CQuIPS

Centre for
Quality Improvement
& Patient Safety

Poster Abstract booklet

Annual CQuIPS Symposium 2024

1. Safety Games in Action: A Proof of Concept in Pharmacy Education

Certina Ho, Wei Wei, Victoria Ezekwemba, Autumn Chen, Ananya Garg, Stephanie Lau, Eulaine Ma
Leslie Dan Faculty of Pharmacy, University of Toronto

Background
Gamification, also known as serious games, in education has been shown to facilitate user engagement and knowledge retention; however, it remains relatively unexplored in pharmacy education. This project was aimed to share the development, implementation, and evaluation of serious games in a patient safety course in an undergraduate pharmacy program. Kern's six-step approach to curriculum development was used to identify the needs perceived by pharmacy students who have previously taken the patient safety course.

Methods
A literature review of user experience (UX) elements was conducted on databases MEDLINE, JSTOR, Web of Science, and IEEE Xplore. A needs assessment survey was disseminated to previous students for topics most needing knowledge reinforcement. A series of educational games was developed and implemented in the Winter 2023 course offering, accompanied with pre- and post-intervention/Safety Games evaluation of students' knowledge and experience with the games, developed and informed by Kirkpatrick's Four-Level Training Evaluation Framework.

Results
Six UX elements were identified from the literature review: (1) ease of use; (2) clarity and affordance; (3) realism and authenticity; (4) feedback mechanism; (5) competition and points system; and (6) complexity and challenge. The topics on root cause analysis, failure mode and effects analysis, and multi-incident analysis; as well as competency domains on safety, risk, and quality improvement were found to be most needed by previous students for knowledge reinforcement. Safety Games were developed with two trivia-games on the above topics. Knowledge assessment scores increased by 23.4% ($p = 0.0027$, 95% CI [20.6, 26.3]) post-intervention. The games allowed students to better recall and reflect on acquired knowledge; identify existing gaps; and reinforce skills.

Conclusion
UX elements for designing engaging games, and patient safety topics that might benefit students from knowledge reinforcement were identified. Positive reaction/satisfaction and learning/knowledge reinforcement in learners were achieved in Safety Games. This pilot project provided an opportunity to identify challenging topics in teaching and learning of patient safety, implement gamification in pharmacy education, and confirm user engagement and knowledge retention potential of gamification in pharmacy education. It was a successful proof of concept in using gamification in pharmacy education.

2. Fostering a culture of trust and continuous improvement: Implementation of a leadership rounding program to advance quality and safety.

Jessica Vickery, Karli Farrow, Dr. Amir Ginzburg, Terri Irwin, Farah Khan, Shannon Maier, Dr. Ivan Diamond, Sandy Dayes, Amanda Rodrigues, Saima Afzal, Hyacinth Kim
Trillium Health Partners

Following the COVID-19 pandemic, a multi-site tertiary teaching hospital recognized the need to focus on foundational practices to foster a standardized, inclusive, and collaborative work environment that supports all people at the organization. Senior leader rounding emerged as a cornerstone within the Quality and Performance program. While rounding practices existed, they were inconsistent, limited to specific leader's portfolio and lacked clear focus. Additionally, workforce surveys highlighted that trust in senior leadership and senior leadership support for safety were some of the greatest opportunities for improvement.

The Senior Leader Quality and Safety rounding program incorporates best practices and principles aimed at improving job satisfaction, joy in work, and aligns with the quintuple aim. This rounding program was co-designed with senior leadership, Quality and Patient Safety, Equity, Anti-Racism and Inclusion Office, point of care staff, and Patient Family Partners to ensure it was meaningful and would resonate with participants. Potential power disparities between senior leadership and staff were identified during the design of the program and intentional efforts were made to flatten this hierarchy to improve engagement and strengthen trust.

Monthly, rounding occurs with up to 28 teams and allows the opportunity to recognize successes and share insights into issues and the reality of experiences related to quality and safety. Post rounding the senior leaders debrief collectively, share insights, raise awareness of organization-wide issues, and collaboratively problem-solve to address actionable improvement opportunities and remove barriers hindering team success. Feedback is shared with program leaders for follow-up, and top themes and action items are discussed at town halls to close the communication loop and ensure continuous improvement.

In fiscal year 2023-2024, this rounding program has occurred with 70% of all teams within the organization (201/289). One of the most encouraging outcomes of this rounding has been a 4 percentile point increase on the grand driver average on the workforce survey question pertaining to trust in senior leaders. These measures help to reinforce qualitative survey feedback from staff indicating that we are at the beginning of a positive shift in culture, underscoring the significant impact that this rounding program is having across the organization.

3. Focusing on Solutions Instead of Problems: A Qualitative Descriptive Study Piloting Appreciative Inquiry as a Physician-Driven Quality Improvement Approach in Internal Medicine

Mohamad Dimassi
McMaster University, Hamilton Health Sciences

Quality improvement (QI) efforts in healthcare often struggle post-implementation, known as the "improvement evaporation effect." Traditional QI approaches yield mixed outcomes, with many failing within a year, and top-down strategies are often perceived as burdensome by physicians. This study addresses the gap in effective, physician-driven QI processes. By focusing on physician-led initiatives, this research aims to enhance the sustainability and effectiveness of QI efforts using strengths-based methodologies like Appreciative Inquiry (AI). Our approach followed AI, which involves identifying real-world examples experienced by practitioners. AI includes four phases: Discover (learning about ‘the best of what is’), Dream (envisioning possibilities), Design (identifying actions), and Destiny (sustaining future actions). We conducted 1.5-hour group interviews using semi-structured guides adapted to our research question and participants' context. Conducted in three phases, Phase 1 involved identifying improvement areas and positive practices through physicians' best moments in medicine and their reactions to changes. Phase 2 used Appreciative Inquiry to advocate for what already works well for physicians. Phase 3 included evaluations using the ReAIM framework, with 6- and 12-month follow-ups. Through the interviews we identified key supports for clinical performance improvement including: creating a safe culture for data-driven discussions, fostering comfort in discussing practice, and emphasizing informal workshops. Success enablers included AI principles, leveraging existing practices, non-evaluative physician leadership, and voluntary participation.

4. Supporting system safety through risk management education and capacity building – a quality improvement initiative

Anthony Soung Yee, Enid Siu, Wendy Hooper, Nataly Farshait, Trevor Hall
Healthcare Insurance Reciprocal of Canada (HIROC)

Healthcare risk managers play a critical role in supporting system safety at the intersection of clinical, insurance, legal, regulatory, and compliance domains. In 2021, a pan-Canadian Risk Management Residency Program (RMRP) was launched to support healthcare risk management professionals in building capacity and confidence to address complex and emerging system challenges. The program provides a comprehensive virtual program

including an educational curriculum, networking and mentoring opportunities with the aim of enhancing front-line impact through effective risk mitigation strategies towards improving patient safety. As part of a multi-year quality improvement initiative, we present results from Program survey evaluations.

The RMRP pilot cohort had 16 learners complete the ten-month Program. Participants were asked to complete an exit survey, which included questions on self-reported levels of competency and confidence in the topics discussed in the RMRP, relative to prior to going into the program. For both measures, all eight survey respondents identified either “higher” or “much higher” levels of competency and confidence, and that they would “likely” or “very likely” recommend the program to peers. As well, analysis of the exit survey data revealed opportunities to improve effectiveness of the Program though peer networking connections, and applied knowledge through practical scenarios.

In response to system demands for education, the cohort size increased to 39 learners to create a larger network of risk management professionals. A pilot set of “Learning Lab” sessions were introduced for learners to put principles into practice. Additional modules were introduced to better reflect the realities of the current healthcare landscape.

The results of the second-year evaluation were consistent with the pilot Program; 22/25 and 24/25 respondents stating competency and confidence being “higher” or “much higher”, respectively, and all respondents stating they are “likely” or “very likely” to recommend the program to peers.

The survey results suggest that the Program has increased both learner competency and confidence. “Learning Labs” provide opportunities to put theory into practice, and are being expanded into more modules. Finally, expanded opportunities to connect with mentors and peers have promoted sharing of best practices, and support system capacity through enhanced risk-based decision making at the front line."

5. Improving infection prevention practices through a novel safety coaches program

Georgia Hacker[1], Shirin Amir Yeganeh[2], Colleen Lee[2], Yuka Hutton[2], Maya Sinno[2], Danny Chen[2], Mary-Agnes Wilson[2], Stephanie Siauw[3], Safiyya Khamis[3], Ahmed Taher[3, 4]
(1) McMaster University
(2) MacKenzie Health
(3) The Regional Municipality of York

Background
Healthcare associated infections (HAIs) are associated with longer hospital stays and increased rates of in-hospital mortality. Infection prevention and control (IPAC) strategies aim to reduce infection transmission and improve survival rates. The COVID-19 pandemic created an excess burden of disease, which created a need for

more rigorous preventative practices. The IPAC Safety Coaches Program was implemented in Mackenzie Health, with the goal of increasing compliance with IPAC guidelines and decreasing HAIs.

Methods
IPAC Safety Coach training occurred over three iterative cohorts of educational sessions. Each session included the review of new learning material, discussion topics, and mandatory action items. The primary outcome measures were hand hygiene compliance and PPE donning/doffing compliance. The secondary outcome measures were rates Clostridium Difficile (C. diff) infections and central line associated bloodstream infections (CLABSI). Data was collected by a standardized audit reporting form.

Results
Over three cohorts of training, hand hygiene compliance improved by 6% with a trend towards significance. There were statistically significant improvements in PPE donning compliance (16%) and PPE doffing compliance (17%). Moreover, secondary outcomes showed significant decreases in C. diff rates (55%) and CLABSI rates (57%) across the three cohorts.

Conclusion
The novel IPAC Safety Coach Program led to a trend of improvement in hand hygiene, significant improvement in PPE donning and doffing, and was associated with a significant reduction in CLABSI and C. diff rates."

6. Empowering Local Quality Improvement: A Homegrown Cohort-Based Training Program

Navpreet Kamboj, RN, MSN, PhD[1, 2] , Christopher Fung, HB.A., MPP[1], Wendy Campbell, BScPT, MEd[1], Kevin Gitau MD, MSc FRCPC[1] , Nikita Gajjar, BSc(Hons), MScOT, OT Reg. (Ont.) [1]
(1) Trillium Health Partners
(2) Lawrence S. Bloomberg Faculty of Nursing, University of Toronto

Quality Improvement (QI) science provides a common language and skills to identify the root causes of issues, analyze and make data-informed decisions, and implement sustainable solutions. However, healthcare staff often do not receive formal QI training, which is a missed opportunity to create a more proactive workforce that can solve its own local level problems. To address this gap, Trillium Health Partners (THP) has adopted the Institute for Healthcare Improvement's (IHI)'s Whole System Quality approach to integrating quality planning, control, and improvement activities and has developed a homegrown cohort-based, QI training program. This structured and continuous program was designed to inspire and empower teams to lead local level QI projects. Launched in February 2024, the program was piloted with seven inpatient teams. It included two in-person training sessions and 12 months of dedicated support from a QI Coach and monthly community of practice sessions. The aim of this program was to build QI competency at the local level with all projects focused on improving time to inpatient bed performance. Outcome measures included percent change in participant's perceived QI knowledge and skill,

along with confidence in applying QI methodologies in practice and the number of knowledge dissemination activities. Process measures included the number of QI projects completed and session attendance rates. Balancing measures were participant and coach experience, and hours lost at clinical work related to participation. Using the Kirkpatrick Evaluation Model, early findings show promising results, with 75% of participants rating themselves as feeling confident in their ability to apply QI methodologies in their work post-training, compared to 39% pre-training. A nurse participant shared, "The program provided us with a new perspective, excitement and a sense of confidence in our ability to enact change." Ensuring teams have sufficient time for their QI project has been a challenge. To address this, a member from each team was appointed as project lead with protected paid time, ensuring the team had a designated leader to coordinate QI activities. Building on the pilot's insights, the curriculum will be refined and scaled to all THP teams as we develop our overall organizational capacity for QI.

7.Building physician quality & safety competencies at a multi-site academic hospital

Sarah Tosoni, Manager, Strategy & Transformation, Quality & Safety, *University Health Network*
Lucas Chartier, Vice President Quality & Safety, Chief Patient Safety Officer, Emergency Physician, *University Health Network*; Associate Professor, *University of Toronto*

Background
Despite widespread benefits of physicians engaging in organizational quality & safety (Q&S) activities, such engagement often remains infrequent, informal, and inconsistent.

Aim
This work aimed to design and implement uniquely-tailored and concurrent interventions to increase the size and Q&S competency levels of UHN's Physician Council on Q&S over a two year period.

Measures
Ten Q&S competency dimensions were tracked as outcome measures: Q&S science & methods, engaging stakeholders for success, aligning local projects with organizational priorities, building local Q&S infrastructure, navigating organizational Q&S processes, obtaining funding for Q&S, scholarly approach to Q&S, academic promotion through Q&S, career development through Q&S, and teaching Q&S. Competency levels were reported on a 4-point scale (i.e. novice, competent, proficient, expert). Process measures centered around change concepts and included number of attendees at Q&S events, number of mentorship pairings, number of QI projects awarded grant funding, and number of visits to our Q&S intranet site.

Change Concepts
Ten interventions were delivered concurrently including 14 Q&S Rounds (~90 attendees each), two quality improvement (QI) workshops (~100 attendees each), Q&S Summit (~700 attendees), Q&S mentorship program (17 pairings), Physician Q&S Playbook (500+ views), Q&S Intranet site (100,000+), Safety Event Data Request Form and Process (1,000+ views), QI Review Committee (550+ QI projects reviewed), Physician QI Grant

Competition (20 projects awarded a total of $100,000) and Physician Q&S Award Competition (4 inaugural winners).

Results
Baseline results (n=32) revealed participants were predominantly in the novice/ competent categories for all dimensions. Competency levels were re-tested in 2023 (n=41) and Chi-squared analyses revealed improvements in the expected direction on all dimensions. Statistically significant increases were observed for navigating UHN processes ($p<0.01$), and building organizational Q&S infrastructure ($p<0.05$). The Council grew over five-fold in size from its 13 original members to 75 members with representation from all of our organization's Programs, Departments, and Divisions.

Discussion
Results indicate that this approach to Educate and Connect (e.g. Rounds, Summit), Promote and Support (e.g. Grants, Awards), and provide Customized Resources (e.g. Playbook, Intranet) was effective in growing a robust and competent physician Q&S community of practice.

8. Co-creating and co-delivering a Quality Improvement Course for Primary Health Care Professionals in Ghana

Margarita Lam Antoniades, *Department of Family and Community Medicine, University of Toronto and Unity Health Toronto, Department of Family and Community Medicine, University of Toronto, Department of Health Policy, Management and Economics*
Kwame Nkumrah, *University of Science and Technology, Kumasi, Ghana*

Background
There is increasing recognition that attention to quality in primary health care globally is critical, in addition to ensuring access to care 1. Quality improvement is an important tool in addressing global health disparities. Through the Africa Higher Education Health Collaborative (AHEC), the University of Toronto Department of Family and Community Medicine (DFCM) partnered with the Kwame Nkrumah University of Science and Technology (KNUST) to co-create and co-deliver a course on quality improvement (QI) with a focus on primary health care.

Methods
KNUST faculty identified key curriculum content areas to be included in the course. Between April and October 2023, faculty from DFCM and KNUST met virtually to co-create the curriculum.
Intentional selection of course participants was enacted by local national leaders in health care quality improvement. Groups of four individuals per institution, a mixture of clinical and administrative staff were selected.

In-class delivery of modules 1 and 2 to two cohorts of 20 participants each by KNUST and UofT faculty took place between October 2023 and July 2024.

Course participants completed a post-course questionnaire and were invited to participate in focus groups to provide qualitative feedback . Course facilitators were interviewed regarding their experience with co-creation and co-delivery.

Qualitative data was analyzed using the generic qualitative analysis approach which allows for both inductive and deductive summation of data into themes.

Results
Results showed participants had increased confidence and sense of empowerment to apply QI methods in their own setting. There was an increased appreciation of the value of communication and stakeholder engagement. Participants valued being connected to a community of peers and were inspired to pursue leadership by example. Themes from the facilitator interviews highlighted perceived key elements a successful international and cross-cultural educational co-creation process, including: well defined roles, mutual respect, communication, shared values, flexibility, adaptability and “letting go of control”.

Conclusion
A QI course was successfully co-created and co-delivered with positive feedback from participants and valuable learning. Future iterations of the course over the next 3 years will continue to build on this early success.

References
Quality in Primary Health Care, WHO 2018. https://www.who.int/docs/default-source/primary-health-care-conference/quality.pdf"

9. Perspectives of Participants and Leaders of a Quality Improvement Training Program for Rehabilitation Clinicians

Tyler Beauregard, Samantha Charles, Lisa Juckett, Ella Snead, Catherine Quatman-Yates
Ohio State University School of Rehabilitation Science

Background
Current best practices for Quality Improvement (QI) training programs for health care professionals in the scientific literature are largely based on programs for training nurses and physicians with studies involving rehabilitation clinicians almost entirely absent. The Continuous Learning and Improvement Mastery Building (CLIMB) program is a quality improvement training program developed primarily for rehabilitation professionals at a large academic medical center that finished its first iteration in 2022. The program utilized a project-based blended learning approach. The approximately 80 CLIMB participants were organized into 8 groups with each group working to complete a QI project over the 12 month course of asynchronous lessons and group discussion. CLIMB appears to have been successful. Understanding the elements that contributed to CLIMB's success could inform future QI training programs. The purpose of the study was to capture CLIMB stakeholder perceptions of effective QI training practices.

Methods
This study was a pragmatic qualitative analysis of semi-structured interviews with key stakeholders. We conducted interviews with 11 CLIMB participants/leaders with a professional background in the rehabilitation sciences. Analysis occurred over 3 distinct phases. In the first phase, two analysts independently open coded each transcript for high-level themes using constant comparative methods within and between transcripts. In the second phase, two analysts deductively re-coded the transcripts according to the codebook developed in the first phase. The third phase was organizing the themes that came out of the second phase into a framework of favorable practices for QI training programs for clinicians in the rehabilitation sciences.

Results
Preliminary themes highlight the importance of clear expectations of participants before program commencement, the necessity of having two scheduled meetings a month, the strengths and limitations of the project-based blended learning approach, the detriment of meeting as an entire program, and the benefits of having well trained QI facilitators.

Conclusion
The common patterns seen in QI training programs for physicians and nurses appear to be, largely, appropriate for training rehabilitation clinicians. Future QI training programs should experiment with delivering the program to individual groups using a core infrastructure rather than to a full cohort that breaks out into groups."

10. Best Practices Champions to Reduce Intensive Care Unit (ICU) Acquired Pressure Injuries

Simon Donato-Woodger[1], Amanda Firth RN[1], Vanessa Hill RN[1], Jacqueline Baptise-Savoie RN [2], Chris J. Yarnell MD PhD [1,3,4] , Thomas F. Bodley MD MSc [1,3,4]

(1) Department of Critical Care Medicine, Scarborough Health Network, Scarborough, Canada
(2) Wound Care Program, Scarborough Health Network, Scarborough, Canada
(3) Interdepartmental Division of Critical Care, Department of Medicine, University of Toronto, Toronto, Canada
(4) Scarborough Health Network Research Institute, Scarborough Health Network, Scarborough, Canada

Background
Hospital acquired pressure injuries are a highly morbid and often preventable complication of critical illness.

Aim
To improve use of pressure injury prevention best-practices and, reduce hospital acquired pressure injuries, in a 38-bed medical-surgical intensive care unit (ICU) in Scarborough, Ontario.

Measures
The primary outcome was unit-level adherence to a six-component pressure injury prevention best-practice care bundle. The secondary outcome was incidence of new pressure injuries per 100 patient days. Balancing measures included staff satisfaction and perceptions of workload related to wound prevention. Outcomes were evaluated using process control charts and segmented regression.

Change Concepts
This prospective quality improvement study included a 7-month pre-intervention and 7-month intervention ending May 2024. A Wound Care Champion nursing role was created to facilitate education, audit and feedback, and bedside assistance of daily and complex wound care. The Wound Care Champion role was designed to create a critical mass of ICU pressure injury prevention and management experts. Root causes of low best-practice bundle adherence were mapped to change theories and interventions through four plan-do-study-act cycles.

Results
A total of 1121 patients were included; 540 pre-intervention and 581 during the intervention. Median age was 71 (IQR 59-80), 63.3% male, with 29.7% surgical admissions. There was no difference in mean multiple organ dysfunction scores (4.5, SD 0.8), median length of stay 3.5 days [IQR 1.0-10.0], or mortality (22.0%) between groups. 2730 bedside audits of best practices were completed: 120 per month pre-intervention and 300 per month during the intervention. Baseline adherence to the best-practice bundle was 29.3%. Adherence peaked at 79.0% with special cause variation at intervention week 8. Rates of pressure injuries per 100 patient-days did not change: 0.71 pre-intervention and 0.65 post-intervention. In a secondary analysis normalizing to audit intensity, which impact pressure injury detection rates, there was a reduction in pressure injuries from 5.7 to 1.95 per 100 patient-audits with special cause variation on intervention week 12.

Discussion
Creating a Wound Care Champion role in the ICU to facilitate rapid cycle improvement increased adherence to pressure injury prevention best practices. Ongoing data collection will establish if the program can also reduce ICU acquired pressure injuries per 100 patient-days"

11. Screening for Pregnancy Before Surgery: Implementing Timely, Standardized, and Objective Preoperative Pregnancy b-hCG Testing A Quality Improvement and Patient Safety Initiative

Angela Deane [1,2] , Abheha Satkunaratnam[1, 2] Sanjho Srikandarajah [1, 3]
(1) North York General Hospital, Toronto, Ontario
(2) University of Toronto, Department of Obstetrics and Gynecology
(3) University of Toronto, Department of Anesthesiology and Pain Medicine

Background
Unrecognized pregnancy at the time of surgery can lead to significant patient harm, posing ethical and legal risks. Despite practice guidelines recommending pregnancy screening prior to surgery, the process remains highly variable amongst care providers and hospital institutions. Investigation of a critical incident involving unrecognized pregnancy at the time of gynecologic surgery, identified a lack of standardized, timely, and objective methods of pregnancy screening prior to surgery.

Aim, Objectives, and Measures
The project aimed to increase pre-surgery pregnancy screening from 14% to 100% over 15 months. Using quality improvement methodology, a Presurgical Pregnancy Screening Process (PPSP) was developed. Starting at the time of surgical consent, patients were screened and if required, completed a pregnancy test 1 to 3 days pre-surgery, results were uploaded to the hospital EMR by the surgeon. On the day of surgery, two checkpoints verify screening completion; at the time of check-in with the preoperative nurse and in the Surgical Safety Check List (SSCL) with the surgical team.
The main outcome measure was the percentage of patients screened prior to surgery.Process measures included verification of screening in SSCL and reliability of the pregnancy test (completed within 3 days prior to surgery). Balancing measures assessed the proportion of patients requiring same day testing, surgery cancelation due to positive pregnancy test, and impact to surgical teamwork flow.

Results, Impact, Lessons Learned
The percentage of patients with presurgical screening at surgical check-in was 77% (n=1105/1442), with consistent rates over 85% in the last 4 months. In the final verification in the SSCL, 98% (n=1409/1442) of patients were screened, highlighting the importance of incorporation of system improvement into already established surgical safety check points. There were 4 unrecognized pregnancies identified with subsequent surgery cancellation; this is considered a major success of the PPSP and aversion of harm.
Challenges identified included workflow burden, EMR usability, and delayed result reporting which PDSA cycles were used to address.

12. Reducing wait times for induction of labour

Carleene Banez[1], Audra Jesso[2], Lori Webel-Edgar[1]
(1) *Healthcare Insurance Reciprocal of Canada*
(2) Royal Victoria Regional Health Centre

Background/Context
Induction of labor is a common step of the intrapartum care and a critical junction for the interdisciplinary decision-making to determine the time, priority, and that the induction method meets the birthing person's medical needs and individual preferences. This article provides a review of the current initiative that aimed to enhance patient and family centred care through changes made to induction scheduling and unit workflows on the Labour and Delivery unit of a large community hospital. During a November 2023 evaluation of patient satisfaction, real-time

feedback was gathered from 60 patients undergoing induction. The unit developed induction champions who incorporated induction standards and best practices to improve patient experience and support teams throughout implementation.
Aim/Objectives

To reduce the elapsed time from patient registration to the commencement of induction by 50% by March 2024.

Measures
Process measures: Time studies were conducted to establish baseline time measures of patients waiting for their inductions.
Outcome measures: Patient satisfaction surveys were conducted to assess overall patient satisfaction.

Improvement/Innovation/Change Concepts
1.Scheduled induction appointments – Appointments were shifted from 07:30 to 07:45
2.Induction Tracking Form – New form used for referrals and to indicate patients' "first" and "second" choices for induction appointments
3.Wayfinding – New signage to improve navigation between patient registration and triage areas

Impact/Results
•47% reduction in elapsed time from registration to commencement of induction
•89% of patients received their first choice for induction dates (The remaining 11% selected their second choice for dates for personal reasons)
•85% of patient satisfaction surveys showed 100% satisfaction post-changes (15% provided feedback regarding lack of equipment supply for nurses to carryout assessments effectively)
Discussion/Lessons Learned/Next steps
Here the key insights we learned from our QI project:
•Physician engagement is fundamental for effective collaboration
•A systemized data collection process, team engagement, and a positive team environment facilitated change ideas and implementation
•Implementation of an Induction Tracking Form was developed to measure sustainable change
•Results were shared internally across programs and externally with peer hospitals and regional partners
•Next steps will look into supporting future direction for prolonged inductions, pain management for inductions, and electronic scheduling of inductions"

13. It’s Time for Kangaroo Care: A Quality Improvement Project to Improve Time Spent Skin-To-Skin in the Sunnybrook Health Sciences Centre Neonatal Intensive Care Unit

Elise M Halpern, Division of Neonatology, University of Toronto, Carisse Thomas[1], Gilad Lazarovits[2], Doaa Al Dweik[1], Federica Savio[1], Mohammed Ellebany[1], Nosheen Akhtar[1], Osagie Ugowe[1], Roshni Gowda[1], Tanisha Austin[1], Ujjwala Mantha[1], Lisa Sampson[2], Maya Dahan[2]
(1) Division of Neonatology, University of Toronto, Toronto, Ontario, Canada
(2) DAN Women & Babies Program, Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada

Background
International guidelines for care of preterm and low birth weight infant recommend Kangaroo Care (KC) for non-critically ill infants for 8-24 hours per day or ‘as many hours as possible’. Kangaroo Care is associated with lower mortality, reduction in infection, stabilization of physiological parameters, and improved breastfeeding outcomes. In our unit, infants spend less than 1 hour per baby per day in KC and the rates of KC on the unit have been reducing over the past 3 years.

Objective
By May 2024, we aimed to increase time spent in Kangaroo Care for all eligible babies in the Sunnybrook Health Sciences Centre (SHSC) Neonatal Intensive Care Unit (NICU) by 20% from an average of 49 minutes/baby/day (95% CI; 44 minutes/baby/day – 54 minutes/baby/day) to an average of 59 minutes/baby/day.

Methods
A multidisciplinary team of stakeholders was assembled for this quality improvement initiative. Barriers to KC on the unit were identified through the development of a fishbone and driver diagram. Using the Plan-Do-Study-Act (PDSA) methodology, further characterization of the barriers and enablers of KC was achieved through anonymous bedside staff questionnaire. Subsequent PDSA cycles targeting increased awareness and intentional conversations around KC both for staff and caregivers followed by the application of bedside signage to further prompt conversations around and implementation of KC.

Impact
We achieved our aim of improvement with 60 minutes/baby/day spent in KC in April of 2024. Through our initiatives, we were able to identify many important factors hindering time spent in KC including parental presence and comfort, staff knowledge and culture, and unit acuity and staffing shortages. Future directions aim for sustained unit practices and emphasis on the importance of KC and its positive impact on patient outcomes."

14. Pain Management during Intrauterine Device (IUD) insertions: Improving the quality of our counseling

Jessica Bawden, Nurse Practitioner
Women's College Hospital

Background
Intrauterine device (IUD) insertions can be painful, especially for equity-deserving populations. Providers often underestimate women's pain experiences, highlighting a critical issue. This QI project aims to improve how patients are informed and supported during IUD insertions in Family Practice (FP).

Aim/Objectives
Increase by 50% the incidence of comprehensive counselling on pain management options for IUD insertions between February and May 2024.

Measures
Weekly chart audits will track:
Percentage of patients receiving comprehensive counselling at IUD prescription (primary outcome).
Documentation rates of pain management plans and number of patient handouts provided.
Patient self-reported pain during insertion (lagging indicator) and use of local analgesia.
On balance, to ensure that there were no problems created elsewhere in the system (time, effort, roadblocks), clinicians will be surveyed. If patient-reported actual pain worsened over time, this will be reported.

Improvement/Innovation/Change Concepts
Using QI methodology, a gap analysis including process mapping included stakeholder and patient input. Clinicians unanimously agreed that improving pain management counselling was important. Over 80% of the barriers were related to knowledge, feasibility and time. Interventions included standardized documentation prompts, a patient handout to simplify counselling, and stocking a comfort kit with analgesic medications to ensure equitable patient access to pain plan execution.

Impact/Results
Following intervention rollout, there was a disruptive increase in pre-insertion counselling rates. Comprehensive counselling rose by 62%, showing likely non-random improvement due to observation of special cause signals in the run chart of this data. Mean local analgesia use during insertions increased from 20.45% to 60.53%, indicating practitioner willingness to change practice independently which is very encouraging.
The impact on health outcomes will be measured in future. It is recommended that all clinicians performing painful procedures be trained to use the most effective forms of pain management for all patients. This should be the performance expectation.

Discussion/Lessons Learned
Standardized documentation prompts were pivotal in changing practice, with feedback emphasizing the importance of providing tools for executing pain management plans equitably. Future steps include funding for

diverse pain reduction strategies and provider training. Inhaled analgesia like Penthrox shows promise in ambulatory settings and merits consideration for wider adoption.

15. Developing a Dashboard for Monitoring System Equity in Maternal Care

Tosin Akintunde, Safety, Equity & Design Lab, Ning Bao, Undergraduate Student, Fiona Sun, Undergraduate Student, Myrtede Alfred, Assistant Professor, Safety, Equity & Design Lab
Department of Mechanical and Industrial Engineering, University of Toronto

Background
Racial disparities in adverse maternal outcomes are pervasive in the United States (US) and have also been identified in Ontario, Canada. Hospitals have made efforts to improve maternal care outcomes through patient safety and quality improvement efforts. However, these methods can fail to address hazards disproportionately impacting Black women and other racialized birthing people. Developing an equity dashboard has been recommended as a major step towards achieving equity in maternal care by better monitoring processes and outcomes for different racial and ethnic groups at the hospital level. Hence, we developed a maternal care equity dashboard to support the identification and monitoring of variations in process and outcome measures across different racial/ethnic groups.

Method
The equity dashboard was developed using Incident reports (IR) and delivery data from 2019 and 2020 were collected from a US based hospital Patient demographic data were linked to process and outcome measures and disaggregated by race/ethnicity: non-Hispanic White (NHW), non-Hispanic Black (NHB), Hispanic and Others. Measures were selected based on area with previously identified disparities in maternal health outcomes, areas of concern identified through hospital level data analysis and other measures modifiable through the delivery of care. The dashboard was iteratively developed using Tableau Desktop (2023.2). Statistical analysis was performed on measures to assess racial variations and determine significance.

Results
The dashboard included 12 charts on IR rate, anesthesia type, delivery method, average length of stay, labour and delivery (L&D) complication, preeclampsia/eclampsia rate, and other morbidity indicators. We identified significant differences in anesthesia type, delivery type, L&D complications and preeclampsia/eclampsia rate across racial/ethnic groups. NHB patients experienced the highest usage of general anesthesia (20.4%), and had the highest rate of L&D complications (23%).

Conclusion
This study describes the development of an equity dashboard. We demonstrated the extensive process of cleaning, linking, disaggregating data, choosing measures, and selecting visualizations for the dashboard.

Integrating equity dashboards within individual healthcare systems is a pivotal step toward enhancing safety and reducing disparities in maternal health outcomes. The usability of the equity dashboard will be assessed through testing with key stakeholders, including care team, and patient safety staff.

16. Optimization of the Outpatient Induction of Labour Process: A Quality Improvement Initiative

Tyrah Ritchie, *Temerty Faculty of Medicine, University of Toronto*
Amanda Cipolla, *Department of Obstetrics and Gynaecology/Trillium Health Partners*

Induction of labour (IOL) is one of the most common obstetrical procedures, with over 20% of pregnancies undergoing an induction. Furthermore, emerging guidelines continue to increase the indications for IOL leading to a rise in the number of procedures. This strains hospital resources which urges optimization of the current induction process. A previous quality improvement (QI) project at Credit Valley Hospital (CVH) in Mississauga, achieved a 12% reduction in average visit length for the initial IOL appointment and reduction in the number of visits per IOL patient from 3.6 to 2.8. However, one of the largest burdens to hospital resources continues to be the length of stay in the birthing suite. Thus, the current QI project aims to optimize the birthing suite stay for IOL patients at CVH. Data was retrospectively extracted from the electronic medical record system EPIC. A cohort of 93 patients receiving IOL at CVH in January 2024 were divided into quartiles based on length of stay in the birthing suite. Using process mapping, an Ishikawa diagram, and chart review we identified key parameters affecting length of stay including parity, time until initial obstetrician assessment, and administration of “pre-labour” medications (Misoprostol and/or Group B Streptococcus (GBS) prophylaxis) in the birthing room. We identified that over half of the IOL patients with longer stays were receiving these pre-labour medications in the birthing suite as opposed to the outpatient setting whereas all the IOL patients with shorter stays received these medications as an outpatient. Additionally, IOL patients with longer stays on average waited an additional 1.4 hours to be assessed by an obstetrician compared to patients with shorter stays. Ultimately, our work suggests the need for an additional space to administer early labour interventions and conduct initial obstetrician assessment. Future work will include plan, do, study, act cycles to assess whether introduction of this unit can reduce the length of the birthing room stay for IOL patients.

17. Standardizing Multidisciplinary Rounds in General Internal Medicine (GIM): A Discharge-Focused Approach at St. Joseph's Healthcare Hamilton

Beth Swenor
St. Joseph's Healthcare Hamilton

Background/Context
At St. Joseph's Healthcare Hamilton (SJHH), inefficiencies in discharge planning within the General Internal Medicine (GIM) unit have led to prolonged hospital stays and delayed access to inpatient beds. As part of this year's Quality Improvement Plan (QIP), this project aims to standardize multidisciplinary rounds with a focus on discharge planning to address these issues. The project kickoff was initiated with a Kaizen event to streamline processes and foster collaborative improvement.

Aim
The aim is to standardize GIM multidisciplinary rounds, emphasizing discharge-focused planning with collaborative input from all disciplines to reduce the time to inpatient bed availability.

Outcome Measures
Time to Inpatient Bed: Measure time from decision to admit to bed placement.
Reduction in Length of Stay: Measure average hospital stay pre and post-implementation.

Process Measures
1.Adherence to Standardized Rounds: Monitor and audit the percentage of multidisciplinary rounds conducted according to the standardized process.

2.Documentation Completeness: Evaluate the completeness and accuracy of documentation, focusing on the inclusion of estimated discharge dates.

Balancing Measures
1.Readmission Rates: Track the 30-day readmission rates to ensure that expedited discharges do not lead to higher readmission rates.
2.Time Management in Rounds: Measure the overall time taken to complete the multidisciplinary rounds and the average time spent reviewing each patient to ensure the changes did not increase the overall time spent in rounds.

Improvement Concepts
1.Standardized Process and Script: Develop a consistent process and conversation template centered on discharge planning and addressing barriers to discharge.
2.Uniform Documentation Template: Establish a template across units, including fields for estimated discharge dates.
3.Training and Implementation: Conduct training sessions for healthcare teams to ensure adherence to the new process and documentation practices.

Impact/Results
The project is still in pre-implementation stage. Our anticipated results aim for improved communication and collaboration among healthcare teams, more accurate discharge planning with clear estimated discharge dates, and a reduction in patient length of stay and time to inpatient bed.

Discussion/Lessons Learned
Anticipated challenges in implementing this project include overcoming initial resistance to change and ensuring consistent adherence to new processes. Addressing these challenges will necessitate ongoing training and support for healthcare teams, alongside establishing regular feedback loops to anticipate concerns and refine the planned processes proactively. Key lessons anticipated to be learned will underscore the critical importance of clear communication and continuous engagement with all stakeholders involved in the multidisciplinary rounds.

18. Don't Drop the Baton: A multidisciplinary & interprofessional approach to improving Transfer of Accountability/Information Transfer (TOAI)

Victoria Glinsky[1], Alyssa Macedo[1] Neesha Dhani[1], UHN; Anet Julius[1], UHN; Lucas Chartier[1, 2, 3]
(1) University Health Network
(2) OH Toronto
(3) University of Toronto, IHPME

At the Princess Margaret Cancer Centre (PM), Transfer of Accountability/Information Transfer (TOAI) was established as a priority that required standardized timely communication and tailored practices. The Cancer Program aim was to reduce serious safety event rate (SSER) related to TOAI to zero by September 2024.

With significant medical leadership, a Cancer Program TOAI Working Group (WG) and hospitalist program was established in 2018. Various tools were developed with the aim of standardization.

PDSA-1: an inter- and intra-facility standard of work outlining optimal TOAI practice, including details around timing, communication and documentation was established. PDSA-2: as the University Health Network implemented I-PASS as a standardized communication tool for TOAI, the WG developed PM-specific education materials to facilitate the adoption of I-PASS. PDSA-3: a needs assessment identified and addressed potential barriers to implementing I-PASS within the different inpatient service lines. This led to a focus on inpatient handover and the creation of standardized scripts, education, videos and schedules.

This multi-year work led to significant improvements in quality outcomes; mainly a reduction in SSER from 1.25 to 0.14 (2016 to 2022). Real-time reporting of TOAI at the PM Site Huddle reduced from 10 to 3 TOAI concerns/month (2021 vs 2022). Inpatient physician handover rounds occurred with 100% attendance, with over 40-50 inpatients reviewed in 25 minutes, with a focus on the sickest patients. In addition, fidelity audits showed 86% compliance with I-PASS in verbal communication.

The WG has led several initiatives to improve the consistency, quality and sustainability of best TOAI practice. Setting TOAI as a priority was critically important to gain focus and momentum within a large program. An interdisciplinary needs assessment helped to focus on barriers and address concerns meaningful to frontline staff.

Frequent audit and feedback helped to guide engagement and dispel myths. Starting small with one pilot and showcasing success was key to change management. Standardization across service lines was highly beneficial for maintaining consistency and quality of care. Work continues to progress towards zero preventable harm with a focus on verbal communication to aid in an effective two-way dialogue. This culture change takes time and persistence.

19. Investigating the transfer safety checklist process when transferring patients to and from diagnostic imaging

Hongchen Lieu[1], Myrtede Alfred, PhD[1], Komal Mazhar[2], Amrutha Kumar[2]
(1) Safety, Equity & Design Lab, Department of Mechanical and Industrial Engineering, University of Toronto, Toronto, ON
(2) William Osler Health System

Adverse events during intra-hospital transfers (IHTs) to and from diagnostic imaging (DI) are among the most common patient safety incidents (PSIs) related to care transitions in hospitals [1], [2]. Effective transitions and handovers are critical to reducing PSIs, improving efficiency, enhancing communication, and shortening patient's hospital stays. Checklists have been developed to support safety in IHTs, including transfers to DI. However, low compliance with these checklists remains a challenge, contributing to increased PSIs [3].

From fiscal years 2020 to 2023, 53 PSIs related to these transfers were identified at William Osler Health System (Osler). This project aims to improve patient safety by investigating the barriers and challenges associated with patient transfer process from the ED to DI at Osler.

Key metrics include checklist compliance rate, transition in care incident rate, and prescription of transfer efficiency.

Utilizing Human Factors (HF) methods, the team will employ contextual inquiry, involving observations and interviews, to gather data on the ED to DI transfer process and analyze existing data, such as checklist audit data and incident reports, to establish a baseline. We will conduct a task analysis, current state process map, and PETT (people, environment, tasks, and tools) scan to identify barriers and facilitators impacting safety in the transport process. This analysis will help us understand compliance issues, root causes of transfer-related PSIs, and inefficiencies in the workflow, allowing us to provide recommendations for improvement.

ED to DI transfers are conducted by four dedicated porters per day. The highest volume DI procedures for ED patients are x-rays, CT scans, and ultrasounds. Preliminary observations indicate a lack of checklist use due to a lack of awareness, training, and integration into the workflow. Additionally, inefficiencies arise from the ED layout and differing information systems used in the ED and DI.

Initial lessons suggest opportunities to improve safety through shared information systems supporting interdepartmental communication and patient tracking, redesign of checklist to increase value and accessibility, and implementing training programs to educate staff on checklist's purpose and use. Further research can identify additional opportunities for process improvement in patient transport, thereby improving outcomes and workflow.

References

[1] H. K. Choi, S. D. Shin, Y. S. Ro, D. K. Kim, S. H. Shin, and Y. H. Kwak, "A before- and after-intervention trial for reducing unexpected events during the intrahospital transport of emergency patients," Am. J. Emerg. Med., vol. 30, no. 8, pp. 1433–1440, Oct. 2012, doi: 10.1016/j.ajem.2011.10.027.
[2] Farnoosh, L., Hossein-Nejad, H., Beigmohammadi, M.-T., & Seyed-Hosseini-Davarani, S.-H. (2018). Preparation and Implementation of Intrahospital Transfer Protocol for Emergency Department Patients to Decrease Unexpected Events. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6549197/
[3] P. Williams, S. Karuppiah, K. Greentree, and J. Darvall, "A checklist for intrahospital transport of critically ill patients improves compliance with transportation safety guidelines," Aust. Crit. Care, vol. 33, no. 1, pp. 20–24, Jan. 2020, doi: 10.1016/j.aucc.2019.02.004.

20. Improving screening rates for micronutrient deficiency in bariatric surgery patients discharged to a primary care practice

Nicole Bourgeois[1], Sameera Toenjes[1], Ameet Mathrani[1], Nely Amaral[2], Sonal Gandhi[3], Susie Kim[1]
(1) Women's College Hospital
(2) Mount Sinai Health System
(3) Sunnybrook Health Sciences Centre

Background

Patients who have had bariatric surgery represent a small, but growing population in Ontario. While effective in treating metabolic disease, these surgeries increase lifelong risk of serious and potentially life-altering micronutrient deficiencies. Recent guidelines recommend annual screening for deficiencies in primary care for patients discharged from bariatric centres. Stakeholders were engaged to identify barriers to screening and potential interventions. Key barriers identified include: low awareness of guidelines, lack of EMR tools to support screening, competing priorities, problem-based appointment booking, and pandemic-related gaps in care.

Aims

At least 75% of patients discharged from bariatric surgical centres to the Women's College Hospital Family Practice (WCHFP) will be up to date with annual screening bloodwork for key micronutrients by December 2024.

Measures
Measures for this project are the proportion of patients who have, in the last year: 1) completed screening bloodwork for micronutrient deficiencies (outcome), 2) have a completed requisition for bloodwork (process), 3) been seen by their provider (process), and 4) had additional appointments and follow-up for abnormal results (balancing).

Innovations
Intervention 1 uses change concepts of standardization and changing the work environment. We have developed a novel EMR toolbar for bariatric follow-up which includes a standardized bloodwork requisition, clinician guidelines, and patient resources. This EMR toolbar was tested with one practice, adjusted based on feedback, and has been spread across the practice.

Intervention 2 is the development of an EMR registry for these patients. The registry will support panel management, in which the registered dietitian will proactively reach out to registry patients due for their annual screening. A patient advisor has been recruited to provide insight on outreach strategies.

Results
In a baseline audit within the WCHFP, we found that our current screening rates are low (ranging from 0% for Vitamin A, to 68% for iron); pre-intervention weekly monitoring suggest that screening rates remain largely unchanged. Intervention 1 has just recently been implemented and our team will monitor for any changes using a run chart over the next 8 weeks. Intervention 2 is set to be implemented fall 2024.

Discussion
Our team will further test these interventions within our practice. If found to be successful, we plan to disseminate our findings to primary care teams. Future work within our clinic include upstream efforts to prevent deficiency, and effectively treating newly identified deficiencies."

21. Exploring Emergency Department Culture Relating to Workplace Violence at UHN

Brendan Singh[1], Brendan Lyver[1], Rickinder Sethi[1,2], Jaswanth Gorla[2], Jennifer Haines[1], Marc Toppings[1], Christian Schulz-Quach[1,2]
(1) University Health Network
(2) University of Toronto

Purpose
Healthcare workers (HCWs) across Ontario and internationally have been struggling with increasingly alarming rates of workplace violence (WPV) in their hospitals, particularly within emergency departments (EDs). University Health Network (UHN) EDs have witnessed a 169% increase in WPV incidents ($p < .0001$), from 0.43 to 1.15 incidents per 1000 visits, since the beginning of the COVID-19 pandemic. As a result of these findings, our team conducted a longitudinal qualitative study to investigate ED HCWs' perspectives on WPV and to collect evidence to support the implementation of interventions to address the issue.

Methods
The study consisted of 52 anonymous, semi-structured, in-person interviews conducted in UHN EDs, that explored staff's feelings of safety in the workplace and perspectives towards WPV. HCWs were selected and interviewed in December 2022 using a convenience sampling strategy. Our team employed a thematic analysis as modeled by Kiger and Varpio (2020). Next steps of the project will be to conduct additional rounds of interviews to further collect HCW's opinions on safety in the workplace and staff perspectives on future de-escalation training programs and safety interventions.

Results
Key themes identified in our analysis include HCW's diminishing perceptions of personal safety as result of unmet needs, discordance between staff involved in code white response efforts, negative mental and emotional impacts of WPV on HCWs, and staff approval regarding current and potential security interventions at UHN. Improvements to behavioral alert systems and incident reporting systems along with the introduction of trauma-informed de-escalation education programs were among the proposed interventions that staff believed would make the greatest impact towards addressing WPV management needs. Analyses revealed that WPV plays an important role in work-related burnout, job burnout, feelings of fear at work and diminished quality of care due to WPV-related effects.

Conclusions
Findings from our analyses shed light on the challenging multifactored dynamics of WPV at UHN and the need for improvements to interventions that promote workplace safety and violence prevention in hospitals. Results from our analyses can be used to inform the development of quality improvement initiatives to enhance health systems resilience by creating safe working environments."

22. Improving the Emergency Department Experience for Patients Presenting with a Bartholin Gland Abscess

Dr Rachel Sheps[1], Dr Paul Koblic[1], NP Carrie Kan[1], Dr Jackie Thomas[1], Dr Frederique Kyomi Labelle[2]
(1) Mount Sinai Hospital
(2) Universite de Montreal

Background
Bartholin gland abscesses (BGA) are a painful gynecologic condition occurring in 2% of women, frequently resulting in emergency department (ED) visits. Longer lengths of stay (EDLOS) and added healthcare costs occur through referral for Gynecology (GYN) management in the ED, typically for incision, drainage and Word catheter insertion (IDW) or marsupialization. IDW is within ED provider's (EDP) scope of practice. We sought to improve the patient experience by reducing LOS and empowering patients and EDPs with systemic changes.

Aim
Using the Model for Improvement, by October 2024 we aim to reduce the EDLOS for patients presenting to MSH ED with BGA by 30% compared to baseline (01/22 – 05/23).

Measures (biweekly data)
Outcome measure

- EDLOS for patients with discharge diagnosis of BGA.

Process measures

- %patients with BGA with GYN consultation in the ED
- %patients seen by EDP receiving IDW

Balancing measures:

- ED Return visits (<24h, <7d, <30d)

Innovations
(1) Checklist – criteria when GYN consult is required
(2) Patient education website – pathophysiology, treatments and decision aid, aftercare
(3) Equipment bundle
(4) Novel outpatient follow-up process

Pending July 2024
(5) Staff Education: Module (identification of BGA, procedural guide), procedure flip book

Preliminary Results (April/24)

- Mean EDLOS- Increasing; all BGA 4.95h, (EDP 3.4h vs GYN 7.9h), no special cause variation
- GYN consultation decreasing 35% (baseline 50%), special cause variation present
- EDP IDW 56% (baseline 62%)
- Return visits decreasing EDP 15% vs GYN 14% (baseline 19% vs 20%)

Discussion

- Multiple system-level interventions required to drive meaningful change
- EDLOS multifactorial, beyond scope of project to address crowding
- Multi-departmental project, competing priorities, change champion necessary to advocate among peers
- In a paper-based system, difficult to ascertain post-ED trajectory
- Unanticipated resource issues – Word catheters back-ordered (solution: new supplier);

- clerical staff shortages (solution: patient phone calls to facilitate post-ED follow up)
- EDP must manage entire ED – more time with one patient = less time with others
- Education module delayed due to challenges securing image copyright
- Next steps (1) role out education module (2) Patient phone calls ensuring follow-up and assessing satisfaction (3) spread to local EDs lacking on-site GYN, avoid transferring all patients with BGA

23. Primary care improvement inspired by patient stories

Dana Arafeh, Erin Plenert, Dr. Noor Ramji, MD
University of Toronto Department of Family and Community Medicine

Patient stories inspire change in our healthcare system because patients are experts through their diverse healthcare experiences. At the Department of Family and Community Medicine (DFCM), University of Toronto, patient stories shared by members of the DFCM Patient and Family Advisory Committee have inspired solutions to some of the challenges faced by patients at our teaching clinics.

Our patient partners identified a significant gap by sharing stories that showcased a common issue: patients often lack understanding of the role of a resident and the nuances of being a patient at a teaching clinic. Our patient stories inspired a change idea that led to the co-design of patient education materials in collaboration with family medicine faculty, teaching clinic leads, and resident doctors. Resources were created such as an exam room poster summarizing who you might meet at a teaching clinic, a letter of understanding explaining what it means to be a patient at a teaching clinic, and a guide to help residents introduce themselves to patients and explain their role when meeting a patient. These materials were then distributed across 16 DFCM teaching clinics.

Patient partners have collaborated with our team on an implementation plan and the measurement of implementation fidelity and effectiveness. The project measures are based on a survey conducted with patients waiting for their appointments at 6 out of the 16 DFCM teaching clinics that received patient education materials. These patients answered questions to help us understand the implementation fidelity of the resident education materials.

The project aims to improve understanding among patients about the role of a resident and what it means to be a patient at a teaching clinic for example, observation methods used to supervise residents. This project is in progress, and the survey is currently underway with data collected until August 30. Preliminary results will be shared in November.

The poster aims to 1) describe how to use patient stories to drive patient-centered change ideas ensuring accountability to patients and effective integration2) showcase the resources created by patient partners 3) describe the process used to assess implementation fidelity and effectiveness of the resources; and 4) explore lessons learned from a project inspired by patient partners in primary care and solutions co-designed with patient partners.

24. Understanding barriers and facilitators to using an AI scribe to reduce clinical documentation burden in community family medicine clinics in Scarborough

Preeni Rathuge, , Susanna Fung, James Carson, Randall Lee, Jennifer McDonald, Roubiya Mohamed, Deva Nicholas, Erum Raheel, Mruna Shah, David Wheler, Janice Weiss
Scarborough Health Network, Department of Family and Community Medicine University of Toronto

Introduction
Recent surveys have shown Ontario family physicians spend an overwhelming amount of time on administrative tasks including clinical documentation, contributing to burnout. Artificial Intelligence (AI) medical scribes are a new proposed tool to alleviate this burden, although there is limited literature systematically evaluating the clinical utility of these tools in community family practice.
Methods
10 preceptors from 9 clinics teaching for Scarborough Health Network (SHN) aimed to reduce the amount of time spent on clinical documentation outside of booked patient hours by 50% in 12 weeks. A self-reported tracking sheet was used to monitor the number of minutes spent on charting outside of booked patient time. The use of an AI scribe was proposed as the first change idea to test, although there was reluctance by many to initiate this change. Attitudes for and against the use of an AI scribe in community practice were explored. Unstructured group feedback sessions were conducted once monthly and were followed up with a self-reflection form completed by participants to guide discussion which were reviewed using a thematic analysis.
Results: Initial tracking showed preceptors spent on average 21 minutes charting outside of booked patient time per booked patient hour. Barriers to using an AI scribe identified included costs of scribing software, concerns regarding privacy of patient data, lack of electronic medical record (EMR) compatibility with AI scribe software, and equity concerns about the performance of the scribe when used with non-native English-speaking patients. Facilitators identified included potential time saving benefits, potential improved documentation quality, eagerness to be an early adopter of technology, and improved physician-patient rapport.

Conclusion
Our project provides further insight into the attitudes of physicians regarding the use of AI scribes in community office-based family practice. Limitations include self-reported time tracking which can be easily biased, and variation in the clinical environments of each preceptor. Further steps will include qualitative interviews with preceptors post trial of an AI scribe to further understand their utility in our local context.

25. A qualitative study: The mobilization of knowledge from patient safety incidents

Laura Pozzobon[1], Melissa Lan[1], Cecilia Wan[2], Paula Rowland[1, 2, 3, 4]

(1) University Health Network
(2) University of Toronto
(3) The Wilson Centre
(4) Centre for Advancing Collaborative Healthcare and Education

Background
There is a moral imperative to learn from reported patient safety incidents; however, there is limited research exploring this learning process. In our research, we build upon calls to integrate workplace learning, knowledge translation and education science with patient safety. In a single-site qualitative study, we explored: How does knowledge generated through the review of serious patient safety incidents move within the organization? And what are the roles of safety incident review processes in this mobilization of safety knowledge?

Methods
We conducted a qualitative, interpretive inquiry study at a large, urban fully affiliated academic health science center (AHSC) in Canada. We interviewed 17 participants representing physicians, medical residents, senior administrators and employees with some type of professional practice and/or quality improvement role within the AHSC. We used an abductive approach to analyze the data.

Results
Through the data analysis, we identified three key themes: classification of incidents; competing organizational imperatives impeding learning; and information dissemination strategies. In the first theme, participants identified an organizational preference for quantification of patent safety incidents and the practices of classification as a political device to determine “what counts?”. In the second theme, participants acknowledged the existence of competing organizational imperatives creating boundaries for information flow and learning. In the final theme, the participants described a focus on learning about incidents rather than from incidents. Here, we heard that the existing organizational information dissemination strategies have limits and that there is a need for robust social processes to build patient safety knowledge.

Conclusion
Our findings demonstrate that there are challenges with learning from patient safety incidents reported within healthcare. We have illuminated that learning from reported incidents is not just a cognitive process, but also a social and political process. We advocate for greater attention to knowledge mobilization within organizational efforts to improve continuous learning. We also argue that collaboration between educators, education scientists, and improvement leaders is required to do this well, especially as organizations aim to become learning health systems.

26. The Road to Minimizing Waste in the Review of Potential Critical Patient Incidents by Patient Safety Specialists

Melissa Lan
University Health Network, University of Toronto, Queen's University, Cardiff University

Background
Hospitals have a responsibility to identify and learn from reported patient safety incidents. At our multi-site academic Health Sciences Centre in Ontario, critical incidents undergo review with the central quality and safety (Q&S) team. There was an opportunity to improve the efficiency of identifying potential critical incidents for in-depth review by Q&S Patient Safety Specialists (PSS).

Aim
Analyze PSS workflow to identify and eliminate waste in the process of discovering potential critical incidents from reported patient incidents by July 31, 2024 using Lean methods.

Measures
Measures were developed to monitor changes identified through a Kaizen event. The outcome measure is the number of patient incident reports reviewed weekly by PSS. The process measure is the number of initial follow-up emails to clinical partners sent by PSS each week. Balancing measures include the number of non-critical incidents that move through the in-depth review process per week and time between the reporting of a suspected non-critical incident classified as a critical incident by PSS. Project data is analyzed with statistical process control charts and follows established rules for differentiating between common and special cause variation.

Change Concepts
The project design is an interrupted time series using Lean methods. A diagnostic review of the incident review process was conducted using Value Stream Mapping, Value-Add and 5-Whys analysis. Change ideas were developed to eliminate process waste and produce system-level change according to the Hierarchy of Intervention Effectiveness. The main change idea is to reduce the daily review of incidents by PSS to level of harm categories most likely to be critical incidents and cross-check reported incidents weekly as a safeguard.

Results
The main change idea began in June 2024 and is ongoing. Preliminary data shows an average decrease of 95.5% in the outcome measure and 78.4% in the process measure. It’s projected that $66,355-$82,950 in funding could be redirected to other department priorities because of improved efficiencies.

Discussion
Eliminating process waste from the incident review process should increase PSS capacity to engage in different work that improves patient safety. The project's next steps include further scrutiny of the in-depth critical incident review process."

27. Evaluating the effectiveness of patient safety incident recommendations at a multi-site community hospital

Sauliha Alli[1], Amanda Rodrigues[2], Amir Ginzburg[1,2]
(1) Temerty Faculty of Medicine, University of Toronto
(2) Trillium Health Partners

Background
Critical incident reporting systems (CIRS) aim to enhance patient safety by identifying and addressing adverse events. While previous studies have focused on the types of reported incidents, the effectiveness of the resultant recommendations remain largely unexplored.

Methods
This retrospective study analyzed all 2023 serious patient safety incidents that underwent concise or comprehensive incident analysis as per the Canadian Incident Analysis Framework and were filed in the CIRS at Trillium Health Partners, a multi-site community hospital in Mississauga, Ontario. The nature of incidents was analysed according to the Health Performance Improvement Taxonomy of Safety Events. Recommended corrective actions for each incident were assessed against the Institute for Safe Medication Practice's hierarchy of effectiveness and implementation feasibility.

Results
Among the 54 incidents reported, major categories were care management (75.9%), procedures (14.8%), and products or devices (7.4%). 11 cases underwent comprehensive review, resulting in a total of 24 recommended actions. The majority (62.5%) of recommended actions were low leverage initiatives aimed at improving education or policies, and were easy (8.3%), moderately easy (45.8%), or difficult (8.3%) to implement. Medium leverage actions (37.5%) aimed at standardization or creation of checklists were either easy (4.2%), moderately easy (25.0%) or difficult (8.3%) to implement. No high leverage actions (e.g. automation, forced function) were recommended.

Conclusion
The study highlights a tendency for incident analysis teams to favor low and medium leverage recommended corrective actions in addressing serious patient safety incidents. While these measures are important, their singular application may not lead to lasting practice changes that reduce or eliminate the risk of incident recurrence. Further research is required to understand the long-term effectiveness and implementation barriers of CIRS recommendations.

28. Addressing negative perceptions in the implementation of huddles and huddle boards

Christopher Rice
North York General Hospital

Background
Huddles and Huddle Boards (HBs) are widely utilized in healthcare, but although an established practice, the perception of their value varied greatly across care teams at our hospital. To change perceptions and get teams' buy-in, a targeted and participatory approach was adopted during the implementation phase.

Methods
An environmental scan of healthcare and adjacent industries helped to define best practices, including how to incorporate patient perspectives. Ethnographic methods were used to conduct interviews and capture data from care teams about current understanding of huddles. Plenary and (shorter) Gemba-based co-design workshops were delivered, offering teams multiple ways to engage in a participatory process. During these workshops, teams: (1) were oriented to the implementation plan; (2) learned how huddles and HBs support team communication, performance, and continuous improvement; and (3) co-designed the layout of their boards, collectively deciding which sections to include and the key metrics to track their team performance.

Results
This participatory process engaged 35 hospital teams in co-designing 40 HBs over 6 months, fostering teams' sense of ownership of their boards. Frequent engagement revealed knowledge gaps in huddle best practices and skepticism to how they support team communication, accountability of performance, and documentation of quality improvement efforts. A key enabler was understanding the contextual factors contributing to the skepticism. Huddles were viewed as undue hardship, rather than a value-add. Continuous follow-ups identified leverage points and opportunities for providing tools and resources to address these challenges. For example, historical precedent left managers feeling solely responsible for facilitating HB updates and huddles, leading to negative perceptions and attitudes. The provision of a huddle facilitation guide, targeted training, and hands-on implementation helped to distribute these responsibilities to other team members. These interventions alleviated feelings of burden, resulting in increased leadership buy-in.

Conclusion
The rollout has expanded beyond its initial scope, with new teams requesting to join the implementation. There are also efforts in place to integrate our patient experience partners (PXPs) as regular huddle participants. Quality improvement specialists support sustainment by assisting teams with maintaining huddle schedules and standards.

29. A qualitative analysis of current interventions: Improving name familiarity in OR teams

Tobi Lam[1], Melanie Hammond Mobilio[1], Jacob Hirsh[2], Edyta Marcon[2], Dean Lising[1], Tulin Cil[1], Carol-anne Moulton[1]
(1) University Health Network
(2) University of Toronto

Background
Operating room (OR) teams with high familiarity are more efficient and effective, with better patient outcomes. However, in dynamic ORs, where team members are often changing, variable or silo-ed intraprofessionally, communication can be challenging. Team members do not routinely know the names and role identities of people in the OR. Team improvement projects have implemented interventions such as Surgical Safety Checklists and labeled scrub caps. We aimed to investigate what team familiarity interventions and strategies are currently being used in the OR; what gaps are found in existing interventions and how might we improve their effectiveness?

Methods
Qualitative co-constructivist approach was used. Semi-structured interviews were conducted with 16 OR staff members (nurses, anesthesiologists, surgeons, anesthesia assistants) at a large urban academic health centre in Toronto. Interview data were de-identified and transcribed. Interventions were examined in a sociotechnical system context, using thematic analysis and SWOT analysis to describe how interventions are currently being used at the individual, group and system level. Criteria for reliable intervention design were described and recommendations for implementation strategies were identified.

Results
A total of 35 interventions addressing team familiarity in the OR were described. Our thematic analysis identified four gaps related to names through the lens of cognition: Identification, Recognition, Memory and Recall. Gaps in the features of current interventions were: availability, reliability, inclusive and visual information, and facilitators of interprofessional communications. Perceived social barriers to name introductions included unwelcoming tone, personality, social embarrassment associated with forgetting names, and workflow interruption. Surgeon leadership and time were identified as enablers for formal team introductions such as the team briefing in the Surgical Safety Checklist.

Conclusions
Current team familiarity tools primarily addressed role-based identification in teams on a functional level but name familiarity is variable and dependent on individuals. Improving interpersonal and individuation of familiarity requires a team culture that supports communications, promoting memory and recall. We recommend system level strategies that enable equitable improvements to name-based interprofessional communications within the OR."

30. Incorporating Equity Considerations Into Serious Safety Event Review Processes

Deenar Virani & Myrtede Alfred, PhD
University of Toronto, Unity Health Toronto

Background/Context - What is the problem of interest? Provide a brief description of the background/issue statement.

Adverse events impacted 1 in 17 hospital stays in Canada from 2022 to 2023, and are instances of avoidable harm within healthcare settings [1]. These events can be reported by hospital staff using patient safety event (PSE) reporting systems [2]. Research has identified higher rates of disparities in adverse events [3]. Serious safety events (SSEs) are a subset of PSEs, which result in significant patient harm or death [4,5]. Systemic inequities in healthcare systems relate to the dissatisfactory treatment of marginalized patients due to systemic biases, which often results in health disparities and PSEs [6,7]. Many quality improvement interventions in healthcare, including those implemented in SSE review processes, can focus on improving patient safety but may worsen inequities when root causes of disparities in adverse events are unaddressed [8].

Aim/Objectives - What is the aim of your project?
Inequity is rarely considered during SSE review processes as a potential contributor to adverse events due to a lack of defined methods. The aim is to develop a standardized tool to identify equity issues contributing to the adverse event during the SSE review process at Unity Health [9].

Measures - What are the outcomes/process/balance measures? How do you know if your project/research resulted in an improvement?

The implementation of the tool, and ability to identify potential contributors for further investigation, will determine an improvement at the hospital.

Improvement/Innovation/Change Concepts - Briefly describe the outcomes, program design, change ideas and how they have been implemented, as applicable.

A literature review was conducted to investigate root cause analysis (RCA) techniques and existing tools used to investigate equity issues in SSE review processes [10]. Semi-structured interviews were conducted with hospital staff to investigate the SSE review process and equity concerns. Data was analyzed using an inductive approach to identify common issues and pain points in the process.

Impact/Results - Did your changes result in an improvement? Summarize key outcomes and/or results and describe the extent to which the initiative has demonstrated an impact on health outcomes or health system performance. Preliminary results will be considered

We completed 5 interviews with hospital staff. There is currently a standardized SSE review process with specific RCA [10] tools utilized, however there is no process for investigating inequities and they are only loosely considered if deemed appropriate. Participants expressed the need for training about identifying equity related issues, and that utilizing a tool with examples of these issues would be beneficial.

Data from interviews was used to develop a standardized equity checklist tool (Supplemental Figure 1). The checklist has 4 categories including demographics, abilities and accessibility, psychosocial factors, and systemic factors, with 14 questions related to examples to stimulate discussion about factors related to inequity in SSEs and to trigger further investigation.

Discussion/Lessons Learned - Have results been replicated outside its original setting? What key lessons were learned? What are the next steps?

Examining SSEs from an equity lens presents an opportunity to reduce avoidable harm towards marginalized patients and inform potential interventions [8]. We developed an initial tool and will conduct additional interviews with hospital staff to further understand the SSE review process and identify equity concerns. Simulations of the SSE review process will be conducted to gather feedback and iterate the tool, as well as a trial period of the tool to evaluate long-term use.

References

[1] ""Patient harm in Canadian hospitals? It does happen."" Canadian Institute for Health Information. 2023. Accessed July 2024. Available https://www.cihi.ca/en/patient-harm-in-canadian-hospitals-it-does-happen

[2] Anderson et al. ""Can incident reporting improve safety? Healthcare practitioners' views of the effectiveness of incident reporting"". International journal for quality in health care : journal of the International Society for Quality in Health Care. April 2013. Available: https://pubmed.ncbi.nlm.nih.gov/23335058/ [Accessed March 2024].

[3] Thomas et al. ""Policy Changes To Address Racial/Ethnic Inequities In Patient Safety"". Health Affairs Editorial. February 2022. Available: https://www.healthaffairs.org/content/forefront/policy-changes-address-racial-ethnic-inequities-patient-safety

[4] Gong, Yang et al. “Enhancing Patient Safety Event Reporting”. Applied Clinical Informatics. July 2017. Available: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6220687/

[5] Donnelly et al. ""Creating a Defined Process to Improve the Timeliness of Serious Safety Event Determination and Root Cause Analysis"". Pediatric Quality & Safety. August 2019. Available: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6831051/

[6] Lane-Fall, Meghan. ""Why Diversity, Equity, and Inclusion Matter for Patient Safety"". ASA Publications. November 2021. Available: https://pubs.asahq.org/monitor/article/85/11/42/117785/Why-Diversity-Equity-and-Inclusion-Matter-for

[7] Adelson, Naomi. ""The Embodiment of Inequity: Health Disparities in Aboriginal Canada"". Canadian Journal of Public Health. March 2005. Accessed: https://link.springer.com/article/10.1007/BF03403702 [Accessed March 2024]

[8] Chin, Marshall. ""Advancing health equity in patient safety: a reckoning, challenge and opportunity"". BMJ Quality & Safety Editorial. Available: https://qualitysafety.bmj.com/content/30/5/356.full

[9] ""Unity Health Toronto"". Available: https://unityhealth.to/ [Accessed February 2024]

[10] Gosbee J., Anderson T. ""Human factors engineering design demonstrations can enlighten your RCA team"". BMJ Quality & Safety. Available: https://qualitysafety.bmj.com/content/12/2/119.short [Accessed March 2024]

31. Turning Close Calls into Catalysts: Enhancing Safety through Improved Near Miss Reporting

Nimrah Kiyani, Komal Mazhar, Bharat Paul
William Osler Health System

Patient safety is a critical concern in healthcare, with 1 out of 17 patients experiencing preventable medical harm during their hospital stay. These incidents not only harm patients but also burden healthcare systems globally. Near-miss incidents, which could have caused harm but did not reach the patient, are vital for identifying vulnerabilities in the healthcare system. Recognizing their importance, at Osler, we aim to increase near-miss reporting through a multifaceted strategy to transform these incidents into learning opportunities, thereby fostering a safer and more transparent organizational environment. Key measures include the number of near-miss incidents reported quarterly, the percentage of trained executive and senior leadership, the percentage of completed rounding on inpatient units, and the number of staff trained for peer support annually. Initiatives involve fostering a Just Culture, introducing the 'Good Catch Award' to incentivize reporting, establishing a Peer Support Network, and rolling out a Learning Management System (LMS) focused on just culture principles. Engagement activities such as patient safety training for leadership, unit rounding, and Datix optimization also support these efforts.

Our multi-pronged strategy resulted in an 14% increase in near miss reporting in Q4 FY 23/24 compared to Q1 FY 23/24. We successfully trained all executive and senior leadership, directors, and managers, and completed rounding in all inpatient units. For our pilot for the Good Catch Patient Safety Awrad in 2 units we successfully trained over 45 staff to be part of the network. Challenges included initial resistance to reporting, cultural shifts towards transparency, and optimizing the Datix system. To overcome these, we conducted comprehensive training on near miss reporting and just culture principles, engaged leadership in promoting safety, and introduced the 'Good Catch Award' for positive reinforcement. Key lessons learned emphasize the need for sustained effort, staff engagement through incentives and peer support networks, and a user-friendly reporting system. Moving forward, we plan to expand training programs, further optimize the Datix system, and regularly monitor and adjust our strategies to maintain and enhance the culture of safety and transparency. Our commitment to these initiatives

aims to sustain and further increase near-miss reporting, continuously enhancing patient safety within our healthcare system.

32. Advancing Patient Care: Innovations and Enhancements in Massive Hemorrhage Response and Treatment at the Royal Victoria Regional Health Centre

Amanda Marrone, Shannon Buck, Brittany Gillard, Anne-Marie Leitner
The Royal Victoria Regional Health Centre

Catastrophic hemorrhage is the primary preventable cause of trauma-related deaths. Prompt administration of blood components is critical, as delays increase mortality risk by 5% per minute (ORBCON, 2020). In September 2023, RVH launched a thorough review of its Massive Hemorrhage Protocol (MHP) following a critical incident, focusing on enhancing documentation, communication, and resource allocation.

This QI aims to establish a runner process, implement an overhead page, and improve communication for Code Transfusion alerts to ensure blood products reach patients within 15 minutes of need (ORBCON, 2020).

More specifically, the aim is to decrease the time from which a patient experiencing a critical hemorrhage in the ED, OR, ICU or PACU receives blood product, from 20 minutes to 15 minutes, by December 31, 2024.

Outcome measures= time from initial MHP activation to receiving blood product

Process measures
1. TXA administered within 1 hour
2. RVC transfusion started within 15 minutes
3. Transfer call initiated within 60 minutes
4. Temperature > 35°C at protocol end
5. Hemoglobin maintained 60-111 g/L (excluding certain pediatric cases)
6. Transitioned to group-specific RBCs and plasma within 90 minutes
7. Adequate activation (>6 RBC units in 24 hours; >40 ml/kg/24 hours in pediatric patients or sooner in critical cases)
8. No blood component wastage

Balancing measures= 24-hour and 30-day mortality rates

A thorough diagnostic assessment included: gap analysis using SWOT, process mapping current and future state with relevant contributors, benchmarking with similar organizations, and data mining.

Main change ideas for MHP process enhancements:

1. Assign OR assistants and Logistics Attendants as ""runners"" to deliver blood products.
2. Implement HyperCare for immediate alert escalation.
3. Establish an overhead page, ""Code Transfusion,"" to notify all hospital personnel and prioritize laboratory services until resolution.

Significant progress has been made in QI initiatives during the executing phase. Key enhancements include implementing a runner, an overhead page, and HyperCare as an escalation process, alongside streamlining MHP code ordering in the EMR. Establishing metric collection and mining, despite ongoing data collection, marks a substantial achievement. Anecdotally, there's a noticeable shift in staff perception toward a more coordinated and organized response, expected to enhance interdisciplinary workflows and patient outcomes. Moving forward, our QI initiative will focus on conducting mock codes for validation, ongoing data collection and analysis, and developing a Pediatric MHP based on pathways similar to those of the adult MHP. Notably, our organization is among the first to implement Hypercare as an escalation method to alert staff and ensure a coordinated response to codes.

33. Pre-Analytical Specimen Multi-Incident Analysis

Amrutha Kumar, Komal Mazhar, Priya Gill, Tiziana Rivera
William Osler Health System

Background
This quality improvement (QI) project involved a pre-analytical specimen multi-incident analysis within one of William Osler Health System's (Osler) Emergency Services (ED). This department had the largest reported pre-analytical specimen incidents in the organization from 2019-2023. The project examined the contributing factors and developed evidence-based recommendations to address the areas of improvement. The Six Sigma quality improvement methodology, DMAIC (Define, Measure, Analyze, Improve and Control) was utilized to conduct this project.

Aim

1.) To conduct a detailed analysis of the pre-analytical phase of specimen collection
2.) To identify the underlying root causes that contribute to patient safety incidents during this phase and develop targeted recommendations to minimize and mitigate these incidents.
3.) To enhance patient safety and improve the overall quality of the pre-analytical specimen collection process

Measure
Outcome measure: The number of pre-analytical specimen incidents

Design

1. Patient Safety Incident Management Data Review from January 2019 to April 2023
2. Gemba Walk in May 2023
3. Stakeholder Interviews in May 2023
4. Current State Process Map

5. Fish Bone Root Cause Analysis
6. Pareto Analysis

Results

The process map includes the steps from when the order is placed to when the specimen is transported to the lab via the pneumatic tube system or through portering services. A total of 672 incidents were analyzed. 78% of the incidents were categorized as near misses, 21% as no harm and 1% as mild. Six 15–30-minute interviews were conducted to gather insights on the incident data. The top contributing factors are incorrect patient/PPID (47%), not following procedure (34%), and incorrect specimen collection (10%). Additional factors include variation in practice, communication, and transport delays.

Discussion

11 recommendations were developed and categorized using the ISMP hierarchy of effectiveness prioritized using the pareto analysis. The recommendations were shared with the ED, Professional Practice, and Laboratory teams and provided with a work plan aligning them with initiatives and working groups to establish timelines and accountabilities.

34. A Quality Improvement Initiative to Reduce Inappropriate Urinary Catheterization on a Clinical Teaching Unit

Catherine M. Andary, Meera Shah, Tina Zhou, Seychelle Yohanna
McMaster University

Background
Indwelling urinary catheters are often inserted and retained without appropriate indications, leading to catheter-associated urinary tract infections (CAUTI) and patient harm.

Aim
By June 2024, we aimed to have a 50% reduction in unexplained prolonged urinary catheterization by reducing catheter-days and CAUTIs per 100 patient-days on a pilot clinical teaching unit (CTU).

Measures
Our outcome measures included the number of catheter-days per 100 patient-days, number of CAUTIs per 100 patient-days, and length of stay in hospital. The process measures were the utilization rate of EMR features and implementation of catheter review during multidisciplinary rounds. Lastly, our balancing measure was the frequency of urinary catheter re-insertion due to a failed trial of void.

Improvement / Innovation
To achieve this, we implemented a physician-targeted Best Practice Advisory (BPA) reminder in the electronic medical record (EMR) system that was triggered for CTU patients with catheters placed for greater than 24 hours. Patients with chronic indwelling catheters were excluded to reduce alert fatigue. The BPA prompted selection of an appropriate indication for catheter continuation, provided a predetermined plan for catheter reassessment, and recommended orders for monitoring post-catheter removal. We further incorporated standardized discussion of ongoing catheter use in daily multidisciplinary rounds in collaboration with nursing staff and allied health professionals.

Results
Pre-intervention data suggested that lack of physician awareness of indwelling catheters was a significant factor in inappropriate use, which was addressed by a multidisciplinary approach. One year post-implementation, catheter-days per 100 patient-days decreased from 14 to 6 (43% relative reduction), with 0.31 CAUTI per 100 patient-days. Seven patients required catheter reinsertion post-intervention due to a failed trial of void. The percentage of appropriate indications for urinary catheterization increased from 35% pre-intervention to over 50% post-intervention.

Discussion
The implementation of a multifaceted approach consisting of BPAs and standardized discussion of catheters in allied health rounds led to safe catheter discontinuation. This resulted in fewer catheter-days per 100 patient-days, fewer patients with CAUTIs, and increased appropriate indications for insertion. Widespread use of multi-disciplinary approaches should be considered to reduce complications associated with prolonged and inappropriate urinary catheterization.

35. Leveraging the electronic medical record to drive improvements in symptom screening

Colleen Dunphy[1, 2], Alyssa Macedo[1], Lauren Philip[1,2], Siron Thayaparan[3], Iqra Ashfaq[1], Madeline Li[1, 2], Shayla Devonish[1], Mike Lovas[1], Janet Papadakos[1], Breffni Hannon[1,2], Kami Patel[1], Jennifer Croke[1,2]
(1) University Health Network-Princess Margaret Cancer Centre
(2) University of Toronto
(3) The Hospital for Sick Children

Background
Symptom screening through patient-reported outcomes (PROs) is an essential component of high quality cancer care and a mandatory performance indicator from Ontario Health (OH). The COVID-19 pandemic decreased rates of symptom screening across Ontario. At Princess Margaret Cancer Centre (PM), this was compounded by the move to a new electronic medical record (EMR) in June 2022.

Aim
Increase symptom screening rates at PM from approximately 18-20% to at least 35% by March 31, 2024.

Measures
Symptom screening rates are part of an initiative to improve patient health outcomes by optimally managing patient symptoms. The screening rate is the percentage of patients who are screened for symptoms with a validated tool, at least once every 30 days.

Improvement Concepts
A team from PM conducted interviews with patients, caregivers, front desk staff and clinicians across several outpatient cancer clinics, and observed workflows related to symptom screening. Common themes were identified and a multidisciplinary, PROs Working Group was formed. A multi-modal approach to improvement was planned with input from the working group and received endorsement from Clinical and Operational leadership. Changes to the EMR were prioritized due to recommendations from other centres, and time-sensitive funding.
Relevant stakeholders worked with an Analyst to create desired changes to the EMR. Changes focused on making symptom screening results easy for clinicians to find, alerting clinicians to notable symptoms, and facilitating documentation of symptoms in the clinical note. Changes were implemented through a series of Plan-Do-Study-Act cycles.

Results
Since implementing the changes, symptom screening at PM has increased from 19.9% to 42.3%. More time is needed to determine the effect on the outcome of improved symptom management and health outcomes.

Challenges/Lessons
Further work needs to occur with the clinical teams, including ongoing education and change management. Challenges included limited resources and governance structures to build changes into the EMR, gaining consensus on changes to be made, and having no staff dedicated to the symptom screening program.

Next Steps
We will continue to increase symptom screening, and more closely examine clinician response to symptoms. Additional, disease-specific screening tools will be added to most accurately capture each patient's individual experience.

36. Hip Fracture Length of Stay at Humber River Health

Dr. Martin Heller, Navdeep, Bhavleen Singh
Humber River Health

Background/Problem Statement
In 2022/23 Humber River Health (HRH) admitted 259 patients with Hip Fractures.
The GTA Rehab Network published Q1 data for 2023/24 reporting on the percentage of patients from home discharged to High Intensity Rehab within 5 days postop and HRH was the lowest at 18%. For patients discharged within 8 days postop, the GTA mean was 68% and HRH was 48%. The mean length of stay (LOS)for all HRH Hip Fracture patients was 13.1 days vs. The GTA mean of 11.2 days.

Aim Statement
Reduce our LOS to mean 10 days (median 8 days) by July 2024, and thereby improve the % meeting the GTA target of 5 days discharge to High Intensity Rehab.

Change Ideas
Stakeholders, i.e. Social Work , Geriatrics, Nursing, Physiotherapy ,Orthopedics analyzed the multiple factors contributing to LOS using Process mapping and a Fishbone diagram. The following ideas were prioritized:
1) Standardization of the workflow involved in completion of the application for Rehab
2) Implementation of standard Rehab choices for patients and their families.

Outcome Measures: LOS for Hip Fracture patients Time from Admission to OR
Discharge to Rehab within 5 days post
Process Measures: % Social Work consults within 24h postop % Rehab referrals initiated by 24h post
Balance Measures: Patient and family satisfaction Social work/ Physio workload

Results
After 2 PDSA cycles all parameters showed improvement ie mean LOS 13 to 10.5 days, SW consults mean 4 days to 1 day postop. 100% of ORs completed by 48 hours, and mean discharge to High intensity rehab : 6 days post admission.

Learning Value
Hip Fracture patients are complex with multiple comorbidities and significant social issues. Consulting with a comprehensive group of stakeholders was the most valuable aspect of our QI project. Our analysis opened the door to several patient care factors that are being incorporated into this study.
These include the influence of primary patient language on Hip Fracture outcomes and an audit of Hip Fracture Peripheral Nerve Blocks in the ER and the downstream effect on patient opioid requirements and delirium."

37. A Team-Based Approach to Deprescribing Sedative-Hypnotics in Older Adults

Holly Rector and Sameera Toenjes
Women's College Hospital

Background
Sedative-hypnotics are commonly prescribed to older adults for treatment of insomnia. Evidence suggests that these medications have limited benefit and are often associated with potential harm. Pharmacist-led deprescribing programs are an evidence-based intervention to help patients safely reduce or stop their sedative-hypnotics.

Aim
The aim of this project is to develop, implement and evaluate a pharmacist-led team-based deprescribing program for sedative-hypnotics for 10 older adults within an Ontario family health.
Measures
· Outcome: # of patients that decreased or stopped benzo/hypnotic
· Process: % of eligible patients contacted for intervention, # of patients referred by family MD, # of patients who self-referred to pharmacist
· Balancing: ISI, GAD-2, clinically significant withdrawals

Improvement
The IHI Model and PDSA framework guided the program development. Buy-in from stakeholders including providers, allied health and administration was sought early and often. Of the 35 physician rosters, 650 potentially eligible patients (Age > 65 with a sedative hypnotic on med list) were identified. Recruitment included EMPOWER patient brochure, scripted letter, Family Health team education and patient-facing posters. Three physicians self-identified as innovators and early adopters and were chosen for the first three PDSA cycles.

Results
From February 2023 until July 2023, 42 potentially eligible patients were identified and emailed materials. Only 26% received a follow-up phone call. Nine patients enrolled. 88% percent female, median age 74, 55% on Z-drug. Patients received personalized deprescribing plan. Six out of nine (67%) patients stopped their sedative-hypnotic

medications. Four of those six patients stopped prior to counseling with pharmacist without any adverse effects. Fifty-five percent (5 out of 9 patients) self-referred to pharmacist and four patients were referred by MD. No clinically significant withdrawal noted with stable or only mild changes to ISI and GAD-2.

Discussion
In summary, a pharmacist-led, team-based program is an effective and safe method for deprescribing sedative hypnotics in older adults. Keys to the success of the program include provider buy-in and endorsement and utilizing existing evidenced-based materials and platforms to minimize clinician workload. Next steps include embedding brochure and letter in the EMR and regular provider-specific medication reports to flag high risk individuals.

38. Impacts of Acute Care Urology at MacKenzie Health

Inna Ushcatz, Dr. Ahmed Taher
University of Toronto

Background
The incidence of urologic presentations in the ED have been on the rise. Greater burden of urologic disease has increased follow-up wait times and returns to the ED. Furthermore, delays in definitive treatment increase the risk of complications such as ureteral stent infection. The Acute Care Urology (ACU) model is a novel implementation which emphasizes presence of an on-site urologist for consultation and surgical management of emergency urology cases.

Aim
The aim of the study is to evaluate the effectiveness of the ACU model to reduce the number of days from ED presentation to definitive urologic management for renal colic patients by 25% within four years.

Measures
The primary outcome measure was (days) from primary ED visit to definitive surgical intervention. The secondary outcome measure was ED length of stay (LOS) defined by time from urology consult request to disposition decision (admit vs discharge). The process measure included proportion of ED patients with renal colic who received referrals to the ACU clinic. The two balancing measures were unscheduled return ED visits within 14 days and assessment of urologist burnout and quality of life.

Improvements and Change Concepts
The ACU Model was established at Mackenzie Health (July 2020) and included a rotational staff urologist responsible for rounding on in-patients, emergency consults, and performing acute procedures (Phase 1). In July 2021, a second ACU clinic was established (phase 2). In January 2023, a third day of coverage was added (phase 3).

Impacts and Results

The primary outcome and balancing measure are pending analysis, with results completed in August. Preliminary secondary measure assessed using a Mann-Whitney U Test, indicated that the LOS from consult to decision increased significantly from 3.1 hours pre-ACU to 3.9 hours in Phase 3 ($p < 0.05$). Referral rates have improved increasing from 91.3% in Phase 1 to 96.9% in Phase 3 ($p < 0.05$).

Discussion and Lessons Learned
While the data is still preliminary, the integration of the ACU model is observed. Nevertheless, more information is required to evaluate changes in time to definitive treatment and to evaluate factors contributing to changes in LOS.

39. Optimization of Elective C/S Processes to Mitigate C/S Delays: Challenges and solutions of a multi-phasic quality improvement project

Mayura Kandasamy, Dr. Lynn Sterling, Dr. Andre Laroche, Dr. Lesley Hawkins, Charriss Memita, Vishnave Maheswaran, Neda Etemadi, Dr. Martin Heller
Humber River Health

The FAST (Flow and Assessment of C-section Teams) Quality Project at Humber River Health's Birthing Unit aimed to reduce significant delays in elective cesarean sections (C/S), impacting patient experience and operational efficiency. Initially, 91% of elective C/S procedures were delayed, averaging 61 minutes per delay, highlighting critical challenges in timely and organized care delivery.

The project focused on streamlining access to timely care for patients requiring C/S, ensuring precise coordination and minimizing delays. FAST was aiming for 80% of procedures to start within 5 minutes of scheduled time as the outcome measure. Other process/balance measures focused on pre-operative times, patient transfer times, Operating Room Turnover and staff/patient experience measures.

The interprofessional FAST Team utilized structured quality improvement (QI) methodologies across three phases. Initially, retrospective analyses quantified delay durations, followed by prospective studies mapping patient journeys to pinpoint contributing delays using tools like root cause analysis and fishbone diagrams. A pivotal intervention involved establishing a dedicated OR nursing team for C/S, optimizing clinical pathways and enhancing surgical efficiencies.

Key outcomes included identification and mitigation of multiple factors contributing to delays: revamping C/S booking times, prioritizing patient portering, pre-emptively designating post-op beds, integrating information systems to support access to pertinent patient information, interprofessional checkpoints for OR schedule accuracy, developing an algorithm for semi-urgent C/S booking, and implementing a surgical assistant schedule.

These interventions overcame not only immediate obstacles but also achieved lasting enhancements in maternal healthcare delivery.

Results from the project were promising: delays reduced significantly to 35% of C/S procedures, with average delays decreased to 18 minutes. Patient journey times also improved, reduced by approximately 69 minutes overall, underscoring enhanced care coordination and efficiency.

Lessons learned highlighted the importance of interdisciplinary collaboration and systematic QI approaches in healthcare settings. Results were promising within the original setting, and ongoing efforts aim to replicate successes long-term through a permanent OR model while advocating for additional resources to further enhance efficiency and patient outcomes.

The FAST Project showcases transformative healthcare improvements by addressing operational challenges and implementing patient-centred solutions, exceeding standards for enhanced patient care and setting a precedent for further QI initiatives.

40. Understanding the barriers to and facilitators of home hemodialysis uptake at Trillium Health Partners

Ojas Bhatia[1], Meherzad Kutky[2], Janice Chan[1]

(1) Temerty Faculty of Medicine, University of Toronto

(2) Trillium Health Partners

Background

Home hemodialysis (HHD) offers numerous benefits over in-center hemodialysis (ICHD), such as improved quality of life and reduced mortality rates for end-stage renal disease patients. Despite these advantages, HHD remains underutilized. This study aims to identify the barriers to and facilitators of HHD uptake within the Trillium Health Partners (THP) chronic kidney disease unit, addressing a significant gap in the literature regarding patient and provider perspectives on HHD.

Methods

We conducted a primary analysis of surveys from patients (n = 29) and providers (n = 27) at THP. The patient population comprised those who had tried HHD but were unsuccessful (n = 9), those who had never tried HHD (n = 10), and those who had tried HHD successfully (n = 10). Provider respondents included nephrologists (n = 12) and nursing staff (n = 15). Thematic and descriptive analysis were used to identify common barriers and facilitators. Key outcomes were defined as the barriers to and facilitators of HHD uptake, identified through survey responses.

Results
Providers identified the most common barriers to HHD referral as cognitive concerns (78%, n = 21), lack of self-care ability (74%, n = 20), and insufficient caregiver support (63%, n = 17). Facilitators to increase HHD uptake included assisted HHD (67%, n = 18), increased patient support in transition units (59%, n = 16), and enhanced patient education (52%, n = 14). Patients reported barriers such as insufficient home support and resources (83%, n = 24), concerns about equipment use (59%, n = 17), and lack of knowledge and confidence regarding HHD (41%, n = 12).

Conclusion
HHD remains an underused dialysis modality among end-stage renal disease patients despite numerous advantages over ICHD such as improvements in quality of life and mortality, indicating a gap in clinical care that must be addressed. Given the disconnect between patient and provider perspectives on HHD utilization, future work should focus on bridging this gap by employing a patient empowerment model. This study highlights areas for improvement and lays the groundwork for change to be implemented within the THP nephrology department, including but not limited to enhanced provider support in HHD transition units which is currently being implemented as a PDSA cycle.

41. Improving the Treatment of Preoperative Anemia in Colorectal and Hepato-pancreato-biliary Patients: A Quality Improvement Initiative

Terry Zwiep, MD, MSc, FRCSC[1, 2], Helen J. Jin, MSc[1, 2],Tsan-Hua Tung, PhD[1], Sydney Selznick, MD[1, 2], Christine Cotton, RN[2], Christopher Harle, MBChB, FRCA, FRCPC[1, 2], Bradley Moffat, MD, MSc, MSc(QI), FRCSC, FACS[1, 2], Patrick Colquhoun, MD, MSc, FRCSC, FACS, FASCRS[1, 2]
(1) Schulich School of Medicine & Dentistry, Western University
(2) London Health Sciences Institute

Background
Preoperative anemia in patients undergoing major surgery is known to increase morbidity, mortality, blood transfusions and hospital costs. Anemia is a treatable condition; however, at our tertiary center, 52% of general surgery patients undergoing major colorectal or hepato-pancreato-biliary (HPB) surgery were found to be anemia pre-operatively.
The aim of this project was to decrease the perioperative blood transfusion rate from 13% to 5% in colorectal and HPB surgery patients.

Methods
A core change team was developed and identified root causes. Change ideas included a new orderset in the electronic medical record for anemia screening, referral to a patient blood management (PBM) program, standardized prescriptions, provider education, and educational posters. Statistical Process Control charts were

used to track our measures. PDSA cycles were completed, and iterative changes were made. Patients were treated with a combination of oral and intravenous iron and an erythropoietin stimulating agent.

Results
Between September 2020 and December 2023, 759 patients were included. 374 (49.6%) had preoperative anemia and 92 (24.6%) were referred to the PBM program and treated. Overall, perioperative blood transfusions rates decreased from 13% to 11.6%. For patients with preoperative anemia, the blood transfusion rate for those treated decreased from 27.2% to 11.8% (p=0.004). For the colorectal and HPB subgroups, our anemia screening rates were 30% and 10%, and treatment rates were 29% and 8%, respectively. The mean increase in preoperative hemoglobin for treated patients was 4.4g/L (106.9 to 111.3 g/L) with each unit increase associated with a 4% decrease in the odds of requiring perioperative blood transfusion (p=2.36e-15).

Conclusion
Although we did not decrease the overall transfusion rate to 5%, we were able to show a significant reduction in the perioperative blood transfusion rate for anemic patients referred to a PBM program and treated.

42. STOP the POP: Reducing postoperative pneumonia in general surgery, a quality improvement project

Mikha Alegria, RN, BScN, MScHQ, Tiffany Tram, HBSc, RRT, CHT, MSc, Alexandra Boasie, MSc, MBA, Laavanyah Vigneswaran MPH, HBSc, CHIM, Victoria Denbok, RPN, CHIM, Natalia Evitch RN, BScN, Meng, Yalikah Mahesuwaran RN, BScN, MinKyoung (Mindy) Kim, RN, BScN, MN, Tariq Esmail MB BCh BAO, FRCPC, MSc, Timothy Jackson, MD, MPH, FRCSC, FACS
University Health Network

Background
Postoperative pneumonia (POP) is an important surgical complication that leads to extended length of stay (LOS), increased mortality rates, and higher resource utilization. At Toronto General Hospital (TGH), data from the National Surgical Quality Improvement Program (NSQIP) revealed a high POP rate among general surgery patients: an observed to expected rate of 6.70% to 1.80% (April-March 2021).

Aim
To decrease POP rate in General Surgery by 20% by successfully implementing and standardizing STOP the POP bundle strategies.
Change Ideas
• Optimize Inventory
• Standardize Workflow
• Use of Reminders
• Integration into Team Culture
• Patient Empowerment/Engagement
• Data Sharing

Measures
The outcome measure is the percentage of patients who develop pneumonia postoperatively within 30 days. Process measures include the percentage of patients receiving education, complete bundle strategies, optimized preoperatively and the frequency of huddle discussions. The balancing measures include nursing workload, patient satisfaction, and increased cost of supplies.

Results
A literature review and environmental scan focusing on post-op pneumonia prevention was performed. Four activities were conducted to establish a baseline understanding: patient and staff surveys, semi-structured patient interviews, retrospective chart reviews, and physical unit audits. A root cause analysis was completed by unit leadership, team members, and patient partners. Subsequently, a multi-phased implementation was executed, targeting post-operative interventions to enhance adherence to the established bundle. The implementation, evaluated through an interrupted time series analysis, demonstrated a significant decrease of 55% in POP as reported by NSQIP.

Lessons Learned
Key lessons include timely data collection and transparent data sharing to foster a collaborative healthcare environment. Dismantling departmental silos and encouraging cross-collaboration throughout the perioperative journey are crucial for culture change. Exploring various methods of data sharing, such as unit huddles and weekly emails, can promote ongoing engagement and alignment with goals. Additionally, informal team interactions are equally vital in raising awareness and enhancing communication among team members. To sustain the project gains, ongoing process measures such as repeated surveys and prospective monitoring using the EPIC electronic medical record system will be utilized. Future efforts will focus on extending these strategies and aiming for widespread reduction of POP to other surgical departments in UHN.

43. Equity-Driven Diagnostic Excellence Competencies

Noor Simsam, Dr. Khalid Azzam
Hamilton Health Sciences, McMaster University

The persistent challenge of diagnostic errors (DxE) significantly threatens patient safety and escalates healthcare costs, with a markedly severe impact on marginalized communities. This study seeks to bridge the gap in current literature by focusing on the development and scalability of diagnostic competencies as a proactive approach to mitigate DxE. Our aim is to establish a model that addresses health inequities rooted in social and structural determinants, thereby advancing both diagnostic excellence and equity.

We synthesized our competencies from a comprehensive review of seminal literature on strategies for preventing diagnostic errors and integrating health equity frameworks. This was supplemented by discussions with patients from active patient advocacy work to ensure the competencies resonate with patient experiences and needs.

Our findings culminate in the identification of four pivotal concepts:

(1) Diagnostic excellence and diagnostic equity are indivisible; (2) Diagnostic errors (DxE) disproportionately affect historically marginalized groups; (3) Most DxE are caused by cognitive bias and bias is inherent in clinical reasoning; (4) Most DxE are preventable and there are strategies to reduce their risk throughout the diagnostic process.

We propose a tripartite model of diagnostic competencies:
1) Individual-based Competencies: Focus on fostering cognitive shifts in clinical reasoning, debiasing, assessing structural vulnerabilities, recognizing atypical symptom presentations, and leveraging communication technologies to enhance patient engagement.
2) Team-based Competencies: Promote transdisciplinary collaboration and authentic engagement with diagnostic teams to co-develop diagnostic hypotheses, build trust, empower patients, and enhance communication.
3) System-based Competencies: Address how structural determinants at the macro level influence clinical interactions at the micro level, integrating these considerations into differential diagnosis and patient care planning.

This framework not only addresses the identified educational gaps concerning diagnostic errors but also sets a foundation for future innovations in competency-based education and equitable healthcare practices.

44. Assessing the impact of language concordance on adherence to infection prevention protocols for Cardiac Surgery and Malignant Hematology patients

Paige Reason[1], Alon Vaisman[2,3], Sheila Le-Abuyen[2], Vishnuka Arulsundaram[2], Hassen Nandwani[2], Vriza Patel[1], Payton Bayley[1], Radhika Chawla[1], Amna Rizvi[1], Jerome Leis[1,3]
(1) Sunnybrook Health Sciences Centre
(2) University Health Network
(3) University of Toronto

Background
Prior studies suggest that language concordant care can influence patient outcomes, including risk of healthcare-associated infection. Whether or not language concordant care is provided and how this can influence understanding and adherence to infection prevention protocols has not been determined across our University affiliated hospitals.

Methods
We are performing a multicentre quality improvement study to assess any difference in the level of understanding and self-reported adherence to two different sets of instructions received: pre-operative bathing before cardiac surgery and central line care for patients with hematologic cancer. Semi-structured interviews are being conducted at both participating hospitals among patients who recently underwent cardiac surgery or had a central

vascular catheter placed for treatment of hematologic malignancy. Preferred language is defined by patient preference and an interpreter used for patients with language preference other than English.

Results
Preliminary data from 54 patient interviews conducted at two sites shows that understanding of infection prevention instructions among English and non-English preference groups is 94.87% (95% CI 93.87 – 95.87) and 93.3% (95% CI 91.71 - 94.95), respectively. Reported adherence is 94.87% (95% CI 93.87 – 95.87) among those with English preference as compared to 86.67% (95% CI 85.05 - 88.29) among those who prefer non-English languages (p=0.3). Of note, 60% (95% CI 58.38 - 61.62) of non-English patients indicated that the instructions were interpreted for them by family members and not by hospital staff.

Conclusion
Preliminary findings suggest a possible gap in self-reported adherence to infection prevention protocols among patients with non-English language preferences. Completion of data collection is required to meaningfully compare different procedure types and patient populations across both hospitals.

45. Optimization of Access to Assistive Device Program for Compression Devices in the Lymphedema Program

Tania Obljubek
Women's College Hospital

Background
Early identification and treatment for lymphedema is essential. Best practice in lymphedema care includes the use of compression devices which are often cost prohibitive for many. The Assistive Devices Program (ADP) in Ontario provides the necessary financial support. Access to the funding program requires a form be completed in a timely way by both a physician and the treating lymphedema therapist which is then submitted by the patient to the appropriate government ministry for approval. Increasing access to dollars to pay for properly fitted compression garments not only can prevent future medical side effects of lymphedema but also ensure patients self-efficacy to manage their chronic condition.

Aim
To improve timely access for patients to the Assistive Devices Program (ADP) for compression devices in the lymphedema program at Women's College Hospital.

Measures
The main outcome measure was the number of days to complete the ADP application from initiation of process to provision of completed paperwork being provided to the patient.

Change Concepts
A process map was created following a set of ADP papers through each step to completion. Interviews of all those involved in the process were completed and the data organized into a fishbone diagram and driver diagram.

Several important drivers were identified, and changes implemented. Those included: Creating a standardized physician clinic schedule with contact information available; Standardized the eligibility for the ADP program by creating an EPIC smart phrase that can be used by all practitioners in the program; Additionally, an education sheet was created for patients to understand the ADP process.

Results

Prior to initiation of changes, it would take an average of 30 days to return completed ADP papers to the patient. Since initiating the changes with 10 patients, we were able to return paperwork to the patient in three days. Unexpectedly though, with the short turnaround time, some patients (3 cases) had not understood expectations regarding proper garment fit and purchase and were provided with the wrong compression wear.

Discussion

Simple changes, including understanding the flow/timing of a clinic can be valuable in timely communication with physicians and nurses. Also, even though we were able to streamline the ADP signing process, ensuring patients are adequately educated in understanding the type of compression they require is an important part of ensuring accuracy in obtaining garments. Next steps include standardization of renewal of ADP paperwork and digitization of the forms into EPIC

46. REACH LTC - REAssessing CHolinesterase inhibitors and memantine in Long-Term Care

Carolyn Tan[1] ,Sunny Raval[1] , Carly Rosenbusch[2], Chris Fan-Lun[3,4] , Katrina Piggott[3,5]
(1) Temerty Faculty of Medicine, University of Toronto
(2) Faculty of Arts and Science, Queen's University
(3) Sunnybrook Health Sciences Centre
(4) Leslie Dan Faculty of Pharmacy, University of Toronto
(5) Institute of Health Policy, Management & Evaluation, University of Toronto

Background

Choosing Wisely Canada (CWC) recommends regular reassessment of cholinesterase inhibitors (ChEIs) and memantine, and trial of deprescribing if risks outweigh benefits. MOH-mandated quarterly reassessments are not routinely occurring in Ontario long-term care (LTC) homes. At Sunnybrook's LTC home, ChEI/memantine use was 15% (n=52). Only 23% of prescriptions had >/=3 reassessments per patient-year, and of appropriate opportunities, deprescription was only trialed in 25%.

Aims

1) improve the percentage of ChEIs/memantine prescriptions with >/=3 reassessments per patient-year to 50% by October 2024 and 2) trial deprescription in 50% of appropriate opportunities by October 2024.

Measures

Outcome measures are the percentage of ChEIs/memantine prescriptions with >/=3 reassessments per patient-year, and the percentage of appropriate opportunities leading to a trial of deprescription. Process measures include the percentage of prescriptions for which a user-defined assessment (UDA) was completed. Balancing measures include changes in cognition, function, behaviour, and antipsychotic prescriptions.

Change concepts
A detailed chart review, direct observation of quarterly medication reviews, and physician surveys were completed. We then performed a root cause analysis (Ishikawa) via semi-structured interviews with leadership, physicians, nurses, pharmacists, and caregivers. Based on these findings, we developed high-impact interventions including a deprescribing toolkit with a decision support algorithm, UDA, clinician evidence summary, patient/family support package, critical conversation guide, and automated integration into medication reviews.

Results
There was 100% physician agreement that ChEI/memantine reassessment and deprescription is important, yet they reported a lack of knowledge and training in this area. We identified numerous other key barriers (e.g., fear of deprescribing medications started by consultants, fear of negative effects from deprescription), and potential facilitators. Following our educational intervention, prescriptions with >/=3 reassessments per patient-year increased from 23% to 44%, and trials of deprescription increased from 25% to 75%. Post-implementation data collection for our other interventions is ongoing.

Discussion
Many people living in LTC die still taking ChEIs/memantine. Despite deprescribing guidelines and CWC recommendations, reassessment and deprescription are not routine. Our study is the first to implement these recommendations in LTC, where risks of ChEIs/memantine are more likely to outweigh benefits compared to community settings.

47. Surveillance of urinary catheterization and catheter-associated urinary tract infection in a long-term care home: a point prevalence study

Christina K. Chan, Charlie Tan, Karoleen Volpentesta, Neethu R. Thomas, Jaclyn O'Brien, Lisa Cheung, Marianna Ofner, Lorraine Maze dit Mieusement, Heather Candon, Jerome A. Leis
Infection Prevention and Control, Sunnybrook Health Sciences Centre

Background
Urinary catheters are common in long-term care homes (LTCH). Residents of LTCH may require a urinary catheter inserted for various reasons, including urinary retention or to protect open wounds; however, catheters are frequently inserted for inappropriate indications, such as urinary incontinence. The aim of this study was to

perform a point prevalence of urinary catheterization, urinary tract infections (UTI) and catheter-associated urinary tract infections (CAUTI) at a LTCH.

Methods
A cross-sectional point prevalence study was conducted on all residents admitted to the Veterans Centre at Sunnybrook Health Sciences Centre on June 5, 2024. Data collected from medical records included type of urinary catheter, date and duration of insertion, indications for insertion and frequency of catheter changes. All residents with a urinary catheter were assessed in-person to evaluate compliance with urinary catheter best practices. Positive urine cultures from Veterans Centre residents on or within seven days before the point prevalence date were obtained from the microbiology laboratory and clinical charts were reviewed for signs and symptoms of urinary tract infection.

Results
A total of 182 residents were surveyed, with 30 residents (16.5%) having an indwelling catheter, all inserted for 30 days or greater. The most common indication for catheterization was urinary retention (60%, 18/30), followed by urologist-guided insertion (16.7%, 5/30). Four residents (13.3%) had urinary incontinence as their only documented indication, while three residents (10%) had no indication documented. The frequency of catheter changes (or date of next scheduled change) was not documented for 6.7% (2/30) of residents. Regarding non-compliance with best practices, 16.7% (5/30) had obstructed urine flow (e.g., kinking/coiling of tubing), 6.7% (2/30) had their urine drainage bag and/or tubing placed above bladder level, and 3.3% (1/30) had their urine drainage bag, tubing and/or outlet on the floor. The overall prevalence of UTI and CAUTI was 2.2% (4/182) and 10% (3/30), respectively. All positive urine cultures were collected from patients with appropriate symptoms.

Conclusion
This point prevalence survey found a small yet actionable proportion of urinary catheters without appropriate indication and/or best practices for maintenance. This methodology can be used for congregate living settings for quality improvement opportunities.

48. Using Computer Simulation to Quantify PSW Workload in Complex Continuing Care: Implications for Patient Safety and Care Quality

Sue Bookey-Bassett[1], Raymond Tran[1], James Hanratty[1], Michael Greig, Kevin Woo[2], Helen Kelly[2], Marcus Yung[3], W.P. Neumann[1]
(1) Toronto Metropolitan University
(2) University Health Network
(3) Conestoga College

Background

Personal support workers (PSWs) are essential healthcare team members, providing direct patient care in Complex Continuing Care (CCC) settings. PSWs face physically demanding workloads and working conditions, compromising their wellbeing and delivery of safe, quality care. Currently, no quantification tool exists to measure and therefore manage PSW workload. Our team has developed a modifiable hybrid discrete event simulation (DES) model to quantify PSW workload in terms of care tasks, time demands, and impact on patient safety and quality of care.

Methods
The DES model was created using interviews, surveys, time and motion studies. These activities yielded movement patterns, care logic, task priorities/timings, representative of PSWs in a CCC setting. The model was validated for shift-long travel distance using a step-counter. Using the model, experiments were conducted to determine the impact of: 1) breaks, 2) additional care tasks, 3) patient dependency, and 4) patient assignment on PSW workload and care quality. Indicators of care quality included missed care tasks, patient waiting time, and PSW utilization.

Results
Average absolute model error for walking distance was under 10%. Results from the based model such as PSW utilization time for direct care tasks, patient care task-in-queue (waiting) time and missed care will be presented. Preliminary results from variations in PSW:patient ratio, patient dependency, and the assigning additional tasks to PSWs suggest the emergence of longer wait times and missed care - incomplete tasks at the end of their shift.

Conclusion
The validated DES model provides a method to quantify PSW workload in terms of time demands and impacts on care quality as missed care and task-in-queue under varying conditions. This measurement/modeling approach can be adapted to examine PSW workload in a range of HC settings. PSWs can complete assigned patient care tasks in a given shift, but increasing patient assignments, patient dependency, or assigning additional care tasks led to missed care. These results offer important implications to ensure safe staffing practices and quality of care.

49. Increasing Resuscitation Status Related Goals of Care Discussions for Older Adults at a Canadian Mental Health Hospital

Cristina de Lasa[1,2] Elnathan Mesfin[1], Eleanor Lam[1], Tania Tajirian[1,2], Caroline Chessex,[1,3,4], Brian Lo[1], Sanjeev Sockalingam[1,5]

(1) Centre for Addiction and Mental Health
(2) Department of Family and Community Medicine, University of Toronto
(3) Department of Medicine, University of Toronto
(4) University Health Network, Toronto ON
(5) Department of Psychiatry, University of Toronto.

Background
The Geriatric Admission Units (GAU) at the Centre for Addiction and Mental Health comprise a cohort of older adults, majority of whom have advanced dementia (AD). They often express a desire for a comfort care approach focusing on quality of life and avoiding life-prolonging procedures, including cardiopulmonary resuscitation (CPR), and invasive treatment1. Pre-2019, hospital policy lacked a resuscitation status order (RSO) with different do-not resuscitate levels. There was no standardized, easily locatable resuscitation status related (RSR) documentation tool within the electronic health record (EHR). This led to frequent transfers to acute care hospitals and was not in alignment with patients' voiced goals of care.

Aim
We aimed to increase RSR GOCD and documentation in the GAU within 7 days of admission or transfer to over 75% by December 2022.

Measures
A retrospective chart review (January 2018-December 2022) was conducted to evaluate:
Outcome measures: RSR GOCD documentation completion rates at 7 days of admission or transfer to the GAU.
Process measures: Time from GAU admission or transfer to completion of RSR GOCD.
Balancing measure: i) EHR-related discrepancies between RSR GOCD documentation and related RSO, ii) quality of RSR GOCD documentation.
Improvements: We developed a 4 level RSO in the EHR, updated the corresponding hospital policy, and provided formal staff education. An environmental scan with GAU stakeholders was conducted to identify contributing factors for infrequent GOCD within this mental health context.
Results: Among 431 reviewed charts, the mean RSR GOCD completion rate was 13.9%, and the mean completion time was 39.5 days. Subgroup analysis indicated that AD patients had double the completion rates of non-AD patients (19.2% vs. 11.8% respectively). Discrepancy rates in charts with RSR GOCD were substantial and documentation quality varied. Barriers to RSR GOCD included the absence of an EHR documentation tool and clear triggers.

Discussion
Similar to other studies1,2, RSR GOCD completion rates were lower and took longer than anticipated, highlighting improvement opportunities. AD subgroup analysis indicated provider awareness of RSR GOCD importance in this population. Discrepancies and documentation quality issues pose risks to patient-centered care. Collaborative stakeholder efforts are imperative for developing system-based informatics solutions, ensuring timely, comprehensive, and patient-centered RSR GOCD.

References:
1. Harris E, Eng D, Ang Q, Clarke E, Sinha A. Goals of care discussions in acute hospital admissions - Qualitative description of perspectives from patients, family and their doctors. Patient Educ Couns. 2021;104(12):2877-87.
2. Munroe JL, Douglas SL, Chaplin T. The documentation of goals of care discussions at a Canadian academic hospital. Cureus. 2020;12(8):e9560.

50. Chemical Dependency Program (CDP) Re-design at Humber River Health—Optimizing to Meet the Evolving Needs of Our Patients

Fayrial Leung, Daniel Tziatis, Darlene Ginsberg, Archna Patel
Humber River Health

The needs of patients requiring care for addictions and substance use are increasing in volume and complexity. The patient population of our Chemical Dependency Program (CDP) consists of individuals with complex medical, social, and mental health needs, who frequently experience difficulty accessing community-based services and/or primary care and often have concurrent disorders i.e., experiencing both mental health and substance use concerns simultaneously. Humber River Health (HRH) recognized the need to adapt our programming to optimize treatment, experience and outcomes. This initiative also aligned with two of our organization's strategic pillars—to advance the empowerment of our people and patients, and to foster innovation, research and academics.

The team started by formulating a driver diagram to help identify change ideas and the overarching aim was to 'Optimize the HRH CDP to better meet the needs of the patient population and in accordance with the guiding principles by the end of March 2024.'

There were seven sub-initiatives:

- Implement internal knowledge hub
- Launch a standardized assessment protocol
- Connections Clinic pilot—facilitate transition from Emergency Department to CDP
- Implement Naloxone kits
- Add Sublocade as a treatment option
- Update/implement order sets related to alcohol use disorder and opiate use disorder
- Implement a resource for families, caregivers, health partners focusing on their wellness

Given the complexity of factors related to clinical outcomes and correlation, the team focused on process measures and preliminary results demonstrated promising uptake of all but one of the changes implemented, as well as positive experience engaging in the work and methodology. As a sample, the standardized assessments protocol uptake in March 2024 was 89%.

Despite primarily favourable experience and outcomes, room for improvement was identified for engagement of certain stakeholders from earlier in the process and in later stages, with various root factors noted. There was a change in scope and its impact on the Connections Clinic pilot was not fully resolved, leading to lower than anticipated uptake and extending the Pilot phase. The Connections Clinic Pilot provided numerous lessons learned which the Program is working through in collaboration with our Emergency Department, in order to facilitate greater success in future efforts.

51. Tooling Up: Standardizing suicide risk assessment in consultation-liaison psychiatry services

Lintao Hu, Dr. Tara Burra, Dr. Lesley Wiesenfeld
University of Toronto Temerty Medicine and Sinai Health
Background

Reducing the harms associated with suicide attempts and deaths by suicide is a critical facet of patient safety and provision of quality care in psychiatry. Standardized use of suicide assessment tools can help identify higher risk patients and enhance utilization of risk mitigation interventions. We found wide variation in utilization of these tools across psychiatric inpatient and outpatient settings at Mount Sinai Hospital, including consultation liaison psychiatry, a subspecialty focused on mental health and addictions care.

Aim/Innovation
We aimed to standardize suicide risk assessment by incorporating the Columbia Suicide Severity Rating Scale (CSSRS) into consultation-liaison (CL) psychiatry assessments. PDSA cycles focused on introducing the CSSRS into the electronic health record, staff training and orientation sessions, audit and feedback, and physical aids, such as lanyard cards to facilitate workflow.

Measures
We measured the proportion of new consultations with a documented suicide risk assessment and mitigation plan. To assess change process, we measured the proportion of new assessments that utilized the CSSRS and clinician participation rate in audit-feedback sessions. To assess unintended impacts, we measured total consultation time and acquired patient and clinician feedback.

Results
Tracking biweekly CL psychiatry chart data from October 2023 to October 2024 yielded an increase in both documented suicide risk and use of the CSSRS Screener following the first PDSA cycle. We observed a shift in values above the median after week 14, with 11 data points above the median for suicide risk assessment. We also observed a shift in CSSRS screener completions with 10 data points above the median and 1 on the median. The consultation time decreased from 64 to 61 minutes after the first PDSA.

Discussion/lessons learned
Quality improvement to standardize use of suicide assessment tools including the CSSRS can promote utilization of risk reduction measures for higher risk patients. Inherent in a standardized approach to suicide risk assessment is also a reduction in clinical practice variation, associated biases, and inequities in care. Barriers and enablers to the screening intervention continue to inform implementation of post-screening suicide prevention interventions to improve patient

52. Improving Access to Equitable Care for Patients Living with Sickle Cell Disease in the Emergency Department

Kim McLeese
University Health Network, Toronto General Hospital

The most common presenting complaint for individuals living with sickle cell disease (SCD) to the emergency department (ED) is a vaso-occlusive pain episode (VOE). Quality standard of care guidelines recommend that these patients be given opioids within 30 minutes of triage. Providing prompt pain management can improve patient outcomes, decrease hospitalization rates, prevent disease complications, and lessen prejudice and mistrust.

During a six-month period of 2023, the median time to opioids for patients experiencing a VOE at the TGH ED was 101 minutes. Only 8.8% of patients received opioids within 30 minutes. Project AIM was to improve the percentage of sickle cell patients with a VOE who receive opioids within 30 minutes of triage to 25% at the TGH ED by March 2024.

A thorough literature review, process mapping, needs assessment, and root cause analysis were conducted. Findings lead to the development of three main interventions: standardizing the workflow by developing a flowchart for clinicians to follow when a patient experiencing a VOE presents to the ED, encouraging the use of sublingual fentanyl as a safe, effective, and efficient means of providing timely pain management, and delivering education to ED staff about SCD and change ideas. A report was created within EPIC to generate relevant data.

Following implementation, the percentage of patients experiencing a VOE who received opioids within 30 minutes of triage improved from 8.8% to 42.9%. The median time to opioids was reduced from 101 minutes to 40 minutes. Utilization of the ED SCD order set remained consistent. Use of sublingual fentanyl increased from 0% to 33%. There were no reported adverse safety events.

To assist with sustainability, SCD education has been incorporated into UofT resident education and UHN nursing new hire orientation sessions. Next steps include spreading interventions to the TWH and a SCD champions QI project will contribute to continuous improvement. Through presentations at conferences and collaboration with Ontario Health and community agencies, these change ideas will be shared with healthcare institutions across the province and nation. The collective action of all these initiatives will create meaningful change for patients living with SCD