



ANNUAL DIVISION QUALITY COMMITTEE REPORT

DIVISION: Orthopaedic Surgery **DIVISION HEAD:** Dr. Paul E. Beaulé, MD, FRCSC

Please describe your divisional performance over the last 12 months as it contributed to support the hospital in achieving its strategy. Where possible incorporate objective corporate performance measures to justify your answer (500 words)

Although COVID-19 changed the landscape of our clinical practice over the past 12 months, the Division of Orthopedic Surgery has remained committed to improving the care we deliver. Our division continues to push forward projects in line with the hospital's strategic directions.

QUALITY

Patient Outcome Measures:

Despite clinic setbacks caused by the pandemic last year, 2020 was a productive year for Orthopaedic Surgery Division's CQI data collection. Using our electronic data platform, ConEHR, the division tracked a total of 2,181 elective surgeries (equivalent to 85% of all elective cases from last year) across all three TOH campuses and the Kemptville District Hospital. We also collected responses for over 25,000 questionnaires from our surgical patients across eight clinical practice units who reported care experiences and health outcomes at various time points along their clinical pathway. Part of the patient-reported outcome measures (PROMs) data were submitted to Ontario Health as a requirement for bundled-care for hip and knee replacement patients. A total of four data submissions were made for last year, contributing to provincial efforts to gather data across Ontario to assess quality of care and support a patient-centered approach to care.

The data collection prior to the pandemic would not have been possible without the division's volunteer program. We recruited and trained over 30 volunteers who assisted in PROMs data collection at five different locations across all three TOH campuses. Due to the pandemic, the volunteer program has been put on hold and many clinic appointments are now virtual, impacting in-clinic data collection. We too had to pivot our workflow strategies and we were able to quickly convert to remote resources. This allowed us to continue our patient data collection without delays or reduction in data volume.

Another highlight of our CQI program last year was the division's efforts to track patient health during the first Ontario-wide lockdown. Between March 16 and May 30, there were 613 patients at TOH whose elective orthopedic surgeries were cancelled. As a means of monitoring their health during the waiting period, PROMs questionnaires were collected remotely. Based on the 82% participation, we learned that patients' overall physical and mental health statuses were at similar levels across most orthopedic problems - a finding contradictory to the popular belief that more severe diagnoses are associated with poorer health outcomes. Through this process we also identified a subset of patients that were not coping due to multiple psychosocial stressors of having their surgical care delayed and we were able to prioritize their care effectively.



Looking ahead to 2021, we are planning to incorporate dashboards and analytical tools on our ConEHR platform which will help visualize and summarize data on key performance indicators. This will allow us to gain insights into the current health structures and identify areas of improvement. We are also on the cusp of adopting ConEHR at CHEO and integrating the platform with the hospital EMR, Epic. This collaboration will enable the two hospitals to standardize data elements, gain technical knowledge and allow us to compare and generalize findings across different population groups.

Patient Experience:

Amid a transitional year, our patients remain a priority. Their experiences are reviewed during our regular divisional CQI meetings and emerging themes or opportunities for growth are reflected back to all division members. We obtain our information via our ConEHR platform, the TOH corporate wide post-discharge assessments, and direct patient feedback (email/phone communication, the patient advocacy department or qualitative projects). TOH patient experience data highlights that our “topbox” overall scores of 216 respondents is 63%. This is comparable to our “topbox” rating over the past 3 years.

We also took the initiative to evaluate the 108 orthopedic patients that were prioritized and underwent surgery during the initial lockdown in March & April 2020 (ambulatory and admitted). Via comprehensive phone interviews 6-months following, we have successfully assessed 82 of the 94 patients (and are still working on the remaining)! No cases of related +COVID-19 transmission were encountered to these patients or their family members throughout their peri-operative care. Most importantly, these patients were overwhelmingly thankful that their care was prioritized during the pandemic. 100% of respondents felt that they would undergo their surgery again given the pandemic circumstances.

Non Face-to-Face Care Capacity:

Provoked by the COVID-19 pandemic we worked on improving our capacity to deliver phone or virtual consultations and follow-up visits. Efforts included standardized training, administrative/technical support sessions, and educational rounds on virtual musculoskeletal physical examinations techniques. Prior to the pandemic, 0% of our patients were being evaluated through non face-to-face communication. In April and May, we peaked by seeing 66% and 62% of our patients within this capacity. Given that many of our patients require in-person physical assessments for diagnosis, supportive direct care (such as casting) or regular X-ray imaging, we estimate that approximately 30% of our patients could be safely assessed via this model looking into the future.

Opioid Reduction Efforts:

In-line with the Department of Surgery’s collective goal to reduce excessive opioid use in ambulatory surgery, we made great strides this year to decrease unnecessary narcotic prescriptions and over prescribing. Led by the research and efforts of Dr. Alexandra Stratton, the orthopedic spine service standardized:

- 1) Specific Epic order panels for outpatient procedures
- 2) Patient discharge instructions (information sheet for day surgery or overnight stay)
- 3) Resident and staff education (Through rounds, appropriate on-boarding, and Epic resource sharing)

Our divisional goals are to minimize opioid prescriptions filled (many patients only require the non-opioid component), and diversion of excess opioids (by prescribing a relatively small number of opioids and have patients bring extra tabs to Plaster Clinic for disposal). We are in the process of using this standardization process across all ambulatory

subspecialties including Foot & Ankle, Hand & Wrist, Shoulder & Elbow, Knee & Hip Arthroscopy and our trauma Walking-Wounded program. We plan to continue to monitor our efforts with formal divisional audits in 2021.

Adverse Event Monitoring

We continue to prospectively monitor adverse events (AEs):

- A novel divisional competition and CQI grand rounds was carried out in January/February 2020 which ensured 100% of our divisional members had the link or “app” for our adverse event tracking on their mobile phones.
- Physician Assistants and Orthopedic Hospitalists continue to assist with entry and provision of monthly metrics across the Civic and General campuses.
- With peri-operative AEs being integrated within our ConEHR platform, we have improved our ability to track entries over time.
- With a directive to physicians that compliance in reporting of less than 85% will affect AFP fund distribution, we continue to foster staff participation.
- We are currently utilizing the AE data to provide direct feedback during weekly CQI trauma rounds and utilizing key cases as educational tools during our M&M rounds.
- We have been able to estimate that approximately 60-80 orthopedic related AEs are occurring per month.
- Opportunity for growth: we were averaging 61 formal AE submissions over the 6-month period leading up to the pandemic. Divisional participation has slowed during the last 6-months of 2020 to an average of 34 formal AE submissions. Participation is regularly reviewed, and the decline is felt to be related to pandemic informational fatigue and the necessity for task prioritization.

Periprosthetic Joint Infection (PJI) Service

Due to the complexity of periprosthetic joint infections, 2020 saw the creation of the PJI service at the General Hospital. Led by a consistent arthroplasty surgeon for a month at a time, these specialized patients are now managed through a more centralized approach. Comprehensive multidisciplinary care and patient/family communication is now provided via a consistent staff Orthopedic Surgeon/Resident, Infectious Disease specialist and a pharmacologist. Qualitative feedback from the patients and care-team (nurses, allied health, residents, staff) as been extremely positive over the past 6 months.

Partners Meetings (Collaboration)

Regular quarterly/semiannual meetings are taking place with Radiology, Emergency Medicine and Anesthesia respectively. Attended by division heads and the CQI leads, the small group of leaders are able to identify, discuss, and evaluate relevant issues. Examples this year of our capacity to instigate effective change together has been demonstrated through our collaboration with:

- Radiology
 - Regular sharing of dashboard wait times for investigations.
 - Ordering and executing pre-visit X-Rays associated with virtual or phone visits.
 - Scheduling X-rays and clinic appointments more effectively in order to honour the social distancing requirements now required in waiting rooms and service areas.
 - Increased availability of staff radiologist for urgent procedures over the weekend until 8 pm (i.e. to effectively obtain a guided joint aspiration to evaluate for joint infection)
- Emergency Medicine

- Improved orthopedic consultation response time and therefore patient flow of admitted hip fracture patients overnight.
- Emergency department staff education and now independent execution of distal radius fracture reductions.
- Equipment related optimization: casting material, reduction adjuncts (finger traps), portable compression monitoring devices.
- Anesthesia
 - Review shared concerns with delays in patient care and peri-operative adverse events.
 - Specific patient cases are thoroughly evaluated, replicating multi-disciplinary M&M learning experiences.
 - Optimization of COVID-19 peri-operative protocols/logistics routinely discussed.

Reduced Costs

- Ongoing education: proper adherence to PPE usage with avoidance of waste.
- We continue to refine performance metrics to ensure operating room efficiency.
- We have continued to identify and optimize patients that are appropriate for same-day discharge following spine or arthroplasty procedures.
- We are now routinely performing four joint arthroplasty procedures within a day at the Civic, General and Kemptville Hospital sites.
- We continue to standardize our routine equipment as well as specialized equipment.
 - Special order requests are regularly monitored and require approval.
- Given that many product evaluations were paused in spring 2020, we continue to undergo frequent review of our vendor contracts and associated products.

The Importance of People

Our 2020 experience has highlighted that our patients are greater than their ailments and our team is more than just Orthopedic Division members. We all have unique physical and mental health stressors combined with a variety of social, financial, and logistical situations. Examples of how we pivoted to optimize the care of our patients and staff members:

- PPE training sessions and numerous COVID-19 related process changes
- Special requests for inpatient visitors for compassionate circumstances (specifically surrounding orthopedic oncology patients and end-of-life care).
- Regular supportive phone calls from staff to those patients identified as critical from the PROM outreach efforts during the elective surgery shutdown.
- Comprehensive compassionate multidisciplinary response to Scabies outbreak on 6NE at the General Hospital October/November.
 - 21 healthcare workers and 4 patients identified as positive requiring treatment
 - Widespread communication and prophylactic treatment of potentially exposed staff and 104 patients.
- Continuation of resident educational rounds (daily), CQI multidisciplinary meetings (every 6 weeks), CQI Rounds (4 annually), M&M Rounds (Division wide and within each Clinical Practice Unit, 11 during 2020) via virtual Microsoft TEAMS platform.

- Continued valuing of physician assistants (PAs) and Hospitalists, which align with many QI with initiatives.
- Continued representation and participation of Clinical Care Leaders, RNs, PAs, Hospitalists, Residents, nurse educators, Staff surgeons and Division Head at the virtual divisional CQI meetings.
- Communicating the importance of health amid the pandemic stress with acknowledgement of healthcare worker burnout and mental health issues during Divisional rounds. Provision of available TOH supportive resources to our members.
- Supported the appointment of Orthopedic Surgeon Dr. J Pollock as the Department of Surgery Wellness Director for 2021.
- CQI program growth: the need for a divisional CQI support person established. Job posting in process, aimed to be filled by April 2021.
- Encouraged team morale and comradery through workout challenges, social media presence, recruitment of incoming residents via virtual platforms, socially distanced golf tournament, holiday gifts, etc.
- Community outreach: due to the cancellation of our annual social programs (such as the annual holiday gathering) division members voted to make financial donations to the Ottawa Inner City Health Inc. the Eliana Saidenberg Urgent Patient Needs Fund in the amount of \$6K each.

Please identify the major threats to patient safety for the patients you treat based on your interpretation of information arising from routinely collected performance data and incidents reported within the Patient Safety Learning System, Serious Incident Reviews, and Morbidity and Mortality rounds, where available (500 words)

Based upon our interpretation of the available information, the major threats to our patient's safety in the Division are reported below. Information was collated, reviewed at the CQI Divisional meetings and fed back to the members for review/discussion.

PSLS

A review of 17 PSLS events were carried out between January 2020 and December 2020. Themes were identified, with the most common being:

- 1) Communication (lapses between healthcare providers and between provider to patient)
- 2) Equipment discrepancies or equipment related delays (i.e. ongoing MDR issues at the Civic site, persistent monitoring tracking of the situation with multidisciplinary meetings).
- 3) Appropriate ordering of investigations prior to surgery (i.e. incomplete bloodwork)

Adverse Events

Courtesy of our online electronic reporting of AEs, we uncovered the following recurring themes:

- 1) Medical complications post-operatively (i.e. delirium, cardiac event)
- 2) DVT/Pulmonary embolism
- 3) Suboptimal anticoagulation management (i.e. pre-op anticoagulation not re-started or held, inappropriate dosing for patient weight).
- 4) Surgical site infection requiring active medical management (i.e. Surgical irrigation and debridement or wound care).

- 5) EPIC related errors (i.e. incorrect or non-use of order sets, suboptimal order set or entered order utilized).

Patient Feedback

(Via in-hospital communication, Department of Patient Advocacy, and surgical office administrative assistants):

Emergent themes as threats to patient safety:

1) Delay to Surgical Care

- a. Prolonged time to surgery on urgent access orthopedic trauma lists at the Civic and General sites. (i.e. priority “E” surgical bookings often expire and are bumped by higher priority cases from other services. Therefore, fractures often wait 3-4 days prior to surgical care in hospital).
- b. Patients and families have made numerous complaints (16 received directly in formal fashion during 2020) regarding prolonged wait time for urgent care. That does not include indirectly expressed concerns which would be estimated ~100+
- c. Patients and families have made direct complaints (9) regarding frustrations with being made NPO on a regular basis while awaiting surgical care. That does not include indirectly expressed concerns which would be estimated ~50+
- d. Current Walking-Wounded program which aims to have ambulatory fractures fixed within 7 days of presentation is failing. Current wait time in December 2020 and January 2021 is >14 days until date of surgery. This causes potential unnecessary harm and may negatively impact patient outcome (i.e. prolonged immobilization resulting in stiffness, increased time off work, soft tissue breakdown, development of DVT/pulmonary embolism). To combat, we are currently admitting Walking-Wounded patients to hospital. This option is not cost effective (having patients wait pre-operatively in hospital days prior to care) and leads to increased issues with points a) and b) above.

Handover Email Template

Daily handover emails are completed at the start and end of each day at both the Civic and General sites. There is an AE specific section within the template for optimal communication. This format also encourages residents to enter the AE within the online tracking system after it is noted within the emails. The CQI lead reviews these emails on a daily basis, noting associated AE themes. Pertinent updates are sent throughout the day to all residents, PAs and staff.

Morbidity and Mortality Rounds

The Process of recording and circulating M&M rounds continues

- Semi-annual summary reports are circulated to the entire division
- 11 Orthopedic M&M rounds took place across the division during 2020, 9 of which confirmed incorporation of the OM³ model.
- Please see description of M&Ms that were uploaded to the SharePoint site

A new emergent theme across our orthopedic care in general (not subspecialty specific) would include administrative errors related to the Epic implementation growth curve. An example of this (reviewed within both the PSLs and M&M settings) would be a patient that did not receive any post injury care for their humerus fracture due to a follow-up order request being entered as a “orthopedic surgery clinic appointment request” instead of an “ambulatory referral to orthopedic surgery.”

Please describe the extent to which your clinical services are meeting the expectations of your patients based on: (1) your interpretation of information arising from patient feedback (example patient concerns, Post Visit phone calls, surveys, focus groups), and (2) the requirements of the Elizabeth and Matthew Policy. (500 words)

Patient Letters/Feedback

- All patient letters/complaints received through patient advocacy or administration are reviewed by the Division Head, the CQI Lead and the clinical lead of the Patient Safety and Continuous Quality Improvement (PS+CQI) Committee. Following review and discussion, feedback is provided for both the clinician involved as well as the patient and allied health professionals. Where appropriate, Just Culture principles are applied.
- Opportunities for in-person meetings, phone calls, or written responses are extended to the concerned patient/families and carried out if desired.
- In 2020, the Division of Orthopaedic Surgery saw two surges of negative patient feedback
 - Spring – surrounding the pandemic and unknown return of “non-urgent” surgery
 - November/December where prolonged wait times to surgery were notable for fracture care.

Readiness for Discharge Questionnaires and assessments

- A Readiness for Discharge survey is given to each patient prior to discharge to better understand and address the reservations patients might have. We are collecting this data at both orthopedic inpatient units at General and Civic Campus.

ConEHR Data collection and associated responses.

- Weekly ConEHR focused review committee meetings taking place (as of October 2020)
- Working towards improved data mining capacity and more regular feedback to of information to surgeons.
- Currently focused on maintaining our >85% adherence rate for complete peri-operative data entry which triggers future data collection points.

Elizabeth and Matthew (E&M) Policy

The E&M policy continues to be used by surgeons from across sites with regular and consistent assessments followed by documentation in the patient’s chart. Appropriate arrangements are carried out (voice mail, notification system etc.) should a surgeon require coverage of his or her patients during this time. We continue to, provide consistent care to our patients with the Clinical Orthopedic Service (COS) for trauma patients at the Civic and General sites respectively, as well as the Periprosthetic Joint Infection (PJI) Service at the General Hospital.

Describe and justify Divisional priorities for quality in the next 12 months based on your answer above. Please identify three priorities in descending order. (500 words)

1) Stabilization and optimization of care amid a labile COVID-19 Pandemic

- Increase capacity and effectiveness of non face-to-face patient care (consultations and follow-up assessments) via virtual or telephone.

- Goal is for patients to feel that they were adequately assessed and received quality care.
- Goal is for healthcare providers to feel that an adequate assessment was performed via non face-to-face communication and that by omitting some of the in-person tools/techniques that the care of their patients was not negatively impacted.
- Reduce non-required investigations (i.e. Such as frequent X-Rays – decreasing overburden on radiology requirements, cost savings, and allowing radiology to maintain social distancing parameters).
- Continued PPE monitoring, in addition to educational and training sessions
- Patient acknowledgement and empathic demonstration that we realize our patients are going through additional stressors.
- Compassion towards patients encouraged on behalf of our administrative assistants and front-line staff.
- Maintain and promote discussion on the crucial importance of the mental and physical health of our healthcare workers to avoid additional crisis, burnout, and informational fatigue.

2) Improved access to care of our trauma patients (decrease their wait time to surgery).

- Longstanding multifactorial issues
- Large source of our patient grief (negative feedback).
- Access to surgical time is limited, however expected surges (i.e. over winter months) are predictable and should accompany an increase in allotted time to trauma care.
- Hospital Administration and the Department of Surgery are aware of our ongoing struggles. Working towards a long-term sustainable solution.
- Divisional leadership via Dr. Paul Beaulé, Dr. Steve Papp (Clinical Services Lead), Dr. Allan Liew (Walking Wounded Program Lead) and Dr. Randa Berdusco (CQI Lead)
- Continued transitioning some orthopedic care off site to community hospitals such as Hawkesbury and Kemptville.
- Admittedly, all orthopedic healthcare workers would make a phone call and have one of their family members with a broken ankle be fixed within 3-4 days after presentation. Our current wait-time of >14 days leads to unnecessary patient, family, and surgical-team stress and it is not align with the TOH principle of providing all patients with the care that we would want for our loved ones.
- Continue our recently introduced policy (December 2020) of having a staff orthopedic surgeon make a daily communication phone call to the family of an admitted patient awaiting surgery on our trauma list that is unable to communicate with their loved ones themselves. This would include patients with language barriers, elderly, confused and developmentally delayed for example. This is an immediate step that we can take to improve the communication with our patient's families during a time when they are not permitted in-hospital and when we are dealing with ongoing resource issues.

3) Operationalize CQI Program for All CPU (Clinical Practice Units or subspecialties)

- Further incorporate standard post operative order sets and patient resource information via Epic optimization and provided handouts/online resources.
- Aim to standardize post-operative analgesia prescriptions within all CPUS, ultimately helping to reduce opioid prescription and use.
- Further ConEHR development and ultimately information mining/data usage
- Improved entry of AEs (from decline in entry noted in 2020)