QUALITY IMPROVEMENT STORYBOARDS

A collection of Quality Improvement Storyboards from across Northern Health

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the northern way of caring

10-300-6397 (IND 10/19)

Ordering Storyboard Books

Printed copies of the storyboard book can be ordered through Document Source's website using the re-order number 10-300-6397. Coiled booklets are approximately $16.85 each.

Ordering Individual Storyboards

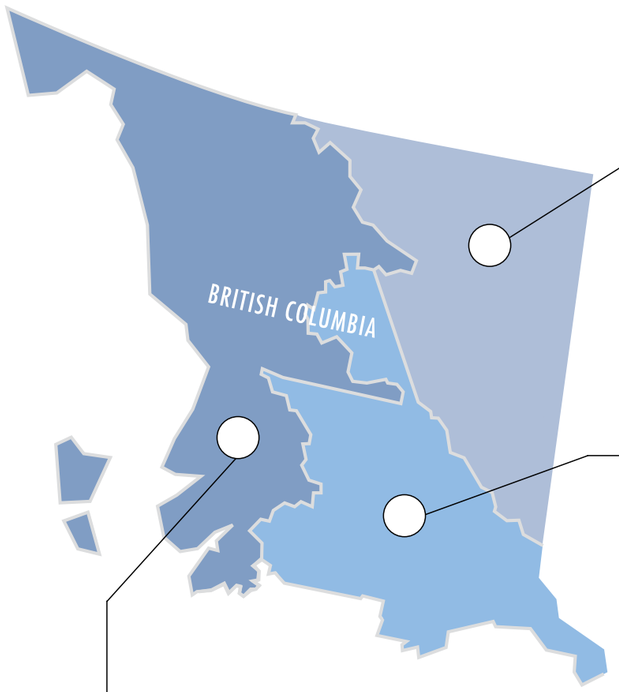
If you could like to order a large poster copy (48"x36") of an individual storyboard, please contact Document Source at document.source@northernhealth.ca with the name of the storyboard, author, and the page number its on in the storyboard book. Storyboards are approximately $46 each.

Storyboard Feedback

If you have feedback on this storyboard book, please email qualityandinnovation@northernhealth.ca

QUALITY IMPROVEMENT TRAINING NUMBERS

Highlights from 2010 to 2019



NORTHEAST TOTALS

Intro to Quality Improvement	272
White Belt	112
Yellow Belt	60
Intermediate Quality Improvement	31
Green Belt	43
Black Belt	2
Quality Academy	2

NORTHERN INTERIOR TOTALS

Intro to Quality Improvement	774
White Belt	323
Yellow Belt	332
Intermediate Quality Improvement	58
Green Belt	55
Black Belt	4
Quality Academy	10

NORTHWEST TOTALS

Intro to Quality Improvement	344
White Belt	173
Yellow Belt	192
Intermediate Quality Improvement	34
Green Belt	36
Black Belt	1
Quality Academy	4

REGIONAL POSITIONS TOTALS

Intro to Quality Improvement	288
White Belt	27
Yellow Belt	31
Intermediate Quality Improvement	33
Green Belt	31
Black Belt	3
Quality Academy	21

TOTALS

Intro to Quality Improvement	1,678
White Belt	635
Yellow Belt	615
Intermediate Quality Improvement	156
Green Belt	165
Black Belt	10
Quality Academy	37

INTERMEDIATE QUALITY IMPROVEMENT

67 in progress

23 NH staff mentors for QI students

111 Physician-focused Principles of Quality Improvement: Level 1

QUALITY IMPROVEMENT CONFERENCES

755 Participants
2014 to 2018

196 Storyboards presented
2014 to 2018

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Improving Access to Cancer Screening Services: Fast-Track Colonoscopy at Bulkley Valley District Hospital

Author: Elena Raykov

Unit Name: Bulkley Valley District Hospital (BVDH) Operating Room

Contact: Elena Raykov, OR Manager

Date: May 1, 2019

QUALITY IMPROVEMENT STORY BOARD

Improving Access to Cancer Screening Services:
Fast-Track Colonoscopy at Bulkley Valley District Hospital

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Background:

- BVDH is a facility in Smithers, BC with population of ~6,000 and referral area of ~12,000 people.
- The surgical services are provided through a visiting specialist program.
- We have general surgical coverage 3 weeks per month, 4 days per week (12 operating days per month).
- On average between 40-60 colonoscopies are done per month.
- Currently, not all patients are able to access colonoscopy procedures in a timely way. Approximately 30% of patients wait over benchmark time.

Objective:

To reduce colonoscopy wait times for BVDH patients from 30% to 10% over the benchmark by May 31, 2019.

In addition, the goal is to:

- ➢ Meet benchmarks 100% of the time for patients who more urgently require the test (e.g., those with positive fecal immunochemical test (FIT) or family history of colon cancer)
- ➢ Ensure wait lists accurately reflect wait times of patients

Solution:

- The Team agreed to design a Fast Track Pathway such that patients who have a positive FIT, positive family history, or who require a follow-up procedure do not require a separate consult visit prior to their procedure visit. To enable the Fast Track program to go ahead, we committed to:
  - ➢ Develop a new screening form for patients eligible for fast tracking
  - ➢ Develop guidelines for who is appropriate for fast tracking
  - ➢ Develop guidelines for blood work for fast track patients
  - ➢ Develop a separate book" in Cerner Scheduler so patients will be booked appropriately and not missed
  - ➢ Invite patients to help us design a Fast Track service
  - ➢ Develop a "future state" map for the Fast Track Pathway (for reference and to help spread to other communities)
- The team identified that waitlist data did not seem to represent actual patient wait times so efforts were also made to clean up the data entry process.

Our Improvements:
- ✓ **August 2018:** Fast Tracking of patients began on a trial basis.
- ✓ **December 2018**: The process for data entry by booking clerks was improved to more accurately reflect patients' waits.
- ✓ **January 2019:** Forms for patient selection and patient information brochures were implemented.
- ✓ **January 2019:** Guidelines for implementing a Fast Track approach were developed.
- ✓ **May 2019:** Kitimat General Hospital adopted the Fast Track approach (the same surgeons work at both sites)

Current State:

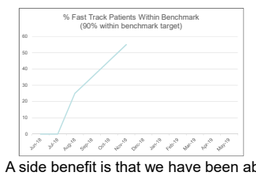
- Colonoscopy wait times are long. For example, 90% of patients wait 29.2 weeks when the average wait times are between 8 and 26 weeks. (*See baseline data at right from Period 4 showing 29% of cases waiting over benchmark)*

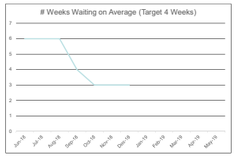
Colonoscopy Wait Times	Period 4 as at 18 August 2018		
Facility	# Cases Waiting	# Cases Waiting that have a Benchmark	% Cases Over Benchmark
BVDH	118	115	29%
Other NH Facilities (Names Witheld)	21	21	5%
	96	90	8%
	76	74	4%
	93	91	51%
	92	91	26%
	408	404	32%
	57	55	25%
	-	-	-
	225	221	24%
NHA Total	1186	1162	27%

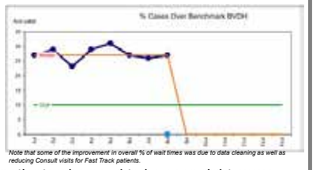
- Patients have to come for a separate consult visit before their procedure. About 40% of these patients would qualify for "fast track colonoscopy" (i.e., could come directly to a procedure after referral from a family physician, without a pre-procedure consultation visit). However:
  - ❑ There are no clear, written guidelines for selection of patients for fast track.
  - ❑ There is no specific screening/admission form for fast track patients.
  - ❑ There is no patient information geared towards fast track patients to ensure they know how to prepare for their procedure.
  - ❑ At present there are no specific bloodwork requirements for fast track patients.

Results:

We have successfully implemented a Fast Track service, improving access times for colonoscopy service for higher priority clients, as well as all clients. See the graphs below showing the % of Fast Track patients seen within benchmark, the average # of weeks Fast Track patients waited for colonoscopy, and % of all BVDH colonoscopy cases over benchmark.







Note that some of the improvement in overall % of wait times was due to data cleaning as well as reducing Consult visits for Fast Track patients.

A side benefit is that we have been able to use the Fast-Track Pathway for urgent patients who need to be seen right away even though it was not designed for that purpose. It is working very well.

Next steps / Sustaining the Gains:

We will continue to monitor the implementation of the Fast-Track Colonoscopy Pathway and its impact on reducing wait times for patients.

Other NH sites are interested in adopting the Fast-Track approach, and materials (guidelines, map, forms, patient brochures) will be shared with these sites.

Patient/Customer:

We invited two Fast Track patients, one pre-scope and one post-scope, to provide us with feedback on how to ensure our Fast-Track service is person- and family centred. They attended our Kaizen event in December.

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Team Members: Elena Raykov, OR Manager; Elize Strauss, Visiting Specialist Office (VSO) clerk; Leayra Germaine, Visiting Specialist Office (VSO) clerk; Patti Fradette, OR booking; Kim Dowling, Pre-Surgical Screening (PSS); Tricia Seinen-Ellis, Pre-Surgical Screening (PSS); Jennifer Cleveland, OR Registered Nurse; Patients

Improving Hip Protector Adherence for Dementia Clients at Terraceview Lodge

Author: Amber Brown

Unit Name: Copper Unit, Terraceview Lodge

Contact: Amber Brown, Rehabilitation Assistant

Date: May 31, 2019

QUALITY IMPROVEMENT STORY BOARD

Improving Hip Protector Adherence for Dementia Clients at Terraceview Lodge

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Background:

- TVL is a 95 bed Long term care facility located in Terrace BC. Located within the facility is Copper community, a 27 bed Special Care unit for clients with dementia (24 permanent, 3 respite).
- From May 1/18 to Oct 19/18, 49 out of 90 reported falls at TVL occurred on Copper community (54%). Of these 49 falls, only 3 were reported wearing hip protectors at the time of the fall.
- According to the Northern Health's Falls Prevention Strategy Clinical Practice Standard, the health care cost of a single hip fracture in Canada is $24,400 to $28,000; 20% of seniors who suffer a hip fracture die within one year (Scott, 2004; Herman, 2006).

Objective:

By May 2019, 100% of clients on Copper Community that are assessed as needing them will be wearing appropriate hip protectors.

Solution:

We held improvement events (kaizen events) January 30, February 20 and April 16, 2019.

Our improvements included:

- ✓ **Purchased several styles of hip protectors and created a sample hip protector cart so that they can be trialed by clients to ensure an optimal fit**
- ✓ **Brought in more pant-style hip protectors which are easy to use, are less prominent, and have pockets**
- ✓ **Adopted an Interior Health handout for staff and families about the benefits of hip protectors**
- ✓ **Increased staff awareness of which clients need and are wearing hip protectors**
- ✓ **Adopted a new process, based on new NH policy, for the nurse to recommend hip protectors based on the Scott Falls Risk Assessment Tool where scores were 7 or greater**
- ✓ **Created a presentation with case studies to assist with staff education**
- ✓ **Coached staff how to determine appropriate size and style of hip protectors**
- ✓ **Created a visual cue to place on the dresser for clients who should be wearing hip protectors**
- ✓ **Identified peer hip protector champions on the Copper unit**
- ✓ **Presented at a Family Information Night**

After we reviewed the results from the staff survey, we ordered more pant style hip protectors in a variety of sizes to ensure proper fit ,style and comfort, as well as a laundry process that including labeling and communication.

Current State:

According to the Scott Fall Risk Tool for LTC:

- <7 = Low Risk
- ≥7 = High Risk
- ≥12 = High Risk and Unsafe

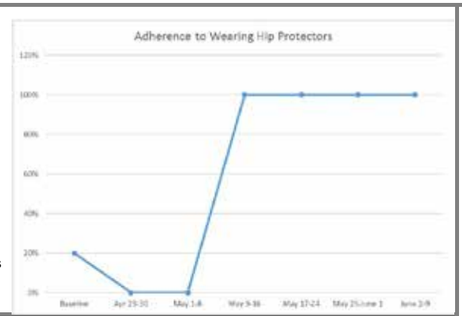
At Dec 2018, of the 25 Copper Unit clients, 8 were assessed as at high risk for falls (32%):

- 5 clients had a Scott Score of 12 or greater
- 3 had a Scott Score of 7 or greater
  - Out of these 8 clients, only 5 owned hip protectors
  - Only 1 was wearing them at time of check

- Three of clients that owned hip protectors weren't wearing them due to wrong style or poor fit, making adherence difficult for both staff and client.
- At baseline, information on hip protectors in the nursing stations was different or missing, and didn't identify local vendors.
- More clarity was needed for staff as to which style was appropriate to best suit needs for TVL clients assessed as high risk of falls by the Scott Fall risk assessment.
- Families also didn't always have a good understanding about the different styles of hip protectors and where to purchase and view styles locally.
- In the past, TVL did not have a designated staff champion for hip protectors.
- There was no standardized process or tracking system in place to identify which TVL clients were assessed for hip protectors, who had them, which style, how many pairs, who was refusing/non-compliant.
- There was no standardized process for recommending hip protectors to high risk clients. At baseline, recommendations were found in various locations of client's chart.

Results:

Our improvements resulted in an increased use of hip protectors by those who were assessed as needing them.



Note: When one client had a change in health status and no longer required hip protectors they were dropped from the sample.

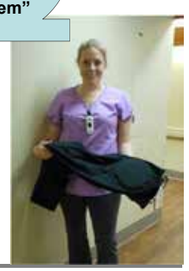
Next steps / Sustaining the Gains:

- We will be purchasing additional hip protector samples so we can spread the falls prevention work to other units in Terraceview Lodge. We will be creating a "fall wall" that includes fall prevention supplies and resources (fall mats, hip protectors, chair alarms, algorithm, etc.)
- We will have a feature in our family newsletter about falls prevention, highlighting the new resources and to inform them about the hip protector cart. Pamphlets will also be placed in the main entrance.
- We will document falls using a "safety cross", a user-friendly data tracking tool to document falls and ensure Patient Safety Learning System (PSLS) reporting is occurring.
- We are working on a tracking system to know which clients are wearing hip protectors, what style, and specifics such as date of purchase so clients are always wearing clinically effective hip protectors.

Patient/Customer:

For this project, staff were considered the customer. They identified challenges associated with having hip protectors and related falls prevention materials readily available:

"We never had the right stuff at the right place when we needed them"



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Increasing Attendance at Regional Continuing Medical Education Conferences

Author: Heather Gummow

Unit Name: Northern Continuing Medical Education Program

Contact: Heather Gummow, NCME Program Coordinator

Date: 2017 – 2019

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Increasing Attendance at Regional Continuing Medical Education Conferences

Background:

All physicians require CME Credits to maintain their licensure. The CME Program was created to increase accessibility of CME activities for rural and remote physicians working in the North. The CME program staff consist of a Coordinator and Assistant who provide the following services:

- Needs assessment,
- Planning, developing and organizing CME activities,
- Accreditation support,
- Budgeting,
- Communication, etc.

The program is accountable to the Regional CME Advisory Committee which is made up of general practitioner and specialist representatives from across each health service delivery area.

Objective:

By June 2019, there will be a 20% increase of attendees at regional medical conferences.

Solution:

Based on the environment scan, the solutions implemented were:

- **Communication and technology strategy:**
  - Increased email advertising and broadened reach to distant communities;
  - Developed CME newsletter to be distributed quarterly;
  - Offered Friday rounds sessions and regional medical conferences via videoconference;
  - Developed relationships with key stakeholders (Divisions, MSA's, Doctors of BC, etc.) to be sharing stories and information;
  - Advertised upcoming CME events at current events; and
  - Worked with key stakeholders to ensure program awareness.
- **Balance between GP's and Specialists:**
  - Identified other CanMEDS roles as areas of focus when developing and organizing CME activities;
  - Invited specialist to be members of the planning committee for events; and
  - Invited specialists to be members of the Regional CME Advisory Committee.
- **Stakeholder feedback**:
  - Developed structures and processes based on feedback received during environmental scan (e.g. Northern Rounds Education Series Accreditation);
  - Reviewed feedback on all evaluation forms received and made changes based on recommendations;
  - Sought input from Divisions, MSA's, Doctors of BC, etc.; and
  - Developed committee meetings with stakeholders to ensure connectedness and transparency across programs.

Current State:

The CME Program was moved into the VP Medicine Portfolio in April, 2017. This transition was made as an interim solution until the Joint Standing Committee of Rural Issues (JSC) made changes at a provincial level for CME.

The goal of the move to the VP of medicine was to ensure a grass roots, local and community approach to CME supports.

In April 2017, an environmental scan was completed to connect with communities, broaden the programs reach, and seek feedback from physicians who reported the following:

- Physicians want more support from a regional CME program;
- Physicians felt discouraged with the lack of support being received;
- Physicians desired more grassroots and hands on support with influence on the program; and
- Lack of awareness amongst the communities about CME supports and upcoming events.

Results:

Event:	Date:	Location:	Number of participants attended:	Max desired # of participants:	Video-conference?	% increase of Participants
Jasper Family Weekend Retreat	February 5-8, 2016	Jasper, AB	42	100	no	
Jasper Winter Retreat	February 1-4, 2018	Jasper, AB	62	100	no	
Jasper Spring Retreat	April 12 - 14, 2019	Jasper, AB	63	100	no	49%
39th Northern Doctors Day	November 6, 2015	Prince George, BC	106	150	no	
40th Northern Doctors Day	November 4, 2016	Prince George, BC	122	150	no	
41st Northern Doctors Day	November 3, 2017	Prince George, BC	124	150	no	
42nd Northern Doctors Day	November 2, 2018	Prince George, BC	149	175	Yes	37%
3D Tumbler Ridge	May 25 - 27, 2018	Tumbler Ridge, BC	50	75	no	
3D Tumbler Ridge	May 31 - June 2, 2019	Tumbler Ridge, BC	56	75	no	12%

Note: an additional event was added in 2018 increasing access to events and overall annual participation by 34%

Next steps / Sustaining the Gains:

In order for the momentum of the CME program to be sustained, the program, staff need to:

- Continue seeking feedback from stakeholders;
- Broaden the membership of the Regional CME Advisory Committee; and
- Maintain knowledge and expertise with respect to CME accreditation.

Patient/Customer:

Physicians.

As CME coordinators for the Haida Gwaii physician group, we have had the pleasure of working with Heather Gummow on several initiatives which have significantly enhanced our local continuing medical education offerings. Heather's support in securing accreditation for CME events and for helping us fund major initiatives such as a Haida Gwaii Ultrasound Course has contributed to the revitalisation of our CME programming. We are now into our third year of offering weekly CME events to not only our physician group, but also our nursing and allied health colleagues. Through teaching and learning from each other, we have brought our island medical communities closer together, forming new allegiances and increasing our resilience as we jointly face the challenges (and reap the rewards!) of rural practice.

Caroline Shooner, MD, Haida Gwaii Hospital
Caroline Walker, MD, COS, Northern Haida Gwaii Hospital

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Team Members: Heather Gummow, CME Coordinator, Justine Derksen, Communications Advisor Medical Affairs, NH CME Advisory Committee (Dr. Ian Schokking, Dr. Charles Helm, Dr. Ray Markham, Dr. Ulrike Meyer, Dr. Dawid van Rensburg, Dr. Justin Flynn)

Hello? Is Anybody Out There? Improving Primary Care Interprofessional Team Communication for Shared Client Care

Author: April McLean

Unit Name: Prince Rupert Primary Care Interprofessional Teams

Contact: April McLean, Interprofessional Team Lead

Date: May 10, 2019

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Hello? Is Anybody Out There?
Improving Primary Care Interprofessional Team Communication for Shared Client Care

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Background:

Prince Rupert is a coastal community in the NW region of BC with a population of approximately 11,900. The Primary Care model is used to deliver responsive health care services to meet the needs of clients in the community. Interprofessional teams play an integral role in providing these services.

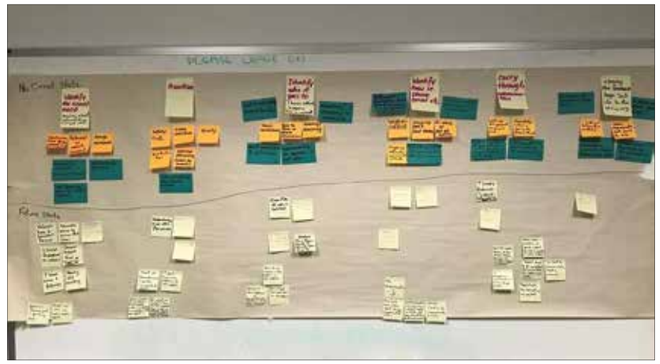
The goal of having Primary Care Interprofessional Teams (PCIPTs) working synergistically is simple: to improve the health and well-being of the population by creating a strong, sustainable, effective and accessible health care system. Successful collaboration is only possible if there is seamless communication amongst the team.

Objective:

To improve the PCIPT communication process which will ensure acceptable and appropriate delivery of community services in an efficient and safe manner by a cohesive and well-functioning team. By May 30, 2019:

- The PCIPT will have an established communication process in place with regularly scheduled PCIPT client-centered meetings.
- A process will be put in place to ensure consistent, accurate and timely sharing of information to the Primary Care Home (physician's offices).

Solution:



A Kaizen event was held in Prince Rupert, BC on January 28, 2019. Improvement team members in attendance at the Kaizen event consisted of Primary Care Nursing, Team Leads, Occupational Therapy, Social Work and Practice Support.

TOOLS USED

- Cause and Effect (Fishbone) Diagram
- 5 Why's
- Process Mapping (Current and Future State)
- PDSA Cycles

WHAT WE LEARNED

- The biggest take away from the internal survey and the Kaizen event was the need for regular, standardized PCIPT huddles to allow team members to come together to review complex clients and create action plans related to shared client care.
- Along with the creation of regular meetings, a documentation process needs to be defined to capture the care planned during the regular IPT meetings.
- The intended impact on internal stakeholders is to increase satisfaction with and efficiency of the PCIPT communication pathway, which will lead to improved client care.

Current State:

The current communication pathway for shared client care amongst the Prince Rupert Primary Care Interprofessional Team is inefficient and fragmented.

Communication surrounding client care happens informally and includes a multitude of communication pathways, such as clinician-specific huddles (i.e. mental health huddles), opportunistic discussions in the hallway, phone calls, text messages, instant messages, and CMOIS inbox/tasks.

Fax is the most utilized communication pathway to occur between the primary care home (physicians) and the PCIPT.

There is currently no formal way to engage other members of the PCIPT. This can lead to gaps in care, miscommunication, poor follow-through of service requests, inadequate documentation and the potential for duplication or delay of service requests.

There is a low level of satisfaction with the current communication process as measured through a survey for internal stakeholders. 10.53% of PCIPT members are satisfied with the current process.

Results:

In February 2019, the first PDSA cycle related to PCIPT meetings was conducted. This involved agreeing upon the frequency and duration of meetings along with the location and make up of the meeting attendants.

PDSA cycle #1 took place over 6 weeks. Data was gathered and PDSA cycle #2 was implemented in March 2019.

The changes from each of these 2 PDSA cycles have begun to improve the process and we anticipate future PDSA cycles will continue to add improvements to the process.

Next steps / Sustaining the Gains:

WHERE DO WE GO FROM HERE?

PDSA cycles provided the framework for developing, testing and implementing regular IPT huddles and are still ongoing. A post-improvement survey will be implemented in 6 months to measure internal stakeholder satisfaction with the PCIPT communication pathway for shared client care.

Patient/Customer:

The impact of this quality improvement project is two-fold:

The interprofessional teams and the clients we serve will benefit from a robust PCIPT communication pathway.

By strengthening the functionality of the teams through improved communication pathways we will be continuing to build stronger, more connected teams.

This team cohesiveness will result in improved client care and flow of information to ensure care is delivered in the right place at the right time.

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Team Members: April McLean Interprofessional Team Lead; Chris Melenberg, Interprofessional Team Lead; Michelle Pele, Practice Support Leader; Maria Bunkowski, Primary Care Nurse; Emily Brennan, Occupational Therapist; Tracie Janzen, Social Worker

Sterile Storage - Meeting Canadian Standards Association Standards

Author: Bonnie Mackenzie

Unit Name: Medical Device Reprocessing Department &
Operating Room Department – Kitimat General Hospital

Contact: Bonnie Mackenzie

Date: October 25, 2018

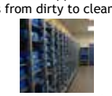
QUALITY IMPROVEMENT STORY BOARD

Sterile Storage – Meeting CSA Standards

Background:

Medical Device Reprocessing Departments (MDRD) are divided into 4 specific job areas. Decontamination, where instruments are disassembled and cleaned; Assembly, where instruments are inspected, assembled and wrapped; Sterilization, where packs are sterilized; and Sterile Storage, where in-house reusable sterile supplies and one time use sterile supplies are stored. Standards apply to each area, as example; decontamination flow is from dirty to clean to avoid cross contamination.

Pictured is an ideal design for an MDRD, and an ideal rack system for sterile trays.



MDRDs are audited yearly to ensure standards are maintained. The audit tool is divided into 12 sections related to 4 main areas of the department. The expectation is a minimum of 85% in all areas. Kitimat scored less than 70% for sterile storage.

Objective:

By May 2019 sterile storage will not be stored with the prep and pack area and traffic in an out of the MDR area will be reduced by 75%. Re-organization of existing storage will allow for better flow, reduced waste of inventory and removal of obsolete and redundant equipment.

This will ensure the following standards (CSA Z314-18, section 10.2.5.1) are maintained:

Clean and sterile storage areas shall be;
a) dedicated to the storage of clean and sterile supplies;
b) located in a separate, enclosed, limited-access area. The dedicated function of this area shall be the storage of sterile and clean supplies.
c) provided with adequate storage space to prevent crushing or damage to packages; and organized in such a way that items are used on a first in first out method.

Solution:

The solution to this project began with many hours of on site observation. Pictures and measurements were taken to determine square footage of actual storage space. By examining and investigating all areas that could be useful for storage within the OR and MDRD it became obvious that a 5 S project was needed. There was outdated inventory, inventory that was overstocked; empty cardboard boxes and old or obsolete instruments and equipment. All of these items were taking up precious storage space. As well, some inventory items were stocked in the sterile storage only to be removed and restocked, sometimes in as many as 3 other places. Useful Lean tools included the 5 Why's to understand the current state, and spaghetti diagrams to follow movement. Following the recommendations for sterile storage outlined in the Ministry of Health's Best Practice Guidelines for Reprocessing Critical and Semi-Critical Devices a plan was formulated to organize the space and make the narrow storage space located off of the assembly area, the designated space (see diagram under Current State). The small alcove situated off of the hallway required the purchase of two new carts that could hold all the orthopedic total hip and knees trays. The repurposed cart wash room, which held large sheets of instrument wrap and housekeeping supplies was utilized for the numerous OR packs, drapes and gowns. Narrow carts replaced the wider bulkier carts that were lined down the hallway to allow for movement when case cart picking. The carts were organized by likeness, as example all IV supplies were on one cart, respiratory supplies on another, etcetera. The rationale is to make it easier for new hires and agency staff to find items quickly. The introduction of the Kanban system, will help with inventory outdates and overstocked items.

The 5 S project was as follows:
Sort: Remove all non-housekeeping supplies from the housekeeping room. Discard empty cardboard boxes and obsolete equipment from the decontamination room. Remove all outdated inventory and antiquated instrumentation. Resituate excessive inventory into a holding bin
Set in order: Build new racks. Organize like with like, label carts and shelves
Shine: Remove all unnecessary bins and carts. Clean and replace all required bins, and shelving. Remove wall racks holders from alcove (date to be determined)
Standardize; Introduce Kanban cards for inventory control. Kanban cards ordered and received
Sustain: Follow-up with site visit in June to provide education for maintaining a Kanban system

Glove and IV Carts

Items Removed

Current State:

Kitimat hospital was built in 2004. The hospital was designed with high ceilings, spacious hallways, a grand entrance with an overall openness to it; the appearance is very roomy; with the exception of storage space. Most departments find they do not have the storage space they need and there is no extra real estate within the hospital for extra equipment and supplies; except for the back hallways.

Staff in the Operating Room (OR) have raised concerns for many years regarding the lack of storage for all the consumables and sterile supplies. With the increase in orthopedic surgeries the amount of equipment over the years has increased, so supplies have been stacked on top of each other, or been moved into the housekeeping room, the MDR assembly area, the supervisor's office, and even the lunch room. On top of this, there was a hoarding mentality, not unlike many hospital departments, so every possible storage room, shelf, drawer and cabinet was filled with *stuff*.

The limited space allocated for storage within the OR and MDRD was cluttered with many unused items (tall warming cabinet, chemical sterilizer, large ENT microscope, rack for positioning devices). There was sterile instruments that had not been opened in over 15 years. Shelves held many expired items and devices, and inventory was overstocked and sitting in bins on the floor. Storage of housekeeping supplies, chemicals for decontamination, and consumables for the endoscopy procedure room were all stocked in the small sterile hallway. As a result, sterile supplies would not fit on the Shelves and were kept in the assembly area and stacked on top of each other. Staff from the OR had no choice but to walk frequently into the assembly area to retrieve sterile instruments and instrument trays. A spaghetti diagram shows movement of one person picking instruments for a surgical case.

A walk through MDRD clearly shows a cluttered and cramped work space

Results:

The project team was a group of like minded individuals that were keen on developing a more efficient, less wasteful operating room. The team sorted through years of hoarded supplies with vigor. It was like a weight had been lifted. There were 3 pieces of equipment and over 390 outdated items removed from the departments storage space.

- staff from the OR no longer have to enter the MDR work area for frequently used instruments; based on 5 surgeries this amounts to a minimum of 15 times less per day.
- Sterile packs, total hip and total knee instruments, suture trays and prep sets are stored in a designated storage area;
- 15 inventory items for housekeeping are now stored in the housekeeping room;
- MDRD and OR supplies are delivered and stocked using the Kanban system; approximately 30 items were removed from inventory
- Sterile storage meets Canadian Standards Association requirements

A walk through MDRD now shows an organized open work space

Next steps / Sustaining the Gains:

This project is part of an overall project for the northwest health service delivery area in Northern Health focussed on OR inventory management.

- Medical Device Reprocessing will be audited yearly to ensure CSA standards for sterile storage are maintained
- Follow-up will include the installation of wall racks to make room for more sterile supplies in the Sterile hallway.
- Inventory management will follow the PAR levels as indicated on the Kanban cards.
- Non-stock and special order items will be identified and managed using a card system

Example of Kanban card and label

Patient/Customer:

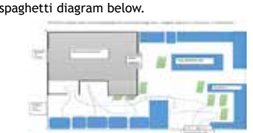
Initially there was buy in from everyone, however once inventory began to move to make room for sterile storage it became challenging for those less involved. There are still implementation issues that need work with managing inventory using the new Kanban system.

Follow up meetings will determine the advantages/disadvantages of the Kanban cards, and whether to continue with that system for inventory management.

Housekeeping staff are very pleased to have their room back. 'I can get my floor machine in and out easily and don't have to worry about an OR bed and positioning rack always in the way".

The OR nurses and sterile technicians have commented on the better organization and neatness within the whole department. Some staff have already taken it among themselves to neaten and organize other areas of the department for improved efficiency.

Picking cases appears more efficient from the spaghetti diagram below.



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Standardized Work Process and Tracking Tool for Health Services for Community Living Dysphagia Outreach Clinics

Author: Heather Ouellette

Unit Name: Health Services for Community Living

Contact: Heather Ouellette, Team Lead

Date: 2019

QUALITY IMPROVEMENT STORY BOARD

Title: Standardized work process and tracking tool for HSCL dysphagia outreach clinics

Background

Health Services for Community Living (HSCL) team provides non-urgent services for adults living in the community who have a developmental disability and are eligible for service under Community Living BC (CLBC). Services include: personal health care planning; identification of potential health and safety issues; referral to other resources and support services; coordination of service; advocacy to assist individuals to achieve optimal health & wellness.

The HSCL team coordinates twice yearly outpatient clinics for dysphagia assessment, neurology follow-up (epilepsy) and complex seating for clients who are wheelchair dependent. Clinics have traditionally been organized and coordinated on an ad hoc basis. The HSCL team recognized the need for a standardized process for planning and coordinating each clinic, and a tracking tool for communication. This will enable an administrative assistant to take over a significant portion of the process and all team members to track completed steps.

Purpose

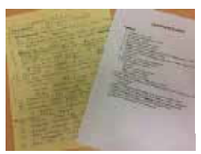
HSCL team will have a standardized process for each outreach clinic, in writing, by December 2019.

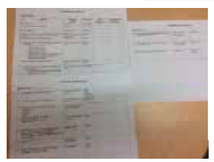
Previous State

For many years, the HSCL team was staffed by the original team hired when the program began in NH. As people retired, we realized that we didn't have the processes for our outreach clinics written out and saved anywhere. Processes evolved over time based on experience. Knowledge was passed from person to person as new hires came on board.

Current State

In April 2018 the HSCL team gathered to roughly map out the current process. We began by brainstorming the steps and then putting them in order on paper resulting in our initial process map. This resulted in task assignment to Admin assistant and to RN to create efficiencies. Through process mapping a flow sheet was created with dual purposes – i) a guide for planning and coordinating the clinic and ii) to be used as a communication tool allowing any team members to know where in the process the planned clinic is at a glance .

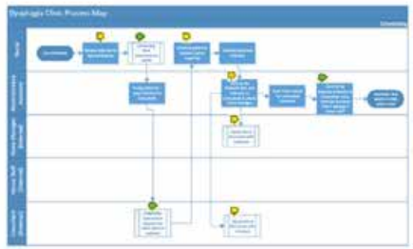




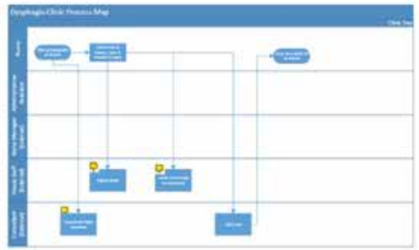
Solution

We trialed our new process and flow sheet during the Fall 2018 dysphagia clinic. These process map diagrams show how this process worked in practice, and the designated assigned responsibilities for each part.

PROCESS MAP: SCHEDULING CLINIC



PROCESS MAP: CLINIC DAY



PROCESS MAP: POST-CLINIC FOLLOWUP

Process mapping enabled the team to identify a number of delays and extra handling; at this time there is no opportunity to streamline these any further due to external pressures and client needs. The HSCL team is committed to continually reviewing the process on at least an annual basis.

Results

The inaugural clinic using this new process developed started with a minor glitch at the outset – our administrative assistant had to go off on sick leave! Luckily having created the flow sheet allowed the team to identify the point at which she had stopped and the rest of the team were able to transition into the work smoothly. The use of the flow sheet was very positively received by the team.

On review, the team noted some aspects of the flow sheet that needed adjusting, including:

- The need to include more information in certain boxes of the flow sheet to better explain the process for any new team member planning a clinic for the first time.
- The original flow sheet was missing a process step related to referrals coming to our team and being sent to the Access Community Therapists. The flow sheet it was initially designed to suggest two clinics are pre-determined annually, however through this mapping exercise it was identified that clinics are scheduled as needed when enough clients are referred.
- In order to streamline the process time allotment for various aspects needed to be pre-determined to help with scheduling.
  - A newly referred client requires 1.5 hours in order to assess.
  - A repeat client can be assessed in 1.0 hour.
  - Travel time between homes/office/UHNBC radiology needs to be incorporated.
- When a client requires barium swallow, upfront workload for the HSCL nurse includes many additional preparatory steps for booking the clinic day. The HSCL nurse needs to know the process for booking the procedure at UHNBC radiology, and how much time to book for. The team has recognized the need to ensure this process is embedded within the larger clinic process information so it is easy to find and use.
- The original flow sheet was missing a process step of booking a meeting room for mobile clients who can attend at our office for their appointment. This step has been incorporated into the fleet vehicle booking timeframe.
- During this process mapping it was identified that the administrative assistant could be contacting the caregivers with specific instructions in how to prepare the clients. However with verbal instruction alone this practice was inconsistent so the team is creating a script for the admin assistant to use during the reminder calls to the home. This will ensure that all caregivers receive complete, correct and consistent information.
- The flow sheet itself has some redundancies that we can eliminate – for example a column for "mark when done" and one for "date completed".

Next Steps/ Sustaining the Gains

The next dysphagia clinic is planned for May 2019. The new, improved flow sheet will be used for planning and running the dysphagia outreach clinic and the next PDSA cycle will begin.

Going through process mapping has been such a positive experience for the HSCL team that they are looking forward to reviewing other processes to identify opportunities for streamlining our work. For example, in May 2019 the team reviewed and updated all of the referral forms we use and created a folder in our shared drive containing all of the electronic copies.

Customer

The HSCL Team:
From Left to Right:
Elisha Williams, OT
Charlene Gilroy, OT
Heather Ouellette, RN, Team Leead
Corinne Reich, RN
Kim Shannon, RN

Process for Distributing Provider Contact Information at UHNBC

Authors: Gail Haeussler and Jeanette Stebbe

Unit Name: Medical Affairs

Contact: Gail Haeussler & Jeanette Stebbe

Date: May 10, 2019

QUALITY IMPROVEMENT STORY BOARD

Process for Distributing Provider Contact Information at UHNBC

Background:

The purpose of this project was to review the process for the distribution of the provider contact information for University Hospital of Northern British Columbia (UHNBC), to identify improvements, and to address any confidentiality issues.

UHNBC provider contact lists were distributed monthly via email with no apparent process or parameters. Some key concerns were confidentiality and efficiency.

Northern Health values efficient service delivery and strives to identify and manage risks to the organization, medical staff, and patients.

Our initial improvement expectations were to eliminate administrative waste and create a clean process for list distribution.

Objective:

The goal for this Lean project was to review the process and recipient needs in the distribution of contact information for UHNBC physicians.

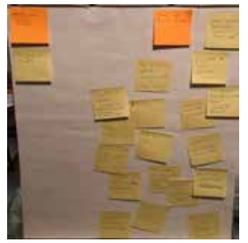
The goals were:
- to increase the efficiency of the distribution process
- to address confidentiality concerns
- to develop clear guidelines for the process

Solution:

The desired outcome of our project was to create an approved process for the distribution of the UHNBC Medical Staff List.
- We surveyed a selection of current list recipients to determine the needs and use of the list.
- We met with the Privacy Office to identify confidentiality/privacy concerns associated with the content and distribution of the list. Some concerns were use of non-secure email addresses e.g. hotmail/yahoo/gmail, and distribution of list in Excel format without a confidentiality disclaimer.
- We met with our Team Members to discuss the survey results, privacy concerns, and to determine appropriate guidelines going forward.

Lean tools utilized:
- The survey is an example of Data Collection and Voice of the Customer. These Lean tools captured input from recipients affected by the process to establish their needs and to define goals for process improvements.
- Observation (going to the Gemba) and Value Stream Mapping were used to visualize and understand the current process for distributing the list. The results of our mapping helped us to Identify Waste. During our observation of the monthly distribution routine, we noted several instances of duplication of effort. This would represent the 'E' in DOWNTIME: Excessive processing was occurring which did not add value to the activity.
- We conducted three PDSAs (Plan, Do, Study, Act). Through each PDSA we communicated change, we tracked feedback and we provided assistance where needed.
  - PDSA 1: We contacted recipients with non-NH email to inform them that the list would only be distributed to secure email addresses and advised on the process to acquire an NH email from Northern Health IT.
  - PDSA 2: We contacted recipients of the External List to advise of the new guidelines and to direct them to the College of Physicians & Surgeons of BC (CPSBC) website to obtain the information.
  - PDSA 3: We informed the recipients of the Internal List of the new guidelines and the potential changes to how they will be receiving the future lists.
  - All of the above communications were met with minimal pushback. Assistance was provided to those requiring help obtaining an NH email address and/or navigating the CPSBC website. No further action was needed on any of the three PDSAs.

Initial



Final

During our initial project planning meeting, we used a Kanban approach to establish every element that we knew and didn't know. Kanban, meaning 'signboard' in Japanese, is a method of scheduling activities. This method would allow us to visually identify aspects of our project. Throughout our project we added and moved items from the 'what we don't know' column to the 'what we know' column and added a heading 'Out of Scope' for an item that we wouldn't pursue.

Current State:

The Administrative Assistant, UHNBC Medical Affairs compiled three lists on a monthly basis:
- Medical Affairs List contained all contact information including name, MSP number, office number, hot line number, fax number, pager number, cell number, home number, office address, postal code, specialty, and email address for privileged UHNBC providers as well as any for community providers who requested inclusion. This list was distributed to Medical Affairs staff.
- Internal List contained all contact information included in Medical Affairs List with the exception of the email addresses. This list was distributed to both privileged and community physicians, a dentist, some midwives and nurse practitioners, switchboard, some unit clerks, some nurses, and various departments and MOAs who had requested it.
- External List contained only publically available information i.e. available on College of Physician & Surgeons of BC website. This list was distributed to those who had requested it including various Northern Health departments, some allied health professionals, a variety of other health care related individuals, and some external contractors.

These lists were distributed in Excel format without a confidentiality disclaimer on the spreadsheet and using an undefined process to nine different email groupings. We discovered that the lists were also being forwarded to other recipients despite email instructions not to do so.

Results:

- The purpose of the current list was defined.
- The list was renamed to reflect all medical staff (physicians, midwives, dentists, nurse practitioners): 'UHNBC Medical Staff List'.
- Only privileged UHNBC medical staff will be included on the list.
- The list will be distributed electronically only to privileged UHNBC medical staff and their MOAs (with NH email addresses), as well as to the UHNBC Switchboard using a single email grouping.
- The list will be distributed via hard copy to UHNBC Operations Management who will disperse to departments and hospital units as they deem necessary.
- The list will be distributed quarterly or tri-annually as required in PDF format and will include a disclaimer in the footer.
- The External List will be discontinued as all information contained on the list is publically available.
- The distribution process was reduced from 9 steps to 4 steps.

The UHNBC Medical Staff List Guidelines were created. Email templates were created to communicate the changes to all previous/future list recipients.

Next steps / Sustaining the Gains:

The changes to the distribution process have been mapped for the future state. As a result of the change in the distribution process, there will be a reduction in administrative time when the change is implemented in June 2019.

The reduction of steps in the distribution will represent a 56% decrease.

The frequency of distribution is being reduced from monthly to quarterly or tri-annually resulting in a 25 – 33% decrease.

Although ownership of this improvement will be handed over to the UHNBC Medical Affairs administrative team in May 2019, we are planning to do a follow-up on the process in Fall 2019. This will give us an opportunity to observe the future state, reflect on the results of the improvements and assess the sustainability with the team.

Patient/Customer:

The creation of guidelines for the UHNBC Medical Staff List has provided clear direction for UHNBC Medical Affairs, UHNBC Medical Staff, and UHNBC Operations Management as well as external customers.

Medical Staff inclusion on the list and list recipients are clearly defined.

The survey was sent to 120 list recipients and 108 recipients took the opportunity to provide input.

The guidelines will insure that all privileged UHNBC Medical Staff are included on the list and that the list will be distributed in either electronic or hard-copy format to appropriate recipients.

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Team Members: Brittany MacNeil, Eliana Clements, Donna Taylor, Greg Marr

Improving Consistency and Accuracy of Booking Appointment Process, Both Initial and Follow-Up, within the Quesnel Primary Care Clinic

Authors: Robin Baker, Barb Nieslen, Heather Walker and Adriana Vienneau

Unit Name: Quesnel Primary Care Clinic

Contact: Robin Barker, Barb Nieslen, Heather Walker & Adriana Vienneau

Date: Oct 23, 2018

QUALITY IMPROVEMENT STORY BOARD

Improving consistency and accuracy of booking appointment process, both initial and follow-up, within the Quesnel Primary Care Clinic

northern health
the northern way of caring

Background:

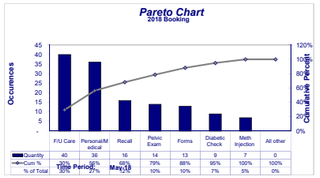
- The Quesnel Primary Care Clinic (QPCC) is one of five family practice facilities in Quesnel.
- QPCC was established in February of 2016 and provides family practice services to approximately 5000 patients. The clinic is typically staffed by 5-6 General Practitioners and 2-3 Nurse Practitioners.
- It became apparent that the lack of consistency in the appointment booking process was causing errors, duplication of work and confusion amongst providers, staff and patients.
- Early analysis showed increased wait times for patient and provider due to inaccurate language.
- Appointment times are based on the visit reason, based on this alone, preparations for the appointment were missed due to the lack of clarity and quality time with the patient was missed.

Objective:

- The appointment booking process is inconsistent and not clearly defined. This results in increased provider and patient wait times and inadvertently missed patient preparation by the Primary Care Assistants (PCAs) and Providers.
- Our team goal is: by April 15, 2019 the inaccurate booking reason will be improved /reduced by 50% at the Quesnel Primary Care Clinic. Our improvements will focus on the top 4 booking reasons.
- We will educate our patients on the booking process so they are aware why they are being asked for specific information when booking their appointment.

Solution:

- Our project goal is to improve the booking process so that all staff in the Quesnel Primary Care Clinic are able to perform their jobs with a minimal number of inaccuracies and to improve our patient's experience when they are attending their appointment. Clearly identifying the appointment reason determines the necessary tasks to be completed by the clinic staff.
- The project team hosted a kaizen event to introduce the project idea to the clinic staff and to involve them in identifying the improvements to be made. We asked the team members to contribute their "good, bad and ugly" input. The clinic team members consisted of the primary care assistants and healthcare providers. Their preliminary suggestions gave us data that we then entered into the Pareto chart to determine the main appointment booking reasons that were causing confusion.
- We determined that when providers were booking follow-up appointments with patients the length of time for the appointment, the purpose of the appointment and the time frame it should be scheduled within, i.e.: 1-2 weeks from today, 2-3 weeks from today, was not clear. Due to the follow-up appointment requirements not being clear the clinic staff missed required measurements and did not routinely have the necessary paperwork ready for the patients. Our improvement project identified the opportunity to standardize the booking process to reduce errors by revising a current booking slip for follow up appointments. These visual shows the original booking slip and the final slip.



- Despite our best efforts some providers are still not routinely using the booking slips. There has been ongoing communication with the team members, and we have encountered some resistance and negative feedback. This resulted in our project improvement team revising our plan and adding a second Kaizen event to get their input and perspectives on the new slips.
- From the beginning of the project we struggled to decide if we should include the voice of the customer. We did not know if the voice of the customer was relevant to our project as we thought our work was solely focused on our internal stakeholders. We determined that the improvements we had intended to make were predominantly to benefit our clinic patients and that it would be beneficial to get their opinion and thoughts on the changes so we created a questionnaire for the patients to complete.
- A standard script was created to be used by staff when booking telephone appointments to determine the appointment reason, and to educate our patients that this information is necessary to ensure that the appropriate length of time is booked for their appointment.

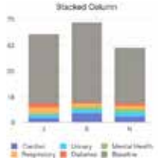
Current State:

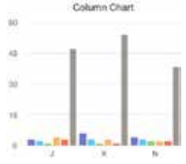
- Appointments are booked based on the reason that the patient provides which can be influenced by the patients' situation as opposed to the clinical reason.
- As a result, patients may be shuffled between clinical, administrative and patient care areas to gather the required information/measures. This adds additional workload on staff and appointment time is wasted to accomplish this while also resulting in a longer than anticipated appointment time for the patient.
- At multiple points of the project, we collected data from the Pareto chart, day sheets and staff input that shows areas that are of concern to be addressed.
- We discovered that the problem did not only relate to the booking language, which was our original assumption, but also to the actual booking process.

Comparison of Appointment Reason Booking Language

These graphs indicate the number of bookings that cause confusion and mistakes within the clinic. The dark grey is the baseline; each color indicates an appointment reason which requires additional work at every staff level.

Description	J	X	N
Cardiac	3	6	4
Urinary	2	3	3
Injection	3	2	7
Mental Health	1	1	2
Respiratory	4	3	2
Diabetes	3	1	2
Baseline	47	54	38





Results:

- Implementing the booking appointment slips has resulted in a 48% improvement in the accuracy of the initial appointments booking language.
- Our first test of revised booking slips resulted in a 97% accuracy for booking follow-up appointments. The second test of revised booking slips resulted in 100% accuracy for booking follow-up appointments!
- By having a clear appointment slip, inconsistency was avoided on the part of patient and staff. Expectations were met because patients were aware of when and why they were returning, and staff has clear direction from the provider. This results in increased patient satisfaction.
- Due to the new efficient booking process, the provider was able to spend the full appointment time with the patient instead of chasing down required information and wasting dedicated appointment time with the patient.
- The clinic staff find the revised booking slip essential to bookings. The slip eliminates the guess work and uncertainty of follow up appointments by clarifying the reason, time length to the next appointment and how long the appointment should be.

Next steps / Sustaining the Gains:

- We plan to have meetings every 6 months with our clinic staff about sustaining our results and to see if there are issues that need to be addressed.
- We will also continue to revisit and remind providers and staff about the importance of using the booking scripts and slips.
- We plan to conduct a patient survey every 6 months to determine our patient's satisfaction with our newly developed appointment booking process for the next two years.
- We are confident that the continued use of the standard telephone script will improve the results shown in the next patient survey.

Patient/Customer:

We struggled trying to include the Voice Of The Customer throughout the project as it was unclear how the clinics booking process affected the patient. However, once we started implementing surveys and gathering the feedback from the patient it became evident how important it was to include the patients in the booking processes.

The results from our patient survey found that: 11% were not aware of the different lengths of time required for their appointment based on the appointment reason; 25% of our patients did not understand why we were asking the reason for their appointment when they called the clinic to book an appointment; and 32% do not find pamphlets or posters useful for sharing information.

Patient appointment wait times reduced due to the regular use of the booking slips. Patients book their next appointment when they leave rather than calling at a later time with vague reasons.

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Team Members: Robin Barker, Barbara Nielsen, Heather Walker and Adriana Vienneau

Becoming a Well-Oiled Machine! Improving Coordination of Population and Public Health Elements and Activities that Support Integrated Primary and Community Care

Author: Hilary McGregor

Unit Name: Population and Public Health

Contact: Hilary McGregor

Date: July 2019

QUALITY IMPROVEMENT STORY BOARD

Becoming a well-oiled machine! **Improving coordination of Population and Public Health elements and activities that support integrated Primary and Community Care**

northern health
the northern way of caring

Background:

Northern Health (NH) is undergoing system transformation towards integrated Primary and Community Care (PCC). The former role of Public Health Nurse, located in the regional Population and Public Health (PPH) structure, was transitioned to Primary Care Nurse located in operational structure. With this change, relationships with regional knowledge holders, communication pathways and processes, practice supports, and other long standing ways of working across NH were disrupted. To effectively support integration and enable delivery of prevention and health promotion services in this transforming system, PPH regional programs need to be highly coordinated.

Coordination is the organization and harmonization of activities and elements to enable effectively working together in the agreed direction. Coordination requires shared knowledge, shared objectives, accurate communication and timely interaction.

Objective:

The first phase will establish a foundation of shared knowledge about the meeting structures involved in implementing IPCC. This is an important step to improve coordination of actions and elements within PPH. Change will be measured with a pre and post survey that gathers:

- Respondent's perspectives on the degree of PPH coordination and their satisfaction with it
- Respondent's degree of agreement with four statements related to awareness/knowledge of meeting structures
- Respondent's self-assessed ability to be effective and efficient in their work with this degree of awareness/knowledge of meeting structures
- Respondent's actual knowledge of example meeting structures

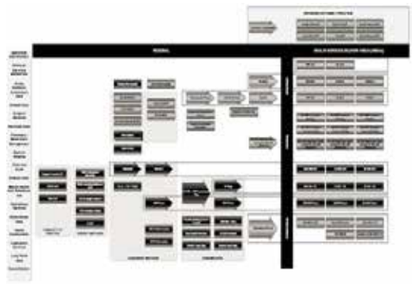
Solution:

One small kaizen event has been held with additional sessions planned to ensure all stakeholders are engaged. The event was an opportunity to explore the current state of meeting structures and explore opportunities for improvement.

Visual management will be applied by developing an interactive graphic to improve coordination by sharing information about meeting structures effectively and openly throughout PPH. It will also be applied to improve overall efficiency and organization to enhance flow of PPH elements and activities.

Throughout the project, PDSA cycles will be applied to pieces of the work to engage stakeholders and make iterative improvements, for example in developing the baseline survey and the visual management tool.

A thorough communications/training plan will be developed and implemented to ensure that stakeholders are made aware of the graphic and how to use the information it contains. The project team will be engaged in developing and implementing the communications/training plan. Recognizing that this type of tool can often go underutilized or quickly obsolete, a maintenance plan will be developed and implemented to ensure that the tool is put to the use for which it was intended and has the best potential of improving PPH coordination.



This is a draft visual management tool representing a number of meeting structures involved in implementing IPCC. During development, the draft is shared with focus groups of stakeholders to iteratively gather feedback and requirements through PDSA cycles. The graphic will have additional layers of information that can be accessed by clicking on a specific meeting structure. Additional information will include PPH attendees, other attendees, purpose, and functions of the meeting structure. The graphic tool is being developed in iGrafx with the support of a Northern Health Business Architect in Planning and Performance Improvement.

At a small kaizen event, the group worked on identifying attendees of meeting structures. Each individual sheet of paper represented a meeting structure with a role in implementing IPCC. Participants each had a package of stickers that represented them, which they placed on meeting structures that they attend.

Participants identified functions that are fulfilled at meeting structures, then grouped similar functions to identify 14 key themes (pink).

Current State:

Observation of the current situation took place over a year establishing a new role in the organization to support the NH strategic priority of aligning population health activity with primary and community care. Through attending meetings and building understanding with key people across the organization, and particularly within PPH teams, learning were gathered and opportunities for improvement were observed related to coordination of PPH activities and elements. Qualitative and quantitative data was gathered through specific engagement activities with PPH team members about different aspects of shared work, such as communication pathways and processes.

Observation	Example
Inefficient efforts	Process for developing messaging and sharing it with IPCC involves significant number of people and effort
Missed opportunities	MHO at HSDA SLT tables not consistently receiving information to share with operational leadership PPH leadership not receiving information about operational leadership needs
Lack of timeliness	Local team requests for guidance/information not responded to by PPH regional in a timely way e.g. how to prioritize services when staffing levels are low

This is an output of collaborative improvement work at a small kaizen event. The dots represent individuals from PPH teams attending these meetings. This is a subset of meeting structures organized on the wall in clusters that made sense to the group. The pink sticky notes represent functions that are fulfilled at specific meetings.

Results:

Data collection took place through a baseline measure survey that was developed collaboratively using PDSA cycles to incorporate feedback and perspectives from over 14 stakeholders. This process helped to clarify project messaging and also the specific measures to be gathered. The survey was sent to 58 stakeholders and received 42 responses within 10 days, a response rate of 72%.

A post survey will provide a comparison after the improvement initiative to measure change.

Measure	Question	Baseline	Target
Perspective on degree of coordination and personal satisfaction with this level of coordination:			
	From your perspective, how coordinated are we, across all of Population and Public Health, in our work with integrated primary and community care?	31% coordinated or somewhat coordinated	40% coordinated or somewhat coordinated
	How satisfied are you with this level of coordination?	28% satisfied or somewhat satisfied	40% satisfied or somewhat satisfied
Degree of agreement with 4 statements related to awareness/knowledge of meeting structures:			
	I am aware of all relevant meeting structures (within and external to PPH and NH) that support all levels of my work that ultimately impacts/enables prevention and health promotion in primary and community care.	24% agree or somewhat agree	80% agree or somewhat agree
	I am aware of the PPH team members who are at these meetings.	26% agree or somewhat agree	80% agree or somewhat agree
	I am aware of what kind of work takes place at these meetings.	10% agree or somewhat agree	80% agree or somewhat agree
	I know where to find information on these meeting structures, who attends, and what work takes place there.	10% agree or somewhat agree	80% agree or somewhat agree
Self-assessed impact of this degree of awareness/knowledge on ability to be effective and efficient in your work:			
	I know enough about meeting structures, who attends, and what work takes place there to be effective and efficient in my work.	29% agree or somewhat agree	80% agree or somewhat agree
	I could be more effective and efficient in my work if I knew more about meeting structures, who attends, and what work takes place there.	7% disagree or somewhat disagree	80% disagree or somewhat disagree
Actual knowledge of example meeting structures (3 quiz-like questions):		31% correct	80% correct

Next steps / Sustaining the Gains:

This project has not reached the implementation stage yet. Implementation will occur when all stakeholders have been engaged to contribute information to the meeting structure graphic, and the graphic has been fully developed and shared with stakeholders as a new visual management tool. A post measurement survey will be implemented to measure change.

This tool will fill a significant knowledge gap that currently exists, and based on current state learnings, there is a need for this information to support more effective and efficient work within PPH. The next phases of the QI project will have a solid foundation of shared knowledge to build on. Ideas for future improvement work include:

- Processes for prioritizing, working together, streamlining, etc.
- Communications and information flow within PPH and to/from IPCC
- PPH roles supporting IPCC
- Education and training within PPH
- Tracking and reporting

Patient/Customer:

For the purposes of this project, the customer is IPCC operational leaders and staff who deliver prevention and health promotion services.

Customer voice was included in early stages of the project as observation was undertaken and information was gathered across the organization including with operational leaders and staff (operational forums, presentations to HSDA SLTs, meetings with implementation leads, etc).

The QI project team discussed the importance of the project being inclusive of, supportive of, and informed by customer experiences and realities. However, because this is the first phase and is laying the groundwork for future project phases, and in order to contain the project scope to make progress in a defined timeline, the project team decided to focus within PPH teams only. This decision was made with full recognition that it is necessary to include operational partners in future phases.

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Improving Height, Weight, and Vitals Measurement Rates for Consultations at Dawson Creek Community Oncology Network (CON) Site

Author: Jordana Archer

Unit Name: Dawson Creek Community Oncology Network

Contact: Jordana Archer

Date: March 2018 - August 2019

QUALITY IMPROVEMENT STORY BOARD

Improving height, weight, and vitals measurement rates for Consultations at Dawson Creek Community Oncology Network (CON) site

Background:

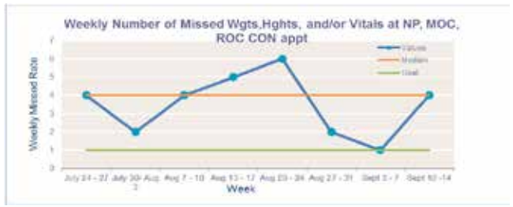
- Roughly 30% of all New Patient consults, MOCs, and ROCs at the 9 CON sites have missed measurements.
- Missing weights, heights, and vitals can cause a delay in start of treatment or further testing.
- Oncologists at Centre for the North identified this as a problem in May 2018.
- Dawson Creek CON was chosen as the pilot site with hopes to expand to additional CON sites in the future.

Objective:

- The goal of the pilot was to improve height, weight, and vitals measurement rates at Dawson Creek hospital.
- Dawson Creek misses roughly 30% of it's measurements. The goal is to decrease missed rate to 10% or a collection rate of 90%.

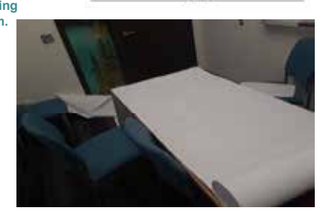
Current State:

- Currently, staff attain measurements and write results on a sticky note, which is verbally communicated to CN through video. Staff at CN then transcribe results on paper chart. This is a potential safety issue.
- The problem impacts patients as they may have to return to the site to attain measurements and may be delayed in starting treatment or further testing.
- In addition, CON referrals may have incomplete information and impact Pharmacy's ability to order accurate amount of drugs in a timely manner.
- This issue spans across all CONs.
- There is no one root cause to the issue as all CON sites vary and have unique barriers.
- Current state and problem was established using frequency data as well as a staff satisfaction survey. Data collected between July 24, 2018 – Sept 19, 2018:
  - Across all CONs: 28% of NP appts had missed measurements
  - Dawson Creek: 33% of NP appts had missed measurements
  - 28% of CON staff felt they could not collect NP measurements due to lack of time or unaware they needed to collect.



Solution:

- Desired outcome is Dawson Creek having a 90% collection rate for telehealth oncology consults.
- Two hour engagement session was hosted to learn more about the current state and to support staff in coming up with potential solutions.
- Members in the engagement session included Dawson Creek RNs, Clerical, and the Site Manager.
- Tools used included process mapping, data collection, the 5 Why's, and PDSA cycles.
- Changes implemented included:
  1. Changing the Telehealth Request Form to allow for RNs at CONs to document measurements,
  2. Pre-scheduling of a 10 min appointment to take measurements before New Patient Appointment.
- Barriers to change included:
  1. Some staff not following new process developed from change idea. These barriers were overcome by explaining the importance of the new process, why the old process did not work, and how the new process benefits them.
  2. Small scope of project. Too small for some staff to see immediate benefit, which impacted sustainability. Currently addressing this by potentially adding two more sites in June 2019.



Lessons Learned

- Importance of early communication and engagement
- Making sure everyone's voice is heard
- Importance of collecting baseline and current state data thoroughly by developing a data collection plan early.
- Importance of Senior Leadership support and involvement throughout project

Results:

- All three appointments at Dawson Creek have had heights, weights, and vitals collected (100% success rate).
- Two out of three appointment measurements were dictated in patient chart.
- Missed measurement rates still high at all other sites (no change implemented). Increase from previous data collection time period attributed to improved data collection method during pilot phase.
- RNs and Oncologists find the Telehealth form helpful and happy to receive measurement information before appointment.
- Not enough data to observe whether new process positively impacts CON Referral process. Will continue to collect data.

* As demonstrated by the run chart: Though change as been successful at Dawson Creek, the overall missed measurement rate is still high. Pilot must be extended to additional CON sites to see substantial results.

Measure Description	Baseline (past performance on measure)	Target	Plan to Collect Data
Lag / Outcome Measures			
Hgt, wgt, and vitals	33% missed	10% or less missed	Will collect frequency data of missed measurements for Consultation appointments
Lead / Process Measures			
# of times RN could not collect measurements and why	NA	10% or less missed	RNs have a log to document when they miss a patient and provide reason
# of CON Refs missing measurements	NA	No target set	Retrospective chart review – To determine if this information is being utilized once collected as it would be a benefit to Pharmacy to have this information on the form
Whether Physician dictated results in EMR	NA	No target set	Retrospective chart review – To determine if this information is being utilized once collected
Reason for inability to schedule Telehealth appt	NA	0%	Monitoring whether pre-scheduling patients 15 min prior to appt will impact ability to initially schedule appt (not desired)
Balancing Measure			
Staff satisfaction survey: RNs, Care Aids, Ocns, Pharm Techs at CONs, RNs at CONs	NA	NA	Survey and verbal feedback
Frequency of missed NP at other CON sites	30% missed	NA	Will collect frequency data of missed Consultation appts measurements at other CON sites. This will be done to see if change and word of mouth impacted other sites.

Next steps / Sustaining the Gains:

- Next steps include writing a summary report and sustainability plan to spread change to other CON sites.
- Frequency data and chart reviews will continue to take place to monitor sustainability and usability of these measurements.
- If solutions is not sustainable, we will meet with team to determine barriers that were not addressed and additional solutions.

Patient/Customer:

- Reduced risk of delay in treatment or additional testing
- Improved communication of results through Physician dictation on chart.
- Improved information sharing through transcription of results on CON referrals, allowing Pharmacy to readily use this information for drug ordering.
- Improved communication between CON and Centre for the North through the use of Telehealth Request Form.

Systemic Issues to Address in Future:

- Clarity on who can collect measurements and when through policy and procedure development
- Triaging of Telehealth appropriateness and location according to patient needs
- EMR advancement to allow of electronic entry of measurements at CONs and engineering controls

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Improve Human Resource Operations

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Unit Name: Human Resource Operations

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Date: July 4, 2019

QUALITY IMPROVEMENT STORY BOARD

Improve Human Resource Operations

Background:

- The Human Resources Operations team supports organizational leadership in the area of guidance with contract interpretation, human resources best practices, human resources strategic planning, and labour relations. This improvement project is focused on creating a Knowledge Repository for the Human Resources Operations Team. This is necessitated by the knowledge gap arising from the high turnover rate in the department, the dynamic nature of the Northern Health Human Resources landscape and some inconsistencies in practices.

Objective:

The objectives of this initiative are as follows:

- Improve ease of access to information by providing standardized, adequate and relevant information about Northern Health HR practices
- Reduce the time spent by experienced Human Resources Advisors on supporting new team members
- Improve consistency in Northern Health-specific Human Resource practices
- Improve knowledge retention

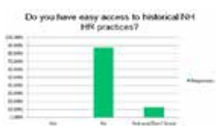
Solution:

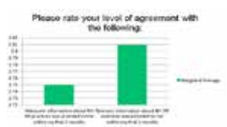
Standardize work by implementing a Knowledge Repository for the Human Resources Operations team.

A major focus of this project is to provide consistent and adequate information to the entire HR operations team, especially the new HR Advisors, with a view to creating a more efficient and standard service. To achieve this, we have to minimize variation in service and ensure that everyone is following the same process and principles in their Human Resource service delivery. Following the Lean principle of ensuring quality at the source by standardizing work, we created a standard document outlining applicable principles and processes that must be followed in completing the majority of the Human Resources Operations team's work. This document is titled Human Resources Operations Knowledge Repository. In addition to enhancing consistency and efficiency, the document will play a vital role in knowledge retention and the learning and development of new employees.

Current State:

The result of our current state and root-cause analysis affirms that there is a knowledge gap within the Human Resources Operations team. The majority of the historical knowledge and Northern Health-specific Human Resources practices have not been outlined in a comprehensive document. This has resulted in the loss of important historical information and a significant knowledge gap, especially when experienced employees leave the team. The department has not prioritized knowledge retention; hence, the knowledge retention process is non-existent.





Results:

The Human Resources Operations Knowledge Repository project is the first step in transforming the Northern Health Human Resources Operations into a Lean environment. Prior to this project, there have never been any Lean initiatives in place. The implementation stage has been challenging due to churn within the department. We intend to apply the principles of Lean implementation during the implementation stage. Our expectation is that by December 2019, we will be able to measure outcomes. We expect to see improvements in access and adequacy of information and a reduction in training time for new Human Resources Advisors. Hopefully, as soon as some of our vacancies are filled, we will get the new team members to start using the Knowledge Repository right from orientation. At that point, we will start testing and collecting lead/process measures data.

HR Ops Project Lean Implementation Status

	Implementation step	Status
1	Gain corporate and top management vision	Complete
2	Train Lean Champions and Kaizen facilitators	Complete
3	Access, and develop the success structure	Complete
4	Identify the value stream	Complete
5	Get quick wins	In progress
6	Train associates and extend training to all	In view
7	Engage and manage supply chain	Not applicable
8	Identify information metrics and Financial reporting system	Not applicable
9	Simplify and achieve flow	In progress
10	Maintain momentum	In progress

Next steps / Sustaining the Gains:

- To ensure accuracy and adequacy of information in the repository, control measure will be put in place. The Knowledge Repository is a live document that will be continuously reviewed, improved and updated on a quarterly basis and as needed. Any update will be discussed during the weekly team meeting and only a select few will be authorized to make any changes to the document.
- Create a Lean culture within the Human Resources Operations team. This will be done by keeping the quality improvement and Lean conversation alive by training other team members to become proficient in Lean and by ensuring that the team taps into Lean procedures that have been put in place such as the Knowledge Repository.
- Draw Traffic to the Knowledge Repository
- Make the Knowledge Repository into a mini library where every team member can go to for up-to-date information on current and past practices. user-friendly layout of the document has been deliberately designed to enable ease of access and encourage frequency of usage.

Patient/Customer:

Value is at the core of the Human Resources Operations business; therefore, we should be able to create, communicate, and add value to our customers by ensuring efficiency, consistency and adequacy of service. The Knowledge Repository will enhance the value we provide to our customers and better equip the Human Resource operations team to provide more expedient, consistent and professional service.

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Building an IT Services Framework that Leads to Accurate, Trusted, and Accessible Information

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Unit Name: IMIT – Client Services / Corporate Application Services

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Date: May 20, 2019

QUALITY IMPROVEMENT STORY BOARD

Building an IT Services framework that leads to accurate, trusted, and accessible information

northern health
the northern way of caring

Background:

The Configuration Management process at Northern Health is not mature. The current process maturity has not yet been determined nor has the process been documented. Information regarding inventory, assets, and system configurations is stored with individual ITS teams and in many different storage methods. As a result, Northern Health IT services are inefficient, because accurate and trusted information is not available during critical incidents such as system outages, which leads to longer resolution times and lower staff confidence in IT services.

The Information Technology Infrastructure Library (ITIL) is a set of detailed practices for IT service management that focuses on aligning IT services with the needs of the business. ITIL defines Configuration Management as a process that tracks all of the individual Configuration Items in an IT System, such as a monitor or disk drive, a network, or a complete system.

Objective:

By May 31, 2019, the Service Delivery team will improve maturity level of the configuration management process for two selected IT services by at least one level.

Improving the maturity level of configuration management will directly support Workplace Evolving Services and Technologies (WEST), which is a Ministry of Health led project for the BC Health Organizations (BCHOs) in which Northern Health is participating. The aim of the WEST project is the procurement of workplace technology services, such as service desk and desk side support, which include change and configuration management. The WEST project supports the effective transition of services from our current external Desktop Managed Services provider IBM Canada Ltd to NTT DATA Services Canada Inc.

Solution:

Following the same process when determining the Current State, the project team decided upon the following solutions.

1. **Determine the current service maturity level of the Configuration Management process**
   To determine the process maturity level, the team selected one business and one clinical service to act as prototypes for all IT services: ***OurNH*** and the ***Holter System***. Using the iSixsigma definition for process maturity, the team determined that the current maturity level for these services is: *Level 0 - Person dependent practices.*

2. **Define the use case for Configuration Management**
   There is no documented and signed off process for Configuration Management. The project team defined the use case for CM as follows: "Effective Configuration Management within Northern Health enables successful and efficient Change Management as well as Disaster Recovery."

3. **Define Configuration Items**
   In order to perform effective Configuration Management (CM), a database consisting of selected Configuration Items and the relationships between those items must be created and maintained. This database is called a Configuration Management Database (CMDB) and is a fundamental component of CM. Using the selected services, the project team built and populated a prototype of a CMDB.

4. **Increase the service maturity level of the Configuration Management process**
   By defining the CM process and building a prototype CMDB, the CM process maturity level will increase by at least one (1) level.

Process Maturity Level - iSixSigma	
Level0 – Person-Dependent Practices	This is for cases where the activity being performed is not documented.
Level1 – Documented Process	At this maturity level, there is a document that has been reviewed and approved by the supervisor or the approving authority as the standard process.
Level2 – Partial Deployment	Here, the activity that is documented is being deployed, but there is inconsistency in the deployment.
Level3 – Full Deployment	At this level, there is no inconsistency between the documented process and the deployed process. This means that the process shows greater consistency of actions and better communication between functions.
Level4 – Measured and Automated	The process has set itself goals such as adherence to timelines, customer satisfaction, cost, etc. The process also is being measured against its goals.
Level5 – Continuously Improving	The goals set for the process are being analyzed for achievements and improved regularly.

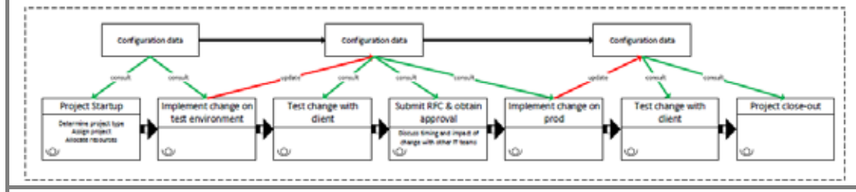
Current State:

Through one-on-one interviews with management and senior technical analysts, it has become clear that several IT services are not able to meet requirements, due to insufficient access to accurate configuration data. This results in performance and potential information security issues. The following challenges related to the Configuration Management (CM) process were identified:

- The CM process maturity level has not been determined.
- The CM process is person dependent, not systemized, and not working within a broader system.
- Configuration data has not been catalogued nor categorized: Configuration Items (CI) are not defined.
- Configuration data are stored in numerous, non-standard methods; there is no single centralized source of truth.
- Configuration data are stored in silos and are not easily shared between teams.
- Configuration data architecture is lacking.

Results:

A PDSA (Plan, Do, Study, Act) cycle was completed to test the proposed changes. They team found that by documenting a unified process and implementing a prototype CMDB for the two (2) selected IT services, the Configuration Management process maturity level was increased to: *Level 2 - Partial Deployment*



Next steps / Sustaining the Gains:

In the final Kaizen event, the documented Configuration Management process for the selected IT processes and the prototype CMDB were presented and the ownership was officially transferred over to project sponsors. As a result of the WEST project, a full CMDB solution was selected. The project team agreed that the next steps are to:

- select Configuration Items types for all IT services.
- select business critical IT services.
- implement the full CMDB for the selected services.

The expectation is that completing these steps will further increase the service maturity level for the Configuration Management process.

Patient/Customer:

This project is expected to provide the following positive changes to the clients:

- Shorter change implementation times
- Faster disaster recovery
- Lower risk of failing IT services
- Lower risk of security breaches
- Higher trust in IT services

A mature configuration management (CM) process effectively supports change management. By successfully implementing a CMDB and documenting the CM process, configuration data are accurate, trusted, and accessible. The change management process enables the Service Delivery team to control the life cycle of all changes made to IT services. The efficiency of the Service Delivery team can positively impact the performance of the entire organization by providing efficient and stable IT services.

This project is linked to the Northern Health strategic action plan: 'Establish a Culture of Quality Improvement and Safety', particularly:

- Partner to continue align research, education, and service delivery
- Develop adequate, appropriate, timely information that support clinical and administrative decision-making
  - Improve application of standards in emergency situations

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Interdisciplinary Approach to Wound Care at Stuart Nechako Manor

Author: Rebecca Fraser

Unit Name: Stuart Nechako Manor

Contact: Rebecca Fraser, Registered Dietitian

Date: Feb 27, 2019

QUALITY IMPROVEMENT STORY BOARD

Title: Interdisciplinary Approach to Wound Care at Stuart Nechako Manor

northern health
the northern way of caring

Background:

Wounds for long term care residents impact their quality of life and lead to significant morbidity and mortality. They further impact the health care system by costing significant resources both in supplies and staff time.

-Acute wounds cost approximate 21,000 per incident (2015 data)
-Chronic wounds cost approximately 52,000 per incident (2015 data)

Best practice indicates that wounds should be managed in an interdisciplinary manner. Currently, not all wounds are receiving interdisciplinary care, which leads to longer healing time or non-healing ulcers. Interprofessional care incorporates the care of a dietitian, occupational therapist and physiotherapist and can address malnutrition, pressure offloading and maintaining strength and movement.

Objective:

By May 31, 2019, 90% of all wounds experienced by the resident's in Stuart Nechako Manor will be managed in an interdisciplinary team based way.

Solution:

During the **Kaizen event** we strategically planned how to improve the process of the prevention and management of PI in SNM

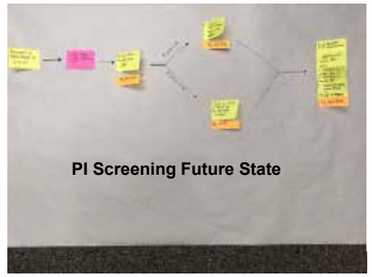
-For screening for the risk of PIs, a future state was mapped out. It was agreed that all residents would be screened:
>within 24 hours of admission
>weekly until the initial RAI is completed
>if their PURS score was above 0 on a RAI
>upon return from hospital
>with a change in medical status.

This meets NH and provincial guidelines.[1] If the score was 18 or less they would develop a PI prevention care plan and refer to the Interprofessional team as required.

-For management of a PI, the team decided to go beyond the guidelines and to consult all members of the Interprofessional team whenever a PI was found. The consensus was this was simpler and provided better care. The members on the Interprofessional team decided that they would make these PI referrals a priority in their referral system and endeavor to see all resident's referred with a PI within one week.

Challenges Encountered:

The major challenge that was encountered from the beginning was the time that it takes to get ethics approval from UBC and NH. This delayed the project for several months. As well, we had to ask for an exemption of consent as initially the request was for consent to be obtained from every resident in the facility, however, many were unable to understand the project and methods to the extent needed in order to give informed consent.



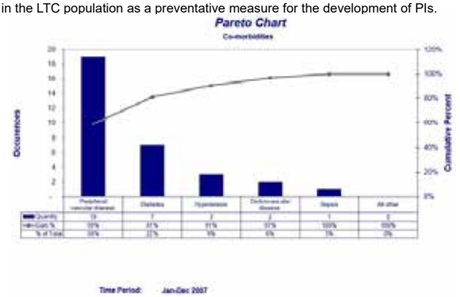
PI Screening Future State

PI Management Future State

Current State:

When the charts were reviewed, it was found that 3 residents had pressure injuries in 2017. Of those residents with pressure injuries, there was no referral to any interprofessional team members during the year we examined. Independently, only one interprofessional team member saw one of the resident's during that time and referred to the wound during their assessment. One resident had more than one pressure injury during the time period examined, which demonstrates the increased complexity of that individual and need for the full interdisciplinary team's involvement.

Five comorbidities where examined that are commonly associated with increased risk of the development of PIs.[3] When looking at the most common co-morbidities in our population, we see in the pareto diagram that peripheral vascular disease is most prevalent followed by diabetes (see appendix 1). This would indicate the importance of ensuring good blood glucose and lipid control in the LTC population as a preventative measure for the development of PIs.



Results:

Unfortunately, this project was not able to be completed during the allotted time primarily due to the time that ethics approval took. It is expected however, that it will meet the intended results of the Braden Scale being done much more consistently at admission, weekly until the RAI is done, upon return from hospital and when the PURS score is greater than 0. It is also expect that the Interprofessional team will be consulted when a PI is found. Follow up and support will be provided to the Interprofessional team and leadership past the timelines of this project to ensure the success of this plan.

The plan was to evaluate the results of the PDSA 3 months after implementation, as this would have given enough time for a full cycle of RAI assessments to be done on the resident's in the facility and for likely a number of new admissions to happen. However, SNM had a fire which resulted in no new admissions and the residents being spread across several facilities. It is not anticipated that the restoration work will be completed for 4-6 months. Thus, the PDSA has been suspended until the building, residents and staffing are back at base line.

Next steps / Sustaining the Gains:

This project will be expanded beyond SNM to other LTC facilities within NH. As a Clinical Nursing Lead for Skin and Wound has been appointed, we will work in a coordinated way with this position to ensure that interdisciplinary wound management is worked into the curriculum for the LTC facilities.

Beyond LTC, this project would be able to be brought to the primary care teams in community. Currently, home support workers and primary care nurses primarily manage wounds in community settings. However, the learnings from this project from screening to management could be brought to this setting with little alterations.

Patient/Customer:

The standardization of screening and then referring high risk resident's for the development of PI's to the Interprofessional team will hopefully lead to the reduction in the development of PI's which impacts both resident's quality of life as well as nursing time spend caring for PI's and the expense of supplies.

As well, by involving the Interprofessional team in the management of PI's this means that the care doesn't fall entirely on the nursing team and leads to a leveling of the work.

It also will lead to addressing more of the causal factors and will lead to a quicker healing time.

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Patient Pathways Project

Authors: Danielle Richey and Kristen Scrivens

Unit Name: Kitimat General Hospital and Health Centre

Contact: Danielle Richey & Kristen Scrivens

Date: June 18, 2019

QUALITY IMPROVEMENT STORY BOARD

Background

With increased industry in Northern BC, specifically Kitimat, there has been a growing number of individuals utilizing emergency department services for basic or routine care, rather than receiving care from a primary care home and linked community supports.

Effective communication between ER, local physicians and community services will help connect patients to an Interprofessional team for broader, supportive wrap around care utilizing the full scope of healthcare services available. It is imperative that the Emergency department communicates with Community Services to ensure care is being provided in the right place to minimize cost to health system and ultimately improve patient experience.

Objective:

The aim is to align population health activity with the primary care home to address health risk factors and support healthy living as well as implement Interprofessional teams to support primary care homes in providing health services for people and their families over the course of their lives.

Care is being inappropriately accessed through Emergency Services rather than Community Services. The treatment done in ER is not being communicated to other support services especially patients with overlapping care that information is not being shared for that wrap around care expectation. This work is important because Northern Health is focusing and improving Primary Care with the patient at the centre of their own health journey. The improvement expectations are that there will be increased patient satisfaction as well as provider satisfaction because their care is strategic and planful.

Current State:

At first glance, feedback received showed that at various levels, communication was either nonexistent or not occurring between ER and Community Services. It was felt that patients were not always receiving care in the right place.

Computer systems used between the various departments within the hospital and physician's office adds another element of disconnect to the communication process.

Electronic Medical Records (EMR) throughout the hospital are not the same software platform and do not interface with each, compounding poor communication between departments delivering care to the same people.

There was a lack of awareness of the disconnect between our shared patients. After initial discussions it was learned that this was a mutual frustration within the Hospital site. A process needed to be developed to better coordinate shared patients within Kitimat General Hospital services.

Tools used:
Quality Improvement tools utilized at this event included Process Mapping - Our team mapped the current state of communication with a graphic illustration of Kitimat General Hospital current process.
Fishbone diagram - Another graphic tool used to identify and snapshot of the root cause of the identified problem. Visually the causes are the bones of the fish and effect is the head.
Standardized work - The team agreed it was imperative to come up with an agreed upon set of steps and processes to help consistency and improve patient care through the utilization of one standard form.
PDSA - The team used the cycle to test the Care Plan form to come up with the most effective one that all liked.
5 Why's -Used to do a deep dive around asking 5 times as to why a problem has occurred in order to reach a conclusion about what the actual root cause is.
It was felt that these tools were best employed to effectively guide and achieve our Lean improvements

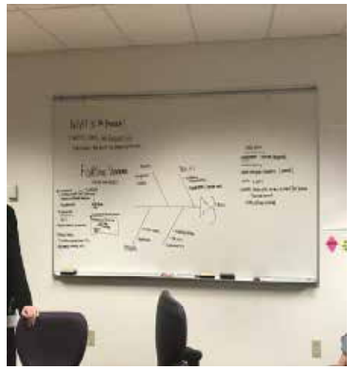


Photo from KAIZEN Event (Fish:
- 4 Physicians
- 2 IPT members
- 2 Program Leads
- 2 Managers

Results:

Due to unforeseen circumstances, aspects of this project require a longer timeline. The KGH site has experienced a high rate of staff turnover including both project leads changing positions and members within our identified team leaving our site coupled with challenges around physician rotation. To achieve the intended improvements the project leads underestimated the impact of physician rotations would have on project timelines. The first PDSA cycle commenced with physicians who will not be returning to their clinics for 6-12 weeks and it is challenging to project when the team will have these original engaged physicians at the same time. Introducing this project to three other physician rotation lines would require the leads to triple the workload and thus be counterproductive to Lean culture

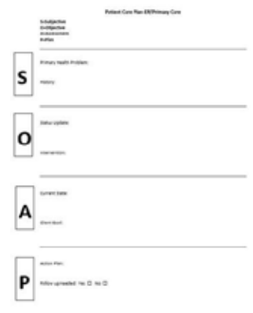
Another challenge the team faced was being able to access support from IT with Powerchart. Granting and changing access also needs to be done at a higher level of authority than where the project leads stand. Approval was granted, however the timelines to complete this for all staff that would need access to move through this project takes some time as well as training on a new form and process. There has also been limitations on who can actually add a care plan to Powerchart, as under first impressions it was identified that everyone was able to add to the document but as the project progressed it was clear that access is only granted to physician users which alters the flow of information. Nonetheless, team members and physicians who are engaged in this project see the value and would like to continue to demonstrate the application of our communication project. The draft care plan has received positive feedback-IPT members and physicians all feel this tool will greatly impact care in the right place in alignment with Northern Health' strategic priorities of Healthy People in Healthy Communities and Coordinated & Accessible Services.

Solutions/Next Steps:

We expect that this project can be implemented over a phased approach. The IPT services are a regular and consistent service that can continue to move forward with the implementation of the new care plan on Powerchart. This will enable physicians working in ER to have access to the information provided by the case managers within IPT. Phase 1 can be closely monitored by the Community Service Manager to ensure the IPT case managers are updating care plans as patient's health care needs change.

The foundation of moving this project through the following phases relies solely on IT and levels of access to uploading documents into the Powerchart system.

In upcoming months, the Kitimat General Hospital will be holding a Medical Advisory Committee (MAC) meeting where this project could be introduced at a higher level to another round of physicians. Promoting this project at a wider site level with medical staff present would show strategic importance and value to promoting adoption of the care plan form and improved communication between departments on site. This is a huge benefit of a co-located site.



Care Plan agreed upon by KAIZEN working group

Consistency and standardization of this document will assist in enhancing patient care.

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Baby-Friendly Initiative (BFI) Step 1 - Policy Implementation Project

Author: Vanessa Salmons

Unit Name: Regional – Perinatal Program

Contact: Vanessa Salmons, Perinatal Program Executive Lead
250-985-5524

Date: July 15, 2018 to April 31, 2019

QUALITY IMPROVEMENT STORY BOARD

Baby-Friendly Initiative (BFI) Step 1 – Policy Implementation Project

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Background:

- The BFI Ten Steps is a quality improvement strategy outlining the minimum standards for infant feeding and maternal/newborn care recommended by the World Health Organization, the Breastfeeding Committee for Canada and the BC Baby Friendly Network
- One of the Perinatal Program's quality improvement priorities in NH is to support facilities/communities efforts to achieve the BFI 10 Steps standardization
- The BFI step that presented as the highest priority to support is Step 1: Have a written breastfeeding policy that is routinely communicated to all staff, health care providers and volunteers
- NH has a new BFI clinical practice standard (policy) to address Step 1 of the BFI framework
- An opportunity presents itself to formulate a solid implementation plan with identification of knowledge translation/education to support staff in both acute care and community settings in NH

Objective:

The aim of the project is that by April 2019, 80% of the staff and providers in Quesnel, Prince George, Fort St. John and Kitimat hospitals/communities will have awareness and understanding of the new BFI Clinical Practice Standard (policy) available on OurNH through completion of an implementation module on the Learning Hub, inclusive of:

- Link to the standard
- BFI e-learning module
- BFI overview video
- Knowledge Translation quiz
- Survey

Solution:

- A focus for improvement was identified through the BFI self-assessment process (current state) and **the Regional Development Team in-person Kaizen event** (World Café/Root Cause Analysis); whereby Step 1 (policy/clinical practice standard) was identified as the priority.
  - This event was supported and co-led by the Provincial BFI Coordinator, Lea Geiger
  - A graphic facilitator was present at the Development Team Kaizen event, from which a summary graphic was created to highlight the results of the World Café and current state analysis.

Graphic Representation

- Once sites/facilities/communities were identified for participation/implementation, a second **Operational Webinar Kaizen** event was implemented Kaizen Agenda and to review the findings of the regional team and determine change/implementation ideas through the use of a Case Study and Driver Diagram.

Case Study

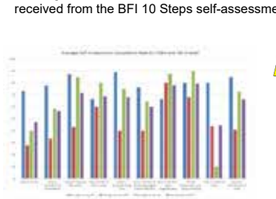
Driver Diagram

- The sites determined that a consolidation of the implementation ideas into a standardized BFI Learning Hub Module would be most effective for the staff completing the project. This module includes a link to the BFI Clinical Practice Standard, a BFI 101 e-learning Module, a BFI overview video, a Knowledge Translation Quiz and a Survey

Learning Hub Module

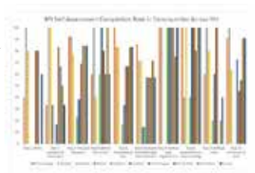
Current State:

- The Regional Development Team, the Moving Breastfeeding Forward team, conducted a BFI Self-Assessment/Evaluation process by utilizing the Breastfeeding Committee for Canada BFI Outcome Indicators in the summer of 2018 to determine the current level of implementation of the BFI 10 Steps in each community/facility in NH
- This data/information was used to support the development team to prioritize the 10 steps and determine work elements for further implementation across the region.
- Meeting these minimum standards is deficient across Northern Health evidenced through data received from the BFI 10 Steps self-assessment



Step 1 (Policy); Step 2 (Education) and Step 9 (Artificial Teats) had the lowest completion rates across the north

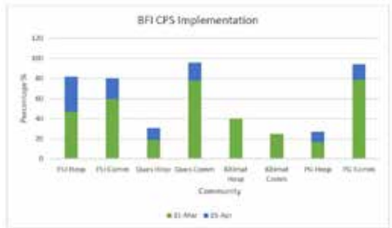
10 NH communities completed the self-assessment, indicating a gap in policy (Step 1)



Results:

- The implementation phase of the project occurred from February 1 – April 15, 2019, whereby the operational teams in the four sites and facilities worked to complete the Learning Hub module.
- A **mid-project check-in evaluation** was completed on March 14, 2019, which highlighted an ease of completion for the community PG group due to the education being coordinated in groups.
- **Completion data** was collected on March 31 and April 15, 2019, which highlights percentages of the BFI CPS Implementation Learning Hub module completion in hospital and community settings in all four sites
- FSJ had the highest completion rate overall, combining hospital and community staff – 82% and 80% respectively, meeting the target goal of 80%; the Quesnel community staff group achieved the highest completion rate of 96%; Kitimat had the lowest completion rates in both community and hospital due to low staff numbers and local leadership changes
- Four out of eight staff groups met or exceeded the 80% goal in the project.

Completion Data



Next steps / Sustaining the Gains:

Sustainment of the project **(Phase 1)** will be achieved through:

- Monitoring continued progress of staff completion in the four sites through the audit survey at 30-60-90 day connections
- Incorporating the BFI CPS Implementation module in new staff orientation to maternity services and the existing NH Infant/Toddler Nutrition Guidelines for Health Professionals Learning modules.
- Recommendation to complete the module in a group setting whenever possible within a team meeting or huddle format.

Spread of this project will be to:

- Identify one new community from each HSDA to participate in the implementation **(Phase 2).**
- The ultimate goal would be for all acute and community sites/facilities to have completed the BFI implementation by 2020/21.
- A final evaluation of the project will identify any tweaks and adaptations to the implementation for future translation in additional sites.

Phase 3 of the project will be for the Regional Development team to determine next BFI steps for regional development and implementation.

Patient/Customer:

- The Qualitative impact of the project is in relation to the parents and families who experience a Baby-Friendly Hospital or community setting (future measure)
- The Quantitative impact is the number of staff with improved knowledge and understanding of the BFI 10 steps as measured through completion of the BFI Clinical Practice Standard Implementation Learning Hub Module

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The Bulkley Lodge Stores Quality Improvement Project: Managing Nursing Supplies in Treatment Room

Author: Liza Hart

Unit Name: Bulkley Lodge

Contact: Liza Hart, Manager

Date: May 2018

QUALITY IMPROVEMENT STORY BOARD

The Bulkley Lodge Stores QI Project: Managing Nursing Supplies in Treatment Room

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Background:

- Bulkley Lodge is a 70 bed complex care facility in Smithers BC.
- There is dissatisfaction and frustration with the current layout of supplies storage, and with the current ordering and re-stocking processes.
- Direct care providers (especially nursing staff; n=20) express frustration with the current layout and trusting that supplies will be available when needed.
- Admin support staff report that ordering and re-stocking takes excessive time every week, and is not sustainable with current workload.
- Supplies are being hoarded in areas not monitored by admin support staff, and expired stock is being discarded.
- The process for making decisions about individual products (especially wound care products) is not systematic, resulting in many special orders of items that are not commonly used, and the need to store an over-supply of similar items.

Objective:

By April 2018 this project will have achieved the following objectives:

- 30% increased staff satisfaction with the **layout** of storage in treatment room
- 30 increased staff satisfaction with **access to and management** of supplies
- 15% reduction in **time taken to re-stock** each week
- **Zero waste** related to expired stock
- Reduction in the **net volume of inventory** maintained on site
- Elimination of **"special" requests** for stocked items related to unanticipated out-of-stock

Solution:

- The team conducted a 5S of the existing storage and implemented an inventory management system called the "two-bin system"
- An inventory of multiple storage areas throughout the facility was conducted
- Analyzed supply use over time to determine rate of usage
- Master supply list was created
- Renovated the treatment room to remove built-in cupboards
- Organized supplies on shelving units with nursing input
- Consolidated majority of nursing supplies in one area from three
- Culled all infrequently used items and expired stock
- Excess supplies given to other healthcare service sites (hospital and Terrace)
- Excess supplies and expired stock donated to Northwest Community College for nursing and healthcare worker training programs
- Supply use instructions developed for nursing staff
- Supply re-ordering instructions developed for administrative staff

Current State:

- Nursing supplies all crammed on one small shelving unit
- Items in downstairs storage that nurses wanted closer
- Ineffective use of cupboard space and drawers
- 60% of nurses dissatisfied with where items stored (n=5)
- 60% very dissatisfied/dissatisfied with how items stored (n=5)

Nurse Satisfaction - Where Supplies Stored

Nurse Satisfaction - How Supplies Organized

Results:

- Treatment room supply area renovated and 3 primary storage shelves installed
- Two-bin system fully implemented

- SURVEY RESULTS HERE

Next steps / Sustaining the Gains:

- Treatment room improvements have been sustained to date. As new items are stocked in keeping with standards, we will ensure there is a continuous review of stock kept on hand.
- Written guidelines for administrative staff will be maintained so that with staff turnover the system can be maintained.
- Each nursing team will be supported to introduce a complementary organization system in the facility's Medication Rooms (3).
- The two-bin system will be implemented in supply closets where personal care products are stored throughout the facility.

Patient/Customer:

Put happy people picture here

Put quote from follow-up survey here
Include voices of nurses and administrative staff

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Referral Prioritization and Waitlist Management in a Community Mental Health Setting

Author: Trish Jones

Unit Name: Prince Rupert Community Health Services

Contact: Trish Jones, Team Lead

Date: May 2018

QUALITY IMPROVEMENT STORY BOARD

Referral Prioritization and Waitlist Management in a Community Mental Health Setting

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Background:

- The project was designed for and implemented in the community outpatient mental health and addictions service setting via two Interprofessional Teams (IPTs)
- The IPTs receive a wide variety of patient referrals for mental health and addictions services (Counselling, Psychiatry, Opioid Antagonist Therapy (OAT), Adult Addictions Day Treatment Program (AADTP))
- These referrals come from physicians, other community service providers, and individuals
- Previously, clinical staff were taking on referred patients on a daily basis, without any triaging or caseload management
- The result was high staff caseloads, inconsistent wait times, lack of standardized processes, and inappropriate allocation of staff resources
- This project focused on developing prioritization categories and a referral process for the daily influx of patient referrals
- Both staff and patients will benefit by a standardized referral process

Objective:

To have a standardized MHAS referral prioritization tool developed, and a defined referral process identified and implemented by May 2018

Solution:

- To have a standardized MHAS referral prioritization tool developed and a defined referral process identified and implemented by May 2018
- For physicians, community service providers, and patients to understand our referral process, and be aware that all referrals will be triaged and responded to accordingly

By meeting these objectives, it is hoped that both the patient experience (i.e., flow through the system) and provider workplace satisfaction (i.e., lessened workload and anxiety) be enhanced.

Barriers to changing the current state:

- Staff embracing the notion of change i.e., not seeing every patient, comfort with less urgent patients waiting to be seen
- Clinician of the Day (C.O.D) services were only half day

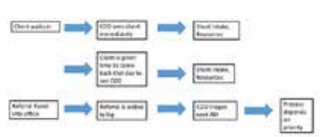
Process:

Three Kaizen Events with Project Team

- ½ day for identifying need for change and to distinguishing clinical terms most used in referrals to CMH in the past 4 years
- Full day for identifying 4 prioritization categories (Urgent, High, Medium, and Low)
- Full day for ascertaining the flow of a patient referral through the system (point of referral received to point of staff first contact with a clinician)
- Several Pre & Post Kaizen meetings were held with the team to discuss planning and to firm up some processes

Process mapping was utilized to plan the future state of a referral received into community mental health services.
Standard Work was implemented by defining a clear patient pathway through the system

Patient Pathway



Patient Flow Based on Priority

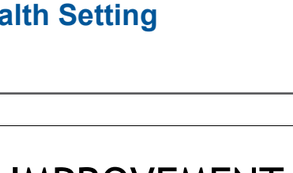
Current State:

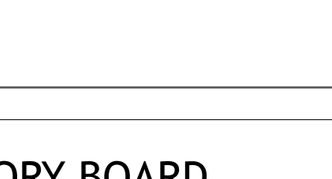
- There is currently no clear process for prioritizing new referrals to Mental Health & Addictions Services in Prince Rupert, nor is there a process for managing a client waitlist
- The MHAS team consists of 4 full-time clinicians and 1 part-time clinician who take on a patient caseload
- On average, the team receives 90 patient referrals per month (November 2016-2017 patient referral log)
  avg= 20 new patients per caseload per month
- Staff have taken on every referral on a daily basis, adding to a constantly growing workload and contributing to high levels of staff stress and symptoms of burnout
- Two previous staff processes have been trialed with ineffective results:
  - Alternately, referrals were screened and non-urgent referrals were added to a waitlist, resulting in a bottleneck
- Physicians and patients do not have a clear understanding of our processes, resulting in inappropriate referrals, increased wait times, and confusion for patients

A current state process map was completed at the commencement of this project. This map emphasized:

- The numerous unclear pathways for patients referred to our teams
- The multitude of factors involved in triaging a referral
- *The need for clearer referral and prioritization processes!*

Results:





- The majority of mental health & addictions related referrals are for individual counselling (62%)
- 13% of referred patients "fell through the cracks" i.e., staff failed to attempt contact
- Of those patients referred for counselling, 31% did not respond to our attempts to contact them

- Increased satisfaction with the referral process
- Enhanced meeting of patient needs
- Reduced anxiety about the referral process
- Unchanged perception of workload pressure
- Perception of slight improvement in external providers understanding our process

Next steps / Sustaining the Gains:

- The model would be most efficient if combined with an extended C.O.D. role, e.g., all day rather than half-day
- Should C.O.D. be extended, more data collection would inform whether the model was both efficient and sustainable
- A walk-in service model may best meet patient needs and reduce staff anxiety regarding wait times
- A walk-in model would: Catch the 31.1% of patients whom "disappear" after the initial referral, despite team efforts
- Rule out the chance of missing contact with a patient, as patient needs are being met at the time of the referral request
- The team of clinicians are amenable to continuing the project processes if the C.O.D. role is extended
- The project manager, one stakeholder, and one team member are committed to continued modification and trialing of the project model
- Similar prioritization categories could be developed for other IPT functions (e.g., home care nursing patients)
- Education for Physicians regarding the referral process will be conducted in conjunction with their Practice Support Coach

Patient/Customer:

- Patients were prioritized daily and contacted accordingly
- Patients were seen in a timely manner, thus making services more accessible for the right person, in the right place, at the right time
- Wait times for urgent and high priority patients decreased
- All patients were offered additional resources during their wait times
  - The results indicate that we are not offering services immediately when patients need them most or are most likely to engage in services (i.e., at the time of referral)
  - This suggests that a walk-in clinic model may best meet the needs of patients, by providing the appropriate response to patients at the most suitable time

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- Brett Broster
- Jacquie Hakes
- Tamara Checkley

Enhanced Resident Satisfaction through Tableside Meal Service

Author: Heather Shannon

Unit Name: Bulkley Lodge

Contact: Heather Shannon, CNM, SSM

Date: October 1, 2017 to April 30, 2018

QUALITY IMPROVEMENT STORY BOARD

Enhanced Resident Satisfaction through Tableside Meal Service

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Background:

Globally, malnutrition affects 12%-54% of residents in LTC, mostly due to poor food and fluid intake. Malnutrition can lead to negative health outcomes including hospital admissions, extended lengths of stay in hospital and death.

At Bulkley Lodge all residents are provided meals based on the menu tickets produced from CBORD, a menu program implemented at Bulkley Lodge in 2015. The impact of this service model is that residents are not offered choice, which causes disengagement, and an under-valued feeling related to their well-being.

Choice allows residents to independently determine what they want to consume, quantity and method of consumption. Resident's independence in dining is enhanced, allowing residents to be active participants in their care.

Objective:

- Increase resident satisfaction and choice offered to >75% prior to April 30, 2018, and then to >90% by September 30, 2018

- Additional objectives considered:
  - Increase resident and/or staff engagement
  - Increase nutritional intake for residents
  - Increase independence in dining for residents

Solution:

- We implemented the **SuzyQ tableside service cart** to:
  - Increase choices being offered to residents
  - Allow residents to see and smell the menu items to promote increased intake
  - Promote resident and staff engagement
- Lean Tools used include:
  - **Going to Gemba** (Observation) - to determine the current status of the service model, and the visual impacts on residents
  - **Data Collection -** to provide qualitative data related to actual service processes
  - **Voice of Customer -** allowing residents to determine what they would like to consume, and be active participants in the dining process
  - **PDSA cycles -** ongoing during the implementation of the SuzyQ cart
  - **Point of Use -** by providing table side service
  - **Level Loading -** through the redesign of the food service staff work routines
- Barriers included:
  - Time required to plan implementation of new process
  - Department funding for increased resources in conducting position redesign process
  - Revision and level loading of work routines, to allow for additional frontline service to residents (main dining room & satellite spots)
  - Staff and resident apprehension to change
- Barriers were overcome through:
  - The investment of funding towards staff resources
  - The development of revised staff work routines with staff impacted of revised work routines
  - Meeting with the leadership team for support and ongoing assistance in the implementation of the program
  - Engagement from residents regarding choices being offered, and by being able to see and smell the meal items

- Lessons learned include:
  - Change takes time, and can't be rushed
  - It is important to be a good listener and communicator during a change project, to ensure that the concerns raised are heard and resolved, and that all participants are actively working toward the same goals.

Participants in the improvement work included the Bulkley Lodge leadership team, nursing and HCW team, food services team, our residents, clients, families and guests.

Current State:

Following the *NH Dining Room and Tray Service: Complex Care* policy, residents are provided meal plates prepared in the kitchen utilizing printed CBORD tray tickets. Staff provide the pre-cut meal items to the residents for consumption.

Current state doesn't allow for resident engagement with food service staff, only direct care staff.

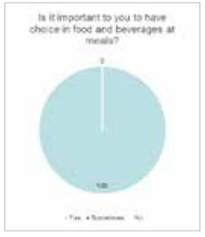
Using Observation (going to Gemba) we have determined residents were offered choice 22% of the time.

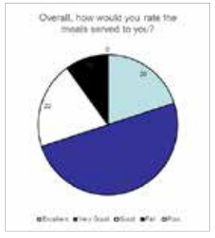
Through the collection and analysis of data from the Residents Satisfaction Survey, we determined that residents were 55% satisfied with food services.

Results:

Our client centered results include:

- Residents' satisfaction level increased from **70 to 85%**
- Choices offered to residents increased from **22 to 94%**





Next steps / Sustaining the Gains:

As part of this project, we will complete an additional assessment of resident satisfaction and choice level in September 2018

Sustainability process:

- Develop standards for using the SuzyQ cart, and how to maximize the items that are offered as part of the program.
- Share the goals that have been attained by the teams, so that they can take pride in the success.
- Promote/support other sites who may choose to make use of the tableside service model, in an effort to enhance the resident engagement, and dining experience, which promotes increase overall satisfaction and engagement in daily living.
- Continued PDSA cycles, to assess any arising challenges and ensure they have been resolved.

Patient/Customer:

Our residents have told us:

"We enjoy this change, and being able to choose the items that we want, and have sauce added or not"

This change has resulted in our residents' having:

- increased independence in dining
- engagement though the choice process
- opportunities to interact with non-direct care staff

The program has allowed for a multi-disciplinary team approach in the care of our residents.

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Workplace Health and Safety Admin Team Review

Authors: Christine Lewis and Leeann McDowell

Unit Name: Workplace Health & Safety

Contact: Christine Lewis & Leeann McDowell

Date: Sept. 2017 – Aug. 2018

QUALITY IMPROVEMENT STORY BOARD

Workplace Health & Safety Admin Team Review

Background:

WHS admin team provides support through three department portfolios. One admin per portfolio, there was also a term position in one portfolio. While each admin position has different responsibilities there are many tasks in common. Admins are not aware of each other's work duties making out of office coverage nearly impossible.
The issues identified with the current practices of the WHS admin team:

- Uneven workload balance
- Term position ending March 28, 2018
- Delayed response time to new requests
- Inconsistent processes throughout department
- Lack of fluidity within the admin team.
- Redundant duties being performed by multiple people
- WHS managers receiving inconsistent support

Objective:

Decrease admin task completion time by 20% by end of Sept 2018.

Issues to address through project:

- Workload balance
- Review and revise processes and procedures
- Assess/evaluate needs of larger WHS team
- Redefine admin role/support
- Streamline processes

Measures:

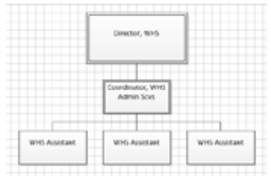
- Track improvement using performance indicators on selected tasks
- Track self-evaluation and manager evaluation on set Admin competencies
- Track customer satisfaction with department wide survey

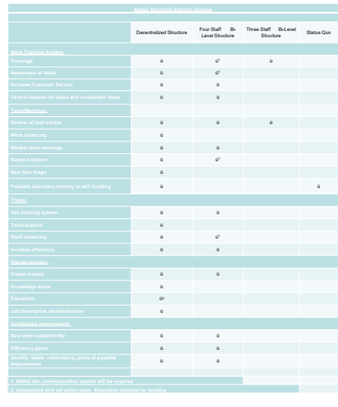
Solution:

Centralized Admin Team

- The admin team completed a work task activity to identify any possible redundancies and areas for efficiency gains.
- A centralized admin team would provide services to the entire WHS department using a triage system to eliminate redundant tasks.
- Tasks would be assigned a priority level that would assist with workload balancing and the assignment of new tasks.
- A task tracker would be put in place to monitor the priority and assignment of tasks.
- The team, with the direction of the WHS Coordinator will review regularly.
- This tracker would be updated with information to complete tasks for purposes of coverage and sharing information.
- A consolidated location of tasks and required documents would also enable the shifting of workloads to accommodate urgent requests and seasonal work shifts (i.e. influenza).
- All new requests would be submitted through a central point of contact.
- Processes and procedures would then be standardized to provide consistent quality of service.

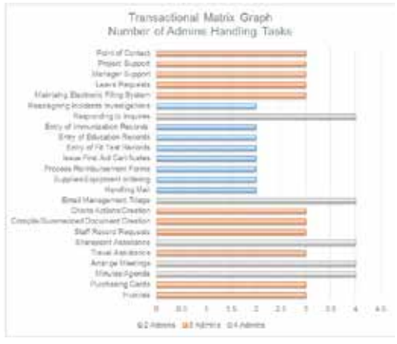
Proposed Reporting structure: Centralized Admin Team





Current State:

Admins each belong to separate portfolios and provide support only to those portfolios. This causes a lot of duplication as highlighted in the Transactional Matrix Graph below.
There is a lack of cross-knowledge between portfolios. Due to this the admins do not have coverage for vacation or sick days. Currently, other team members in the portfolios either provide support or work waits for the return of the admin assistant.
This lack of cross-knowledge makes it difficult for the admins to provide any assistance to each other during periods of increased workload.



Results:

January 2018 the Workplace Health & Safety Director, our project sponsor, left the health authority and this position was not filled until April. No progress was made on the project during this time frame. In April 2018, we resumed work on the project with our new sponsor. Our focus from April 2018 – Sept 2018 was on team building and out of office coverage. The WHS admin team is now meeting regularly and working together to improve the administrative services offered to our team. No changes were made to our reporting structure.

We did not meet our goal of a reduction in task completion but have:

- Developed a work tracking tool – this allows easy transfer of tasks and workload planning
- Established Vacation coverage – vacation coverage now provided within team
- Participated in cross-training

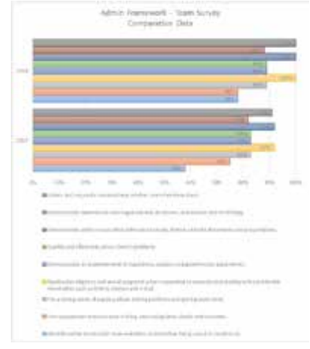
Task tracker development PDSA:
The team tested a variety of tools including: SharePoint tracker, Outlook and a combination of SharePoint and Outlook. The focus was on finding a tracking tool within current software that wouldn't become onerous to use daily or maintain. Most of our requests are received via email and during the PDSA we found it too time consuming to attach or move the original requests. From this point we moved to a SharePoint/Outlook system but found time lapses between updates caused data discrepancies between teammates. The team then trialed Outlook alone; our final version is easy to use and maintain.
We continue to work on our original project objective of decreasing task completion by 20% and improving process efficiencies.

Next steps / Sustaining the Gains:

- Monthly admin team meetings
- Continued use of the admin task tracker
- Meeting with WHS Leadership
- Continue satisfaction survey of customer base
- WHS Admin process reviews

Patient/Customer:

In December 2017 we surveyed our customer base (WHS staff and leadership) to see where the satisfaction levels were with the currently provided services. We once again surveyed the WHS staff to check on the satisfaction levels.



Primary email contact: leeann.mcdowell@northernhealth.ca

Secondary email contact: christine.lewis@northernhealth.ca

Team Members: Christine Lewis, Leeann McDowell, Colleen Jacobs

Nurse's Supply Room - Organization and Restocking Process

Author: Debra Levasseur

Unit Name: Health Unit – Prince George Interprofessional Teams

Contact: Debra Levasseur

Date: July 2018

QUALITY IMPROVEMENT STORY BOARD

Nurse's Supply Room – Organization and Restocking Process

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the northern way of caring

Background:

When the Interprofessional teams moved into their new location, they created a space to house nursing supplies. The nursing supplies were not clearly labelled and the space was not large enough for their needs. There was no structured reorder process. This had created confusion amongst team members and resulted in a lack of supplies on hand when needed. Nursing staff brought forward concern with regards to the lack of access to the supplies required to perform their day to day work. The Director of Community Services, Manager of Community Services and the Team Leads identified this work as an improvement project that would benefit the team.

Objective:

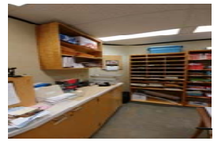
The objectives of this project:

- Identify a space that would accommodate all the supplies that were necessary for the nursing staff in the IPTs to perform their day to day to duties.
- Identify the type and quantity of supplies needed by the nursing staff
- Arrange the supplies in a manner that allowed the nursing staff to quickly and easily access the supplies needed
- Create a consistent reorder process for the Primary Care Assistants

Solution:

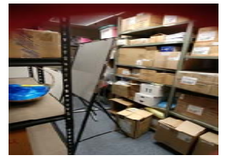
The working group identified a possible new location, and after consultation with leadership the new location was finalized. This new location was the current home of the office supplies, the mail room as well as boxes of old immunization records that were required to be kept on site. This created a bit of a domino affect. Using a 5S approach (Sort, Set in Order, Shine, Standardize and Sustain) the project was divided into different steps:

- **Step 1 - Moving the clerical supplies and mail space to the photocopy room**
  - Removed unwanted items
  - Created new mail space including reorganizing current photocopy area
  - Moved Maternity Home visit supplies to the new nurse supply room
  - Created new office supply space including organizing and labelling supplies



New Mail Area

- **Step 2 - Moving the immunization records to the 1st floor store room**
  - Determined requirements for record retention
  - Removed unwanted items and reorganized 1st floor store room
  - Moved shelving and immunization records to 1st floor store room
  - Created a new process for records retrieval
  - Organized the removal of records that were able to be moved to offsite storage



1st floor store room - before

1st floor store room - after

Current State:

Nursing staff identified the following challenges:

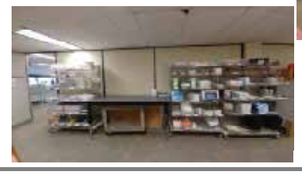
- Supplies to fill their travel bags were not always available when needed
- Supplies were not housed in close proximity, and in many cases, nurses had to travel to other sites to find the required supplies
- There was no table for cleaning equipment upon return from a home visit
- There was no sink or access to water for cleaning equipment upon return from a home visit
- Supplies were not clearly labelled for ease of access

After analyzing the current inventory and past supply order needs and considering the needs brought forward by the nurses, the working group determined that the size and location of the current supply room was not adequate.

Results:

Step 3 - Creating a new nurse supply room

- New shelving system ordered and set up in new space
- Organized supplies based on frequency of use
- Clearly labeled supplies
- Created table space for filling bags and cleaning supplies
- Created new space for Maternity Home Visit supplies
- Created a reorder process



Next steps / Sustaining the Gains:

This project set out to improve the access and reorder process for the current nurse supply room. As the project progressed, it evolved and created improvement in two other areas. We were able to 5S the photocopy and 1st floor supply room. We removed unwanted items, reorganized and labelled remaining items, and created spaces that were easier to access. An immunization record retrieval process was developed that also allowed the teams to gather data and make decisions for future immunization record storage.

An additional project was undertaken to finalize a new reorder process for both the nursing and office supplies in order to ensure sustainability.

Patient/Customer:

My customer for this project was all members of the Interprofessional Teams. Although this project indirectly affected the patient, there was no direct involvement.

I have spoken to numerous members of the team, and all have expressed that they have found a significant improvement.

Nurses have indicated the following:

- They are able to access their supplies much quickly
- All supplies are located in one area, and the supply room is kept fully stocked
- There is space to fill their bags
- Although we were not able to provide a sink, nurses have indicated that they are able to clean the equipment on the table supplied

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Secondary email contact: N/A

Team Members: PCA – Karlene Mushamanski; Public Health Assistant – Robyn Jickels; Team Lead – Ricki Smith; Clinical Nurse Educator – Jasmine Jawanda; PHRN – Sarah Brown; Manager, Community Services – Julie Dhaliwal; Team Lead, Public Health Clinics – Melanie Martin; Sponsor – Director Community Services- Suzanne Campbell

Increasing Security and Improving Usability for Northern Health Remote Computer Access

Author: Dave Moleschi

Unit Name: Northern Health ITS

Contact: Dave Moleschi

Date: April 2018

QUALITY IMPROVEMENT STORY BOARD

Increasing security and improving usability for Northern Health remote computer access

Objective:

To reduce the time and reduce the complications Northern Health staff and physicians face when they configure computer two-factor authentication profiles. In scope use is accessing Northern Health Webmail, i-Site, and OurNH. Computer network security standards must be maintained during the process.

The goal is to reduce the time spent on the process from the current 30 minutes to under 10 minutes. The setup time must remain consistent 24 hours a day, and the process must be supported by the Northern Health ITS Service Desk.

To meet the objective a new application will be developed in-house called https://trusted.northernhealth.ca.

Background:

The Northern Health ITS department owns the current process.

What is Two-Factor Authentication? It adds an extra layer of security when you log in from outside the NH network - e.g., at home or on the road.

Two-Factor Authentication is a method of confirming a user's claimed identity by utilizing a combination of two different factors:

1. Something you know (your computer login username and password)
2. Something you have (a one-time passcode configured to be received on your mobile phone) The two-factor authentication service will need to be configured for each user by going to the Northern Health Trusted Access website (https://trusted.northernhealth.ca/) or calling Service Desk at 1-888-558-4357

Current State:

Hackers constantly try to steal Northern Health staff login information. Two-Factor Authentication will help prevent this. Stolen personal health information can be worth 10 times that of credit card information.

Two-factor authentication has already been implemented for use when accessing the internal Northern Health computer network (VPN) from an offsite computer. It has not been implemented for accessing Northern Health Webmail, i-Site and OurNH.

Physicians and staff have difficulty using the current system of Two-Factor authentication called RSA. Users find it takes too much time to setup RSA because it involves installing software on their cellphone. This install on the phone is the root cause of difficulty. The RSA system also has a high licensing cost.

When staff and physicians can't access their computer needs due to the RSA system not working for them, it will have a potential impact on patient care.

The RSA system was studied, and tests show initial setup takes 30 minutes and this setup takes longer after hours when a tech must be dispatched for assistance. This time is not acceptable for users, and has been identified as a major problem.

The scope of the project includes implementing a new Two-Factor system called https://trusted.northernhealth.ca/ for Northern Health Webmail, i-Site and OurNH. Out of scope for this project is remote network access called VPN. The VPN system will eventually use the new Two-Factor system called https://trusted.northernhealth.ca/ sometime in 2019 and will be implemented as part of another project.

Solution:

How were the changes made?

Signing into webmail, i-Site and OurNH from an off-site computer will work a little differently. After entering your NH username and password, you'll need to enter one more code.

The code will be sent to your mobile phone, either as a text or through an app – it's your choice. It can also be sent to your personal email. To choose how you'd like to receive your authentication codes go to the Northern Health Trusted Access website from within the Northern Health Network at https://trusted.northernhealth.ca There are three ways to receive your code:

1. By text message
2. In an email to your personal account
3. Through the Google Authenticator app.

NOTE: If you're already using NH's VPN system, your RSA passcode won't work for accessing your Northern Health Webmail, i-Site and OurNH. They're two separate systems but the plan is for the systems to be merged in 2019, however that is out of scope for this project.

What lessons were leaned?

The solution has to be as user friendly as possible, and comply with security standards to prevent attacks from hackers.

Who was involved?

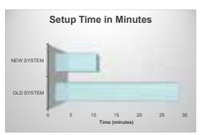
A test group of 10 Northern Health staff from different departments and 3 physicians were asked how to improve on the old system. The group also tested the system during the stages of development and provided feedback. The Northern Health Tech Ops staff also tested the systems.

Patient/Customer:

- Northern Health staff and physicians now spend less time when configuring computer two-factor authentication profiles.
- There is an increase in security for computer systems that contain sensitive patient information.
- The project will develop a cost effective in-house solution called https://trusted.northernhealth.ca/. We plan to offer the software solution and our knowledge on the process to other BC Health Authorities once complete.

Results:

- The new system reduced the initial setup time to 10 minutes, from a 30 minute average.



- The system went live April 16th and over 4,200 users have enrolled in the service for use when accessing Northern Health Webmail, i-Site, and OurNH

- This is what the new NH Trusted Access Two-Factor Authentication website looks like.

Next steps / Sustaining the Gains:

Other events planned that are out of the scope of this project include further reducing the dependence on the RSA software by using https://trusted.northernhealth.ca for computer remote access also known as VPN, starting in 2019. The mySchedule app will also be transitioned over to the new service, with the option of transitioning other new apps in the future.

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Team Members: Dave Moleschi, Team Lead ITS Training and Education, Michael Dawes, Information Security Specialist, James Uhrich, Director Technology Services, Dr. John Smith, Physician, Collette Funnell, Client Services Team Lead, Andrew Dedesko, Senior Application Technical Analyst

Improving Acute Care Nursing Orientation

Authors: Marie McIvor and Sam Teghtmeyer

Unit Name: Dawson Creek Acute Care Nursing Education

Contact: Marie McIvor and Sam Teghtmeyer

Date: September 2017 to July 2018

QUALITY IMPROVEMENT STORY BOARD

Improving Acute Care Nursing Orientation

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the northern way of caring

Background:

During nursing orientation staff report they are unsure of courses required and the time frame to which they need to be completed. The learning material is fractured, not all the courses listed in one area.

Objective:

- To increase the value, organization and clarity of the orientation process for nursing staff.
- Overall staff satisfaction will increase by 33% with the median moving from a 3 (Good) to 4 (Very Good) rating of orientation week in meeting their needs.

Solution:

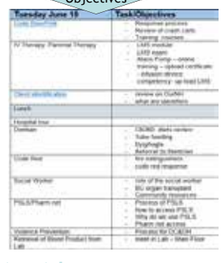
Manager's Pre Orientation process more defined

Kaizen Event

Subject: Managers review of nursing orientation

1. Set dates
2. Process of staff entering orientation
   a. Managers to notify education
   b. Managers to send resume and/or previous work experience,
   c. Education department to be notified if new hires
3. Nursing orientation agenda items and LMS curriculum
   a. Reviewed by managers present at meeting and agreed upon.
4. Follow-up post orientation week
   a. All managers will be added to the NHA - Orientation - Dawson Creek Hospital Nursing for follow up with their staff.
5. CNE to ask LMS to create continuing competency curriculum for ER. Current continuing competency curriculum for IPU reviewed!

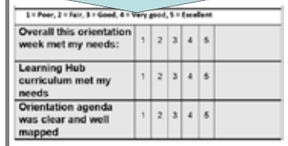
Clear Learning Objectives



LMS Curriculum

Agenda

Evaluation



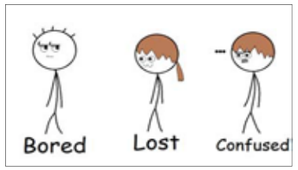
1 = Poor, 2 = Fair, 3 = Good, 4 = Very good, 5 = Excellent						
Overall this orientation week met my needs:	1	2	3	4	5	
Learning Hub curriculum met my needs	1	2	3	4	5	
Orientation agenda was clear and well mapped	1	2	3	4	5	

Your text here

One Stop Shopping

Previously staff had to find each course on learning hub, new curriculum makes one stop shopping

Current State:



No balance

Fractured

Missing presenters

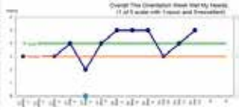
Current Format of Agenda

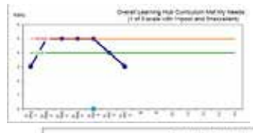
Dawson Creek & District Hospital
NURSING ORIENTATION RECERTIFICATION
LOCATION: Nursing Education room unless otherwise indicated

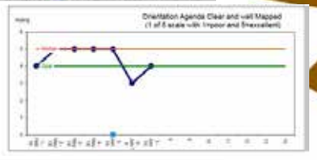
Monday	TIME	Location Nursing room	Presenter	Sign
11-Sep				
IT & Learning Hub set up	0900-0930		Maree McIvor	
Pain Management (PCA/Epidural/Neuropraxia	0830-1200		Maree McIvor	
Lunch	1200-1240			
IV THERAPY (CVAD)	1300-1500		Maree McIvor	
Respiratory Therapy	1300-1600		Sam Teghtmeyer	

Tuesday	TIME	location Nursing room	Presenter	Sign
12-Sep				
Documentation	0900-0930		Maree McIvor	
Safe Patient Handling/Falls Prevention	0930-1100			
Photo ID	1100-1200		Ramona/Eric 3rd	
Tour Hospital	1200-1230			
Lunch	1230-1300			
Dietician	1230-1330		Judy Aunt	
Code Med	1300-1315		Tina Walsh	
Social Worker	1315-1330		Nadine Wild	
Glucometer (New Employee ED	1330-1430		Chrishe Mann	
Transfusion Medicine	1430-1730		Maree McIvor	
Retrieval of Blood Product from Lab	1630-1650	LAB – Inner Core	Lucinda Lavallee	

Results:







Comments from Evaluations:

"Staff removed from orientation to work on unit. Missed out on valuable education."

"Adjustments were made based on orienteers needs…beneficial."

"Time well spent."

Next steps / Sustaining the Gains:

- Evaluation will continue to occur each orientation session
- Collaboration with regional NH orientation
- Work with inpatient CPL around presenting during nursing orientation
- Continue to work on improving no show rates with presenters
- Have annual meeting resurrected for reviewing education needs
- Modify orientation week content as education needs and presenters change

Patient/Customer:

The customers of orientation are:
1) the staff
2) the managers
3) the presenters

These improvements implemented were suggested by customers:

- Curriculum
- Agenda
- Objectives of presenters
- Evaluation form
- Process for managers
- Nursing orientation review Q4 year

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Secondary email contact: Samantha.Teghtmeyer@northernhealth.ca

Team Members: Managers: ER/ICU, OR/PAR, inpatient unit, maternity. Staff, new hires, and those hired in the last year.

Getting Green - A Recycling Project at Wrinch Memorial

Author: April Sebastian

Unit Name: Wrinch Memorial Hospital

Contact: April Sebastian - PCA

Date: April 30th, 2018

QUALITY IMPROVEMENT STORY BOARD

Getting Green – A Recycling Project at Wrinch Memorial

Objective:

To provide meaningful opportunities for Life Skills clients through the implementation of work experience at Wrinch Memorial. Will achieve this by creating a program for Life Skills clients to increase recycling receptacle locations from 3 to 10 at Wrinch Memorial by March of 2018.

The Community Services building where the Life Skills Program is located

Background:

At Wrinch Memorial Hospital, located in Northwest B.C., Life Skills clients are lacking opportunities to gain meaningful work experience in the community.
Key Quality Issues
1.Life Skills clients currently have no meaningful opportunities to gain work experience on site.
2.Wrinch Memorial Hospital has not taken on a standard of recycling to date.
3.Many recyclable materials are currently not being recycled to full potential. Currently there are only three discernible recycling receptacle locations on the grounds available to staff and public.

Current State:

How will we know that a change is an improvement?

Measure Description	Baseline (past performance on measure)	Target	Plan to Collect Data
Lag / Outcome Measures			
Increased recycling receptacle availability	Current State: 3	10	Implementation of 7 new receptacle locations for recycling, with recorded bi-monthly returns. Plan to create mapping of new and old sites at mini Kaizen #2
# Life Skills clients benefitting	n/a	2	Sign in of workers bi-monthly. Plan to create effective documents at Mini Kaizen #2.
Lead / Process Measures			
Setting a Recycling Standard	TBD	TBD	Interim surveys to assess viability/efficiency of recycling program.
Amount of refunds	$8/month	$12/month	Check in and recording of bi-weekly refunds collected.
Staff satisfaction	TBD	90%	Use of the interim surveys to gauge satisfaction. First round of surveys sent out before Mini Kaizen #2.
Client satisfaction	TBD	90%	Use of the interim surveys to gauge satisfaction. First round of surveys sent out before Mini Kaizen #2.

Current State: Main Lobby

Current State: Our Cafeteria

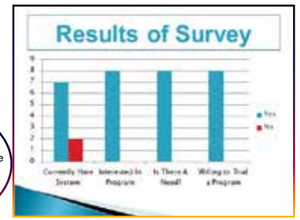
Solution:

The creation and implementation of a Recycling Program here at Wrinch Memorial will provide a way to gain meaningful Work experience for Life Skills clients through active involvement in planning, coordination and recycling of materials collected Within the hospital. Committing to the improvement of our Hospital will also help instill a sense of community pride!

In Scope (what work will this initiative include?) Who/What/Where/When
Providing an avenue for Life Skills clients to gain valuable work experience in our community.
Creating an opportunity for recycling of cans, glass and plastics at Wrinch Memorial.

Future Site for Recycling Receptacle! Registration Waiting Room

Interim Survey Results show a definite need/want for a Recycling Program!



Patient/Customer:

Life Skills Clients in our community will be given an opportunity To gain valuable work experience by running the Recycling Program here at Wrinch Memorial Hospital. These clients have little access to work experience within the community and would benefit greatly from the opportunities this program has to offer.

Out of Scope (what work will this initiative **not** include?) Who/What/Where/When
Will be working solely with Life Skills Program clients, not including other life improvement initiatives in the area.
We will not be including organic materials at this point in time.

Results:

The Project has been implemented successfully. Weekly recycling is being conducted and is bringing in at least one large bag each week of returnable items There is enough recycling being collected in the week long period to sustain the programs need for work, although I do anticipate a fluctuation in amounts. I am pleased with the new and improved Recycling Receptacle locations and have received many compliments on the appearance and overall effect the bins have on the atmosphere here in the hospital. I am currently in the process of transferring accountability of this Recycling Program.

Main Lobby now

Next steps / Sustaining the Gains:

During the next few weeks I will be transferring accountability of this program over to the Project Lead. I will also be monitoring the impact this Work Experience will have on the Clients of the Life Skills Program. I have not gotten any results from the Life Skills Program as of yet but the Project is underway and moving great. Right now we do not have a Life Skills worker to undertake this project, unfortunately she had left her position just after implementation. We have been working with a non-profit charity in our community called Helping Hands since her resignation. This charity provides assistance to those in need with ; prescriptions, dental work and appointments. All the recyclable materials collected have been donated to this particular charity. While understanding that this project is a bit different in regards to the usual Quality Improvement Initiatives, I look forward to observing this project In the months to come with the hope that if we do not get a new Life Skills worker then we can continue to work with this other charity and hand over accountability to them..

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Secondary email contact: Kyla.Arnett@NorthernHealth.ca

Team Members: Kyla Arnett – Life Skills Worker
Doug Eftoda – Maintenance Supervisor
Selina Stoeppler – Dental Clinic Department Head
Tysen LeBlond - Community Services Manager
Deanna Hawkins – Support Services Coordinator
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Rapid Mobilization Program Utilization by Fort St. John Hospital Emergency

Authors: Joyce Graham and Kara Simons

QUALITY IMPROVEMENT STORY BOARD
Rapid Mobilization Program Utilization by Fort St. John Hospital Emergency

Objective:

To improve appropriateness of care for patients who present to the FSJ Hospital Emergency Department **by increasing referrals to Rapid Mobilization Program by 50% by May 2018** for those patients whose care would be more appropriate when delivered by community in their homes rather than being admitted to hospital or sent home without community supports. This will **increase referrals to the Rapid Mobilization program by 4-5 per month.**

How does this help our patients?

1. **Healthy People in Healthy Communities** – provides ED staff with an alternative to admission with the goal of rehabilitation so that patients are able to live safely and independently
2. **Coordinated and Accessible Services** – strives to ensure patient receives the right care at the right time in the right place by improving communication between the Emergency Department and Community Services
3. **Quality** – improving outcomes for patients, ensuring physicians and other caregivers have confidence that their patients are receiving the care they need

Background:

Rapid Mobilization is a Home and Community Care program that provides patients with access to community based home support services. The program provides up to 5 days nursing care delivered by LPNs, or a bridge to various community services that may enable qualified patients to receive care outside of a hospital setting.

The program started in Fort St. John in 2014. Demand for the Rapid Mobilization program has increased overall by 85%. There has been an overall increase in referrals from two areas (day surgery and family practices), but less of an increase from the Emergency Department (ED)/Critical Decision-Making Unit (CDU).

Rapid Mobilization Referrals
2015 vs 2017 (based on Aug, Sep, Oct)
source: 2015 S.Sawka Rapid Mobilization QI Storyboard; 2017 Rapid Mobilization referral binder

	2015 avg per month	2017 avg per month	% increase
Day Surgery/Minor Procedure Room	2	1½	63.9%
Family Practices/Birthing Centre	5	14	154%
Emerg/CDU	7	8	12%
FSJ IPU/Other Inpatient	9	8	12%
Community Services	1	1	0%
Unknown/Source not provided	2	3	85%
	26	48	85%

Current State:

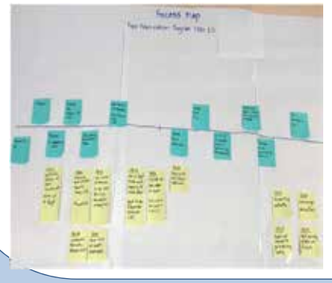
FSJ Hospital current state and capacity issues:

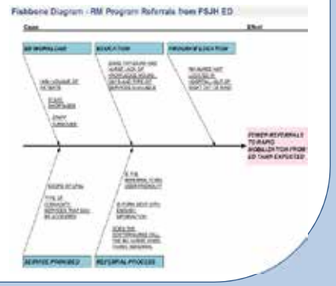
- Inpatient Unit 87% over capacity during 2017
- Emergency Department volume approximately 2000 patient visits per month; 27% are patients who are triaged as CTAS Level 3
- Of patients who were triaged as CTAS 3, 24% of those aged 65+, were admitted to acute care; 8% of those under the age of 65 were admitted.
- Time of registration: 46% of patients visit the Emergency Department in evening/night between 4pm to 7am
- **Rapid Mobilization Program could be an option for more patients:**
  - to avoid admission by providing timely access to care in patient's home and at hours when other services may not be available
  - to provide an opportunity to assess patient's needs in the home when they may otherwise be sent home without supports
  - to connect the patient to appropriate community services

Uncovering the Root Cause; Could there be more referrals from Emergency to Rapid Mobilization?

The team held a series of Kaizen events to determine why the rate of referral averages only 8 referrals per month to Rapid Mobilization. The following tools were used:

1. Process map
   - Identified bottlenecks/barriers – faxing referrals at end of shift, availability of diagnostic services, safety of staff home visits at night
   - Identified waste – referrals with incomplete or insufficient information, no follow up phone call
2. Fishbone Diagram
   - Lack of knowledge about the program due to staff turnover
   - Location – Rapid Mobilization Program staff located in health unit, not Emergency Department

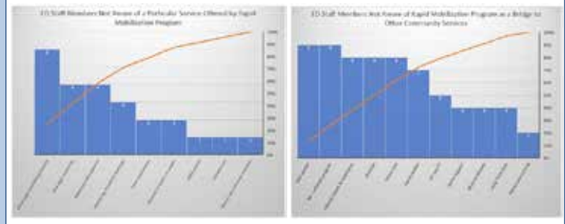




Solutions:

Number of referrals – Education and process changes:

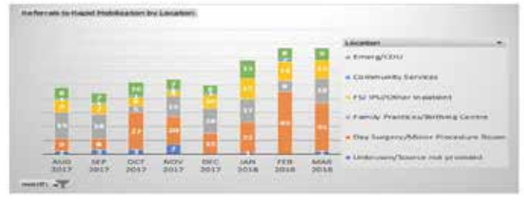
- Members of the team including one Rapid Mobilization nurse visited the Emergency Department on three separate occasions to talk to physicians, residents and nurses to administer a short survey on the Rapid Mobilization program; provided education where necessary in regards to hours, services provided
- Aspects of the program that were not well known were noted and discussed.



Quality of referrals/waste:

- Recommending faxing outpatient ambulatory record with referral to avoid rework obtaining patient history, treatment required
- Recommending referrals be faxed as completed, rather than at end of shift to facilitate phone call between Emergency staff and Rapid Mobilization staff.

Results:



- Did not see increase in number of referrals yet as further work to be done; did see improvements in quality/waste
- Increased awareness of program
- Rapid Mobilization Program nurse meeting Emergency Department staff face to face facilitated relationship building

How the Rapid Mobilization Program changed the rest of my Mum's life

There was a sudden change in the last eight months of my Mum's life. Prior to this she was mobile, basically medication-free, able to complete all her daily living activities easily, and breath on her own. We started noticing a slow decline in her health needing medication and a walker. In April 2017 my Mum was admitted into the hospital when things turned from bad to worse.

My Mum's wish was to be at home. In her words, "I just want to go home and be comfortable". As a result, Rapid Mobilization and her family doctor started creating a plan for a safe discharge. She was now put on oxygen 24/7 so a concentrator was set up, regular blood work needed to be drawn for her blood thinner management, and safety checks and vitals were done when her well being and medication management was assessed. She was able to return home safely.

The Rapid Mobilization program was able to transition Mum to several community services for the next five months. This allowed her to be at home without hospital protocols and it allowed me to be a little less stressed. We were able to better enjoy the rest of my Mum's time together. Eventually my Mum was readmitted where she decided to receive palliative care. She died on the 7th of October 2017 the way she wanted - peacefully.~Joyce Graham

Next Steps:

Recommendations for ongoing improvements and sustainability:

- Rapid Mobilization Program nurse being in the Emergency Department on a regular basis
- Adding Rapid Mobilization Program / Community Services education to orientation packages for RNs and physicians new to Northern Health in Fort St John
- Emergency Department Physician Lead to invite Quality Improvement Coach to quarterly staff meeting

Emergency Department Fort St John Hospital and Rapid Mobilization Program, Home and Community Care Fort St John
Prepared by:Joyce Graham, Primary and Community Care Process Lead, Regional; Kara Simons CPA, CMA, Independent Contractor/Business Analyst

May 2018 **Sponsor: Sherry Sawka**
Team Members: Meagan Adams, Brad Gullason, June Savard, Denise MacDonald, Lisa Mason, Sandra Richardson

Friendly Faces in the Emergency Room

Author: Heather Goretzky

Unit Name: Primary Care

Contact: Heather Goretzky

Date: January 23, 2018

QUALITY IMPROVEMENT STORY BOARD

FRIENDLY FACES IN THE EMERGENCY ROOM

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Background:

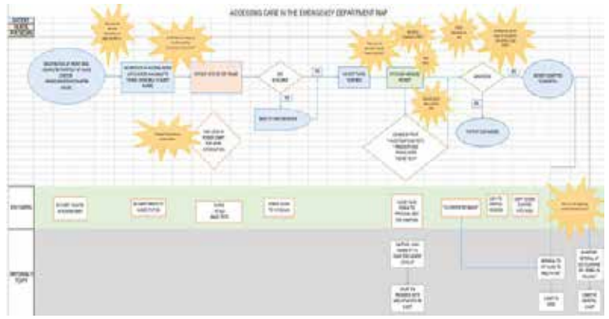
- It has been suggested that there are Friendly Faces who visit the ER for non-emergent care more frequently than would be anticipated given their health status.
- Care delivery in the ER costs more than that in the community setting.
- We have Home and Community Services available in our community that might support the individuals and subsequently decrease the need to access care in the ER.

Objective:

- To develop a standard process to identify who the Friendly Faces are and subsequently develop plans of care to support them with team based care.
- To reduce the number of visits for identified individuals by 5% by January 23, 2019 by proactively supporting the individuals with services in the community setting.

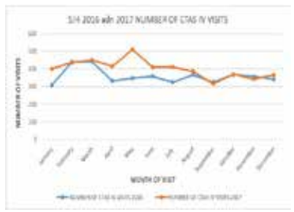
Solution:

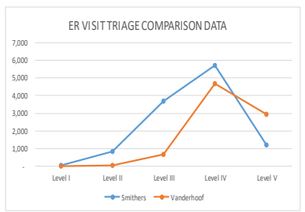
- During our Kaizen event we were able to map our current state for accessing care in the ER. We utilized a TRIZ to further identify areas for improvement and subsequently a work plan to capture the change ideas to be developed into PDSA cycles to test change.
- We identified the need to develop a process for identifying Friendly Faces in the ER
  - Trial with Team Lead to identify based on ER data - was not successful - not enough history to determine
  - Trial with Physicians identifying based on ER data - was not successful - physicians were unable to identify Friendly Faces from the data
  - Trial with ER nurses identifying based on recognition of Friendly Faces - one patient identified - already well connected to the team. Medical interventions were implemented by physician. Too early to see results.
- Is it possible to indicate a connection to the IPT on the ER sheet at registration?
  - NH trialing this process in PG and will move out to Vanderhoof in their next trial phase
- How to best document and share the information
  - Care plans developed in collaboration with the patient/family, physician and IPT that are shared with all involved and are uploaded to Powerchart and available in the ER
- How to educate patients re: clinic appointments available when not an emergency
  - Poster for Emergency registration area
- How can discharge planning support friendly faces? Recognize and follow up quickly with individuals already connected with the team to see if there is a need to bolster supports.
  - Explore a daily ER registry to be shared with the IPT and Head Nurse
- Physician orientation to the IPT



Current State:

- The data gathered from the SJH ER showed that we had a total of 7,448 visits for CTAS 4 and 5 visits in 2016, and in 2017 the number increased to 7,819 visits
- In comparing a rural community of similar size, Vanderhoof was shown to have 25% more unscheduled CTAS 5 visits in the same period of time.
- In the later half of 2017, Vanderhoof had a full cohort of physicians, with more appointments available in the primary care clinic.
- Costs in the ER are not easy to determine as there is a lot of overhead and staffing that factor into the cost, but on average, we could see the cost was higher in the acute setting as compared to a physician's office.
- We were able to map out the current state for accessing care in the ER during our Kaizen event.





Results:

- While anecdotally it was indicated that there were Friendly Faces in the SJH ER, we were unable to readily identify Friendly Faces through the data.
- We have not had any data to date to pull to measure an improvement or not.
- Through tools used in our Kaizen event, we determined that there were a number of minor improvements that we could trial to see improvements:

1. Poster for the ER registration area to highlight that if individual does not deem their visit to be emergent, there may be appointments available at the medical clinic and provided their number. (The clinic is right across the street)
2. Identifying IPT connection upon registration at the ER. We were looking to implement a system that would identify on the ER sheet. In Prince George this is currently being trialed in the Cerner program with an alert. Information received was that Vanderhoof has been slated to trial in the next phase of project. This should alert ER staff of a connection to the IPT with the hope of informing and/or supporting follow up/discharge plans with the individual.
3. ER daily registry report. We are currently in the process of development with NH HIMS team. We will trial having a copy of the report for the IPT prior to discharge planning to identify individuals who are already connected with the IPT. Identified individuals can then be brought up at discharge planning with the Head Nurse who can determine if the visit is appropriate for the team to proactively follow up by phone call to determine if further visits/supports would be appropriate with the individual.

Next steps / Sustaining the Gains:

- We will continue to have the ER nurses identify any Friendly Faces and bring them forward at discharge planning by the Head Nurse or her substitute in her absence. Pull reports to monitor change for improvement or not.
- We will look to have an introduction to the IPT as part of a new physician/resident orientation to NH to increase awareness of the IPT as a resource, its composition and the services available.
- The team will continue to work on all of the minor improvements that have been identified and continue to look for other areas for improvement.

Patient/Customer:

- Through Patient Voices Network, we connected with two individuals from our community to participate in this project.
- We were better able to understand the perspective of a patient accessing care in the ER.
- The patients were able to contribute in a Kaizen event and identify areas for improvement that should positively impact the patient experience.

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Secondary email contact:

Team Members: Jennifer Clarkson, Edie East, Dr. Nicole Ebert, Heather Goretzky, Raquel Miles , Mary Ann Mose, Valerie Pagdin, Cindy Simoes, Brad Van Dolah

5S HSBC 4th Floor Supplies!

Author: Jayleen Emery

5S HSBC 4th Floor Supplies!

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AIM STATEMENT

- 5S the 4th floor HSBC supplies station to reduce supplies waste by and time spent searching for supplies by 90% as well as create a process for ordering supplies and dealing with unwanted supplies items by January 2019.

Team Members:

Jayleen Emery, Lynda Pacheco, Tiegan Daniels, HSBC – 4th floor staff

PROBLEM STATEMENT

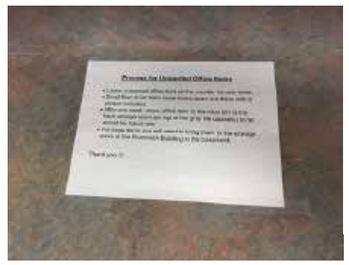
- The group supplies station is for multiple departments and has been a dumping ground for all unwanted supplies as there was no process for what to do with them.
- You often could not find what you were looking for and had to search for a long period of time.
- Supplies was often re-ordered when it already existed, but just could not be found.
- Other staff would often be interrupted by staff asking where to find certain supplies.

CHANGE IDEAS/RESULTS

- A survey was done with the 4th floor staff to address needs, wants and any concerns for the process
- 2 kaizen events were held by Jayleen and Lynda to:
  - ❑ Removed unwanted items
  - ❑ Created a space for storage items in the back room
  - ❑ Shopped for containers to keep supplies organized
  - ❑ Re-organized the space
  - ❑ Labeled the front of the doors and inside cupboards
  - ❑ Lynda re-organized paper and got a new cupboard for it by the printer
  - ❑ Space created for incoming and outgoing mail
  - ❑ White board purchased and attached to the cupboard for ordering supplies
- A process for unwanted supplies was created and posted for all staff

BEFORE

AFTER



Survey Results

NEXT STEPS / SUSTAINING THE GAINS

- The space will be monitored bi-weekly for the next 6 months for organization and consistency
- An after picture will be taken in 3 months and then again in 6 months
- Communication will be important with keeping the space clean and correct supplies ordered.
- Ensure all unwanted items follow the process

Location: Prince George HSBC 4th Floor
Contact: Jayleen Emery – physicianqi@northernhealth.ca
Date: Complete January 2019

PQI PHYSICIAN QUALITY IMPROVEMENT
An SSC Initiative

Communicating and Increasing Use of the Adaptive Feeding Aids Process within Northern Health Facilities

Author: Judy Wakabayashi

Unit Name: Regional Dysphagia Management Team
Judy Wakabayashi, OT

Contact: RDMT@northernhealth.ca

Date: April 2018

QUALITY IMPROVEMENT STORY BOARD

Communicating and Increasing Use of the Adaptive Feeding Aids Process within NH Facilities

Background:

Adaptive feeding aids are specialized cups, glasses, plates, cutlery, and straws that increase an individual's ability to independently bring fluids or solids to their mouth for ingestion.

Use of adaptive feedings aids can:

- Enhance quality of life and personal dignity
- Maintain feeding skills and abilities
- Increase independence during mealtimes
- Improve safety with eating and drinking

Objective:

Aim Statement:

At a regional level, residents who are assessed as appropriate for any of the standard adaptive feeding aids will receive them for each meal 80% of the time by April 2018

Challenges:

- Communicating awareness that the adaptive feedings aids provision process exists
- Ensuring each team member understands and values their role in the process
- Recognizing each site has different methods to store dining supplies and provide meals

Solution:

Future state mapping:

- Input from the entire interdisciplinary team and stakeholder
- Focus group discussions with practitioners and sites

PDSA cycles:

- Review of products for durability, user friendliness and aesthetics
- Evaluate flow of information from practitioner to CBORD (Nutrition Management system) to site via tray ticket
- Track percentage of items being provided correctly

Development of Educational Materials:

- Seek input from stakeholder on practical methods of delivery then create resources

Spot audits and checklist feedback:

- 1 and 3 months after implementation of process
- Data on continued and percentage of use of items at sites

Monitor changes:

- Set up reports through CBORD to monitor adaptive feeding aids use in NH facilities

"From February 28, 2017 to February 28, 2018 there was nearly a 300% increase in amount of adaptive feeding aids added to client files in CBORD"

Current State:

Practitioners were well aware of the functional benefits some individuals would gain from the use of adaptive feeding aids. The barriers they faced were:

- No standard process
- No standard items
- Lack of trial items
- Dependent on the site
- Mostly communication "work around"

The newly established provision of adaptive feeding aids process addresses these barriers by providing:

- Standard request procedure
- Set selection of aids
- Access to assessment kits at each site
- Easy and ongoing availability
- Single ordering process

Results:

Future state mapping:

- Input from stakeholder in all 3 health regions in all disciplines (clinical, food services, direct care, management, product purchase)

PDSA cycles:

- Established the selection of 12 standardized items
- Addition of 12 items to the CBORD database
- Addition of 12 items to be purchased through eRex

Development of educational materials

- Updated poster with process flow model
- Updated selection sheet connecting all stages of process (prescription, card file update, provision and ordering) to increase clarity and roles
- Created and supplied an educational power point in each kit

Next steps / Sustaining the Gains:

- Ensure each NH site, that uses CBORD, has knowledge of the new clinical practice standard
- Provide practitioners with the physical kit which includes the guide-to-use and resources (completed)
- Ensure posters with the process are strategically located where adaptive feeding aids are stored
- Encourage periodic in-services to all staff with the educational PowerPoint presentation by sites
- Continue to complete random spot audits at mealtimes to monitor process function or flaws

- Create an eLearning module to be available as part of staff orientation (September 2018)
- Develop and send out a satisfaction survey about the process for practitioner input (June 2018)
- Establish a 1x yearly meeting to review/update (add or remove) items available
- Create a trend chart; collect data quarterly on use of adaptive feeding aids in NH facilities (July 2018)

Patient/Customer:

Who can benefit?

Children or adults of ANY age who's mealtime experience is affected by **reduced**:

- Strength
- Range of motion
- Coordination
- Dexterity
- Use of hands/arms
- Planning (cognition)

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Transition of Care Communication Between Units at G.R. Baker Memorial Hospital

Author: Laura Johnston

Unit Name: G.R. Baker Memorial Hospital (QUESST, Medicine, Emergency) And Dunrovin Park Lodge

Contact: Laura Johnston
Quality & Process Improvement Advisor

Date: May 4, 2018

QUALITY IMPROVEMENT STORY BOARD

Transition of Care Communication between units at G.R. Baker Memorial Hospital

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Background:

Effective communication is critical in maintaining patient safety. Hand-off communication carries a potential risk to patient safety and is a major clinical priority. Transition points of care are vulnerable points for the patient.

Often clients and families are required to repeat information in the absence of documented and verbal communication between staff. Clients and families need information to prepare for and improve care transitions, as well as to make decisions, and often are not an active participant in the process.

Accreditation Canada's Required Organizational Practice (Information Transfer at Care Transitions) requires standardized documentation at all transition of care points from emergency, admission and discharge. Transfer of Care Communication and the SBAR Tool (Situation, Background, Assessment & Recommendations) refers to a summary report of the patient's treatment and medications.

Objective:

GR Baker Memorial Hospital is a full care hospital with 27 acute beds, 4 ICU beds, 3 maternity beds and 5 crisis stabilization beds (QUESST). Dunrovin Park Lodge is a 91-bed intermediate care residential facility with 19 special care beds.

Between the Medicine, QUESST and Emergency Department units at G.R. Baker Hospital, 80% of patients (4 out of 5) will have a completed Transition of Care Communication document on their chart by April 30, 2018. This will result in better communication between staff, physicians, patients and their families, better patient care and increased patient safety.

Incorporating the use of transfer forms and standardized checklists, as well as including the opportunity to ask and respond to questions, ensures the accurate and complete communication of patient information.

Solution:

Throughout the summer and fall of 2017, a Development Team comprised of subject matter experts met to review the Clinical Practice Standard and Transfer of Care SBAR Tool based on the recommendations arising from the Admission Documentation Working Group. After consultation with and feedback from stakeholder groups, both documents were revised and updated on OurNH.

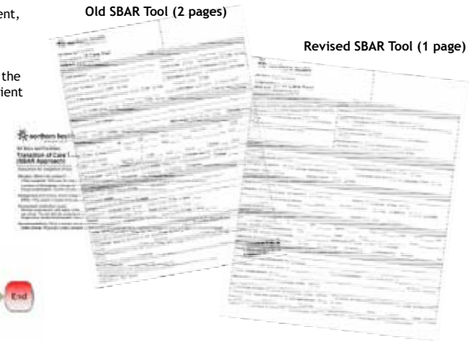
The SBAR Tool (Situation, Background, Assessment and Recommendations) was revised to ensure it was consistent with language and formatting used with other acute care documentation tools. The document was also shortened to ensure duplication was not occurring between forms (i.e: with the Admission Assessment form).

The team at G.R. Baker decided to focus on Transition of Care Communication in the QUESST unit and the Medicine unit. The goal was to have staff on both these units become familiar with the process already in place with the Emergency Department, to include the SBAR tool on every patient chart, to have it completed fully, and include the patient and their family in the communication.

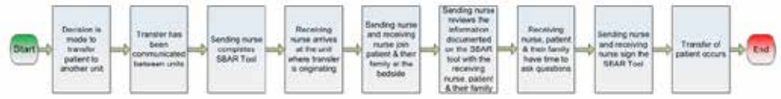
The Clinical Practice Leader for Medicine and the QUESST Team Leader provided communication to staff on the introduction of the SBAR tool and process. Communication occurred through email, morning huddles, and unit staff meetings. Weekly audits of patient charts was conducted to measure the level of success and identify areas for improvement.

Old SBAR Tool (2 pages)

Revised SBAR Tool (1 page)



PROCESS (high level): The Sending staff member is responsible for communicating the patient information and releasing care of the patient to the Receiver. The Receiving staff member is responsible for receiving the patient information and accepting care of the patient. Hand-off communication occurs at the bedside and includes the Sender, Receiver and the patient/family/caregivers, when appropriate. There is a period of Protected Time at the end of hand-off to allow the Receiver to ask questions of the Sender. Use the standardized Transition of Care Tool (SBAR approach) in conjunction with verbal hand-off to relay patient information



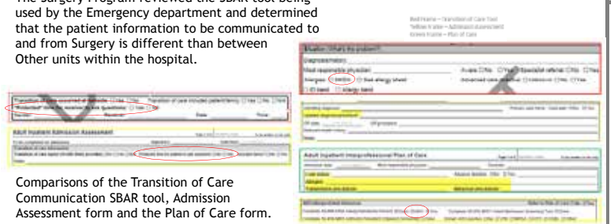
Current State:

In 2013 Northern Health implemented a Transition of Care Communication - Administrative Policy & Procedure and SBAR Tool for all Emergency Departments (ED). Leadership and ED staff at G.R. Baker Memorial Hospital was very engaged in this work and have been very successful over the years in completing the SBAR tool for patient transitions out of the Emergency Department. A baseline audit was completed on patient charts for transitions from the ED to the Medicine unit and the SBAR tool was on the chart 100% of the time. An opportunity identified for improvement was to include the patient and their family in the communication – which was at 40%.

Within other units at the hospital, they had not yet implemented the process and SBAR tool. These units include patient transitions between the QUESST unit (mental health), ICU, Surgery, Maternity and Medicine.

The SBAR Tool that was being used was two pages and duplicated some of the information collected on the Admission Assessment form and Plan of Care form. These three forms contained inconsistent language and formatting (ie: acronyms for allergies was different on the two forms).

The Surgery Program reviewed the SBAR tool being used by the Emergency department and determined that the patient information to be communicated to and from Surgery is different than between Other units within the hospital.



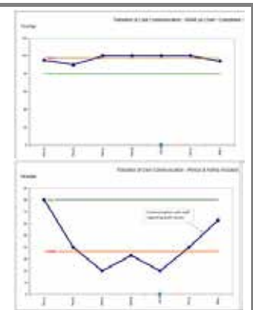
Comparisons of the Transition of Care Communication SBAR tool, Admission Assessment form and the Plan of Care form.

Results:

Similar to the Emergency Department experience, the SBAR tool was included on the patients chart and completed fully almost 100% of the time for both the Medicine and QUESST unit.

Involving patients and their family in the Transition of Care Communication is an area that needs further improvement. One observation encountered mid way through the improvement project was that often it was not appropriate for the QUESST patients to be included in the communication due to being under observation, experiencing Psychosis or medicated. In these cases, the team decided that the audits would capture this scenario as being not applicable (N/A) instead of not completed. This also reflects the SBAR tool, which provides yes, no and not applicable check boxes.

In early May, staff were provided with the results of the recent audits and provided further education on the importance of including patients and their family in the transition communication. At the time of this storyboard submission, audit results showed an increase from 20% to 63%. The team will continue to do audits and track & share the results.



Next steps / Sustaining the Gains:

The QUESST and Medicine unit teams will continue to audit the charts to ensure sustainability of this improvement over the next 3 months. The focus will be on including the patient and their family in the communication and this can be achieved by ensuring the communication occurs at the bedside.

Another opportunity will be to gather feedback from staff on their comfort level and satisfaction with the new process and SBAR tool that has been implemented and see what additional improvements can be considered based on this feedback. We are planning on reviewing the SBAR tool to ensure the changes recently made to the document are meeting the needs. For example, there has been feedback that certain elements are missing from the tool (ie: Patient Transfer Network) and there could be some unique needs for the QUESST unit and their patients, similar to the Surgery unit.

Patient/Customer:

During the initiation of this improvement project, it was identified that resident transitions between the Long Term Care facility (Dunrovin Park Lodge) and the Emergency Department do not have a clear process or communication tool. In reviewing what other Long Term Care facilities are doing across Northern Health, we realized that there is no standard for this Transition of Care Communication. The team at Dunrovin Park Lodge shared that they send up to 7 different pieces of documentation to the hospital with the resident (via ambulance). As they are not documenting electronically, they need to handwrite and photocopy these documents, causing an increase in workload and duplication. In their experience, when the resident returns to the long term care facility, rarely any documentation or communication regarding the care they received and care plan changes are received. Based on this, the group has decided to expanded their improvement project to include transitions between Dunrovin Park Lodge and the Emergency Department at G.R. Baker Memorial Hospital.

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Team Members: Leanne O'Neill –Inpatient Psychiatry Team Leader (QUESST), Melody Moore – Clinical Practice Lead (Medicine and Maternity), Margaret Gilbert - Clinical Practice Lead (Extended Care/Palliative Care), Joanne George – Clinical Practice Lead (Operating Room)
Ad Hoc Members: Pat Tresierra - Manager, Surgical & Critical Care, Karen Keis - Critical Care Leader (Emergency and ICU), Adele Bachand – Manager Residential Care, Complex Care, Audra Gillin - Manager Residential Care, Extended Care, Karen Fee - Clinical Practice Lead, Extended Care

Reducing The Risk: Crucial Conversations Regarding Patient Placement

Authors: Dr. Laura Brough and Shelley Movold

Unit Name: **University** Hospital of Northern BC Emergency Department

Contact: **Laura** Brough MD, Shelley Movold PQI

Date: Sept 2017- Sept 2018

QUALITY IMPROVEMENT STORY BOARD

REDUCING THE RISK: Crucial Conversations Regarding Patient Placement

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Background:

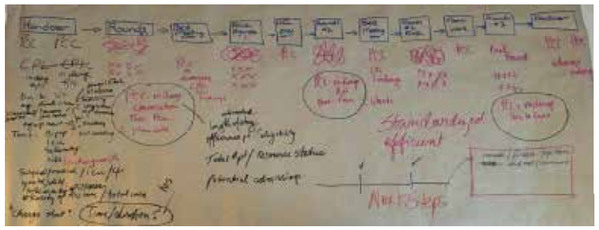
Patients admitted to the hospital through the emergency department are placed on wards according to nursing needs, medical acuity and resource requirements. Adverse events have occurred when there is a mismatch between requirements and resources. Transfer of patient information can be variable, incomplete or insufficient. Currently there is no standardized content.

Objective:

By Sept 2018, we will achieve a 90% compliance and satisfaction with a standardized communication tool used to transfer admitted patient information between ER Charge Nurse and Patient Care Coordinator.

Current State:

December 2017: a Process Map was created that reflected the daily journey of the PCC and a list of critical information that was required to optimally and safely assign a patient to a bed in the hospital was compiled. Attendance: PCC's and Charge RN

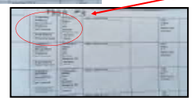


Original communication tool.

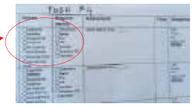
Jan 4, 2018 : Meeting with a group of PCC's & RNs to discuss a potential trial of a change to their communication tool
Jan 15, 2018 : PDSA cycle - 1st Prototype
March 2018 : PDSA cycles #1-#6
April 2018 : Survey to PCC's to evaluate feedback on the tool
May 2018 : Survey to Charge RN's to evaluate feedback on tool

Solution:

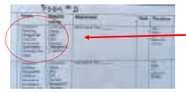
- Needed more space in the assessment section



- A place for an explanation of the infection control issue was added.
- Bariatric was moved from an issue to a requirement.
- Medications were added as a requirement because some medications are barriers to admittance on certain floors.



- The line was removed from infection control.
- High nursing needs was moved to an issue rather than a requirement.
- Medications was removed because staff found it confusing.



- High nursing needs was replaced with other.

- A line was put back for the description of the infection control issue
- Other was replaced with 1:1 need
- Infusion meds was added as a requirement. This was why the med was added previously but people were confused and thought they had to list all meds, so this time it was labeled "infusion med" for clarity.

Results:

Patient Care Coordinator (PCC) Results:

- **3/4 PCCs identified improvements in the accuracy of patient information and a decrease in the variability in the transfer of information.**
  - ***"Having the patient's issues and requirements on the in charge sheet made a huge difference".***
  - ***"Has reduced barriers to information flow"***
  - ***"I use the charge sheets regularly. I photocopy the sheets at the beginning of the shift and use them throughout, updating as I go".***

Charge Nurse Results:

- **6/6 Charge RNs identified improvements in the accuracy of patient information and a decrease in the variability in the transfer of information.**
  - ***" It does seem to highlight the important information"***
  - ***" I find it cues me to answer certain info that I may have forgotten to consider"***

Next steps / Sustaining the Gains:

- **The paper form still has issues to be worked out because staff are erasing information when patients change. Stickers were created to paste over top, to address this but it remains an issue to be resolved. An electronic version would be ideal and the team is working towards this next step.**
- **The staff have identified the need to consider an electronic format " Could the report be generated electronically so it can be generated in real time? Patients change rapidly in ER"**
- **There continues to be comments about "unnecessary" information on the form which presents an ongoing opportunity to re-evaluate the content of the tool.**

Patient/Customer:

The direct customers of this project were the Patient Care Coordinators (PCCs) and the Charge Nurses in the Emergency Department. The information flow between these two roles was explored in an effort to improve the system of getting patients to the right bed in the hospital.

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Team Members: Laura Brough, MD, Rita Sweeney, RN, Patient Care Coordinators, Charge Emergency Room Nurses & Shelley Movold, PQI

Fort St. John Hospital Laboratory Out Patient (OP) Wait Time

Author: Tara Mitchell

Unit Name: FSJH Laboratory
Contact: Tara Mitchell-FSJH Lab. Mgr.
Date: September 2018

Fort St. John Hospital Laboratory Out Patient (OP) Wait Time

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Objective: To decrease OP wait times by Dec.31/18 to not more than 15 min., improve quality and the patient experience.

Background:
The OP lab supports local clinics, out of town doctors/specialists with routine, pre-op and stat collections. A longer wait time inevitably leads to a delay in diagnosis and treatment and possibly in the scheduling of procedures. The OP waiting problem has been recognized by staff and patients

Current State:
Each staff member works in their own rooms and calls patients individually. Staff process OPs from start to finish and some work faster than others do, so OP turn-around varies. Every OP wait is captured and measured with the "Q-Nomy" system.

OP Lab Traffic Flow

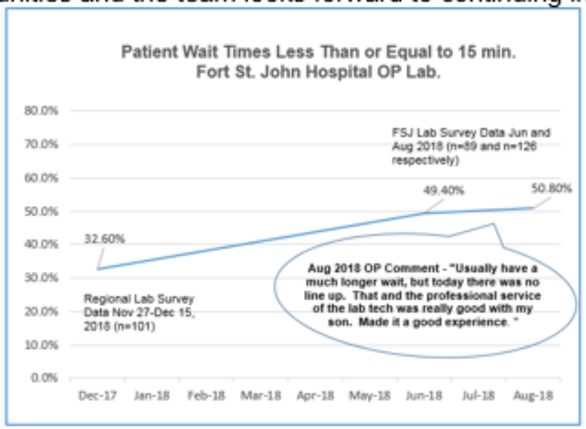
Factors that contribute to OP wait times include · Incomplete requisitions/patient preparation ·Errors in direction/information · Clerical duties · Inpatient priorities

Solution:

- Revise rotation/work schedules
- Create a "tag-team" environment where one staff member accessions all orders and the other staff does the phlebotomy, recognizing that, in order to do this successfully, communication between co-workers is key.
- Better signage and clearer patient information

Results:
The percentage of OPs waiting 15 minutes or less increased as intended. Several other improvement opportunities were identified during this improvement process. A 'whole' Laboratory Service Review Assessment completed in June 2018, confirmed the further improvement opportunities and the team looks forward to continuing improvement work.

Process Map / Idea Wall



New room/floor numbers

Next steps/Sustain the Gains:
Parking Lot of Improvement Opportunities identified include:

- Sample drop-off station
- Removal of double-entry process for registration
- Q-nomy ticket/data system
- Longer hours of operation

Monitoring of the OP Lab wait time will continue. Another OP Lab survey is planned for 2019. Attention to further improvement opportunities will further decrease wait times.

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Decreasing The Number of Failed Medical Services Plan Claims in MOIS Using Correct Codes and Patients Information

Author: Denise Cerqueira-Pages

Unit Name: Northern Haida Gwaii Hospital & Health Centre

Contact: Denise Cerqueira-Pages 250-626-4702

Date: November 2018

QUALITY IMPROVEMENT STORY BOARD

Title: Decreasing the Number of Failed MSP Claims in MOIS Using Correct Codes and Patients Information

Background:

Northern Haida Gwaii Hospital and Health Centre is part of Northern Heath (NH) that uses the Alternative Payment Program (APP) model for physicians. This is a salary model as opposed to fee for service (FFS) where physicians are reimbursed for each service they provide. According to the British Columbia Government APP Policy Framework "the APP must account for the distribution of its budget through the evidence of records and reporting and ensure efficiency in all aspects of operations and program administration." Thus, it is essential that our site have specific guidelines and routine staff procedures to add patient-based records, to guarantee successful transmission of service details to the Government of British Columbia.

Objective:

In August 2017, the billing report showed that the number of MSP claims that failed increased 54% from 2016 to 2017 (from 160 to 325). If a high level of claims fails, there is a risk of revenue loss to NH. For this reason, the main objective of this project is that by March 31, 2018, the Masset Clinic staff will have specific guidelines for checking and adding patient information and billing codes in MOIS. Further, by August 2018, the number of MSP claims that fail will decrease to less than 10 claims per month after summer client traffic, which proves to be busiest time in our facility.

Solution:

Based on the NH quality framework and the process of continuing to improve, it was possible to plan the beginning of our quality improvement journey: The NH framework states, "It is meant to be an introduction to the concept of quality, how quality improvement process supports NH's strategic priorities, and how anyone can participate in quality improvement in their daily work lives" For this reason, I started working with the Primary Care Assistant (PCA) team and the approach and initial planning was divided on two phases: **Phase 1**: Pull the team together, complete mapping process and a kaizen event to look at the root cause of the problem and develop solutions. The main tools that were be used in this phase were Data collection, Gemba, Lean Culture and Kaizen. **Phase 2:** In this phase, we analyzed the recommendations from the regular meetings and the first Kaizen. In addition, other Lean tools and methods were used to try to get to the root of problems: 5Whys, Pareto Diagram and Fishbone diagram.

Phase 1

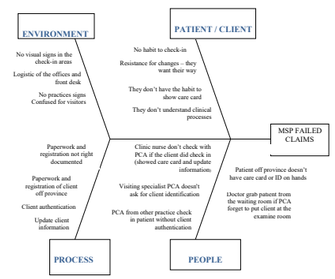
Figure 1-The Kaizen event took place at the staff room in the Northern Haida Gwaii Hospital

Figure 2-The PCAs and one of our Physicians

Figure 3 - Clients / Patients Journey at Masset Clinic and parallel pathway to map the Primary Care Assistant /Documentation Pathway, which will be the focus of our solutions

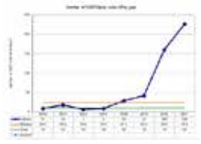
We identified several areas that are lacking: client services signs to direct patients to the hospital services and enforce polices; guidelines and processes for patient authentication; and confidentiality and client privacy practices. Furthermore, the Masset Clinic needs to have a designated person that can guide and enforce NH policy and guidelines for the clinic staff like other hospital departments do. Moreover, the clinic did not have a designated person to process the billing and monitor the failed claims. Hence, one way we found to eliminate defects was to train one PCA to help with daily schedule billing. Since November 2017, a team member has been responsible for analysing each practice billing from their daily schedule

Phase 2



Current State:

In July 2017, using data collected, we could identify a significant increase in the failed claims on the billing process from 2016 to 2017. (Graphic 1) Furthermore, we used a control chart that shows time order data and provides limits within observed variations. (Graphic 2) In this graphic, an increase in failed claims in December is noticed and it is a result of a wrong locum physician registration code. The registration of locum physicians in MOIS is done by the NH head office in Prince George. This situation was out of our hands, creating perfect example of a special variation in our system. According to the failed codes in 2017, the data showed the cause of these failed claims can be consequence of diagnostic and clinic code errors, and incorrect patient information added in MOIS (Graphic 3)



The number of MSP claims written off, claims that cannot be sending to Teleplan, start increased in 2015 and reached a high level in June 2017.

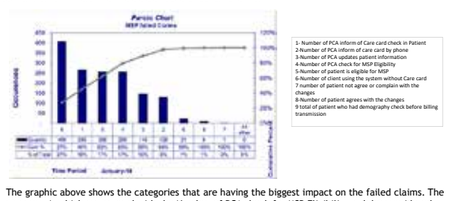
The number of MSP failed claims was unusually high in May 2017. From June to October 2017, we resubmitted the entire failed claims in the period of 90 days in our system.

CK- Practitioner status is invalid for this payment number or date of services
CF-Time called or time services was rendered is missing or invalid
WA- Services not approved for this payment number or date of services prior to approval date.
E*-Our records indicated patient has permanent moved out of BC. Please have patient re-apply for covered if applicable
C*-MSP is unable to locate patient. Please have patient contact MSP.

Results:

On January 2, 2018, the Masset Clinic PCAs started asking for Patient Care cards and ID, updating the client information in MOIS. One PCA was designated to follow all the steps for a successful billing transmission. This was the period our team focused on all the routine activities to guarantee successful results. Using the Pareto diagram and Fishbone often, we could focus on reminding the team what caused the billing to fail and what we needed to do to avoid it.

The number of failed claims decreased in January, February and March 2018. If we compare March 2017 and 2018, there is a big difference in billing rejection. This confirms if our Clinic has a specific and efficient process billing it is possible to keep the failed claims low, especially in summer time, the busiest session in Masset-Haida Gwaii.



The graphic above shows the categories that are having the biggest impact on the failed claims. The category 4, which correspond with the Number of PCA check for MSP Eligibility, cab be considered 80% of the billing problems. In addition, this category continue prevalence in the Month of February, see the Pareto graphic below.

Next steps / Sustaining the Gains:

We will continue to monitor all aspects of the billing process and the plan is to apply our model effectively and consistently into the summer season when we will have many clients from other parts from British Columbia and Out of Province.

After summer 2018, we will identify if this improvement project has had an impact in our system and how the procedures we are using can be standardized at our site. The PCAs needs to work as team and they cannot stop prioritizing the authentication of clients to sustain the changes in our system. If we achieve satisfactory results in August 2018, the next step will be an official guideline and a standardized process.

Patient/Customer:

This project gave a chance to improve patient/customer authentication at the Masset Clinic according with the NH policy. Furthermore, proper client authentication guarantees privacy, confidentially and proper care. Masset, Port Clement and Tow Hill communities have accepted this change and agree how important this procedure is for their health services.

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Surgical Start Time for Gynecological Cases at UHNBC

Authors: Dr. Marijo Odulio, Jodi Temoin and Shelley Movold

Unit Name: UHNBC Operating Room

Contact: Dr. Marijo Odulio, Jodi Temoin & Shelley Movold

Date: June 2018

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Surgical Start Time for Gynecological Cases at UHNBC

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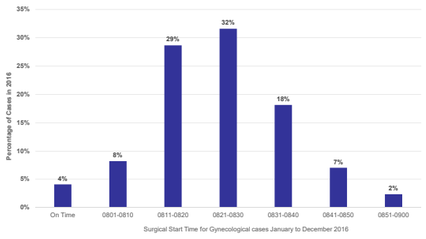
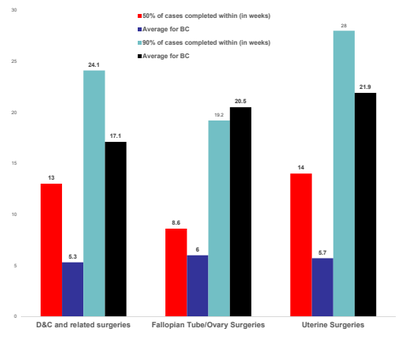
Objective:

- Gynecology surgical slates do not start on time at 0800. This results in less surgeries being done per day and cases being cancelled when the room runs late. In the end, surgical waitlists get longer.
- By June 30, 2018, at least 50% of the Gynecology surgical slates at UHNBC will meet the goal of starting surgery at 0800. This will result in efficient use of OR time and allow more surgeries to be completed.

Background:

On average surgical start time was 0823 only 4% of cases started on time at 0800.





UHNBC wait time (in weeks) for 50% and 90% of the cases to have each of the surgeries is greater than the BC average for these surgery types.

Current State:

Data collected from Surginet (computerized software used in the OR at UHNBC)
- Patients in the operating room on average at 0747
- Takes 17 minutes on average to anesthetize the patient
- Takes 16 minutes to prep and position the patient on average
- Average surgical start time is 0823

Workplace Survey conducted at UHNB in November 2017 showed:
- 17% of respondents felt their knowledge and opinions were not valued by colleagues in the past week
- 45% of participants felt disrespected by a colleague at least once in the past week

Solution:

To address workplace culture issues, a workshop was held called Building a High Functioning Team:
- The day allowed participants to talk openly with each other and discuss issue they faced everyday at work
- The team came together to envision what they thought a high functioning team in the OR would act like and created a team charter of expectations for their workplace

PDSA Cycles:
Change cycle #1: Have the surgeon in the OR at 0745 to:
- Provide leadership to the room
- Improve communication between team members
- Assess whether the room was ready for the first operation in terms of equipment needs

Change cycle #2: Continue to have the surgeon in the room & have the IVs inserted before the patient enters the operating room.

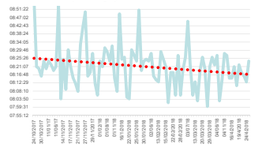
Patient/Customer:

- Women having gynecological surgeries
- Starting gynecological cases on time is the first step to improving OR efficiencies.
- With OR efficiencies comes more cases being performed and shortening of waitlists for patients.

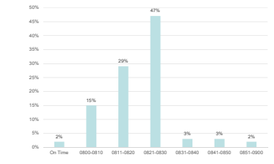
Results:

Although, the aim of 50% of gynecological surgeries starting at 0800 has not been accomplished, there has been visible improvement in the overall start time of these surgeries at UHNBC as evidenced in Graph 1 and 2. It became apparent through the course of the project that a surgical start time of 0800 is not realistic if the patient is brought into the OR at 0745. To meet a 0800 surgical time the patient would likely have to be in the operating room at 0730. This is a significant change in practice and departmental operation and is part of discussions within the department in the future.

Graph 1: Surgery Start Time Jan-Apr 2018

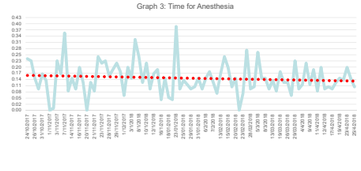


Graph 2: Surgical Start Time Jan-Apr 2018



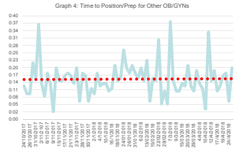
The Anesthetists for gynecological surgeries have generally been very punctual and the time between the patient entering the OR and the Anesthetist start has been on average 1 minute. The time to anesthetize the patient also remains quite consistent as can be seen in Graph 3. Thus is does not appear from the data to date that having an IV inserted prior to the patient entering the OR has made a significant impact on improving the anesthesia time.

Graph 3: Time for Anesthesia

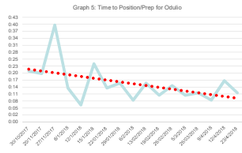


The time savings appears to have come from the positioning and preparing the patient for surgery once they are asleep. The affect of this can really be seen when comparing the other Gynecologists' (Graph 4) to Dr. Odulio's (Graph 5) results. Dr. Odulio was consistently in the room at 0745 and didn't leave the room for other reasons between 0745 and the start of the surgery. The data suggests that this wasn't the case for the other Gynecologists. From this it can be concluded that there is significant improvement in efficiency in the positioning and preparation time if the surgeon is in the room and leading the team. The leadership encourages others to be on time and look for ways to be efficient as well.

Graph 4: Time to Position/Prep for Other OB/GYNs



Graph 5: Time to Position/Prep for Odulio



Next steps / Sustaining the Gains:

- Communicate the results of the project to all physicians and staff. Celebrate the learnings in regards to communication, teamwork and work culture.
- Redo the workplace culture survey to see if the project has improved the workplace culture.
- Review the earlier stages of the process map for gynecological patients. There were other areas for improvement identified in the day care surgery preparation and patient holding areas that could be addressed.

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Organizing Space and Improving Processes around Supplies and Client Files

Author: Sherry Sawka

Unit Name: Fort St John Health Unit

Contact: Sherry Sawka

Date: November 2017 – October 2018

QUALITY IMPROVEMENT STORY BOARD

Organizing Space and Improving Processes around Supplies & Client Files

Background:

The Fort St John Health Unit provides many different community services to the public. The public come in for services in the wound care clinics, pick up harm reduction supplies and receive immunizations. For other providers like home care nursing and rapid mobilization, it is their home base where they organize their services before going to people's homes. There are 3 IPT teams and 6 PCA's. There are approximately 6 clinicians that utilize the room daily. Supplies, equipment, pamphlets and files need to be organized to meet the needs of the programs. That organization can help all meet the daily demands and increase time efficiency.

Objective:

The Fort St John Health Unit Storage Room space will be improved by creating an organized structure for the supplies, equipment and files by Dec 2018. This will be measured by the 5S audit score increasing by 25%.
Initial 5S audit score Dec 15, 2017 – 6
Audit score October 31, 2018 - 59

Solution:

Items to be stored in room

- Client files (archived records for public health and community)
- Wound care supplies
- Supplies for specific patients
- Palliative care supplies
- Personal Protective Equipment
- Harm reduction supplies
- Regular and Extra supplies for vaccine clinics
- Pamphlets for public health

Processes

- Supply ordering
- Client Files
- Harm Reduction
- Pamphlets

Changing out shelving from deep wood shelves to wire shelves with supplies stored in clear bins

Sept Kaizen Two binning supplies, determining quantities to be kept on hand; how many more bins do we need?

Red tagged items for redistribution

Current State:

Orderly with designated areas; basic knowledge of stock with opportunity to improve matching quantities on hand with usage, having a list of standard stock for all supplies and create a more concrete standard ordering process

A dumping ground for everything and anything

Old files need to meet filing standards; determine what needs to be kept and what can be shredded

Results:

11 CONTAINERS OF SHREDDING

REDUCED # OF PRODUCTS ON STANDARD SUPPLY LIST

BEFORE

AFTER

Patient/Customer:

Impact for PCA's and nurses:

Save staff time; create reliability
Improve ordering process and reduce items not being used
Create standardization for ordering items for all programs
Consistency with file retention, visualizing amount of harm reduction supplies and pamphlets at a glance
Bright and open – easy to visualize

Next steps / Sustaining the Gains:

- Continue to review supplies adding/deleting as needed
- One more event with staff to finish labelling containers and firm up order list
- Provide education to staff on wound care products use
- Removal of records off-site to create additional space
- Create list of pamphlets found in the area
- Educate and provide information to all staff of changes to the room
- Scan of room monthly to ensure supplies continue to stay in their respective space
- Follow up with staff regarding where items are stored to ensure it is in proper space
- Complete another 5S audit in 3 months

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Team Members: Health care unit staff – P.C.A; nurses, leadership

Wrinch Memorial 5S Project - Doctors' Clinic Supply Room

Authors: Shirley Webb and Julia Sundell

Unit Name: Wrinch Memorial Doctors' Clinic

Contact: Shirley Webb, Clinic Manager
Julia Sundell, Practice Support Coach

Date: April 2018

QUALITY IMPROVEMENT STORY BOARD

Wrinch Memorial 5-S Project – Doctors' Clinic Supply Room

5S: Sort, Set in Order, Shine, Standardize, Sustain

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the northern way of caring

Background:

Our clinic is located within the hospital. It is the only medical clinic staffed with physicians in our local health area. Our catchment area encompasses over 4,800 square kilometers. We have an active patient population of 4,500. Our clinic has an FTE allotment of 7.5 physicians and a full time Nurse Practitioner. We provide weekly out reach clinics to four First Nations communities. We have an Inter-Professional Team clinic once per week where patients can attend to have injections and wound care.

Our storage area was a drop zone for supplies and desperately required a make over. The space was "bursting at the seams" with a plethora of different supplies and equipment: some are used regularly and some have not been touched for the last decade.

Moving the supply room into a larger space meant relocating a weekly prenatal program out of the targeted space. Moving this program meant renovating an old storage room into a functional office space. We had to relocate the Telehealth room in order to continue to facilitate our Resident program, as our targeted space also held the audio/visual equipment for observing the Resident.

Objective:

Wrinch Memorial Doctors' Clinic staff will move and reorganize the supply space. All changes must occur without any service interruptions.

By March 2018, our goal is to increase staff satisfaction with the reorganization from 6% to the level of 80% and to reduce the distance that is required to gather supplies from 425 feet to 126 feet.

Our objectives include:

- Create time savings for healthcare staff locating supplies which will then provide increased time for patient care.
- Increase space by removing unnecessary and out of date supplies and equipment.
- Improve efficiency when ordering and stocking by introducing the "Two Bin" Kanban system.
- Reduce supply over handling by condensing supplies into one area and eliminating the need for extra storage in the hospital store room.
- Redesign of the supply room will meet infection control standards and WCB regulations.

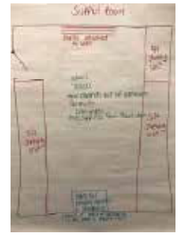
Solution:

The team held a Kaizen event and used several quality improvement tools, including a Triz to understand the current state and identify the new supply room location and its intended layout. Other tools used included a satisfaction survey to users, spaghetti mapping the current and improved state for three different supply scenarios. We also collected and reviewed the baseline data from the tools, analyzed the maps for improved design and systems. We then implemented a 5-S project with Kanban. Many lessons were learned in this project, however the most valuable that was the contributing factor in our success was the engagement of our team early in the process

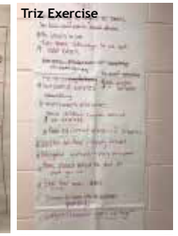
Our desired outcomes were:

- Relocate supply room with sufficient space and increase staff satisfaction from 6% to 80%
- Reduce distance travelled to retrieve supplies from 425 feet to 126 feet
- Eliminate 20lbs of expired supplies and equipment from the current space
- Efficient reordering of supplies with cost effective inventory control
- Become compliant with infection control and WBC regulations
- Implement Kanban system in our supply room for 80% of our inventory
- Eliminate time wasted looking for supplies allowing increased time dedicated to patient care
- Design a space that is intuitive for users so they will not have to retrieve supplies from other hospital departments
- Eliminate overstocking so supplies are not stored in the hospital store room, thereby reducing time and distance are required to retrieve overflow stock

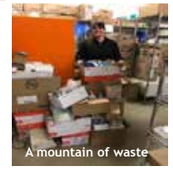
Question	Pre-survey result	Post-survey result	% of Change
How satisfied are you with the current state of the supply room area(s) within the clinic?	6% very satisfied 94% Not at all satisfied	100% very satisfied	94% increase
Do you waste time locating supplies?	6% Never 76% Sometime 18% Most of the time	30% Never 70% Sometime	48% decrease
On average how many minutes per day do you waste looking for supplies?	8.7 minutes per day per person	3.5 minutes per day per person	5.2 minutes
% of staff who have found expired supplies	59%	10%	49% decrease
Times when you are unable to locate what you are looking for and need help	94%	70%	24% decrease



Triz Exercise



85.65 kgs of expired or unused supplies and equipment were removed from inventory. 27.8 kgs of those supplies were donated to a medical clinic in Gambia.



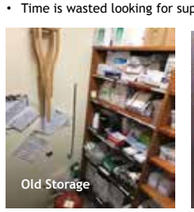
A mountain of waste

Current State:

Wrinch Memorial Doctors' Clinic has a very small supply room that is actually too small to house the required inventory. We have 10 providers and ongoing locums as well as 5 support staff that need to access these supplies. The store room is crowded, items are hard to find and despite our best efforts, remains disorganized due to lack of space. This results in providers and staff spending more time than necessary locating supplies.

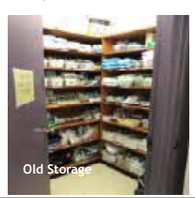
Our current state is difficult for all staff:

- Supplies have to be handled twice due to lack of space in current clinic supply room
- Additional time and distance are required to retrieve overflow supplies from shipping and receiving which is a distance of 425 feet
- Providers will often access supplies in the Emergency Room due to familiarity rather than searching for supplies they can't find in our current storage space. This adds an additional 161 feet to their search
- Items expire resulting in an increased cost for the clinic due to disorganized storage and subsequent waste
- Wasted space due to old outdated equipment/supplies remaining in the supply room
- Inefficient reordering of supplies. Too much/too little and poor inventory control
- Items stored are not in compliance with infection control as some of the shelving is wood which is porous and items are stored in corrugated cardboard
- Some items do not meet WBC regulations due to the height of the items stored
- Time is wasted looking for supplies which reduces time dedicated to patient care



Old Storage

Old Storage



Old Storage

Results:

By relocating the supply room and implementing the Kanban system, supply handling was reduced by storing items at one location.

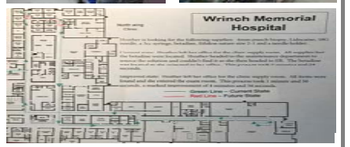
The results achieved are as follows:

- After implementing the Kanban system accurate inventory control has been achieved
- Expired supplies on hand have decreased due to the Kanban system by 49%
- Distance traveled for retrieval of supplies has been reduced by 342 feet
- 100% of items in the supply room are on the Kanban system
- We have decreased our footprint by reducing the number of rooms used from 4 to 3
- Removing 85.65kgs of outdated equipment and supplies annihilated the original target
- Time wasted searching for supplies was reduced by 5.2 minutes per person, per day
- Staff satisfaction has increased by 94%
- WBC and infection control standards have been met

Reordering supplies has also increased in efficiency. Gone are the days of scouring the supply list looking for items one by one. Now the empty bins/cards are placed in the staging area and reordering is done in minutes rather than hours.

Future State achieved

Future State achieved



Next steps / Sustaining the Gains:

1. Our team will continue to PDSA the space for improvements.
2. Continued familiarization with the layout will contribute to additional efficiency gains for all staff.
3. 12 April 2018 - 27.8kgs of waste supplies were transported by our anesthetist to be used at medical clinic in Gambia.
4. The celebration for the project (final team meeting) is scheduled for 13th April 2018, where a transfer of ownership will take place.

Wrinch Staff

Patient/Customer:

Our team (the customer) had early engagement and throughout the project through Kaizen events and PDSAs. Pre and post satisfaction surveys were completed which showed tremendous results. Comments received through the surveys about the current state of the supply room include:

"This is a great start - Keep it up!!!"
"It is wonderful, thank you."
"Much improved from previous."
"So much better!"
"I love how organized and efficient it makes our work."
"I LOVE IT!"
"The new supply room is extremely organized, upscale and easy to locate. It has made a difference in my work day. I am truly grateful."

Primary Care Assistant Team

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Team Members: Shirley Webb - Clinic Manager, Julia Sundell - Practice Support Coach, Mary Vanstone - Health Service Administrator, Chris Chandler - Physician, Doug Eftoda - Maintenance Supervisor, Janet Wright - Sterile Processing Department, Beth McAskill - Infection Control Practitioner, Duane Garceau -Stores, Sylvia Wagner - Starting Smart Administrator, Verna Sullivan - PCN, Sandra Lynch-Bakken - PCA, Katja Wagner - PCA, Monique Jones - PCA and Heather West - PCA
Mentor team: Selina Stoeppler & Shar McCrory

Spreading Lab-Based Success: Improving Patient Flow by Supporting Timely Discharge of Patients within Three Northwest Facilities

Authors: Lee Cameron and Tiegan Daniels

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Date: October 2018

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Spreading Lab-Based Success: Improving Patient Flow by Supporting Timely Discharge of Patients within Three Northwest Facilities

northern health
the northern way of caring

Background:

The quality improvement project outlined within this report stems directly from a former QI process that was undertaken between April 2016 and May 2017 at Mills Memorial Hospital (MMH) in the Northwest (NW) health service delivery area of Northern Health. In early 2016, it was identified by NW Senior Leadership that up to date lab results required for discharge were often not available by the time physicians were conducting morning rounds thus delaying patient discharge. The goal of the MMH project was to assess the current state of AM blood work within that facility and identify potential facility-specific opportunities for improvement. As of early May 2017, the project had improved the average final reporting time from 0947hrs to 0831hrs at the MMH site.
The improvements achieved at the MMH site initiated the NW Chief Operating Officer (COO) and the NW Medical Director to spread that projects learnings to three other NW facilities, with the goal to improve patient flow by supporting timely discharge of patients. The three NW facility sites identified for the spread were the Kitimat General Hospital (KGH), Bulkley Valley District Hospital (BVDH) in Smithers, and the Prince Rupert Regional Hospital (PRRH).

Objective:

Initial Northwest Regional Aim Statement:
To increase the amount of up to date lab results by 0800 hours available for physician rounding by 60% by March 30th, 2018.

Kitimat Aim Statement:
Have 80% of 7:30 inpatient requisitions complete by 9:30am by having requisitions entered by 7:30am, collected by 8:30am, and results reported by 9:30am by June 2018.

Prince Rupert Aim Statement:
To increase the amount of up to date lab results by 0800 hours available for physician rounding by 60% by March 30th, 2018.

Solution:

After a current state process mapping exercise both the KGH Lab team and the PRRH team identified current pain points and opportunities for improvement (see Figure 3). Focus was put towards pain points & improvements that could be readily achieved and that were within the control of the teams.

To address these, an ideal future state map was developed by the PRRH lab improvement team. It was identified that initial improvement opportunities were clustered around areas of rework, duplication, and excess processing. Examples of the identified improvement opportunities at PRRH included:

- Inconsistent or incomplete requisitions
- Rework and duplication to address incomplete requisitions
- Unnecessary movement of requisitions and charts

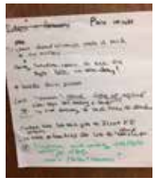

Figure 3. PRRH "Pain Points".

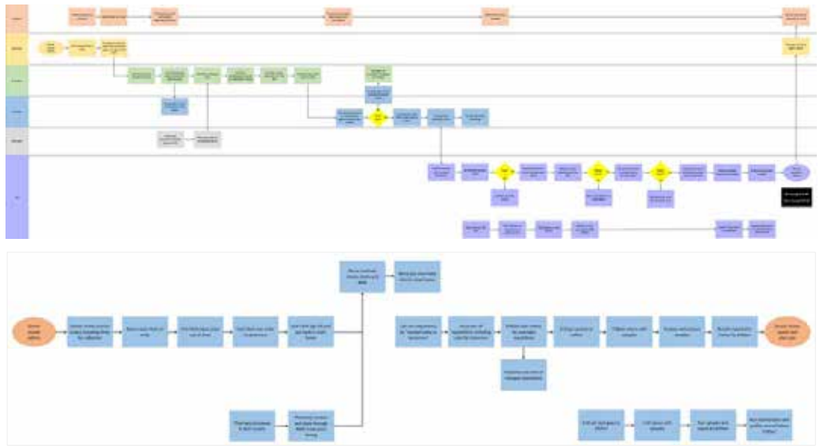

Figure 4. Current (top) and future (bottom) state maps for Prince Rupert Regional Hospital.

Current State:

For each team, the current state the current state analysis consisted of the collection and analysis of baseline data and a process mapping kaizen event.

At PRRH, the current average reporting time of results was 0924hrs for Complete Blood Counts (CBC) and 0919hrs for chemistry. Identified as a balancing measure, the current length of stay for acute patients within the facility was 4.64 days in 2017.

At KGH, for the collection period of late March to mid-April, 40% of all accessioned lab samples were meeting the reporting benchmark of having results published by 0930hrs. The team was over performing on their expected time of collection with an average current collection time of 0755hrs. However, the run chart indicates variability in the current collection time (Figure 1). The team was reporting results at a daily average of 0938hrs, just shy of their set target of 0930hrs. However, the run chart also indicates a high level of variability in final reporting time (Figure 1).

Figure 1. Baseline data for KGH lab.

Figure 2. Current state map for KGH lab.

Results:

Each project team has completed a thorough baseline and current state analysis, engaging a dedicated site team and leadership support to undertake future improvements aimed at achieving the project aim statement. Currently, the teams are reviewing their identified opportunities for improvement and are preparing to undertake a process of prioritization.

One notable improvement opportunity identified by both teams was the current low utilization of physicians and staff accessing and using Powerchart, the internal electronic record system for retrieving and viewing laboratory results and queues. This was estimated to be a root cause of duplicate requisitions, unnecessary calls to the laboratory team for updates on requisition queue or result status, and physicians re-ordering active requests. Teams and physician partners are currently pursuing implementing additional Powerchart training.

Next steps / Sustaining the Gains:

The **KGH** lab team is in the process of developing a form that the acute care nurses can use to ensure all Doctor Orders have been checked and all the lab orders have been filled out. This form was submitted to the NH Quality, Resource & Technology Department in October 2018 with an anticipated publish date of late January 2019. Following, a series of Kaizen events will occur with the acute care nurses and ideally include site physicians. It is planned that the KGH Clinical Nurse Educator & the Lab Manager will provide education on the recently completed form, commencing in February 2019. The improvement team has identified the need for physician engagement & input on this initiative in order to be successful. The KGH Practice Support Coach has recently been recruited to the improvement team.

The **PRRH** project is currently on hold due to leadership turnover and upcoming site Lab department Accreditation, scheduled to be complete by April 2019. The Improvement Team continues to see value in this project and once Accreditation with its accompanying time requirements are complete, the team plans to schedule a face to face meeting to revisit, revitalize and recommence the improvement initiative. Target date late April 2019 for initial meeting. Strong site leadership support exists. This site identified that lack of physician engagement was a challenge and is currently considering different ways that they can show the relevance and importance of this improvement work to the physicians.

Patient/Customer:

Early reporting of AM laboratory results are an integral part of ensuring timely discharge of acute patients to allow for proper discharge or transition planning, improved patient flow, and reduced emergency department crowding.

During the development of their current state process map, the PRRH team identified a swim lane of the patients engagement and involvement in the process of AM blood work. The patients involvement can be seen in the top column of Figure 4.

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Team Members: (KGH) Mark Hawkins, Pamela Dawkins, Peter Gill. Process mapping kaizen participants also included Ashlee Baer, Wendy Baker, Mary John, Krina Patel, Alberto Pineda, and Sandra Whittington.
(PRRH) Michelle Bartel, Alyssa Rimmer, Shannon Mann. Process mapping kaizen participants also included Adelaide Dipascale, Sara Phillips, Angela Szabo, Holly McAlister, and Michelle Pele.
(BVDH) Scott Martin, Robbie Dunbar, Sharon Dempsey, Dr. Vestvik, Dr. Blouw.

Identifying Frail Patients and Connecting Them to the Interprofessional Teams

Author: Tamara Stephens

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Date: September 2017- present

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Identifying Frail Patients and Connecting Them to the Interprofessional Teams

Objective:

Develop a clear process for frailty identification in two physician practices in the primary care home in order to enable proactive, informed care and improve patient outcomes.

- By April 30, 2018 75% of patients 70 years and greater will have been assessed with the Prisma 7 tool. Patients who score 3 or more will then receive an additional screening with the CSHA Frailty Score. Patients who score 6 or 7 on the CSHA Frailty Scale will then be referred to the interprofessional teams for supportive care
- By April 30, 2018 50% of frail patients will receive an initial intake after being referred to the interprofessional team. Plans of care will be developed and communicated back to the GP's via a "Client Status Report" which will then be added to the patient's overall care plan.

Background:

Communities in Northern BC have a growing senior population that will require more proactive support. Frail patients are among those.
Frailty predicts:

- loss of ability to carry out activities of daily living
- worsened quality of life and caregiver burnout
- future hospitalization.

Routinely identifying frailty is a **proactive approach** that offers opportunities for targeted care, including applying clinical practice guidelines and tools specific for managing frailty.
Additionally, connecting frail patients and their family to an interprofessional team provides wrap around supportive care, utilizing the wide range of health care services available.

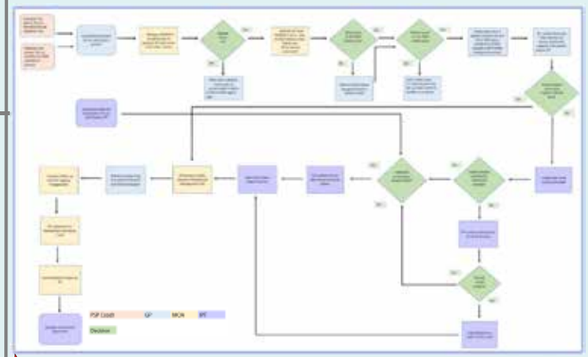
Current State:

Already, there was work being done by the Physicians to connect more complex and vulnerable patients and families to the interprofessional teams.
An EMR panel assessment of disease prevalence was done in Park Avenue Medical Clinic and it determined that:

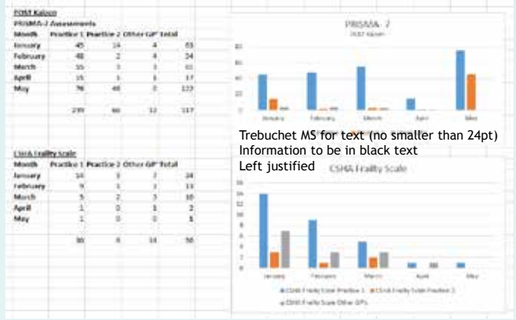
- Priority would be placed on developing a **frailty registry** along with associated recalls/interventions to proactively manage frail patients.
- 2 physicians would pilot a process for identifying and assessing frailty within their practices for approx. 386 patients 70+ years using BC Guideline evidence-based assessment tools.
- Once identified, physicians would connect these patients to community supports, test the process and finally, spread the process to the other physicians in the clinic.

Solution:

The **Kaizen** event brought the team together to discuss the '**voice of the customer**' for future workflow steps, tools to support identification of frailty, roles of team members, expectations for communication and developing a step by step process. The **process was mapped** clearly, with each step identified and who would do the work. A **PDSA cycle** was started the next day to trial two assessment tools that had been embedded in the EMR in the GP's office.
After doing a **Root Cause analysis** and **5 Why's**, the physicians were able to determine the appropriate way to code frailty using the ICD-9 identifier and add these to an electronic registry in the EMR.



A second **Kaizen** was held two months later as a follow up to the **PDSA cycles** and to serve as a means to **standardize** the work. **Data** collected from the 2 month period showed that improvement had been achieved in identifying, coding, assessing and referring frail to the interprofessional team.



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The first PDSA revealed a need for a workflow flag or a decision support tool that could be added in the EMR that would show when a patient had been assessed for frailty and their score from the assessment.

A second PDSA incorporated that change. This alert added value to both the physician and patient because assessments would not be repeated needlessly and they could also be tracked for setting up recalls to do re-assessments.

The CSHA frailty scoring tool identified frail patients that needed to be immediately connected to the interprofessional teams by means of a Team Care Plan service request.

Results:

The implementation of the new process went relatively smoothly. The first PDSA cycle was successful in that the electronic assessment tools for frailty (PRISMA 7 and CSHA Frailty Score) were used.

The goal was for each practice to assess 75% of their active patients 70+ with the Prisma 7 tool. The result was that 98% were done in one practice. The other practice has a different patient demographic so it was a bit more challenging to reach the target. Work is still in progress with achieving those results. But **combined, the practices reached 78%.**

The physicians and Interprofessional Team Leads estimated that approximately 15-20 patients received care at the right time which prevented them from having an adverse event and ending up in acute care.

Next steps / Sustaining the Gains:

- The project has moved into a second phase over the course of the next 6 months in order to spread the documented process and data collection to 3 other physicians.
- Already two other physicians have embraced the process and integrated the steps in their practices.
- The interprofessional teams have done cross-training to incorporate more frailty intakes within their service model, to support this spread.

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Team Members: Dr. Jaco Strydom, Dr. Greg Linton, Darci Batjer, Corry Carpino, Rai Read, Jamie Braid, Mitch Griffith, Janis Morris, Chena Le Gresley, Matthew Le Gresley

Streamlining the On Call Process at G.R. Baker Memorial Hospital

Author: Wendy Fox

Unit Name: GR Baker Memorial Hospital/Administration

Contact: Wendy Fox

Date: April 16, 2018

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Streamlining the OnCall Process at GR Baker Memorial Hospital

Background:

• GR Baker Memorial Hospital is a 36 bed facility that serves the Community of Quesnel and outlying areas with a population of approx. 35,000. We have 32 physicians consisting of specialists and family practitioners.
•The Hospital runs 24/7 and provides after hour care. A Department on-call scheduling process is in existence but was determined by the Health Service Administrator and Call Coordinator that significant streamlining to the data compilation/data gathering processes needed to be addressed. The amount of time spent gathering the required information, compiling it, following up on deadlines with staff and then sending out to clinics and relevant departments, is excessive.
•Our local on-call rota schedule is handled multiple times and multiple times throughout the month even once the master schedule is created.
•After completing an environmental scan of similar sized facilities in Northern Health, it was determined that there wasn't a standard approach and all sites had their own process of creating their on-call rota. It was also determined that some sites were electronic, some were via paper, some via fax, some template fillable forms.

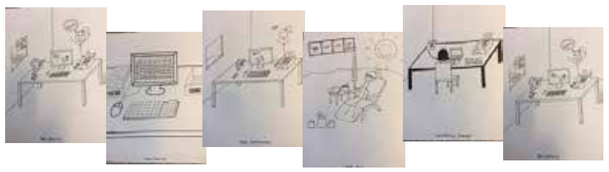
Objective:

•The Departments consist of: OR, LAB, X-Ray, CT Scan, ER/ Surgeon, C-Section/Maternity, Anesthetist, Internist, Radiology, Residential Care, 5 Clinics, Administrator and Maintenance

•The goal of this project is to reduce by 20% the minutes per week that the Call Coordinator spends either updating or changing the monthly on-call roster per month. The Call Coordinator currently spends 260 minutes per month and we want to improve this to 210 minutes by May 30, 2018. This project will also look to reduce the umber documents received from the department coordinators from 32 to 20 by May 30, 2018.

Current State:

•The data regarding Physician and Staff availability to populate the on-call schedule, is submitted multiple ways either by fax, paper calendars and email and by a specific monthly due date to the call coordinator.
•Once the data is compiled, the Call Coordinator sends the master rotation to clinics and departments via by fax and email.
•Throughout the month, multiple shift change requests occur due of illness, requested time off, and personal shift changes. All of the change requests are sent to the Admitting Department so the changes can be reflected and the scheduled updated.
•There is a 5 day window once the master rotation has been developed and sent out when there is a break where the Call Coordinator does not touch the call rotation schedule before the entire process begins again for the upcoming month.

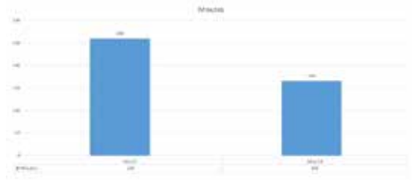


Solution:

•The First trial of change was implemented with six local departments by eliminating the data received by paper copy and converted over to an electronic spreadsheet.
•By instituting this one simple change request, the Call Coordinator was able to copy information sent electronically and paste into the master call excel spreadsheet. This reduced data compilation time by the targeted 20% and also reduced the amount of paperwork submitted.
•When this project first began the goal was to implement the new process in the following departments: OR, LAB, X-Ray, CT Scan, Maintenance, Emergency Room, Surgeon, C-Section/Maternity, Residential Care, Anesthetist, Internist, Radiology, 5 Clinics and Administrator On-Call. The scope of the project was impacted half way through with the implementation of a technology scheduling system called "ByteBloc". This electronic scheduling system was created for the Emergency Room Physicians consequently eliminating the need for Physician Clinic Office Managers to submit/arrange/schedule the ER on-call rotation and submit the calendars to the Call Coordinator.
•In gathering of information from other Northern Health sites and Vancouver Coastal Health, it was discovered that every facility coordinator who is responsible for the on-call schedules, has large degrees of variation on how information is gathered, compiled and distributed to their departments.
•It was also discovered half way through project that Northern Health is working on a standardized electronic on-call system that should be operational within the next year to 18 months. While this project looked to reduce the waste in process, technology is providing a permanent long-term solution to the challenge.
•Below is a snapshot of what a completed month looks like

Results:

-The improvements with this project resulted in less time spent organizing data on a monthly basis as less documents were submitted.
-originally, time spent entering data totaled 260 minutes but after the implementation of requesting departments submit on-call schedules electronically coupled with the ByteBloc system, time spent entering data decreased to 166 minutes - a 36% reduction in time required to produce the monthly on-call schedule.



Next steps / Sustaining the Gains:

•In February 2018 our Emergency Room physicians subscribed to an electronic software program called ByteBloc. This system is used by other on-call groups throughout Northern Health with very positive results and high customer satisfaction.
•Users of this system are extremely satisfied with the electronic scheduling system as it provides up to the second current information so any last minute changes that are required, can be quickly accommodated. The Physicians are responsible for making all call changes with this system whereas prior to this software, physicians would need to contact their clinic managers who then would fill out paperwork and fax to GRB Admitting, Admitting then would make the required changes and re-fax the call change to all the departments. This could take up to 40 minutes per change. With ByteBloc, changes occur instantaneously thereby eliminating the paperwork and follow up faxes.
•Clinic Managers are very satisfied with ByteBloc as the software has removed them from ensuring all call changes/scheduling were captured.
•The new electronic system will be implemented for all units at GR Baker Memorial Hospital by the end of 2019.

Patient/Customer:

Key learnings for myself - was very enlightened and surprised to learn that the need for a standardized process is critical and that an electronic system eliminates the human error.

"I hate working with paper…so going electronic made my work efficient too and I can type faster and neater than I can write"

"I find ByteBloc very user friendly. I love that the Doctors make their own changes and I always have the most up-to-date schedule. Saves me a lot of time"

"Dr McDonald really likes the way the program works and would be great if OBS/C-Section/Surgery/Residential/Anesthesia could be set up this way too"

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Team Members: Wendy Fox, Debbie Strang, Dana McColl, Linda Giesbrecht, Ursula West, Aida Keram

Infectious Diseases Telemedicine Services in Northern British Columbia

Author: Sophie Walton

Unit Name: Department of Internal Medicine

Contact: Sophie Walton

Date: December 2017

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Infectious Diseases Telemedicine Services in Northern British Columbia

Objective:

To understand patient perceptions and uptake of the infectious diseases telemedicine service offered through the medical clinic of Dr. Abu Hamour in Prince George through the administration of a patient satisfaction survey and chart review.

Background:

Telehealth allows the provision of a variety of healthcare services and improves access to services for people living in rural and remote areas (1). It is becoming an increasingly popular care tool with the number of clinical sessions doubling in BC from 2012 to 2014 (2). The majority of telehealth services offered in BC are clinical sessions and the most common sessions in Canada deal with mental health, neurology, oncology, pediatrics, and rehabilitation (2).

In 2013, the BC Centre for Disease Control Annual Surveillance Report on HIV identified that the highest rates of new HIV diagnoses were in the Vancouver Coast and Northern Health Authorities. Aboriginal peoples are disproportionately represented in BC's HIV epidemic (3). Additionally, telehomecare and chronic disease management have been identified as telehealth service areas deserving attention, especially in First Nations communities (4).

The use of telemedicine in the management of patients diagnosed with chronic infectious diseases in Northern British Columbia can address geographical and financial barriers to accessing specialist care.

Current State:

Providing specialist follow up care for patients with HIV and Hepatitis C using telemedicine may help to improve continuity of care and patient outcomes. As such, the telemedicine initiative established at the clinic of Dr. Abu Hamour was initiated in January 2013 to enhance the follow up care provided to those patients in Northern British Columbia living with HIV and Hepatitis C, a portion of who identify as Aboriginal peoples.

The number of patients using the telemedicine service has increased annually. In total, 210 patients residing in Northern British Columbia have accessed the service and the telemedicine terminal has been used for 601 appointments. The majority (61%) of patients are aged 50-69 years old with a confirmed diagnosis of Hepatitis C (54%), HIV (11%), or a dual diagnosis (7%).

Solution:

As the use and breadth of telemedicine grows, it is important to establish open communication with patients to continually evaluate its successes and shortcomings. This project aims to do this in order to inform future care delivered by our clinic.

Patient Satisfaction Survey

50 patient satisfaction surveys were administered by medical staff working at the office of Dr. Hamour using a provided script. The accessibility of the telemedicine service, the telemedicine technology and functionality of telemedicine as a care tool were assessed.

Chart Review

Information was gathered retrospectively from patients who used the telemedicine service from January 1st, 2013 to July 21st, 2017.
Diagnosis, communities of residence along with the travel distance to the nearest Northern Health telemedicine terminal and to specialist care was recorded. In addition, the usage of the telemedicine terminal in the office of Dr. Abu Hamour was analyzed. Specifically, use of the terminal and the number of administrative scheduling hours were reviewed.

Patient/Customer:

Patient's of Dr. Hamour that are living in remote places in Northern British Columbia and those using telemedicine services that Dr. Hamour provides.

References:

(1) Northern Health. (2016). Telehealth Programs, Project, and Services – Lessons Learned: An Environmental Scan.

(2) COACH: Canada's Health Informatics Association (2015). 2015 Canadian Telehealth Report. COACH: Canada's Health Informatics Association. Toronto, ON.

(3) British Columbia Centre for Disease Control. (2015). HIV in British Columbia: Annual Surveillance Report 2013. Accessed from http://www.bccdc.ca/util/about/annreport/default.htmhttp://www.bccdc.ca/util/about/annreport/default.htm

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(5) Boissin, C., Fleming, J., Wallis, L., Hasselberg, M., & Laflamme, L. (2015) Can we trust the use of smartphone cameras in clinical practice? Laypeople assessment of their image quality. Telemedicine Journal and E-Health, 21, 887-892. doi: 10.1089/tmj.2014.0221

Acknowledgments:

Tamara Checkley, Research and Evaluation, Northern Health

Northern Medical Program Office of Research Services, University of Northern British Columbia

Results:

Patient Satisfaction Survey

Overall feedback was positive with 98% of respondents stating they would use the telemedicine service again and would recommend this service to a friend.

- 80% of respondents felt comfortable using the telemedicine terminal
- 98% were satisfied or very satisfied with the quality of the visual image and audio sound
- 98% of respondents could understand the medical advice given

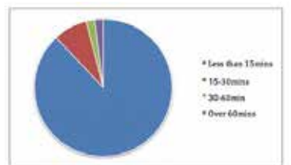

Figure 1. Time patients report spending commuting to nearest telemedicine terminal for medical appointment

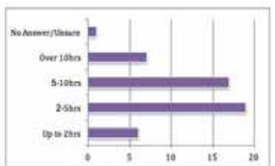

Figure 2. Time patients report spending commuting to Prince George for medical appointment

Chart Review

When looking at the distance patients must travel for medical appointments, 34% of patients live 100-299km from Prince George while a further 44% live 300-599km from Prince George. When using the telemedicine service, 88% of patients can attend their specialist appointment within their home community.

Next steps / Sustaining the Gains:

1) Continue to foster the current infectious diseases telemedicine service:
- Telehealth enhances care delivery to underserved populations and is also a cost effective means of delivering care (5).
- One third of respondents stated they preferred in person medical consultations to telemedicine appointments; however, 94% of respondents felt it was extremely important or important that a telemedicine consultation was an option for patients.

2) Develop solutions to address the greater administrative time needed to book a telemedicine versus an in person appointment.

3) Improve access to specialist healthcare in Northern BC through continued promotion and improvement of local telemedicine services by working with key stakeholders.

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Team Members:

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Consultant Infectious Diseases Physician
University Hospital of Northern British Columbia
Clinical Assistant Professor, University of British Columbia

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Northern Medical Program
M.D. Candidate, Class of 2018
University of British Columbia

Canadian Foundation for Healthcare Improvement Connected Medicine Collaborative: Physician Learning Experiences

Authors: Dr. Anurag Singh, Dr. John Pawlovich, Dr. Abu Hamour, Dr. Haidar Hadi, Janice Paterson and Tiegan Daniels

CFHI Connected Medicine Collaborative: Physician Learning Experiences

Dr. Anurag Singh[1]; Dr. John Pawlovich[1,2]; Dr. Abu Hamour[1]; Dr. Haidar Hadi[1]; Janice Paterson[1,4] and Tiegan Daniels[1,3]

[1]Northern Health; [2]Carrier Sekani Family Services; [3]Physician Quality Improvement; [4] Specialist Services Committee

Background

Northern Health (NH) has a large proportion of rural, remote, Northern, and Indigenous populations, which increases the need for creative health care solutions for patients and health care providers alike. The Northern RACE line allows physicians to be connected by telephone to a specialist in urgent cases. However, NH still battles long referral lists and wait-times for specialist consultations in addition to high expenses related to patient travel.

In Northern BC, GPs have access to the Northern Rapid Access to Consultative Expertise line for non-urgent patient care questions, an advice line that allows the GP to get quick support from 12 different specialist types, including cardiology, nephrology, and infectious disease. Northern Partners in Care (NPIC) had originally developed the Northern RACE line. When NPIC closed it's doors in 2017, Northern Health's Chronic Disease Program agreed to continue the administration of this line while planning for a long-term solution continued.

At the same time, the Canadian Foundation for Healthcare Improvement (CFHI) was offering teams across the country to join a 15 month quality improvement collaborative focused on spreading evidence-informed strategies that enhance primary care access to specialist consult, July 2017 to September 2018. As physicians, we saw this as an opportunity to learn about what was working well with the current Northern RACE line, and be supported with quality improvement education to learn and connect with other teams seeking to improve similar services in their own health organizations.

We saw an opportunity to bring together a small team of specialists and GPs working in the Northern Health region to learn quality improvement methods, and apply them together with the support of this national collaborative and the Northern Health Physician Quality Improvement Program.

Details from our Project Team Charter

The project encompassed five main objectives.

1. Improve patient access to specialist care in the North
2. Improve timeliness of access to specialist care for providers and patients
3. Support collaboration and relationship building between specialists, PCPs and their patients
4. Create opportunities to highlight and support awareness about how to provide culturally safe care
5. Improve the care inequities in rural and remote communities, including First Nations

By September 2018, our team aimed to:

- Increase awareness about culturally sensitive care for patients, families, and care providers at the point of care.
- Increase awareness and use of the RACE line by 50% in order to seek feedback and make improvements to the existing system.
- Seek to understand how communities are currently accessing specialist services and explore opportunities for building new and/or improving relationships between SPs, PCPs and their patients/communities.

Why is this important?

Dr. Anurag Singh, Nephrologist

"Remote consults will prevent anxiety, travel and related costs to patients, burden on wait lists, and overall better patient and provider experience. Remote consults can also play a huge role to build relationships between providers which can improve patient experience and outcomes."

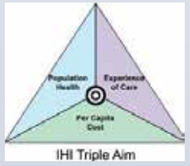
"The patients we serve do not always have the means or the desire to travel to larger communities to receive care. The RACE line prevents patients from having to leave home and allows the Primary Care Provider to have their questions answered quickly."

Dr. John Pawlovich, GP

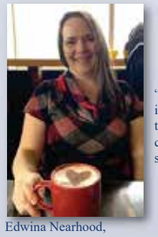
Dr. Abu Hamour, Infectious Disease Specialist

Dr. Haidar Hadi, Cardiologist

"As the vast geography is a major challenge in Northern BC, remote consult will undoubtedly help bridge the gap in access to care. The anticipated improvement in the quality of care, patient and provider experience alike, and the possible savings in healthcare costs would all fit well with the triple aim strategy."



IHI Triple Aim



Edwina Nearhood, Patient Advisor

"The RACE line would significantly improve the patient experience by allowing their Primary Care Provider to discuss the condition with a specialist without having to send the patient out of town."

Team Learning Activities

Key activities and education experienced:

4 Modules + 1 we added

- Design and Readiness for implementation
- Early Stage Testing and Implementation
- Continued implementation and Early Evaluation
- Planning for Sustainability and sharing results

+

- Indigenous Cultural Sensitivity Training Workshop

Modalities Used

- Webinars/live chats
- Surveys
- Coaching teleconferences
- Worksheets and data reviews with team PDSA Virtual Team Planning/Studying Meetings using QI tools
- Education Primers: Patient engagement and co-design; Highly Adoptable Improvement; PSDA Cycles

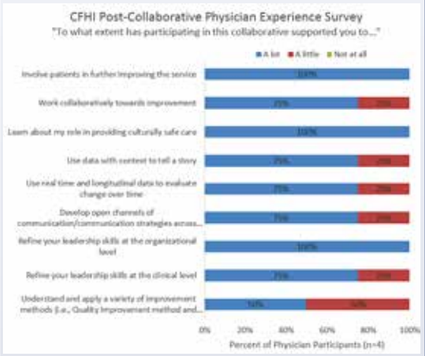
Collaborative Timeline:

Project Results

Since the beginning of focused project work in September 2017, the Northern RACE line has seen an average of 37.3 calls per month. An upwards trend in call volume was seen between December 2017 and April 2018.

Reflections

"We have learned a lot about patient and stakeholder engagement through this collaborative and through working with our patient partner on the team. Also, the measurement webinars and coaching have been helpful. We are also learning ways to successfully engage with physicians and leaders in our regions. We have a much better understanding about how the physicians in the north appreciate and advocate for their northern connections and consults and the importance of having a local and regional context for consults and communication." (Team Report, July 2018).



What's Next?

For education and leadership:

As physicians, we plan to further our education with additional leadership and quality improvement courses, and use our leadership to support contemporary technology use and relationship collaboration between GPs and specialists.

For the Race North Team:

- Further relationship building with GPs in our region
- Technology improvements to enhance RACE line services
- Patient Journey Mapping with our Patient Partner
- Additional spread and sustainability planning
- Participate in provincial planning discussions

Acknowledgments and Contact Info:

Contact: Dr. Anurag Singh Email: Anuragsing@hotmail.com

This project owes a great deal of appreciation and thanks to the following people and groups that enabled this project to happen: Patient Voices Network, our Patient Partner, Edwina Nearhood; our Sponsors, Northern Health, the SSC funded Physician Quality Improvement initiative, and the CFHI Connected Medicine Collaborative.

We would like to also acknowledge the rest of the RACE North team: Reina Pharness, Edwina Nearhood, Frank Flood, Lee Cameron, Leanne Nahulak, Sheri Yeast, Jessica Place, Tiegan Daniels, and Janice Paterson.

Knowledge is Power: Strengthening Chronic Obstructive Pulmonary Disease Patients with Support and Education

Author: Dr. Denise McLeod

Unit Name: Family Practice in Prince George

Contact: Dr. Denise McLeod

Date: December 2017- October 2018

KNOWLEDGE IS POWER: Strengthening COPD Patients with Support and Education

northern health
the northern way of caring

Background:

- 0.4% of all people diagnosed with COPD have access to pulmonary rehab
- 14% of people with COPD in BC were admitted to the hospital for an average length of stay of 13.2 days
- 9% of those people were readmitted to hospital within 15 days of discharge
- COPD is the 4th leading cause of death in Canada

Objective:

We aim to increase patient confidence in self-management thereby reducing Emergency Room/Walk In Clinic visits and hospital admission by providing incremental information.

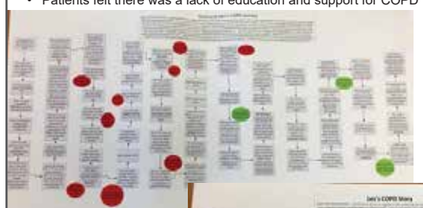
Current State:

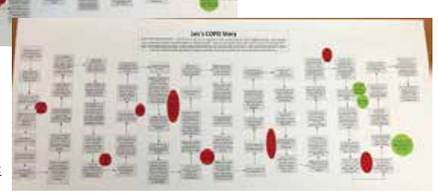
UHNBC Data:

- COPD is nearly always the #1 reason for readmission to UHNBC with 28 days of discharge from the hospital
- For COPD patients that visited the ED 19% of them returned to the ED within 1 week
- By 2 weeks 30% of the COPD patients were back to the ED
- And by 4 weeks 43% of the COPD patients had returned to the ED
- Of COPD patients that had been admitted to UHNBC 21% of them were readmitted within 4 weeks

PATIENT JOURNEY MAPS OF PATIENTS LIVING WITH COPD REVEALED:

- Patients felt there was a lack of education and support for COPD





DR. MCLEOD'S OFFICE:

- 67 patients living with COPD of 1747 total patients
- 35 of the COPD patients had a least 1 other chronic disease
- 88% (59/67) had their pneumococcal vaccine
- 85% (57/67) has their FEV1 done at some point (measure of COPD)
- 64% (43/67) were non smokers
- 67% 945/67) had an activity assessment done in the last year

Solution:

December 2017 –	Planning and identifying goals and measures with the primary care team, practice support coach, physician QI coach
January 2018 –	Identify patients to invite
February 9, 2018 –	Planning of training session with Renee Pigeon, RT and the primary care team
February 22, 2018-	First Group Medical Visit at McLeod Medical Clinic
March 2018-	1:1 Doctor's visit with GMV participants followed by home visit with the primary care team
April 2018 -	Second Group Medical Visit
May 2018 –	Third Group Medical Visit

Patient/Customer:

Patients living with COPD that were part of Dr. McLeod's practice.

Results:

Measures	Prior to 1st GMV	Current Data (from 1st GMV to Oct 2018)
# of emergency visits	17%	0%
# of walk in clinic visits	0%	0%
COPD exacerbations	33%	17% *
# of current action plans	17%	100%
# of current Pulmonary Function Tests (PFTs)	17%	100%
Patient confidence with their self management (from survey)	30%	50%

*One patient had 3 exacerbations but they were all treated at home. No ER visits.

PATIENT FEEDBACK ON GROUP MEDICAL VISITS

Respondents ***unanimously*** identified interacting with other COPD patients (e.g. hearing their experiences and learning from them) as ***the biggest benefit*** of the session.

"Slightly bigger room, with a larger group"

	Yes	No
Would you change anything about the GMV?	1	4
Can you understand and manage COPD better?	4	1
Would you come again?	4	1

"No. Still trying to understand what COPD is and what causes it"

"Would not take up a valuable spot and have another patient with COPD partake"

"Yes, how to use the inhaler that she was doing it correct"

"Definitely educated me on the disease and that he found" he did not have COPD"

"Absolutely..."
"Definitely..."
"Yes, to support my husband"

Lessons Learned:

- A community Respiratory Therapist would be a very big asset to the team both in the sessions and for one on one follow-up with patients.
- Team education prior to undertaking the teaching made things very smooth.
- Projects over the summer are difficult on the staff and patients. But, the primary care teams were familiar with the patients because of the GMVs and they did home visits during the wildfires in the summer to check on them.
- GMVs should be 2-3 months apart with a primary care team home visit and an individual doctor's appointment in between.
- We need to improve our teaching slides.

Next steps:

- Present results at a Family Practice Rounds or Divisions of Family Practice meeting.
- Speak at the Practice Support Program COPD Module for the Divisions of Family Practice to promote the use of GMVs for COPD work.
- Begin a second group of GMVs for people living with COPD in my practice.
- Increase the group size of the GMVs

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Team Members: Dr. Denise McLeod, Johanna Tolsdorf (MOA), Dr. Sharla Olsen (Respirologist), Renee Pigeon (Respiratory Therapist), Roberta Miller (Primary Care Team Lead), Annick McIntosh (Primary Care RN), Karen Gill (Practice Improvement Coach), Shelley Movold (Facility Improvement Coach)

Northern Haida Gwaii Hospital Emergency Department Organization Project (5S)

Authors: Dr. Caroline Walker and Lisa Froese

northern health
the northern way of caring

5S Method of Improvement
SORT
SET IN ORDER
SHINE
STANDARDIZE
SUSTAIN

Location: Northern Haida Gwaii Hospital Emergency Department
Contact: Lisa Froese
Date: Fall 2018

Northern Haida Gwaii Hospital Emergency Department Organization Project (5S)

AIM STATEMENT :

- to reduce duplicate and redundant stock, estimated 40% of current stock
- to increase efficiency of stocking by at least 30%
- to decrease frequency that staff need to look in more than one place for supplies by 50%
- to increase satisfaction of users of the space

BACKGROUND

The Northern Haida Gwaii Hospital is a rural facility with combined residential, acute, and emergency areas. The emergency room sees clients of all ages and all variations of health concerns.

The Emergency Department has undergone numerous isolated improvements but remains disorganized and simultaneously over- and under-stocked, which increases risk to clients.

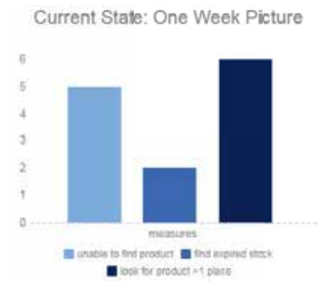
Dr. Caroline Walker identified this as a concern with the physician team, and other inter-professional team members agreed that it is a priority.

CURRENT STATE

Nurses request stock from stores, who deliver product to the department. A different nurse then puts it away. This results in numerous locations of items, overstock, and incorrect product use.

Patients are affected when staff can't find emergency equipment quickly. The design of the department and overstocking has resulted in storage in patient rooms, who are then interrupted when items are needed from the room they are in.

Unfortunately, the problem does extend beyond the ED, however to address the entire building was beyond the scope of this project. This is a widespread problem since the move into this building 9-years ago after design and construction issues, followed by a rushed move.



RESULTS

39 expired types of product removed during 5S
2 individual expired products found at audit 1 month post- 5S

89 Products discontinued from stock due to being inappropriate, redundant, or outdated

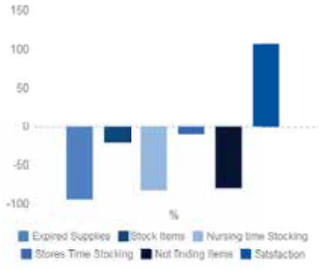
- examples include: combitubes, tracheostomy trays, 3 varieties of wrist splint, soft collars

Average nursing time spent stocking in the ED decreased 82%

Average stores time spent stocking in the ED decreased 10%

Frequency of not finding necessary supplies reduced from average 5 times/week to 1/week

Staff satisfaction doubled from a mean of 4/10 to 8.3/10



CHANGE IDEAS

Our goal is to improve accessibility of stock, reducing search attempts by half by Oct 31st; reduce wasted time in the supply chain system by half; and reduce overstock or redundancy by 75% by Nov 9th.

A Lean 5S approach was used to improve the space and develop a Kanban system. Changes were made through consultation with the users of the space and a coordinated approach that considered the entire department but tackled individual areas to manage the size of the project.

Critical success factors were the unanimous agreement that the current state was inefficient; Barriers are primarily to sustainability, given that this site continues to have high levels of turnover in both bedside and management levels.

The active team included representatives from nursing, physicians, stores, midwifery, and administration. Potentially impacted groups and off-site partners were lab and X-ray staff, infection control, wound care, trauma care, pediatrics, diagnostic imaging, and sterile supplies processing.

PATIENT/CUSTOMER

- decreased risk of delayed care
- decreased risk of use of outdated supplies•
- increased efficiency of department:
  - decreased time spent stocking by clinicians
  - decreased time spent stocking by stores staff
- decrease in redundant items on unit
- more professional and tidy appearance for staff and those seeking care

NEXT STEPS / SUSTAINING THE GAINS

This project was done with existing space and supplies, with no budget for purchasing tools or equipment. A modern stocking system is the next step, such as Acart and mobile carts that can take supplies to the patient. Furthermore, sustainability will be challenging when other areas of the same building remain cluttered and do not use the same stocking system. A lean approach to ward stock, and ultimately, the stores department will increase consistency and support sustainability.

This project also identified many opportunities for continuous quality improvement that are smaller in scope and reasonable for a small team to tackle in a few days.

A solid sustainability plan is essential, as this is the major challenge faced given high turnover. The new state has been integrated into the orientation process. Tools have been made to maintain minimum and maximum supply levels, and existing checklists have all been modified to be consistent with the future state. An auditing system was put into place with staff, management, and the local QI Committee. Changes are anticipated, and an application-type system is in place so that they can be considered in a broader context by all who may be affected.

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PQI PHYSICIAN QUALITY IMPROVEMENT
An SSC Initiative

UHNBC Emergency Department and the Lab Quality Improvement Project

Author: Dr. K. Cunniffe

northern health
the northern way of caring

Location: UHNBC
Contact: Dr. K. Cunniffe
Date: April 2018 - April 2019

UHNBC Emergency Department and the Lab Quality Improvement Project

AIM STATEMENT

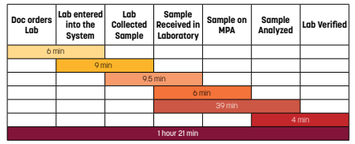
To improve the variability in the time it takes for physicians to receive their lab work results by 30% by April 2019 in the UHNBC Emergency Department.

BACKGROUND

Physicians and others have raised concerns with the lab's response time to providing blood work results in the Emergency Department (ED) at UHNBC. Lab staff have not had significant increases to the number of full time equivalents in the department over a number of years despite large increases in the workload. This has led to an increasingly stressful work environment and stresses to other parts of the hospital system.

PROBLEM STATEMENT

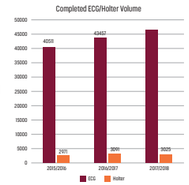
There was too much variability in the amount of time it took to get lab results once the ED physicians ordered them. It could take anywhere between 36 minutes and 5 hours to get lab results. The median amounts of time for each step in the process, from the labs being ordered to the labs being verified and ready for the physicians, is seen in the table to the right.



	2016	2017	2018	Difference from 2016 - 2018	% Change
Blood	1089063	1095899	1148934	59871	5.5%
Body Fluid	2390	2845	3169	779	32.6%
CSF	757	663	905	148	19.6%
Hold	4635	7202	8521	3886	83.8%
Whole Blood	19577	21258	23021	3444	17.6%

In the last 3 years, there was a significant increase in the workload for the UHNBC lab department, as can be seen in the table above.

In addition to the blood work that the lab assistants needed to collect, they were also responsible for performing the ECGs that were ordered. The volume of ECG orders at UHNBC has gone up by 6000/year in the last 3 years.



CHANGE IDEAS

To trial having two extra lab assistants; one would help improve lab response time in the ED and the other would help with earlier sample collection throughout the hospital. The ED would be supported with an extra lab assistant during peak ECG times based on analysis of ECG ordering patterns:

- 1500-2300 Monday to Friday / 1300-2100 on Weekends

Monday to Friday ECG Volumes

Time	Completed Volume
00:00 - 00:59 PDT	352
01:00 - 01:59 PDT	243
02:00 - 02:59 PDT	152
03:00 - 03:59 PDT	173
04:00 - 04:59 PDT	183
05:00 - 05:59 PDT	135
06:00 - 06:59 PDT	205
07:00 - 07:59 PDT	656
08:00 - 08:59 PDT	521
09:00 - 09:59 PDT	680
10:00 - 10:59 PDT	526
11:00 - 11:59 PDT	525
12:00 - 12:59 PDT	523
13:00 - 13:59 PDT	432
14:00 - 14:59 PDT	341
TOTAL	5560

Saturday & Sunday ECG Volumes

Time	Completed Volume
00:00 - 00:59 PDT	128
01:00 - 01:59 PDT	104
02:00 - 02:59 PDT	87
03:00 - 03:59 PDT	93
04:00 - 04:59 PDT	68
05:00 - 05:59 PDT	51
06:00 - 06:59 PDT	65
07:00 - 07:59 PDT	221
08:00 - 08:59 PDT	356
09:00 - 09:59 PDT	311
10:00 - 10:59 PDT	258
11:00 - 11:59 PDT	283
12:00 - 12:59 PDT	257
13:00 - 13:59 PDT	338
14:00 - 14:59 PDT	424
15:00 - 15:59 PDT	244
16:00 - 16:59 PDT	226
17:00 - 17:59 PDT	193
18:00 - 18:59 PDT	240
19:00 - 19:59 PDT	226
20:00 - 20:59 PDT	218
21:00 - 21:59 PDT	161
22:00 - 22:59 PDT	152
23:00 - 23:59 PDT	161
TOTAL	4815

A morning lab assistant would support early discharges from the rest of the hospital and the ED.

- 0600-1000 (7 days a week)

Also noteworthy: having extra lab assistants ensures that lab technologists remain in the lab to expedite sample processing, rather than being called away to help with sample collections.

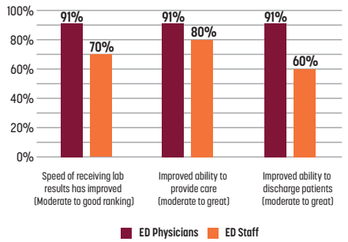
RESULTS

The variability in the amount of time it took to get lab work results improved to a range of 35 minutes to 3.5 hours. There was improvement seen in the percentage of cases done in a specified time period across the board.

Percentage Cases	Baseline	Pilot
Less than 1 hour	21%	38%
Less than 1 hour 30 min	68%	75%
Great than 2 hours	9%	6%
Greater than 2.5 hours	3%	1%

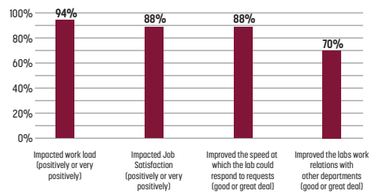
In addition to the ED, the entire hospital benefitted from the trial because morning lab work was available earlier to help physicians make decisions about discharge while doing their morning rounds. On the surgical floors complete lab work was available for review by 0809 (median time) which was an improvement from 0935 (median time) prior to the trial.

Pilot Feedback from the Emergency Department



Staff and physicians were surveyed and asked about the trial.

The Pilot's Impact on the Lab Staff



Staff in the lab were also surveyed.

NEXT STEPS / SUSTAINING THE GAINS

The project was hugely successful with physicians and staff; a business case is being developed to sustain the changes.

NEXT STEPS....

1. Improving the percentage of ED labs available in under 1 hour
2. Ensuring lab results are available in the early morning to enable earlier discharges, improve hospital-wide patient flow and help with overcapacity issues
3. Continue to examine the optimal times of day to have extra lab assistant shifts

TEAM MEMBERS

Dr. Kathleen Cunniffe (ED Physician), Dr. Melissa Dymond (ED Physician), Roma Toor (Diagnostics Manager), Darcy Hamel (Manager High Intervention), Caroline Perrin (Specimen Logistics Charge Technician), Laura Elsenheimer (Chief Technologist Laboratory UHNBC), Shelley Movold (Physician Quality Improvement Coach)

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Reducing Readmission Rates of Frail Elderly Patients at G.R. Baker Hospital

Author: Dr. J. Fine

Unit Name: GR Baker Memorial Hospital

Contact: Dr. J. Fine

Date: November 7, 2018

QUALITY IMPROVEMENT STORY BOARD

Title: REDUCING READMISSION RATES OF FRAIL ELDERLY PATIENTS AT G.R.BAKER HOSPITAL

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Objective:

To reduce readmission rates of frail elderly patients in GR Baker Hospital by:

1. Using and scoring the Modified LACE Tool in the clinical setting reliably
2. Developing an effective discharge planning process
3. Effectively involving the IPT, family and caregivers in the discharge planning process

Background:

"Rehospitalizations among Medicare beneficiaries are prevalent and costly".
Ref: Jencks, Williams and Coleman. Rehospitalizations among Patients in the Medicare Fee-for-Service Program. New England Journal of Medicine, 2009; 360; 1418-28

"Hospitals need to identify potentially preventable readmissions (PPR's) in order to control readmission rates".
Ref: Goldfield, McCulloch et al. Identifying Potentially Preventable Admissions. Health Care Financing Review, Fall 2008; 30 (1): 75-91

Current State:

- Chronic overcapacity
- At any one time 70%-90% of inpatients are >65
- Increased mortality
- Increased morbidity – nosocomial infections, reduced mobility, increased falls, functional decline
- Reduced patient satisfaction

Next steps / Sustaining the Gains:

Develop Enhanced Discharge Planning processes when a person is identified as high risk for readmission:
•Develop meeting structure to discuss cases, develop a complex care plan, and identify shared documentation
•Early involvement and collaboration with patient and caregivers
•Patient will be 'flagged' in Cerner as high risk for re-admission
•LACE scores will be added to the acute care huddle board
•Explore if complex care plan can be shared through Cerner
•Sharing of information: primary care provider, IPT, appropriate acute care services

Early connection with the IPT:
•Document LACE score and complex care plan in CMOIS
•Use LACE score to prioritise high risk patients and allocate resources
•PCN to meet with the patient prior to discharge
•PCN to see patient within one week of discharge to ensure all elements of the plan are working

Early follow up with the primary care provider

Identify roles and responsibilities within existing positions to ensure sustainability

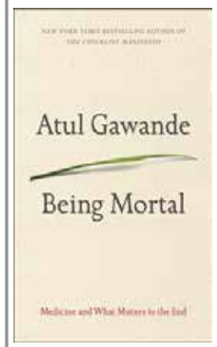
Solution:

- Trial use of the LACE assessment tool to identify those patients who are at high risk for readmissions
- Implement process to complete a LACE assessment on all patients >65ys who are admitted to acute care
- Identify the structure and processes to provide high risk patients with an Enhanced Discharge
  Two process mapping sessions have been completed with a multidisciplinary team (acute care, community care, and the primary care home)

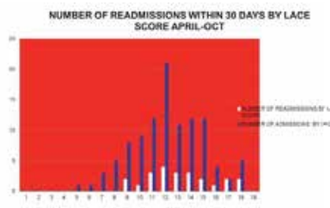
L = length of stay A = acuity C = comorbidities E = number of ER visits in past six months

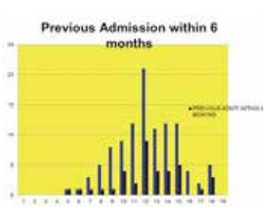
Attribute	Value	Points	Prior Admit	Present Admit
Length of Stay	Less 1 day	0		
	1 day	1		
	2 days	2		
	3 days	3		
	4-6 days	4		
	7-13 days	5		
	14 or more days	6		
Acute admission	Inpatient	3		
	Observation	0		
Comorbidity: (Comorbidity points are cumulative to maximum of 5 points)	No prior history	0		
	DM no complications, Cerebrovascular disease, Hx of MI, PVD, PUD, Mild liver disease, DM with end organ damage, CHF, COPD, Cancer, Leukemia, lymphoma, any tumor, cancer, moderate to severe renal dz	1		
	Dementia or connective tissue disease	2		
	Moderate or severe liver disease or HIV infection	3		
	Metastatic cancer	4		
		6		
Emergency Room visits during previous 6 months	0 visits	0		
	1 visits	1		
	2 visits	2		
	3 visits	3		
	4 or more visits	4		
Take the sum of the points and enter the total →				

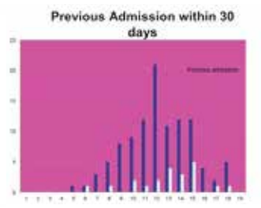
Patient/Customer:



Results:







To date 107 LACE scores have been completed on those 65 years of age and older, excluding those deemed ALCP.

•Of those, 79 have scored 11 or above, indicating a **high risk** for readmission within 30 days – **74% of admissions**
•33% had a previous admission within the previous six months.
•21% had been readmitted within 30 days.
•19% of previous admissions were admitted within 30 days.
•13 patients were readmitted within 72 hours. (Includes 2 repatriations)

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Team Members: Dr J. Fine, Riley Beckman RN BSN, Marna deSousa PQI QI Coach

Rapid Assessment Zone (RAZ)

Author: Dr. Laura Brough

northern health
the northern way of caring

Location: University of Northern British Columbia
Contact: Dr. Laura Brough
Date: May 1, 2019

RAPID ASSESSMENT ZONE (RAZ)

QUALITY IMPROVEMENT TRIAL
FEBRUARY 4TH - APRIL 30TH, 2019

BACKGROUND

The Rapid Assessment Zone (RAZ)

- Additional geographic space next to the acute care Emergency Department (ED)
- Currently operates 1300-2100, 7 days a week
- Designated ED physician and ED Nurse
- Assesses and cares for CTAS Level III patients (no telemetry or resuscitation capacity)

Canadian Triage Acuity Scale (CTAS)

Level	Urgency	Guideline Time to see a Physician
CTAS I	Resuscitation	NOW
CTAS II	Emergent	=<15 mins
CTAS III	Urgent	=<30 mins
CTAS IV	Semi-Urgent	=< 1 hour
CTAS V	Non-Urgent	=<2 hours

PROBLEM STATEMENT

UHNBC experiences capacity issues and the ED struggles with flow challenges. The importance of moving patients through the system in as efficient a manner as possible is tremendously important. It has been observed that the number of CTAS III (RAZ appropriate patients) has slowly been increasing over the years. In particular, the morning hours from 0900-1300 have a large number of patients that could be seen in RAZ, if it were open. By the time RAZ opens at 1300, there is a backlog of patients waiting to be seen. This leads to frustrated patients and a more difficult, stressful working environment for staff and physicians.

CHANGE IDEAS

- Increase RAZ hours by 4 hours per day, 7 days a week
- Trial held for 12 weeks (February 4th- April 30th, 2019)
- Open from 0900-2100 (instead of 1300-2100)

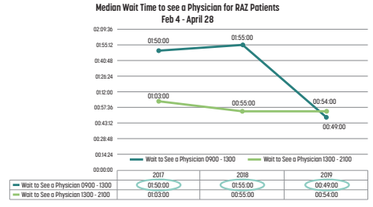
PATIENT/ CUSTOMER

- Lower acuity CTAS III level patients

RESULTS

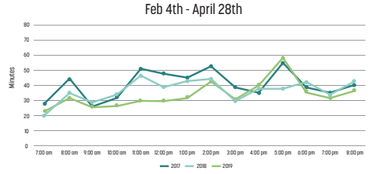
As a result of the trial, wait times to see a physician, for RAZ patients, decreased by over 1 hour from 0900-1300. Likewise, all other ED patients experienced a decrease in wait time to see a physician from 0900-1300 (grey line in graphs below). From 1300-2100, when there was no changes trialed, there was no significant difference in wait times.

Median Wait Time to see a Physician for RAZ Patients
Feb 4 - April 28

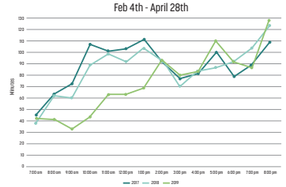


	2017	2018	2019
Wait to See a Physician 0900 - 1300	01:50:00	01:55:00	00:49:00
Wait to See a Physician 1300 - 2100	01:03:00	00:55:00	00:54:00

Median Wait Time of Non-Raz
CTAS 1 & 2 Emergency Patients at UHNBC
Feb 4th - April 28th

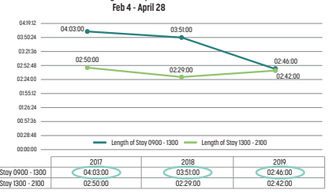


Median Wait Time of Non-Raz
CTAS 3 Emergency Patients at UHNBC
Feb 4th - April 28th



In addition, the length of time spent in the ED was decreased for RAZ patients, therefore improving flow.

Median Length of Stay for RAZ Patients
Feb 4 - April 28

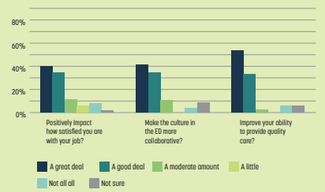


	2017	2018	2019
Length of Stay 0900 - 1300	04:03:00	03:51:00	02:46:00
Length of Stay 1300 - 2100	02:50:00	02:29:00	02:42:00

SURVEY OF PHYSICIANS AND STAFF IN THE ED:

Physicians and staff were very supportive of the pilot and when surveyed about their feelings towards the pilot, had many good things to say.

To what extent did the extended hours...



COMMENTS FROM PHYSICIANS AND STAFF:

- "earlier start has fundamentally changed the atmosphere in ER, less stress for ER Dr, less stress for triage knowing flow will improve, less dissatisfaction for patients re wait times"
- "most importantly it's helping the overall morale for the squad"
- "patients less grumpy which makes my job more pleasant"

NEXT STEPS / SUSTAINING THE GAINS

- To work towards sustaining this trial as it was well received by physicians and staff. An APP funding request has been submitted to request a permanent increase in physician time for RAZ, as well as a business case to support Northern Health Nurse time.
- Continued work is underway in the ED to look for ways to deal with improving the flow of patients through the ED and help with UHNBC's overcapacity issues.

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TEAM MEMBERS: Dr. Laura Brough, Dr. Devin Spooner, Dr. Patrick Rowe, Dr. Patrick Turner, Dr. Matt Janzen, Dr. Kathleen Cunniffe, Dr. Amy Johnson, Rita Sweeney, Belinda Maidment, Laura Wessman & All ED Nurses

Routine Offering of HIV Testing for Acute Care Patients in Northwestern BC

Author: Dr. Denise Jaworsky

northern health
the northern way of caring

Location: Mills Memorial Hospital, Terrace
Contact: Dr. Denise Jaworsky
Date: October 2018

PROJECT AIM

To increase HIV screening of patients 19 years of age and older in acute care (Medicine, Surgery, Intensive Care Unit) at Mills Memorial Hospital to >20% by December 31, 2018.

BACKGROUND

The BC HIV Testing Guidelines recommend that providers routinely offer an HIV test:

- Every 5 years, to individuals 18-70 years
- Annually, to individuals 18-70 years belonging to populations with a higher burden of HIV
- Whenever ordering bloodwork for a new or worsening medical condition

The lower mainland's STOP HIV work has shown that routine offering of HIV testing in the hospital environment is acceptable and effective (inpatient testing increased from 3.3% to 19.2%).

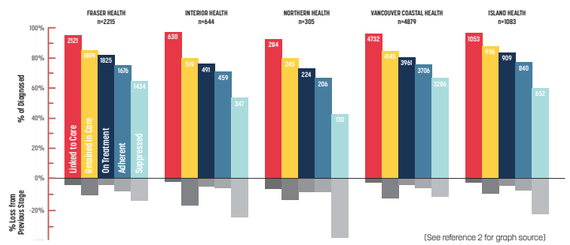
PROBLEM STATEMENT

In 2017, 4,711 people per 100,000 (4.7%) in Northern Health were tested for HIV[1]

- Excludes point-of-care and prenatal testing
- Provincial average was 5,963/100,000 people (6.0%)

42.6% of people living with HIV in Northern Health's catchment area were virally suppressed[2]

- Below provincial viral suppression rate of 64%



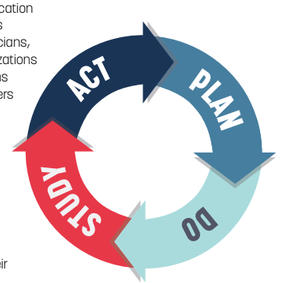
(See reference 2 for graph source)

CHANGE IDEAS

Routinely offer HIV testing to all adults admitted to acute care settings (Medical/Surgical Ward, Intensive Care Unit) at Mills Memorial Hospital in order to increase rates of testing in this population. Plan-Do-Study-Act cycles were utilized to develop and modify the intervention of offering routing HIV testing.

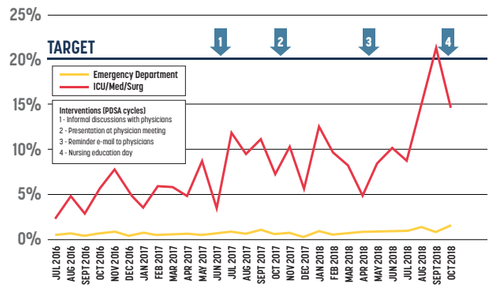
Steps in this quality improvement project:

1. Develop a local process of delegated follow-up
2. Formation of stakeholder advisory group
   - Advise on education needs
   - Ensure messaging is appropriate for community
   - Provide input on ways to increase testing
3. Build local HIV capacity and education
   - AIDS service organization visits
   - HIV training sessions for physicians, nurses and community organizations
   - Community education programs
   - Preceptorships for care providers
   - Physician newsletter article
   - HIV resource board for nurses
4. Implementation of routine offering of testing
5. Evaluation
   - Project data reviewed at 3, 6 and 12 months
   - Proportion of individuals who received an HIV test during their inpatient stay



RESULTS

RATES OF HIV TESTING AT MILLS MEMORIAL HOSPITAL



NEXT STEPS / SUSTAINING THE GAINS

- Continue Plan Do Study Act (PDSA) cycles to further increase HIV testing rates
- Community HIV education events and educational materials
- Developing client-initiated testing (clients requesting tests in addition to providers offering testing)
- Increased nursing and other health professional engagement

Developing strategies to increase testing in other settings

- Community settings
- Other hospitals in region

PATIENT/CUSTOMER

This project addresses the Northern Health strategic priority, "Healthy People in Healthy Communities" and involvement of patient and community stakeholders was essential. The stakeholder advisory group consisted of representation from:

- Patient partner
- Health Directors - multi-nation representation
- Community service providers
- Public Health nurses
- Community research associate
- Family physician
- Specialist physician

The stakeholder advisory group guided the project and helped to ensure that the project represented the interests and needs of community members.

TEAM MEMBERS

Holly (Gitsdi motx') Harris, Kyle McIver, Ciro Panessa, Lee Cameron, HIV Community Advisory Board

ACKNOWLEDGEMENTS:
Ashley Stoppler, Candice Manahan, Dee-Ann Stickel, Andrew Gray, Raina Fumerton, Mark Hull, ICMT Team, Terrace Public Health, Northern Health, Jasmine Pocha, STOP HIV/AIDS, BC Centre for Excellence in HIV/AIDS

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REFERENCES:
1. STOP HIV report: BC Centre for Excellence in HIV/AIDS. http://cfenet.ubc.ca
2. Lourenco L, et al. High levels of heterogeneity in the HIV cascade of care across different population subgroups in British Columbia, Canada. PLoS One 9(12): e115277

PQI PHYSICIAN QUALITY IMPROVEMENT

St. John Hospital Endoscopy Clinic Quality Improvement Project

Author: Marna deSousa

Unit Name: St John Hospital Endoscopy Program

Contact: Marna deSousa

Date: October 2018

QUALITY IMPROVEMENT STORY BOARD

St. John Hospital Endoscopy Clinic Quality Improvement Project

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Objective:

We aim to improve the clinical quality and the quality of the patient and provider experience of the St. John Hospital Endoscopy Service.
By working on the process, we expect to:

- Improve program efficiency
- Improve access
- Improve patient satisfaction
- Improve provider skills
- Improve data analysis

Background:

The Endoscopy service at St. John Hospital supports patients from Vanderhoof, Fraser Lake, Fort St. James and surrounding Indigenous communities. Two physicians perform diagnostic colonoscopies and gastroscopies and are continually looking to improve services and patient care within the facility. Based on an initial data review they have chosen to focus on process efficiency and outcome measurements to optimize service capacity, develop patient-centred processes and enhance their endoscopy skills.

Current State:

The demand for endoscopy services is growing, particularly for screening colonoscopy. Currently the demand from our referral area outweighs our capacity which significantly affects patient access and adds to the burden for patients requiring the service. Our resource limited rural setting compounds the situation.

Rural patients have increased challenges with transportation and supports and this is particularly evident in our marginalized population.

The current hybrid paper and electronic environment makes tracking and using meaningful data problematic. The referral process between the endoscopists office and hospital requires significant manual work and strains our administrative capacity.

Virtual technologies are being employed, however, it is limited by patient access to reliable internet.

We have a part time Quality Improvement Coach whose essential facilitation and leadership is time limited.

Activities:

Improve Program Efficiency
•Working group meets quarterly to review and create action plans for implementation of the Canadian Association of Gastroenterology Global Rating Scale (C-GRS) recommendations:
- Currently 6 of the 12 identified action plans are complete and implemented or are in progress

Improve Data Analysis
•Developing processes to measure and review quality outcomes

Improve Access
•Implemented processes to measure and review wait times, access equity, and appropriateness
•Implemented a standard 'direct-to-procedure' process
•Implemented a Virtual Consultation Process to improve access to consultation
•Continuing use of Group Medical Appointments for consultation to increase capacity and efficiency

Improve Patient Satisfaction
•Completed series of patient satisfaction and feedback surveys used to inform the development of virtual consultations
•Use Northern Health regional Patient Satisfaction Survey to inform ongoing program improvement
•Developing processes to monitor and improve patient safety, comfort, privacy and dignity

Patient/Customer:

We have focused on endoscopy patients and in particular those needing urgent procedures.

Patient feedback was used to inform process development, through direct interviews.

Next steps will be to invite patient partners to participate in program development including processes regarding access and also more robust use of Patient Reported Outcome Measures (PROMs) and Patient Reported Experience Measures (PREMs).

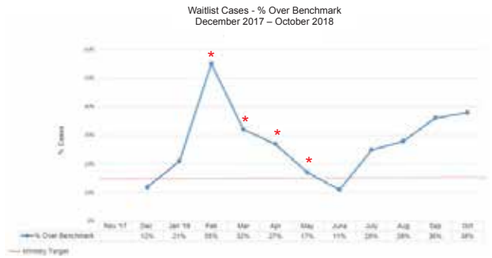
This work will allow patients to access this care close to home in a timely manner.

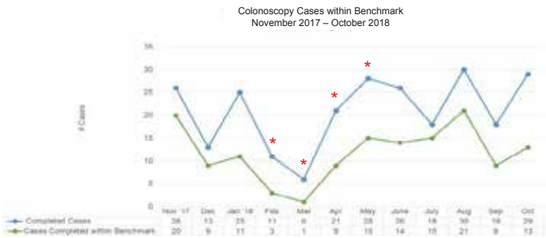
Results:

Results from interviews regarding the Virtual Consultation Process, showed that 100% of patients who used it were satisfied with the process and time to appointment. Patient uptake of virtual consultations however remains low.

Results related to wait times for consultation to procedure shows that in all but two months from January to October 2018*, colonoscopy case wait times were above the benchmark target of 15%.

**Data presented here captures colonoscopies only. Baseline data only commenced in December 2017 and in February 10, 2018 the OR flooded and the OR was closed to April 16, 2018. The results from February-April reflect times when the OR was open. December 2017 data is considered the baseline for comparison.*





Next steps / Sustaining the Gains:

Explore methods to increase capacity of the program to improve our wait times and meet the benchmark.
- Process mapping and use of LEAN Tools
- Explore risk management of performing endoscopies in OR verses endoscopy suite

Explore methods to increase access.
- Collaborate with regional, community and clinic partners with focus on marginalized populations
- Electronic bookings
- C-GRS completion

Data collection and analysis.
- Track quality indicators related to technical performance of the procedure and appropriateness
- Use of real time dashboard and trends of relevant indicators to monitor access, capacity and efficiency of endoscopy service

Provider skills development.
- DOPs assessment
- Establish formal mentorships

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Team Members: Dr. Sean Ebert, Dr. Alison Fine, Mary Sommerville, Marna deSousa, Jennifer Little, Heather Goretzky

CMOIS Care Plan Folder Use Improvement within Prince George Inter-Professional Teams

Authors: Julie Creaser and Jerry Daoust

Unit Name: Primary Care

Contact: Julie Creaser & Jerry Daoust

Date: May 10 2017

QUALITY IMPROVEMENT STORY BOARD

CMOIS Care Plan Folder use Improvement within Prince George Inter-Professional Teams

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Background:

Inter-professional teams (IPT) use CMOIS as their primary electronic health record (referred to as CMOIS) During IPT orientation, clinicians receive basic training on the electronic health record (EHR) and were asked to start entering their Plan of Care (POC) into the "Care Plan" folder in MOIS / CMOIS.

CMOIS "Care Plan" folder use by Prince George IPT's was found to be low. In addition, the type and way information is entered is inconsistent across IPT clinicians. The majority of Prince George IPT clinicians find POC entry into CMOIS extremely challenging without a process workflow or entry guidance, thus adoption of its use is very low among all IPT members in Prince George.

Objective:

Improvement objectives:

1. Increase completed plans of care to 50% over baseline for primary care clients served by IPT members by April 30th, 2018.
2. Increase the average confidence of the PG IPT's ability to enter data in each field of the plan of care over the baseline of 2.2 on a 10 point scale. (1 = "Not Confident at All")

Solution:

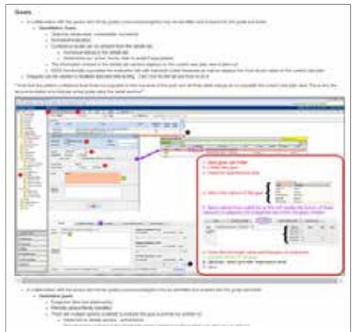
The goal was to increase CMOIS Care Plan usage and IPT members knowledge and skills around entering data into the plan of care. After digging into the root causes of the problem, a draft standard help tool and additional CMOIS Care Plan support and training were identified as primary solutions.

A phased approach to improvement was initiated:

- **Phase 1**: Developed a draft standard entry help tool outlining the workflow and entry procedure. Regional collaboration took place to identify what the prosed workflow should include. (Jan 2017)
- **Phase 2:** Worked with one IPT core group (Rehabilitation Team Members) and test the standardized help document. This phase included further stakeholder meetings and PDSA Cycles. (Mar 2017)
- **Phase 3**: Summarized the results from the PDSA cycle with the Rehabilitation Team and identify a list of feasible improvements to the standard document. (Apr 2017)
- **Phase 4**: Distributed the revised standard document to the Rehabilitation Team to solicit feedback and validate the readiness of this documents introduction to all IPT's. (May 2017)
- **Phase 5**: Introduce the standard help tool to all IPT clinicians & disciplines (Mental Health, Social Work, and Nursing) for feedback via a facilitated large group meeting. (June 2017)
- **Phase 6**: Make any necessary revisions based on Phase 5 and Implement. (July 2017)
- **Phase 7**: Control and stabilization phase. Process owners - monitor usage levels and quality of data input through CMOIS reporting tool and chart audits. (Ongoing)

Key Learnings:

- Early baseline data collection is critical to measuring the level of improvement.
- Basic engagement with staff can solve some problems without making huge changes up front.
- Root cause identification isn't always straightforward – early complaints about technology in the field obscured what was really going on and several investigations were required.
- Communication about local solutions upwards to regional initiatives is important to ensuring broader system change/sustainability of solutions rather than just localized solutions.



Instructional and visual changes were made to online Help Tool after the first PDSA Cycle

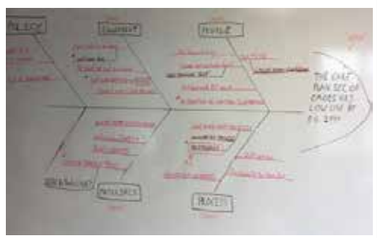
Current State:

Implementation of Plans of Care into CMOIS happened without clear direction. Basic training in CMOIS had been provided and a general sense that teams should start using the Plan of Care had been conveyed. However, team members faced barriers including:

- Technological skills – this barrier was one of the early flags to a problem – historically, team members often worked on paper in the client homes rather than routinely charting plans of care online.
- Lack of training or peer supports – sufficient guidance to help with data entry or guide specific professional needs in the plan of care EMR model created frustration among team members
- Paper to Online - some documents remained in paper, some were scanned into the EMR, while other plan of care data was lagging or not being entered at all into the EMR – communication among providers was flagged as a problem, especially between the IPT members and the Primary Care Providers.

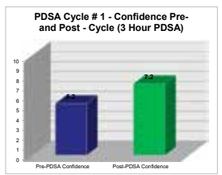
The problem was measured by assessing the present level of CMOIS Care Plan folder use by Prince George IPT members. Additional measures included level of confidence in using the Plan of Care as well as staff acceptance of the quality of training and documentation provided to support their use of the POC

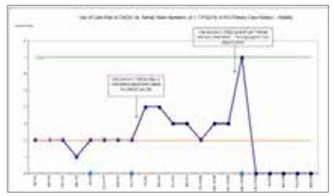
The **Root Cause** was uncovered through a **Fishbone Diagram** created after early discussions with stakeholders. **A lack of standardized information tools and specific training supports** were identified as major causes



Results:

- Development of a physical help support tool. Validation of the support tool as useful by Rehab.
- 100% agreed the tool would increase confidence in electronic care planning for others.
- 60% strongly agreed the tool would be useful to others, 40% were neutral.
- Care Plan entry confidence rating increased from 5.2 out of 10 to 7.2 post PDSA cycle.





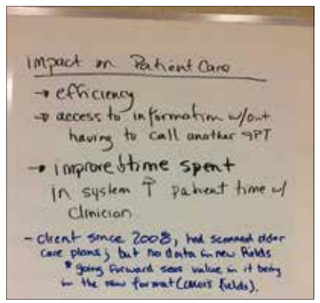
Next steps / Sustaining the Gains:

1. This project is ongoing and PDSA cycles will continue with different disciplines within the ITP
2. Changes to the help tool are underway.
3. Informatics is supporting the document online on confluence in a format that works for users (Post PDSA Improvements)

Sustainability is being addressed in several ways:

- Accountability – role of team leads, Monitoring –chart audits, Care Plan Reporting in CMOIS
- Peer to Peer support – mentoring,
- Training and introduction of support tool part of new employee onboarding
- Consistent and frequent communication of supports – Learning series

Patient/Customer:



1. The PDSA discussion identified that improving data entry skills & having step-by-step help resources would increase efficiency and potentially increase care time with the client.
2. It was also stated that communication about care would be improved – no more hunting for paper plans in piles or calling other team members for client details.

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Secondary email contact: Julie.creaser@northernhealth.ca

Team Members: Jerry Daoust (Care Process Coach); Julie Creaser (Regional Manager, Library Services) and Sandi DeWolf (Team Leader, Primary Care)

- Cifuentes, M., Davis, M., Fernald, D., Gunn, R., Dickinson, P., & Cohen, D. J. (2015). Electronic Health Record Challenges, Workarounds, and Solutions Observed in Practices Integrating Behavioral Health and Primary Care. Journal of the American Board of Family Medicine: JABFM, 28 Suppl 1, S63–72. https://doi.org/10.3122/jabfm.2015.S1.150133
- Hoerbst A, Schweitzer M. A Systematic Investigation on Barriers and Critical Success Factors for Clinical Information Systems in Integrated Care Settings. Yearbook of Medical Informatics. 2015;10(1):79-89. doi:10.15265/IY-2015-018.

Community Psychiatric Referrals Improvement Initiative

Author: Dr. Hezekiah Agboji

Unit Name: Quesnel Mental Health Service

Contact: Dr Hezekiah Agboji, Consultant Psychiatrist
2509831181

Date: April 2017

QUALITY IMPROVEMENT STORY BOARD

Community Psychiatric Referrals Improvement Initiative

northern health
the northern way of caring

Objective:

To improve the process of psychiatric referrals to the Community Mental Health and Addiction Service. The goal is to improve access to the Community Mental Health and Addiction Service by reducing the wait time for intake assessment from 80% to 10% and psychiatric assessment wait time from 90% to 70% at the end of first quarter (March) of 2017.

Background:

Northern Health Strategic Priority (2016-2021) states that we should "optimize patient and resident access and flow through facility-based care"
•Appropriately match service to need
•Improve care flow by improving access to specialized services
•Align facility based services with service pathways developed in partnership with physicians (GPs and Specialists)

In collaboration with GPs and administrative staff of Quesnel Community Mental Health and Addiction Services, a new referral pathway is put in place to improve access to care for patients with severe mental illnesses.

Current State:

Data were collected from the registry to identify the time lapse between referral and psychiatric assessment, and between referral and intake. Process mapping was done to ascertain the current service limitations which are outlined below:

- ❑ Currently, there is no standardized format for psychiatric referrals to the Community Mental Health and Addiction Service. The Family Physicians send in referral letters with varying amount of background information.
- ❑ A lot of referrals were found to be incomplete and lack clarity. This presents a problem in the time spent to process them.
- ❑ Incomplete referrals lack baseline investigation. Lack of clarity in the referral assessment data presents a problem in viewing the case as a severe mental illness, which brings the question of appropriateness of the referral process.
- ❑ Administrative staff, Team Leader's and Specialist's time are dedicated to having meetings to screen appropriateness of referrals, complete paperwork, hunt for results, including calling the referring physician for more information and advising them on what to do. There is need to protect direct patient care time and target services towards those with severe mental illness.
- ❑ Time between referral and intake assessment by the Mental Health and Addiction Team appears prolonged beyond departmental target of 1-2 weeks due to delay in tracking patients down. Any delay here trickles down the line.
- ❑ The time between referral and appointment for Specialist assessment of patient is unduly prolonged beyond departmental target of 4-6 weeks for routine patient.
- ❑ Delay in the process had resulted in Physicians, concerned relatives and clients making frantic calls to the Service wondering why there is delay with appointment.

Current state measure/ Baseline	
Measure description	Baseline (past performance on measure)
# of days of wait times between referral and psychiatric assessment	84 days
# of days of wait times between referral and intake assessment	58 days
% of referrals meeting departmental target	30%

Solution:

Meeting was held with team members and GPs. Two quality improvement/lean tools were used. These include: process mapping to understand the current situation and root cause analysis using the 5-why to identify the source of the bottleneck and ensure a more effective system is put in place to improve access for adult patients with severe mental illnesses.

- ❑ Feedback from the participants did not suggest they support creating a 'referral form' but measures to streamline the process to increase access. This includes:
- ❑ Development of an "ideal" psychiatric referral pathway for adult patients with severe mental illnesses
- ❑ Referrals sent directly to the Specialist
- ❑ Specialist contact GP immediately to clarify any missing information

Patient/Customer:

As there was no direct patient contact in this project, the customers are administrative staff, team leader, manager and family physicians who are directly involved in the referral process. Survey was carried out to seek the opinions of the family physicians involved in the project using a Likert scale questionnaire. 100% of people surveyed were "very satisfied" with the new referral pathway.

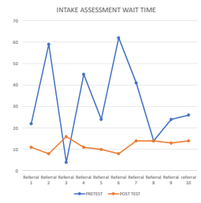
Results:

The new referral pathway was trialled from January to March 2017.

Out of the 10 last referrals retrieved from the manually kept registry between October and December 2016 (pretest), 2 (20%) referrals met the set target wait time for intake assessment while only 1 (10%) referral met the set target for psychiatric assessment wait time (See run chart on right).

At the end of the three month (between January to March 2017) project trial (post test), amongst the ten last referrals retrieved, 9 (90%) referrals met the set target for intake assessment and 3 (30%) the psychiatric assessment wait time (See run chart on right).

Overall, there was significant reduction in both intake and psychiatric assessment wait time (see run chart at right) during the 3 month trial period. This is in tandem with the aim and objective of this project and it is expected that this will continue until all referrals comply with the departmental target.



Next steps / Sustaining the Gains:

- The next improvement is to establish a standardized proforma for updating referring physicians on the outcome of their referrals, whether their patients attended intake/psychiatric appointments or not.
- The results of this project will be shared with the entire Community Mental Health team and GPs for feedback.
- A progress review report will be prepared and shared with the team members on a quarterly basis.
- Views and feedback will be sought from the team regarding the progress on a quarterly basis

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Team Members: Loni Carreiro, MOA; Gina Predan, Team Leader; Wendy Corbett, Manager Community Services; Christine McCann-Facilitator; Dr. Furstenburg Chief of Staff, Dr. Grapes, Deputy Chief of Staff; Dr McDonald; Dr Obanye

Enhancing the Dining Environment at Gateway Lodge

Author: Lindsay Kraitberg

Unit Name: Gateway Lodge Enhanced Dining Team

Contact: Lindsay.Kraitberg@northernhealth.ca

Date: Winter/Spring 2017

QUALITY IMPROVEMENT STORY BOARD

Enhancing the Dining Environment at Gateway Lodge

Background:

Globally, malnutrition affects 12%-54% of residents in LTC, mostly due to poor food and fluid intake. Malnutrition can lead to negative health outcomes including infections, falls, pressure ulcers, reduced function and cognition, hospital admissions, extended lengths of stay in hospital and death.

Intake may be increased by implementing nutrition interventions such as offering snacks between meals. ***However, recent research shows that the dining environment, which includes both physical and social factors can impact residents' food intake***.

Why is this important?
Out of approximately 1500 beds in total, Northern health provides 1106 LTC beds. Malnutrition decreases health status and quality of life but also raises healthcare costs due to hospital admissions and extended lengths of stay in hospital.

Objective:

Original Project Objective :
Evaluate current overall dining environment in the main floor dining room at Gateway Lodge using the adapted CHOICE+ Mealtime Practices Checklist. CHOICE+ is a training program with six principles:

Aim Statement:
By June 30, 2017, the dining environment will be enhanced for residents at Gateway Lodge by protecting mealtimes to minimize unnecessary distractions by 80%

Solution:

To achieve the objective and aim, the following lean tools were used:

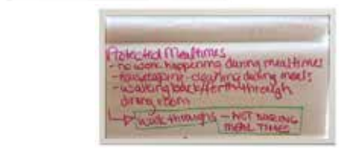
Going to the Gemba & Collecting Data: To determine the current state of the dining environment at Gateway Lodge, the QI team observed 9 meals (three breakfasts, three lunches and three suppers) in total in one dining room and used the CHOICE+ tool to determine if the mealtime practices were occurring at a few or no meals, some meals, most meals or every meal. Mealtime practices occurring at every and most meals were highlighted successes. Those occurring at a few or no meals and some meals were used as guidelines for areas for possible dining environment improvements.

Letter grade **"A"** = practice was observed at **every meal** - scored if observed **100%** of the time
Letter grade **"B"** = practice was observed at **most meals** - scored if observed **50-99%** of the time
Letter grade **"C"** = practice was observed at **some meals** - scored if observed **15 - 50%** of the time
Letter grade **"D"** = practice was observed at only a **few or no meals** - scored if observed **0-15%** of the time

Kaizen: In order to involve all disciplines who contribute to the dining environment, a day long Kaizen event was held. During the Kaizen, dot voting was utilized to determine where to focus efforts for improvement. Although the group voted on other areas to improve, protecting mealtimes by minimizing unnecessary distractions was chosen as a focal point. A working group was developed to further brainstorm and dig into the issue of distractions

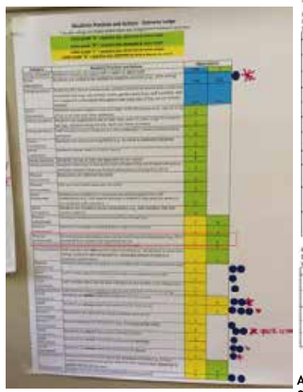
Going to the Gemba & Collecting Data (again): Following the Kaizen, additional data was collected to determine the time, nature and number of "unnecessary distractions" occurring in the dining room at breakfast

PDSA: Following another round of data collection, the protected mealtime working group got together to further brainstorm how to reduce distractions in the dining room. In looking at the observations, an opportunity was identified to slightly alter the laundry/housekeeping work routine to prevent laundry bins and carts from going through the dining room during meals.



Current State:

1. **The Overall Dining Environment using the adapted CHOICE+ Mealtime Practices Checklist**



2. **Distractions in the Dining Room**

Average of 10 distractions observed between 8:00 - 9:00am

*Note: any staff walkthroughs resulting in interactions with residents was considered positive

Results:

Original Project Objective Results: The QI team was successful in evaluating the current overall dining environment in one side of the main floor dining room. This provided baseline information about the strengths of the dining environment and also identified areas to improve.

Aim Related Results: A 35% reduction of unnecessary distractions was observed in the main floor dining room at breakfast. Of particular note, linens were not delivered and laundry was not collected during the breakfast meal, contributing positively to the dining environment.

Staff have reported an increased awareness of unnecessary distractions in the dining room, including walking through when it is not making a positive contribution to the mealtime.

Average of 6.5 distractions observed between 8:00 - 9:00am

Next steps / Sustaining the Gains:

Sustaining the Gains:
1. Continue regular meetings with Protected Mealtimes Working Group at Gateway to continue PDSA cycle
2. Attend Resident Council Meetings to involve residents in further dining environment initiatives
3. Identify staff member from Gateway to enroll in next cohort of Intermediate QI

Next Steps/Moving Forward:

1. Spread Plan: Evaluate dining environment in other dining rooms at Gateway Lodge so that staff can learn from each other

2. Greater involvement of the Voice of Customer (VOC) via Resident Satisfaction Surveys: Food satisfaction audits are conducted annually. Currently, resident food satisfaction surveys do not include any questions about the dining environment.

Patient/Customer:

"The staff delivering meals are courteous and friendly"
- 99% of residents in NH from 2016 Food Satisfaction Survey

"My food likes and dislikes are accommodated"
- 84% of residents in NH from 2016 Food Satisfaction Survey

Involvement in Kaizen Event:
One resident and two resident family members participated in a full day Kaizen event to help determine how the dining environment could be improved.

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Secondary email contact: Erin.Branco@northernhealth.ca

*Note: Collection of the current state data was used as a dietetic intern research project and will be showcased at the upcoming Dietitians of Canada Conference as part of the Canadian Foundation for Dietetic Research poster presentations

Team Members: Lindsay Kraitberg (RD), Erin Branco (RD), Kelly Bogh (Dietetic Intern), Laurel Burton (Dietetic Intern), Stefanie Finch (Project Sponsor) Sharon Heudes (Food Service Supervisor), Sandra Barnes (CPL), Helena Harris (Rehab Assistant), Gloria Kerr (Activity Worker), Fikirte Mekuria (LPN), Joanna Garbutt(LPN), Haley Hillen (Care Aide) Cindy Wang (Food Service Worker), Jody Shul (Social Worker), Rhonda Rosler (Housekeeping/Laundry Supervisor), Kat (Resident), Marilyn (Wife of Resident), Shirley (Wife of Resident)

Implementing Standardization for Adult Patients with Eating Disorders

Author: Eating Disorder Team

Unit Name: Eating Disorders Program

Contact: Main Reception 250-565-7479

Date: November 2016 – May 2017

QUALITY IMPROVEMENT STORY BOARD

Implementing Standardization for Adult Patients with Eating Disorders

Background:

The identified problem is that there is no consistent utilization of a standard process for adult patients with eating disorders presenting in the Emergency Department (ED) at University Hospital of Northern British Columbia (UHNBC) for medical stabilization.

By focusing on the first point of contact for many patients within the ED it will allow our team to identify opportunities for future projects which may focus on other aspects of the admission (for example: medical floor care, discharge planning, etc.).

This quality improvement initiative will support best practices and evidence based practices for eating disorder patients. It has the potential to reduce waste with shorter admissions, reduce risk of error and improve workflow with standardized processes.

Objective:

By May 2018, a standardized process will be implemented for the initial treatment and medical management of all adult patients with eating disorders presenting in the Emergency Department at UHNBC.

This project aligns with and supports our Strategic Plan:

NH Strategic Plan: Priority # 3:
2: Establish quality improvement goals and continuously measure, monitor, and improve performance.
3: Encourage and Enable local teams and departments to design and test innovative solutions.
5: Identify and manage risks to the organization and to service delivery.

Solution:

In order to identify areas of improvement we hosted a Kaizen event and developed a process map for adult patients with eating disorders admitted through the emergency department. The process mapping we developed identified many future opportunities.

The current state reveals multiple wait time and assessment experiences for patients. It also confirms our identified problem statement that there are no standardized practices currently in place for adult patients with eating disorders requiring medical stabilization at the UHNBC.

The main areas of focus for this project are:
-education for staff, families, and care providers
-create a working group to begin work on a standardized order set for adult admissions for eating disorder patients who require medical stabilization based upon the Provincial Standards of Care

We have included a list of our opportunities for review with projected time lines and completed items.

eating disorder_process ma

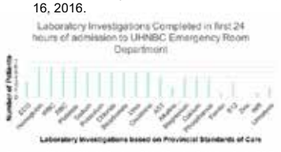
Process Map Opportunities.docx

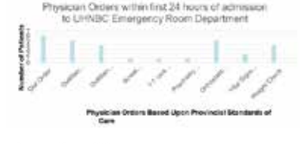
Current State:

Root Cause Analysis & 5 Why's - The team identified the key issue driving this project, which is the lack of standardized care at the UHNBC for adult patients with eating disorders requiring medical stabilization. This was based upon the team's working experience and informal feedback provided by patients, families and other service providers providing direct care and receiving treatment for an eating disorder at the UHNBC. The team then completed the 5 Whys exercise to determine a potential root cause for this issue. The next was to validate this with individuals who worked in the ED to understand the systematic process for a patient with an eating disorder going through their department.

Initial data was collected from the Discharge Abstract Data (DAD) system which included; Admissions and Discharge numbers for Eating Disorder patients that were coded as Eating Disorder as primary diagnosis. Upon reviewing the data we found that the numbers were far lower than what was reported through the outpatient clinic. We then compared the DAD data with the outpatient clinic data of referrals received from acute care, as well as active patients who were presented to acute care for treatment related to their Eating Disorder. The findings of the comparative data analysis were indicative of a much larger patient population and congruent with our anecdotal/experiential knowledge.

The team also collected base line data to support identifying gaps in care.
The team conducted chart audits to compare physician orders within the first 24 hours against the recommended provincial standards of care for inpatient eating disorder patients.
16, 2016.





Reference: Ministry of Health Services: Clinical Practice Guidelines for the BC Eating Disorders Continuum of Services 2012: http://www.google.ca/url?url=http://www.bcmhsus.ca/includes/download.php%3Ffile%3D./content/223/BCED_Sept21.pdf&rct=j&frm=1&q=&esrc=s&sa=U&ved=0ahUKEwi2yajlyNzKAhVN-GMKHenuAUMQFggTMAA&usg=AFQjCNG6dvra-rPFDn2kqtlNc4xbrLXIBA Retrieved September 16, 2016.

Results:

Outcomes that were achieved as a result of this process were:
-a reconstruction of our statistics collection through the Regional Eating Disorder Clinic
-increased relationships and networking between inpatient and outpatient programs

Another learning and opportunity would be to find a way to avoid the Emergency Department altogether for eating disorder patients and work with community and inpatient partners to cohort patients to a specified unit for a direct admission at the University Hospital at Northern British Columbia.

The first phase of our implementation has been completed in regards to data collection and connecting with other departments and identifying areas for improvement.

The second phase of our project will be creating a working group through members of our Kaizen event and from the Regional Eating Disorders Committee to ensure regional representation. The working group will work towards a standardized order set and go through the Northern Health Medical Advisory Committee for endorsement.

Our third phase will work towards co-hording patients in one area of the hospital for direct admissions for adult eating disorder patients and work towards creating the Northern Centre for Excellence at the UHNBC.

Next steps / Sustaining the Gains:

Key Learnings:
-how the Emergency Department functions and some of our limitations surrounding our scope of control over our patient population
-the overall context and complexity of various departments within our health care system
-hosting the Kaizen event, process mapping, and working through the 5 whys helped us to identify the most effective ways to attend to our patient's needs that will have the most impact on patient care. We intend to use these tools identified during this process through phases 2 and 3 of our project and look to see what other tools will be useful in order to assist us with our future LEAN projects.
-in order to make such effective and timely processes that our initial expected outcome date was far too premature and that it takes time to develop a working group, order set and educate employees in order to properly carry through with standardized care for our identified patient population. This is why we have incorporated various phases into our future planning of this project.

Patient/Customer:

The Patient identified in this project is any adult who presents in the emergency department at UHNBC with an eating disorder.

The team considered working with the Patient Voices Network to have patient representation however, there were no patients available from the PVN who experienced eating disorders and the team decided to focus on the procedure surrounding an admission for medical stabilization.

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Secondary email contact:

Team Members: Mary Morrison, Manager of Specialized Services; Rilla Reardon Eating Disorders Dietitian; Daney Disher Nurse Clinician Eating disorders; Courtenay Hopson Chief Inpatient Dietitian.
Kaizen Team: April Price, QI Mentor; Dr. Laura Brough, Physician Representative; Stephanie Finch, Manager Food & Nutrition Systems; Lindsay Kraitberg, Regional Menu Dietitian; Rebecca Harlos, Emergency Dept. RN; Darlene Dunn, Emergency Dept. CPL; Karen Clare, Emergency Dept. CNE; Bareilly Sweet, Manager Specialty Services MH&A Acute

Improving Responsiveness to Client Needs in Mental Health and Addictions Services

Author: Stephanie Rex

Unit Name: Community Acute Stabilization Team- Prince George

Contact: Stephanie Rex

Date: Kaizen #1 November 2016
Kaizen #2 February 2017

QUALITY IMPROVEMENT STORY BOARD

Title: Improving responsiveness to client needs in Mental Health and Addictions Services

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the northern way of caring

Objective:

Clients with moderate to severe mental health and addictions conditions can wait months to access therapy at CAST. Clients and referring agents are confused and frustrated with the wait times and difficulty accessing services they require.

The objective of this project is to clarify the program mandate, streamline the group referral process, and allow clients quicker access to effective treatment.

Background:

Northern Health is in the midst of a comprehensive restructuring of health services as they transition to a new model of care. Mental Health and Addictions services have been dismantled and reorganized in stages as the new system is designed. The Community Acute Stabilization Team (CAST) offers a range of individual and group therapy services suitable to address mild, moderate, and severe mental health and addictions concerns. The demand for services to address this range of needs exceeds program capacity. Clients requiring specialized group treatment face delays or interruptions in their treatment while waitlisted. Without the right level of treatment, clients over utilize the primary and acute care systems resulting in a backlogged system and an inefficient use of health care resources.

Current State:

•The group waitlist management process at CAST is not standardized. Clients are waitlisted to multiple groups simultaneously and offered a spot on a "first come first served basis." Individual clinicians manage these waitlists and there is no standardized record-keeping process and no commonly understood criteria to guide the group referral process.
•It was impossible to objectively measure the extent of the problem due to limitations of data gathered by the electronic medical record (Synapse) and inconsistencies in the way information was gathered and charted. This is beyond the scope of the project as we are currently in transition between multiple EMRs.
•The root problem was not fully uncovered through this process.

Solution:

• Two half-day Kaizen events were held with staff from CAST and Adult Addictions Day Program
• Lean tools: Kaizen events, process mapping, quick wins, and PDSA cycles
• Kaizen #1: process mapping was used to clarify the mandate, map the current state, and identify challenges and opportunities.
• Kaizen #2: raw data was themed and presented to the team for validation; challenges and opportunities were categorized, the team identified quick wins, the ones with the highest number of votes were chosen for implementation. The team brainstormed ways to implement quick wins for services to our clients with addictions.
• Quick wins included: 1. removing barriers to the addictions group (Changing Addictive Behaviors) by offering it as an open group to the general public and following the successful Relapse Prevention Group format. 2. Trialing 30 minute check in appointments for clients in early recovery instead of the typical 60 minute slot. 3. offering groups to cohorts of clients based on the presenting issue.
• A small working group was established to implement PDSA cycles to test effectiveness of these new groups . We planned to use clinical tools to measure changes in functional impairment and track attendance and attrition.
• Barriers to the PDSA cycle for Social Anxiety Disorder was lack of client readiness during the project time frame.
• The 30 minute check-in appointments were trialed over a 14 week period by one clinician for 5 clients.
• Barriers were reductions in staff, changes in leadership structure, staff engagement issues, and insufficient time devoted to the Kaizen event.

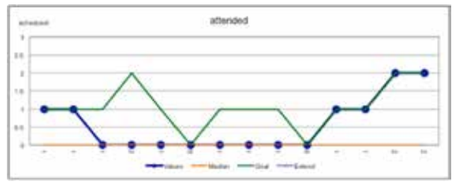
Patient/Customer:

• Faster access to drug and alcohol counseling
• Evidence based treatment to suit their both presenting issue and severity.
• The Voice of the Customer was solicited in a structured way at each group session by asking the question "please let us know what you got out of today's session and if there were any problems with the session." They were advised about the project when recruited for the group and invited to help us shape the content and format.
• Following the group, each participant was provided a group evaluation form, however none were returned.

Results:

30 minute check-in appointments PDSA:
•On days that clients attended, I was able to see 1-2 clients per hour, and days where there were no-shows, only 1 hour was 'wasted.' Previously, client 'no shows' would result in a full hour 'wasted' and less overall available clinical time resulting in longer wait times. This results in a net gain in available clinical time. Testing over a longer period and involving more clinicians is needed to effectively evaluate this change.

Depression Recovery Group PDSA:
•We identified a cohort of clients who met the selection criteria and tested an evidence-based program using a Behavioral Activation approach designed to treat moderate to severe depression. We solicited ongoing feedback from clients and included topics suggested by clients where possible. Early results are encouraging with all participants experiencing an improvement in functioning measured by their PHQ-9 scores however, this must interpreted with caution due to small sample size and confounding variables. Client feedback was positive. The second cycle is underway.



Next steps / Sustaining the Gains:

• It has been said that culture eats strategy for breakfast and I have found this to be true as I worked to implement this project. I would recommend that the team is carefully prepped before engaging in quality improvement initiatives.
• Baseline data needs to be available in order test the effectiveness of a change. I have addressed this by collecting data on each of the groups at CAST since January using an excel spreadsheet and manually tracking the referrals, closures and completion of each of the targeted groups.
• We now have a waitlist and a projected start date of June 2, 2017 for our first PDSA cycle of the Social Anxiety/Social Phobia Group.
• I have added two more 30 minute slots for addictions clients in early recovery and a second clinician is also trying 30 minute slots without collecting data.
• Several other team members have been inspired to look fine-tuning or adapting their approach to group treatment.

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Leaner Planning and Performance Improvement Reporting: A Partnered Exercise

Author: Milad Fathi

Unit Name: Planning and Performance Improvement

Contact: Milad Fathi

Date: May 16, 2017

QUALITY IMPROVEMENT STORY BOARD

Leaner PPI Reporting: A Partnered Exercise

Background:

The Planning and Performance Improvement (PPI) team is a primary source of strategic business intelligence for the Board, executives and top management of Northern Health. Be it through forecasting models, one-off or routine reports, or strategic scorecards, the business insights provided by the team are used by the top management of the organization for performance monitoring and decision making. Hence, the efficiency of the PPI team can directly impact the performance of the entire organization, especially from a strategic and long term planning perspective. With the portfolio of team expanding rapidly, the need for improved efficiency of reporting has become more apparent. Initial interviews with team members highlighted bottlenecks in various areas which have ultimately, resulted in more pressure on the members, and inefficiencies and inconsistencies in produced business artifacts.

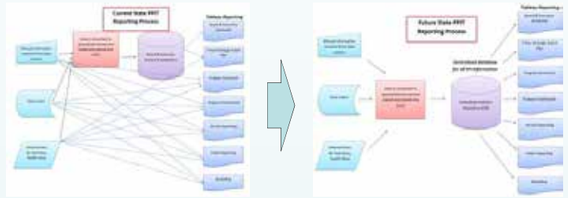
Objective:

The aim of this project is to reduce the average time it takes to complete reporting projects by at least 40%. In doing so, the aim is to:

1. Improve the productivity of analysts by adopting more efficient reporting processes and technologies
2. Reduce the time spent on data procurement and preparation
3. Improve automation of reports
4. Facilitate data validation by consolidating the sources of truth for indicators

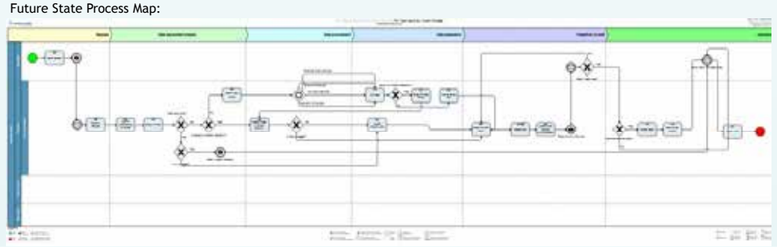
Solution:

1. Repurpose the B&E App and use it as a Centralized Indicator Repository
Through this change, the Board and Executive Scorecard Application will be used as a Centralized Indicator Repository to store the verbiage and data for all indicators reported by analysts as part of their routine or ad hoc reporting. This will provide a single, more efficient data model for all indicators reported by the team. Importantly, only small tweaks to current technologies would be required for implementation of this solution.



2. Adopt a standard Tableau template to work in conjunction with Centralized Indicator Repository
Using the Centralized Indicator Repository (CIR) for all indicators creates a data model that will substantially facilitate automation of both routine and ad hoc reports. The data model will be used in conjunction with pre-made, standardized Tableau templates (Tableau is a business intelligence application expected to be widely used by PPIT). This is expected to decrease the duration of the process of data visualization by more than 50%.

Future State Process Map:



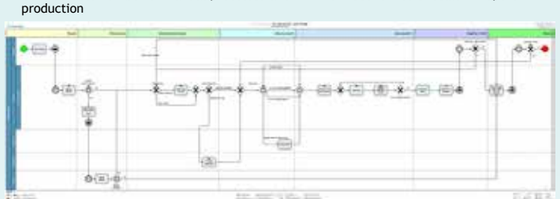
Current State:

Through primary interviews with the management and analysts the following were identified as some of the challenges that the team was facing:

- A centralized data platform/model for the team does not exist.
- Quite often analysts either personally 'pull' data from various data sources, or contact data owners within the organization to have the data pull performed for them. There is a clear lack of economies of scale
- Sharing of data between analysts (if any) is not done in a defined, systematic way.
- Analysts are often unaware if the same data they are trying access has already been prepared by other team members.
- Data validation is cumbersome due to various sources of truth.
- Ultimately, because of the amount of time spent on data preparation, considerably less time is spent on actual data analysis.

In a separate survey analysts were asked about the average percentage of reporting project time they spend on data preparation (a primary outcome measure of this project). Based on the results, PPIT analysts spent **63%** of their time pulling, cleansing and preparing data on average. Furthermore, root cause analysis performed on these findings and the results of a Triz exercise showed the following primary causes for said inefficiencies:

- Lacking legacy data models
- Considerable number of manual processes and minimum economies of scale in report production



Results:

In order to test the proposed changes, a PDSA (Plan, Do, Study, Act) cycle was completed for a strategic report using both the old and new system. The following tables compare the results:

Old Process

Step	Duration
1. Obtain data for indicators from data sources	1 hour
2. Create data model in excel	1 hour
3. Format and cleanse data for reporting	2 hours
4. Create Charts in Excel	3 hours
5. Finalize report	1 hour
TOTAL	8 hours

New Process

Step	Duration
1. Obtain data for indicators from data sources	1 hour
2. Bring to Centralized Indicator Repository format in Excel	1 hour
3. Create report/indicator in CIR and upload data	1 hour
4. Initiate database connection in Tableau	15 minutes
5. Finalize design	15 minutes
TOTAL	3.5 hours

As the two tables show the new process takes at least 50% less time to complete. In this instance, the performance exceeds the 40% reduction goal envisaged at the beginning of the project. Apart from apparent time efficiencies, the Tableau template provides a richer design which uses at least 5 different data views, namely, the performance summary page, Control Chart, Trendline, Funnel Plot and Box plot. Moreover, by storing indicator data and definitions in CIR the analysts will be able to use the repository as a single source of truth for all reporting and re-use indicators where possible.

Next steps / Sustaining the Gains:

In the final, 3-hour Kaizen event, the future state process map and the new use cases for the technologies were showcased, and the ownership was officially transferred over to project sponsors (who are also the team leads). The team agreed on following the new procedures and technologies for producing reports. It was also decided to perform reviews of them system at least semi-annually to evaluate the proposed system and make adjustments accordingly.

The current infrastructure of the Centralized Indicator Repository can support report production to a certain extent. However, to fully streamline the reporting process minor tweaks are needed. These changes mainly revolve around various classification fields that assign indicators to management levels and reporting projects. As per estimations of the IT department, work on these changes is expected to be finished by August 2017. The expectation is for the application to be fully utilized for the majority of team's reporting by that date. Once utilized, the prediction is to be able to surpass the 40% project time reduction goal that was set at the beginning for the project.

Patient/Customer:

Direct Customers: Board, executives and top management of Northern Health
Indirect Customers: entire organization

This project is expected to provide the following positive changes for the clients:

- Shorter report production times
- Richer and more consistent report designs
- More accurate output

The template introduced as part of solution 2 was built directly based on the current Northern Health Strategic Action Plan. The primary reason for this choice was the fact that clients have continually provided feedback on the design of the report.

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Regional Community Plan of Care Redesign

Authors: Dori Pears and Cathy Czechmeister

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Date: August 2016 to current

QUALITY IMPROVEMENT STORY BOARD

Regional Community Plan of Care Redesign

Background:

Northern Health is transitioning towards an integrated way of delivering Primary and Community Care which creates the opportunity to improve the process of shared planning of care and the plan of care (POC) tool within the Electronic Medical Record (EMR). There was an awareness that clinicians on the interprofessional teams (IPT) were not satisfied with the plan of care tool in MOIS and that completion rates were low. An understanding of the reasons for this and of the needs of clinicians in order to develop quality, patient centered plans of care was essential.

The literature indicates that coordinated, patient-centered planning of care by an interprofessional team may lead to reduced emergency service usage, lower acute care admission and readmission rates and greater patient self-care ability and satisfaction[1].

Objective:

This is a two year, four phase project. The overall aim is:

- In Primary and Community Care Services, 80% of individuals serviced by the primary care IPT will have an evidenced based, goal- oriented, current, shared plan of care that is documented and communicated. This is to be completed by October 2018.

This storyboard represents Phase 1 of the project; the aim statement is:

- By April 30 2017, a community Plan of Care current state analysis and future needs assessment will be developed and validated by a representative group of point of care health care clinicians.

Solution:

To understand the current state and capture the needs analysis numerous strategies and Lean tools were utilized to capture the Voice of the Customer. Ultimately the customer of the planning of care is the patient; however, for the purpose of phase one of the project the customers are clinicians on the IPT's.

Kaizen	Data collection
Process Mapping using Simulations: • Groups of clinicians used three patient case examples to simulate the process of planning care and the change to the desired state of the planning of care interprofessionally and with the patient. **Fishbone Cause and Effect Diagram:** • Kaizen participants worked to understand the root cause of low clinician satisfaction **EMR Dream Hour:** • Participants were asked to creatively capture their vision for an ideal Plan of Care template.	**Literature Review:** • A review of 55 articles was completed using the research question: In the integrated primary and community care setting, what does the process of interprofessional care planning look like? **Scan of professional and employer standards for the planning of care** **Clinician Satisfaction Survey:** • A baseline survey was completed by 25 clinicians from Prince George, Fraser Lake, and Fort St. John. **Chart Audit:** • Quantitative and qualitative baseline assessment of Plan of Care completion in MOIS.

Case Example used in the Simulation

Fishbone Cause and Effect Results Diagram

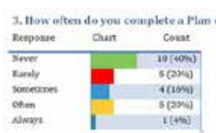
World Café during Kaizen Event

Page one of the Scan of Professional Standards

Example of EMR Dream Hour Visioning

Current State:

Analysis of the baseline **clinician survey** showed very low clinician satisfaction with the current POC functionality and that it does not support the effective engagement of the person and their family in the process of developing their POC.

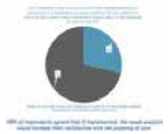


The **chart audit** demonstrated very low rates and quality of use of the POC fields in MOIS. This does not mean that care is not being planned, only that the planning is not documented in the EMR.

Results:

The information collected from the clinicians using all of the tools, was collated, themed and summarized. The following themes emerged:
Process of planning care: standardization, education, leadership, efficiency, communication, person and family centered process
Plan of care tool in the EMR: standardization, education, efficiency, person and family centered, discipline specific needs vs interprofessional, interoperability and interface.

Validation of the results:
The kaizen participants were asked if the themed results reflected their collective input, and if they thought that their satisfaction would increase if the needs assessment were implemented.



Next steps / Sustaining the Gains:

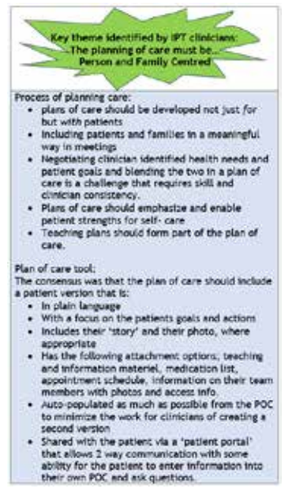
A Planning of Care Steering Committee: Consisting of representatives from NH Executive, Acute care, Specialized Services, Primary Care Providers, and operational leaders has been established to guide this project and planning of care across a patient's healthcare journey.

Project Phases: There are three more phases to this project: (1) Redesign of the POC in the EMR, (2) Development and provision of standardized education, and (3) Ongoing evaluation of POC utilization, quality and outcomes.

Sharing Learning: Planning of Care definitions and a visual mapping of the flow of a patient's information were documented to inform planning of care improvement work in acute care, specialized, and specialist sectors as well as community and primary care.

Complementary Projects: A concurrent regional project is working to improve and standardize the plan of care in acute care. Additionally, a Quality Improvement team is currently working to create an interim improvement for IPT POC processes and utilization of MOIS.

Patient/Customer:



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[1] Coulter A, Entwistle VA, Eccles A, Ryan S, Shepperd S, Perera R. Personalised care planning for adults with chronic or long-term health conditions. The Cochrane database of systematic reviews. 2015:CD010523.

Fleet Vehicle Coordinator Orientation/Cheat Sheet

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Contact: Business Development

Date: July 2014

LEAN STORY BOARD

Title: Fleet Vehicle Coordinator Orientation/Cheat Sheet

Objective:

A High volume of phone calls and emails are sent to Coordinator of Fleet Services and Transportation everyday. Many of the new vehicle coordinators are trained by previous coordinators or are not trained at all. Processes are not followed and invoices are paid incorrectly. Lots of confusion and inquires creating extra workload for everyone. Information is available but takes time to find the answer in fleet binder or on Iportal (Ournh). Vehicle coordinators are managing vehicles off the sides of their desks.
Identify where there are misunderstandings and unknowns for managing a fleet vehicle. Track the issues from phone calls and emails in a spreadsheet. Use this information to create a single document for vehicle coordinators to increase competency and decrease workload from 28 inquires to 15 per week.
By July 2014 the volume of questions from coordinators to Fleet services will be reduced by 13 (or from 28 to 15).
By July 2014 the amount of time it takes to answer questions and resolve issues with vehicles will be reduced by 4 mins (or from 5 mins to 1 min).

Background:

Business Development is responsible for an assortment of projects and programs that either make profits or create efficiencies. Business development took over Northern Health's fleet in 2010 and moved the entire maintenance program from PHH to BC Ambulance Services - Fleet operations in 2012. There are approximately 80 coordinators in Northern Health and most manage their portion of the 180 vehicles off the sides of their desks. It is the Coordinator of Fleet Operations and Transportation who identified that there are still lots of enquires even with all the proper change management and communications. The main issue is that coordinators rarely have to do anything with the vehicle and when they do they have to look through a binder or on Iportal (Ournh) so they either call or email to get a faster response. There also seems to be a lot of turnover in some of the positions that coordinate vehicles as well.

Current State:

Vehicle coordinators contact the Coordinator of Fleet Services and Transport about any inquires or make their own decisions. New coordinators are trained by previous coordinators or not trained at all.

If the proper safety procedures and maintenance protocol are not followed it could become a safety issue for staff, patients or even the public.

The inquires have been tracked and there were 28 emails and calls in May 2014 of tracking.

Vehicle coordinators positions are of a variety and the fleet vehicles are secondary to their main job tasks. There is also higher turnover for some of these positions. Some examples are primary/admin assistants and support or coordinators and clerks. Less turnover is in the positions of maintenance personnel, assisted living workers, LPN's and RN's.

Mass fleet inquiries is a Business Development issue but a relatively new one. Before there was a maintenance program, there were was no streamlining of processes. The root cause of the issue is that there is a large group of high turnover employees and a completely new maintenance program.

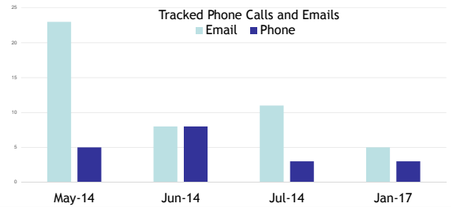
Solution:

Some calls and emails are expected but minimum is preferred in order to make time for other Business Development projects. A one page document addressing a broad range of vehicle coordinator questions was created and tested with existing coordinators for feedback then rolled out to all coordinators. British Columbia Ambulance Service also provided feedback. An initial, much larger, document was created but soon set aside after it was confirmed that most do not have time to go through such a document. The vehicle binders pose the same issue.

Fleet Coor Manual NHA

They provide the information but in greater detail. The one pager was created with lots of links if further information is needed. It is available on OurNH and also distributed monthly with the odometer reminders.

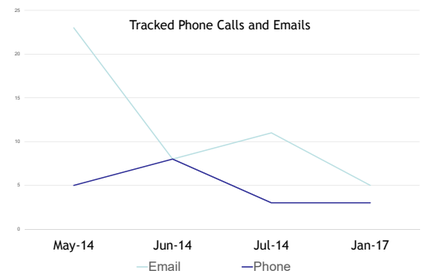
With a better streamlined processes and clearer instructions on how to manage vehicles end users should have a safer, more reliable vehicle. If they have questions themselves while using the vehicle they can contact the vehicle coordinator who will now be able to provide a quick answer with their one page "cheat sheet."



Results:

The new form made it easier for training purposes and also decreased the frequency of phone calls and emails (see tracked phone calls and emails chart). Less time explaining the process for the vehicle coordinator means they will have more time to provide patient care or support to those who provide patient care. It also means that the vehicles will be maintained and safer for patients and employees. Vehicles that are maintained properly will generally last longer and contribute to cost savings.
The total amount of emails/phone calls was reduced by 75% in the first 3 months of implementing the document.

However it is noted that this changed occurred during the summer months and therefore could contribute to the "success." In January of 2017 results were similar to July 2014 so results were sustained. Aim statement met and maintained.



Next steps / Sustaining the Gains:

Continue to update the document as needed for questions that might become more common. It is expected to change as more Fleet projects are implemented creating further questions. As the new maintenance program becomes common knowledge around Northern Health there might not be a need for some of the information in the document.

Quarterly teleconference meetings are being done to engage the fleet coordinators for ideas and to answer common questions in a different form of communication. These meetings are done with regional groups so information sharing isn't overwhelming and topics are generally relatable. The added bonus of these meetings is coordinators connect with each other for further information sharing.

A new way of recording/tracking odometer readings has been created and seems to "catch" turnover a little better. Coordinators enter their odometer readings in a shared drive excel spreadsheet. A reminder is sent out a couple of times a month to a fleet coordinator distribution list to let coordinators know to enter their odometer readings.

This document is helpful for all fleet related projects. It has been updated and shared with vehicle coordinators since it's debut. It has been shared with some management to show the broad responsibilities/expectations of the coordinators. The coordinator of Transport and Fleet Services will have to continue to update the cheat sheet document and keep it current.

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The Importance of Clerical Efficiency in the World of Food Services

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Unit Name: Dunrovin Park Lodge – Food Services

Contact: Justin De Medeiros

Date: December 2016 – May 2017

QUALITY IMPROVEMENT STORY BOARD

The Importance of Clerical Efficiency in the World of Food Services

Background:

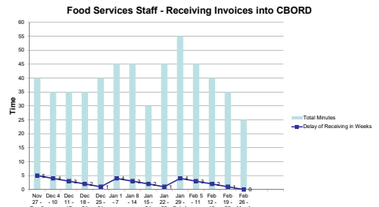
- CBORD implementation has led to increased clerical work, such as, receiving invoices and inventory data entry in addition to current invoice processing practices. This extra clerical work was not budgeted for or completed by the food services team in the past, but is now required.
- An administrative assistant from a different department also assists with this type of clerical work to help with the extra workload which creates trade-offs in that department as well.
- Inefficient allocation of resources creates increased financial costs, and trade-offs of conflicting priorities that may hinder service and patient care. Staff turnover leads to increased training with CBORD related clerical entering also increasing costs in the department.
- Incorrect employees are doing incorrect work. Employees who are not confident working with computers and software are being trained and held responsible to do work they are not completely comfortable with. Which in turn, creates inefficiencies, increased costs, delays, errors, low confidence and decreased job satisfaction. This then limits staff from completing work in which they excel at and truly enjoy.

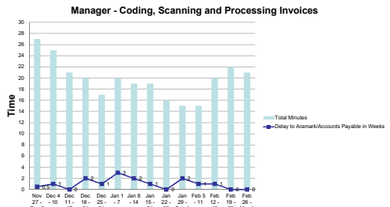
Objective:

- Increase the efficiency of clerical data entry by reducing the time of invoice processing and invoice receiving by 100% to 50% from the manager's, cook's & food service worker's responsibility to improve food services and increase time for more job specific tasks by May 15 2017.

Solution:

- The desired outcome will be a significant reduction in time for invoice receiving entry for food service staff and a reduction in delays for invoice processing.
- A suitable administrative assistant that excels in clerical data entry will assist with data entry component during the trial stage. This will significantly reduce the time, cost and delay which will save time for food service staff to focus on other areas of service.
- Changes were made based on feedback, ensuring all staff were comfortable with their responsibilities during the trial phase, and having an administrative assistant available and committed to assist during this trial.
- Team member commitment to track and time clerical duties of processing and receiving invoices into CBORD were essential to successfully compare current state to the desired state.
- Lessons learned - the administrative assistant was off on vacation and there was no trained backfill during the trial which caused a delay of 2 weeks at one point. This again shows the importance of a process that accounts for this type of challenge and is not reliant on the skill or commitment of one individual.
- Food service workers, cooks, their manager, and an administrative assistant were involved in this project. Feedback and communication from Aramark, Accounts Payable and vendors such as Sysco were also noted regarding delays, reminders, errors or invoices sent back to code and any observed reduction in these areas.
- Techniques and tools of Observation (Gemba), Data Collection, PDSA, Identifying Waste, and the Fishbone diagram were completed.





Current State:

•Clerical tasks, such as receiving invoices into CBORD, are often completed inefficiently in addition to current invoice processing.

•Currently the manager codes and scans/emails invoices to Aramark and Accounts Payable for processing before coordinating and scheduling employees to receive invoices into CBORD based on who is trained to do this work. This causes tradeoffs in completing more suitable management priorities, produces a higher cost of completing this type of work, and creates delays when the manager is unavailable to complete these tasks.

•Food service staff spend significant time doing clerical related duties; this causes trade-offs as they may not be able to complete other tasks related to service or improving quality. Some food service staff feel certain clerical work is an inefficient use of their resources and skills, and prefer to spend more time completing cook and food service related tasks that contribute to better quality of service.

•Delays occur with invoices being sent to Aramark and Accounts Payable. Emails are sent to the manager or food service team asking to code invoices, pay or process outstanding invoices. This then causes processing delays, confusion and ultimately more delays on vendors getting paid.

•Assistance is being provided by an administrative assistant in another department when free time permits as it is not built into her work routine and is side of desk. This employee excels at data entry and proves that there may be a more efficient method to process data entry.

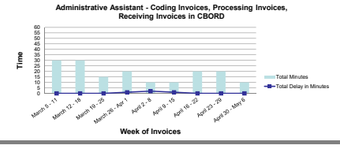
•The current state relies on multiple people doing certain tasks and causes more delays and errors when the appropriate people are away from their role for lengths of time. The amount of time required to complete these clerical type tasks was not measured previously; however, is known to take a significant amount of time.

•The NH strategic plan has strong focuses around Our People and Quality. Therefore, it is important to measure time and challenges occurring that could be improved on to ensure that the right people and tools are in place. This would allow staff to flourish in their work. Ultimately, this saves time and costs to be reallocated in making a more significant improvement in food service quality to residents.

•Limitations include having no clerical or administrative assistance in food services, and no funding or additional resources long term. Finding an administration assistant to regularly assist and champion tasks during the trial could be a challenge.

Results:

- Current State: The total weekly average time to have invoices coded, received, and processed by the manager and food service staff to Aramark and Accounts Payable was 59 minutes. This has a resulting average weekly cost of $26.60 in labour when you factor in everyone's different wage.
- Trial Period: The total weekly average time of all these tasks completed by one administrative assistant was 22 min. This has a resulting average weekly cost of $7.33 in labour.
- Reduction: This showed an average total time savings of 63% and also reduced the average weekly cost in labour by 72%.
- This also significantly reduced the wastes of waiting delays and non-utilized staff creativity.



Next steps / Sustaining the Gains:

- Team meeting with all team members to review results of the trial period. Team to look at other clerical duties occurring, including inventory data entry. This will offer more clarity and assurance on which tasks should be completed by food services and which would benefit from assistance. Specific processes going forward should overcome any major reliance on certain individuals to prevent major delays while they are away.
- Transfer of ownership to an administration assistant for coding and sending invoices to Aramark in a weekly timeframe has been completed.
- Manager to investigate and evaluate if there are any opportunities to add clerical support for other clerical duties in the department.
- Manager will share results with regional teams when workload challenges are brought up relating to clerical duties. This may further explore if there is opportunity to lean clerical duties on a larger scale regionally in food service and/or support services.
- In the future, technology such as NetHims software and "inventory guns" will be implemented regionally in food services. This should successfully save the step of entering clerical data manually after counting inventory. Technology such as this could lead to more efficient and accurate processes while reducing time and errors.

Patient/Customer:

- Based on data and follow up from Aramark, they were able to receive invoices in a timely manner which then allowed them to complete their process more efficiently.
- Vendors like Sysco were able to receive their payment for goods in a timely manner and significantly reduce the level of outstanding invoices.
- Although staff enjoyed learning clerical tasks such as receiving, most are happier they can focus on more direct food service responsibilities where they excel and make a bigger difference to residents.
- Ultimately, the goal of time reduction and cost savings in food services from these clerical duties can lead to an important effect on Quality (of our service for residents) and Our People (ensuring the people and tools are in place to help them thrive in their work).

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Chronic Disease Management – Evaluation of Diabetes Process and Billing at the Northern Haida Gwaii Hospital & Health Centre

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Date: October 2019

QUALITY IMPROVEMENT STORY BOARD

Chronic Disease Management (CDM) - Evaluation of Diabetes Process and Billing at the Northern Haida Gwaii Hospital & Health Centre.

northern health
the northern way of caring

Background:

Northern Health (NH) is committed to implementing patient and family centred primary and community health care. The management, administration, structure and processes of Chronic Disease Management (CDM) at the Northern Haida Gwaii Hospital & Health Centre (NHGHHC) are in a process of restructuring to support the Primary and Community care model. This involves a shift from a siloed management by a dietician team to the Masset clinic physicians team/Interprofessional team. In June 2018, all the parties involved on CDM- diabetes processes participated in meetings to discuss the right directions for future CDM processes and billing. To start off, physicians would like to understand and verify the billing aspects of the process, because CDM incentive "billed and recovered by NH physicians are entitled to receive their monies under their contract terms", and as an Alternative Payment Program (APP) model site, the CDM incentives are the only revenue Masset Clinic receives directly from the Medical Services Plan (MSP). The second step was to define a better process to capture Annual Diabetes Review (ADR).

Objective:

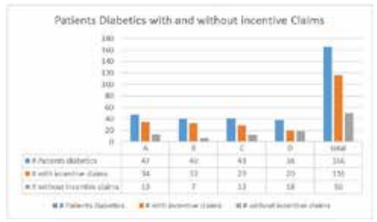
In June 2018, the billing report showed that of the 131 patients registered for incentive billing, 84 were overdue to bill MSP and six were never billed. For this reason, the main objective of this project is that by September 2019, the Masset Clinic practices will have a specific CDM-Diabetes billing, based on the EMR reports, and a process in place to continue to provide proactive care for the 162 diabetes patients that receive primary care at NHGHHC.

Solution:

The approach and initial planning was divided in two phases. Phase 1: the main tool used in this phase was data collection- module report practice management incentive claims projected billing and report-bills fee codes to process the 84 overdue incentive claims and the six claims that were never billed. Moreover, efforts were made to reduce the number of patients with diabetes without incentive claims and recalls. (Graphic 3) Phase 2: In this phase, we used data collection, mapping processes and Plan-Do-Study-Act (PDSA) cycle to understand the current state and put in place the future state of the CDM process. Figure 2

Phase 1

MOIS Report Module



Graphic 2- Report based on incentive claim project billing schedule shows that 131 patients registered on MSP 41 were billed more than 60 days, six were never billed and 84 were overdue to bill to MSP.

Phase 2

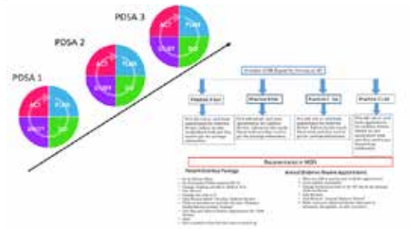
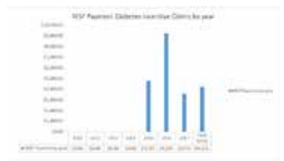


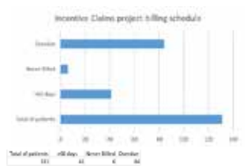
Figure 2- To test the process, we used three PDSA cycle results in a current documentation in MOIS and the Future Process mapping. PDSA 1- PCAs would send the ADR package and wait patient to book an appointment; PDSA 2- PCAs would print recall report and book appointments by month. PDSA 3 Practice Support Coach (PCA) will review the list of recalls report by practice and complete the ADR documentation by months.

Current State:

In June 2018, using data collected based on the report module bill-fee code MSP from MOIS, we could identify a decrease in dollars of MSP payment for diabetes incentive claims in 2017 (Graphic 1). Moreover, we used another report based on report module-practice management incentive claims project billing schedule with 84 overdue claims (Graphic 2). Figure one shows the previous process for CDM diabetes that was coordinated by Community Program and dietician team.



Graphic 1-The NHGHHC starts receiving payment in 2014, however the number in dollars decreased in 2017 and first months in 2018.



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Current Process Mapping

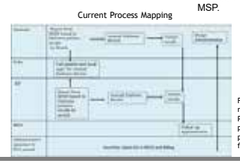


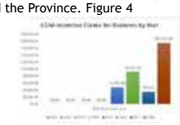
Figure 1-Dietician used to get a report based on recall for ADR by months and community program PCA used to book appointment. The nurse practitioner (NP) and dietician used to assess diabetic patients and physicians would be responsible for follow up appointments.

Results:

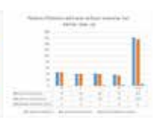
On August 2018, we processed the 84 overdue incentive claims and received $10,525.00 for Annual Diabetes Review (ADR) from 2017 (Graphic 4). Furthermore, in December 2018 the NHGHHC physicians received $17,512.00 (Graphic 5). Based on Panel clean up we updated the list of diabetic patients based on the list of incentive claims on Practice A, B, C and D (Graphic 6). Using process mapping and PDSA cycle, we better defined the future process for CDM-Diabetes. PCAs will print reports based on CDM diabetes recalls by month and call patients to inform them of the ADR. Moreover, they will send a package including date and time of appointment, instructions for the appointment and blood test requisitions. Patients will have their ADR completed by their family physicians; PCAs will update recalls for the following year. Other staff from NHGHHC will do the billing process and financial administration. Figure 3. In addition, using Health Data Coalition report, we could confirm the Masset clinic's proactive care was in line with data from NH and the Province. Figure 4

Year	MSP Payment
2011	$0.00
2012	$0.00
2013	$0.00
2014	$0.00
2015	$8,787.00
2016	$9,225.00
2017	$8,525
2018.00.29	$10,525.00

Graphic 4- MSP payment the NHGHHC from 2011 to August 2018. In 2016, the Masset clinic physicians received $9,225.00 and this amount decreased drastically in 2017. After processing the 84 overdue claims, this amount increased giving a satisfactory outcome to the project



Graphic 5- QI team continued to process the CDM Diabetes incentive claims from patients registered with MSP and in December 2018, the amount in dollars was higher than the other years.



Graphic 6: Diabetic Patients 'data updated. Practice A and B were updated completely. While Practice C and D need to have some patients' charts review for incentive claim.

Future Process Mapping

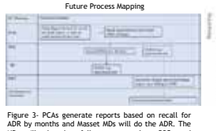
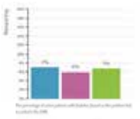


Figure 3- PCAs generate reports based on recall for ADR by months and Masset MDs will do the ADR. The NP will do the follow-up consults. PSC and administration assistant are responsible for billing report and financial administration respectively.



Next steps / Sustaining the Gains:

The CDM-Diabetes process and billing are very important to the Masset Clinic. The team (site manager, physicians, PCAs, NP, dieticians and Practice Support Coach (PSC) will continue to monitor all the CDM-diabetes processes and each member will be responsible for part of the process such as scheduling ADR, updating notification recalls and incentive claims, reporting billing overdue and submission to MSP, and making sure all the steps of this process are correct. After September 2019, a new cycle of this process will start and the team hope to continue to have satisfactory results in terms of proactive care and revenue back to the clinic. Furthermore, the team intends to start reviewing the billing and process for Chronic Obstructive Pulmonary Disease (COPD), Heart failure and Hypertension.

Patient/Customer:

The intended impact on patient care, is that patients with diabetes will have annual proactive care based on BC guidelines. Moreover, the revenue received from the MSP, as a result of an incentive claim schedule, will provide the purchase of new clinic supplies, group medical clinics, and other initiatives to improve patients' care and doctors' experience.

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NOTES