Community of Practice: Choosing Wisely in Paediatrics

Moderator:

Dr. Olivia Ostrow
Director of Quality & Safety, Paediatric Emergency Medicine
Department of Pediatrics, The Hospital for Sick Children
Associate Director, SickKids Choosing Wisely Program
Associate Professor, University of Toronto

Choosing Wisely Canada
Children's Healthcare Canada | Santé des enfants Canada

Welcome (and welcome back)!

The Choosing Wisely in Paediatrics Community of Practice (CoP) mandate is to foster knowledge sharing and collaborative learning to promote high-quality, value-added care by focusing on the overuse of certain tests and therapies in children.

Since launching in 2019:

- Reach is North American with **>300 multidisciplinary and interprofessional members**
- **13 webinars and 29 presentations have been held to date**
- Presentation topics involve both **paediatric acute-care centres, community sites and primary care**

Choosing Wisely Canada | Children's Healthcare Canada | Santé des enfants Canada

Community of Practice – Participating Sites

Children's Mercy Hospital, KC
Mayo Clinic
Dartmouth Health
UTHealth

Choosing Wisely Canada

Children's Healthcare Canada | Santé des enfants Canada

Children's Healthcare Canada

Visit the Choosing Wisely in Paediatrics Health Hub at childrenshealthcarecanada.ca to view past webinar recordings, resources, and for info about upcoming CoP offerings

Choosing Wisely Canada | Children's Healthcare Canada | Santé des enfants Canada

Future Webinars- we want to hear from you!

Winter 2025 – date TBC

Topic: Reducing antibiotic treatment durations and increasing transitions from IV to oral antibiotics

Please send us speaker suggestions!

Other future topic ideas:

Implementation resources - using implementation science and expertise to support sites in their work

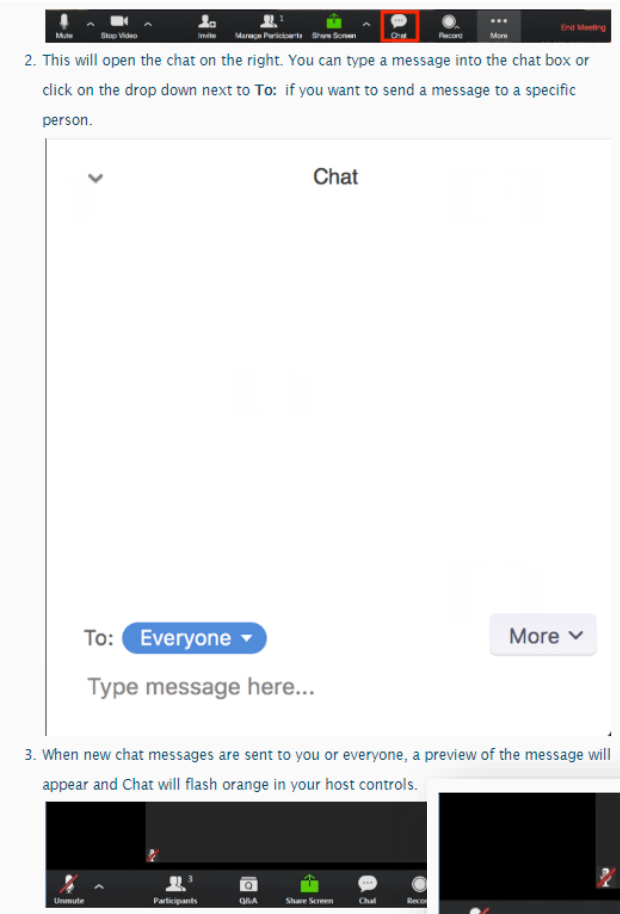
If you are interested in presenting, have resources you wish to share, or would like to be added to the mailing list, please complete the webinar feedback survey or email lauren.whitney@sickkids.ca

Choosing Wisely Canada

Children's Healthcare Canada | Santé des enfants Canada

Agenda

3:00 – 3:05 PM	**Welcome and Introductions**
3:05 – 3:45 PM	**<u>New SickKids 2023 Choosing Wisely Recommendations – 'Rapid Fire'</u>** **Unnecessary laboratory evaluation for medical clearance of patients requiring psychiatric inpatient care** Dr. Adam Enchin, Medical Director, Garry Hurvitz Centre for Community Mental Health **The "SNAppy" (Same Night Appy) Project** Dr. Joshua Ramjist, Staff Surgeon, General and Thoracic Surgery, The Hospital for Sick Children **Reducing bladder catheterization duration in hospitalized children** Dr. Maitreya Coffey, Staff Paediatrician and Associate CMO, Quality & Medical Affairs, The Hospital for Sick Children **Vitamin D overtesting** Dr. Krista Oei, Staff Physician, Endocrinology, The Hospital for Sick Children
3:45 – 4:00 PM	**Q&A**



Q&A

- Please enter your questions using the **chat function**
- If you wish to contribute to the conversation, be sure to **un-mute** on the Zoom dashboard
- Note: *we will moderate the Q&A after all presentations have been completed*

Choosing Wisely Canada

Children's Healthcare Canada | Santé des enfants Canada

Dr. Adam Enchin
Medical Director,
Garry Hurvitz Centre for Community Mental Health

Medical Clearance

Choosing Wisely Canada
Children's Healthcare Canada | Santé des enfants Canada

Disclosures

- None

Paediatric mental health presentations to the emergency department (ED) have increased since 2000, mirroring the increased incidence of population-level paediatric mental health issues. Most paediatric patients do not have underlying medical concerns contributing to their ED presentations for acute mental health concerns. While medical clearance has historically been linked with laboratory evaluation, evidence shows that routine laboratory testing is not necessary or useful to provide safe mental health care to paediatric patients presenting to the ED. Eliminating unnecessary routine screening laboratory tests to medically clear paediatric patients will prevent iatrogenic procedure-related distress, decrease tasks for healthcare providers to complete in the already busy emergency setting and decrease healthcare costs for tests with no value

REFERENCES:

Donofrio JJ, Santillanes G, McCammack BD, et al. Clinical utility of screening laboratory tests in pediatric psychiatric patients presenting to the emergency department for medical clearance. Ann Emerg Med. 2014;63(6):666-675.e663.
https://pubmed.ncbi.nlm.nih.gov/24219903/

Santillanes G, Donofrio JJ, Lam CN, et al. Is medical clearance necessary for pediatric psychiatric patients? J Emerg Med. 2014;46(6):800-807
https://pubmed.ncbi.nlm.nih.gov/24642041/

Implementation of a Medical Clearance Algorithm for Psychiatric Emergency Patients
Julie S. Berg, MD; Asha S. Payne, MD, MPH; Theresa Wavra, MSN; Sephora Morrison, MBBS; Shilpa J. Patel, MD, MPH
https://publications.aap.org/hospitalpediatrics/article/13/1/66/190367/Implementation-of-a-Medical-Clearance-Algorithm?autologincheck=redirected

https://www.pemcincinnati.com/podcasts/?p=1203

Thrasher TW, Rolli M, Redwood RS, et al. 'Medical clearance' of patients with acute mental health needs in the emergency department: a literature review and practice recommendations. WMJ. 2019;118(4):156-163
Donofrio JJ, Horeczko T, Kaji A, Santillanes G, Claudius I. Most routine laboratory testing of pediatric psychiatric patients in the emergency department is not medically necessary. Health Aff (Millwood). 2015;34(5):812-818
Chun TH. Medical clearance: time for this dinosaur to go extinct. Ann Emerg Med. 2014;63(6):676-677
Santiago LI, Tunik MG, Foltin GL, Mojica MA. Children requiring psychiatric consultation in the pediatric emergency department—epidemiology, resource utilization, and complications. Pediatr Emerg Care. 2006;22(2):85-89

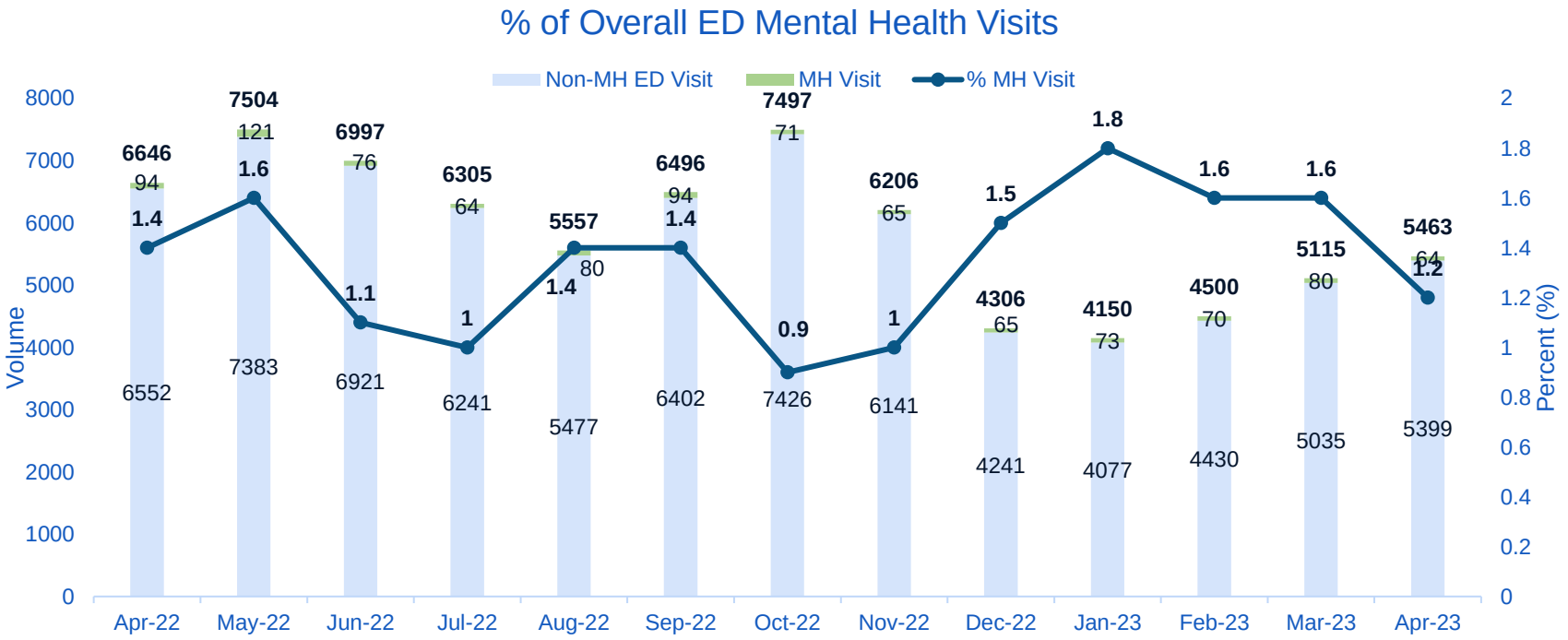
Don’t obtain screening laboratory tests in the medical clearance process of paediatric patients who require inpatient psychiatric admission unless clinically indicated.

Dr. Adam Enchin

Dr. Krishna Anchala

Project leads: Dr. Adam Enchin, Medical Director, Garry Hurvitz Centre for Community Health; Dr. Krishna Anchala, Staff Physician, Paediatric Emergency Medicine, and Emergency Physician Lead, Kids Health Alliance.

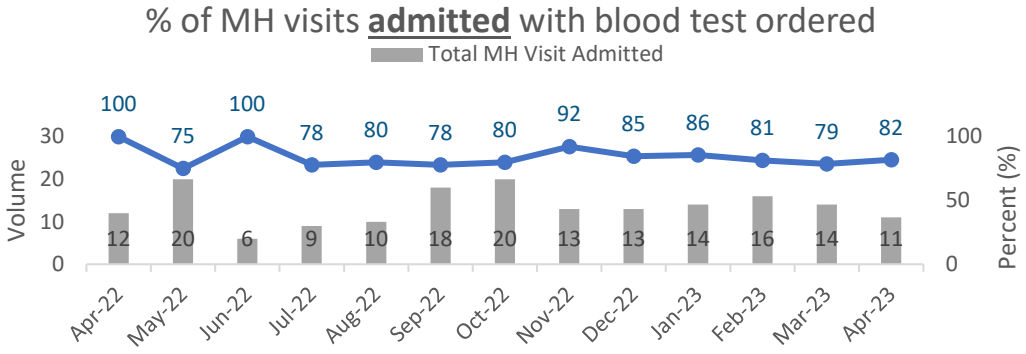
Results: ED Mental Health Visits

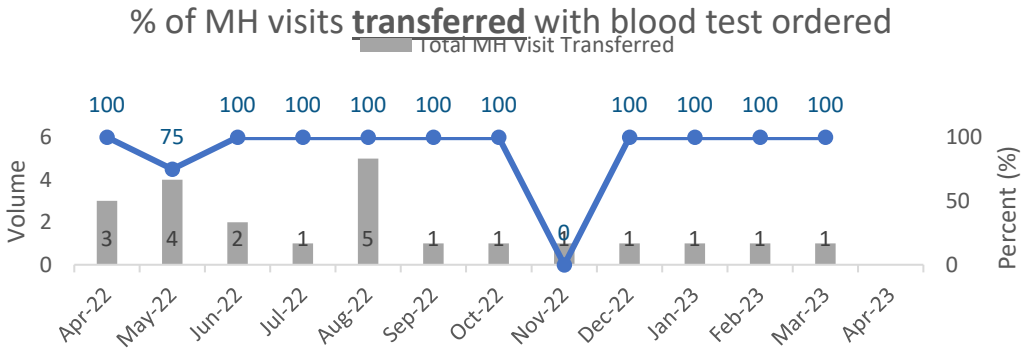


Approximately ~1.3% of ED visits are MH visits (main diagnosis coded in NACRS)

Results: Outcome Measure

Proportion of ED patients that are admitted or transferred to community hospitals for a mental health diagnosis with unnecessary blood tests ordered excluding patients with ingestion and overdose or acute psychosis





Key Insights

- On average, ~ 84% of MH patients that are admitted have a blood test ordered
- For MH patients that are transferred, majority/all have a blood test ordered (note: small denominator)

Aim

- To reduce unnecessary lab testing that is conducted as part of a medical clearance process.

- Planned focus at both admission and transfer

Measures: Our approach

Data Sources

- NACRS
  - Most Responsible Diagnosis
- Azure Data Warehouse
  - Chief Complaints
  - Clinical Impressions
  - Discharge Disposition (Admit or Transfer to another facility)
- Epic Reporting Workbench
  - Find Orders template→ Procedure = “SK Lab Blood Orderables”
    - Monthly export

Intervention

- Recommendation already implemented within the Emergency Department – regular education/communication to reinforce
- Elimination of stock order set by psychiatry at admission/transfer – also regular education/communication within the department of psychiatry
- Enrollment in IMPWR AAP QI Collaborative

IMPWR

PROJECT AIMS

Global Aim: To improve care for children ages 12-18 presenting to the ED or hospital for an acute mental health concern

Specific Aim #1: Reduce use of Physical Restraints

Specific Aim #2: Reduce use of routine laboratory testing for medical stabilization

Specific Aim #3: Increase lethal means counseling

Specific Aim #4: increase suicide risk re-assessment while awaiting transfer to inpatient facility

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN®

Results

- ?
- Clear uptake within the Emergency Department with evident reduction in ordering of screening labs.
- Modification of Psychiatry admission order set with removal of automated labs
- Ongoing evaluation of data to identify areas for improvement and further tailoring of interventions – high yield

Future Directions

- Focus on both internal practice and external orgs
- Identification of team members – ER/Psychiatry to facilitate further dissemination of best practice recommendations
- Presentation of recommendations in other relevant settings (i.e., ONCAIPS, Divisional Executive Committee)

Choosing Wisely Canada | Children's Healthcare Canada | Santé des enfants Canada

Thank You

Any questions?

You can find us at:

Krishna.Anchala@sickkids.ca

Adam.Enchin@sickkids.ca

Choosing Wisely Canada

Children's Healthcare Canada | Santé des enfants Canada

Joshua K. Ramjist, MD
Staff Surgeon, General & Thoracic Surgery

Same Night Appendectomy "SNAppy" Project

SickKids | General & Thoracic Surgery

Choosing Wisely Canada

Children's Healthcare Canada | Santé des enfants Canada

Disclosures

- None

Background

- Appendicitis is one of the most common surgical emergencies
- Due to resource conservation in the COVID-19 pandemic, we sought new strategies to:
  - Decrease length of stay
  - Decrease in patient bed utilization
  - Reduce staffing demands
- For families, this potentially allows them to recover closer to home, return to work sooner and care for other children

Halter, J. M., Mallory, B., Neilson, I. R., & Langer, M. (2016). Same-day discharge following laparoscopic appendectomy for uncomplicated acute appendicitis as a measure of quality in the pediatric population. Journal of Laparoendoscopic & Advanced Surgical Techniques, 26(4), 309-313.

Recommendation

Don't routinely hospitalize otherwise healthy children who are post-op from a non-perforated laparoscopic appendectomy who can be safely and more comfortably managed at home.

Aim

Two phase, quality improvement project:

1. Discharge from ward within 6 hours of procedure end from the surgical ward
2. Discharge from PACU within 2 hours of procedure end

Measures

- Primary Measure
  - Length of Stay after procedure
- Secondary Measure
  - Return to ED
  - Discharge Location
  - Ward staffing

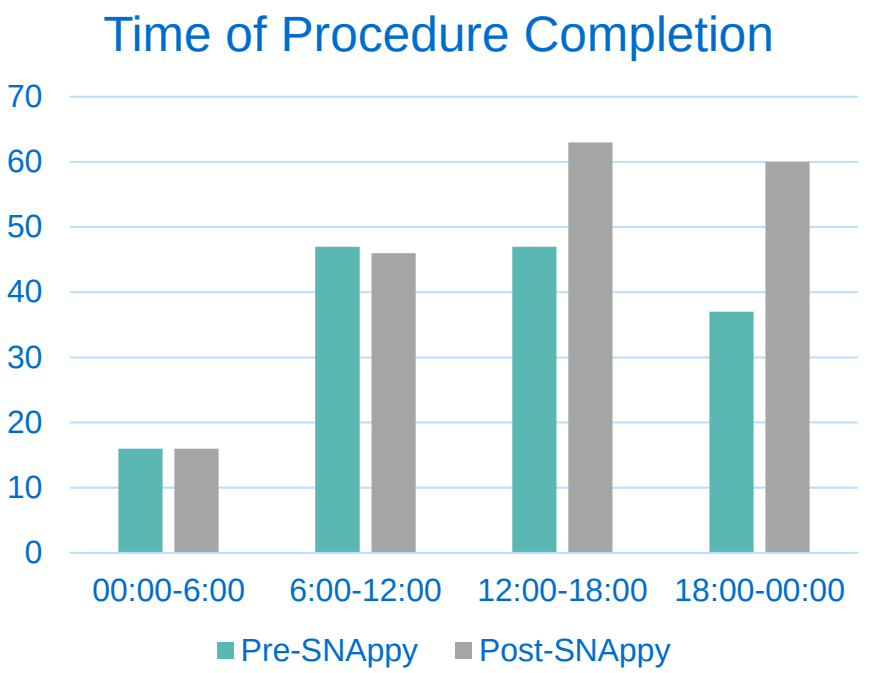
Intervention

ED/Pre-operative	Intra-operative & PACU	Surgical/Inpatient Unit	Discharge
❑ NPO ❑ Void 1 hour before operation ❑ Acetaminophen within 6hrs of expected OR start time ❑ IV Ceftriaxone and metronidazole ❑ **Standardized communication about expectations**	❑ No intra-op foley ❑ Cefazolin for skin prophylaxis ❑ Max dose local anesthetic ❑ Ketorolac and ondansetron at the end of the case ❑ Acetaminophen at the end of the case (*if due) ❑ Reinforcement of expectations	❑ Clears or DAT ❑ Scheduled max dose acetaminophen and ketorolac ❑ Scheduled ondansetron ❑ Activity as tolerated (and encouraged) ❑ Reinforcement of expectations	❑ Eligible for discharge without eating solids (if tolerating fluids well) ❑ Eligible for discharge without voiding or passing flatus ❑ Acetaminophen & Ibuprofen ❑ PEG OD x 3 days (stop if diarrhea) ❑ Activity as tolerated ❑ Meeting expectations of discharge 2-6 hrs post-op

Results

- Study Period: 2 years
- Total of 336 patients

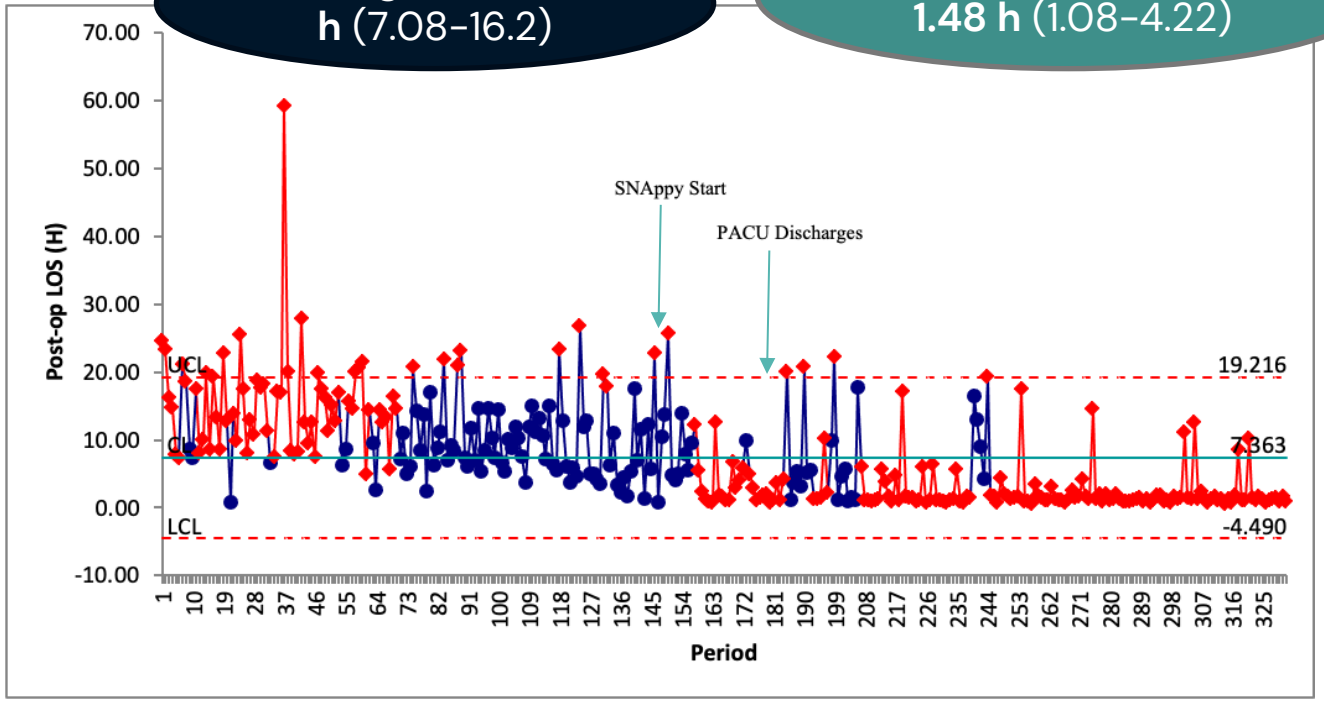
	Pre-SNAppy (n=149)	Post-SNAppy (n=187)	p
Age (y)	9.0 (6–12)	8.0 (6–11)	0.45
Procedure Duration (min)	42 (31–53)	38 (27–52)	0.053
Request to in room	209 (109–339)	170 (104–288)	0.095



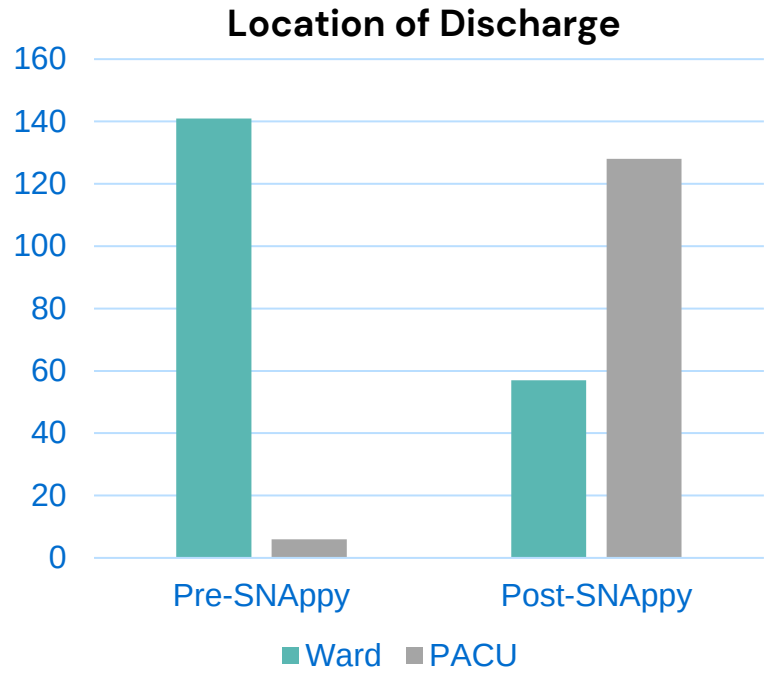
Results

Average LOS: 11.15 h (7.08–16.2)

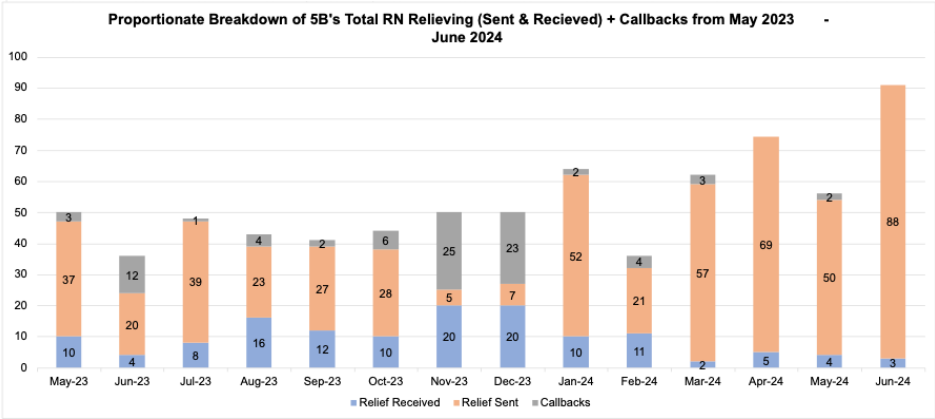
Average LOS: **1.48 h** (1.08–4.22)



Results



	Pre-SNAppy	Post-SNAppy	p
ED Returns	10	17	0.65



SickKids | General & Thoracic Surgery

Choosing Wisely Canada | Children's Healthcare Canada | Santé des enfants Canada

Future Directions

Discharge from PACU in < 2 hours post laparoscopic appendectomy is safe and feasible

-Emphasis on early discharge instructions

The decreased utilization of ward beds:

-Saves money

-Increases capacity for elective procedures

-Decreases staffing demands

Future studies:

-Expansion to other centers

- Utilization of NSQIP for post-op tracking

-Comparison between 1 and 3 port appendectomy

Thank You

Any questions?

You can find me at:

joshua.ramjist@sickkids.ca

Project Leads:
Trey Coffey, MD, FAAP, FRCP(C)
Staff Paediatrician, Associate Chief Medical Officer, Quality and Medical Affairs

Angie Lim, RN, PhD
Clinical Nurse Specialist, Interprofessional Practice

Catheter Associated Urinary Tract Infection

Choosing Wisely Canada
Children's Healthcare Canada | Santé des enfants Canada

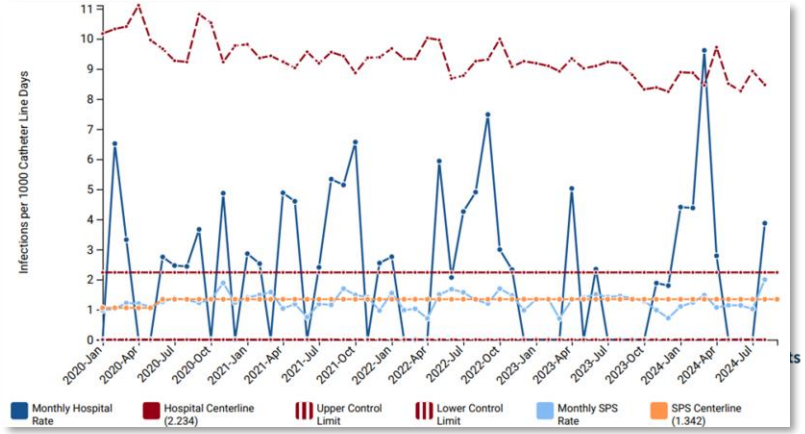
Disclosures

- The presenters have no relevant disclosures.

Background

- In 2016, SickKids launched the **Caring Safely** initiative, which aims to longitudinally measure, address, and ultimately eliminate preventable harm (including 9 Hospital Acquired Harms)

Although CAUTI is one of our less frequent HACs, our rate was nearly twice the rate of our comparators (SPS Network)



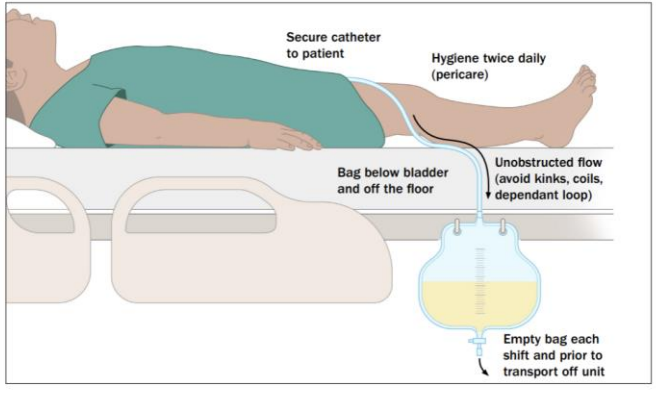
In an observational/QI study, Solutions for Patient Safety reported a > 60% reduction in CAUTI across 128 children's hospitals.

Foster CB, et al. Catheter-Associated Urinary Tract Infection Reduction in a Pediatric Safety Engagement Network. Pediatrics. 2020 Oct;146(4):e20192057.

Harm Prevention Bundle: CAUTI

CAUTI is a urinary tract infection (UTI) when an indwelling urinary catheter was in place within the last 2 calendar days.

Days since last CAUTI: _____ **Bundle adherence:** _____



Maintenance bundle:

- ✓ Maintain closed drainage system
- ✓ Maintain hygiene (twice daily)
  - Pericare with Bath wipes
  - Cleansing of the catheter
- ✓ Keep drainage bag below the level of the bladder at all times
- ✓ Maintain unobstructed flow of urine
  - No kinks or dependant loops
  - Empty bag at minimum every shift and before transport off unit
- ✓ Keep catheter secure
- ✓ Remove catheter when no longer needed
  - Daily discussion of catheter necessity

caringsafely

SickKids

nté
s enfants
nada

Local Observations

- With the introduction of **HAC Risk Rounding** in the critical care areas, catheter utilization was reduced by **30%**

Aim

- Contribute to our CAUTI **reduction target** of **30%** by **reducing urinary catheter utilization** by **20%**

3 Don't keep urinary catheters in place longer than clinically indicated in hospitalized children.

Prolonged use of urinary catheters longer than medically indicated increases the risk of bacterial colonization, leading to catheter-associated urinary tract infections (CAUTIs), a common and potentially serious healthcare-associated infection that can lead to severe complications, such as bloodstream infections, sepsis, and kidney damage. In addition to the patient health risks, CAUTIs are associated with increased healthcare costs, prolonged hospital stays, and a higher likelihood of antibiotic resistance due to the need for antibiotic treatments.

By implementing evidence-based guidelines for CAUTI prevention by the Children's Hospitals' Solutions for Patient Safety, healthcare providers can minimize these risks and improve patient outcomes. Furthermore, reducing the duration of catheter use can also enhance patient comfort and dignity, as urinary catheters can be physically uncomfortable and restrict mobility. This can negatively impact patients' overall well-being and prolong their recovery process. Thus, removing urinary catheters as soon as medically indicated not only prevents the likelihood of developing a CAUTI but also reduces the potential consequences of increased healthcare costs while promoting improved patient care experience by prioritizing patients' comfort and quality of life.

continued on next page

Choosing Wisely Canada

SickKids

Choosing Wisely Canada | Children's Healthcare Canada | Santé des enfants Canada

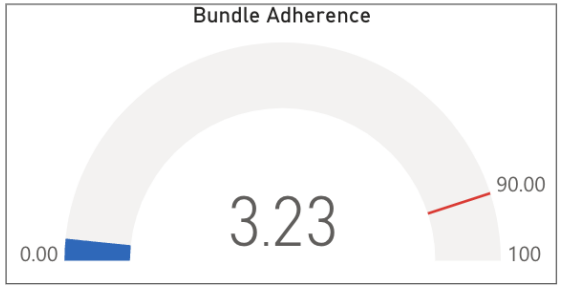
Intervention

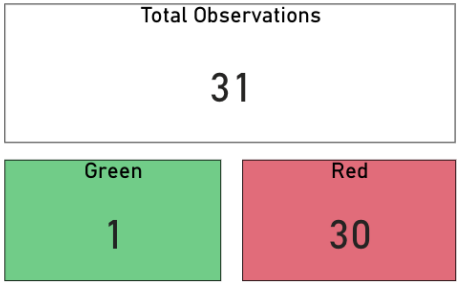
- Under the oversight of a **CAUTI Action Group**, we are using our successful model of **HAC Nursing Practice Observation Leads** (a.k.a. “HAC Auditors”) to regularly discuss catheter care with clinical teams, identifying **coaching opportunities** and **recognizing** and **celebrating success**

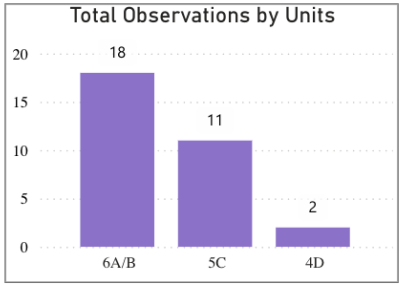
Measures

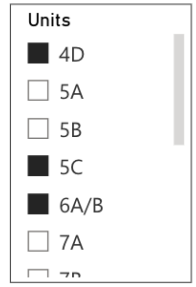
- Hospital-wide CAUTI rate and number (hospital wide and by unit)
- Number of audits/month
- % of audits adhering to bundle and failure modes
- Catheter utilization rate

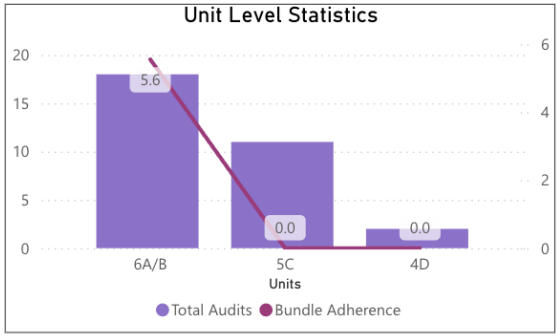
SickKids CAUTI Status Board

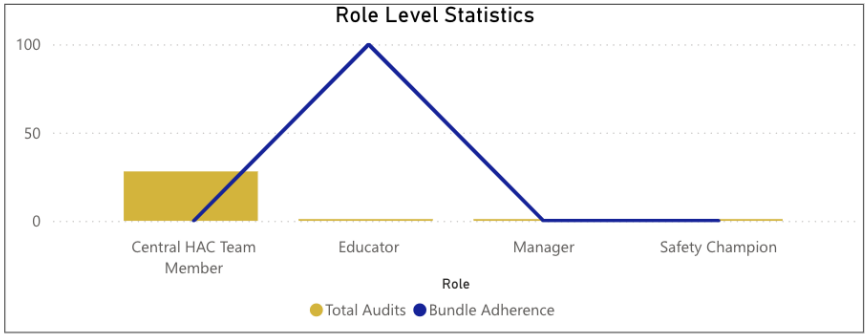


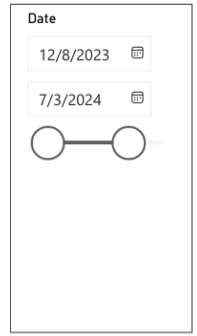












Failure Modes

Maintained A Closed Drainage System	Maintained Hygiene Twice Daily	Drainage Bag Kept Below The Level of The Bladder At All Times	Catheter Secured	Daily Assessment of Catheter Necessity
0	26	4	2	1

Maintained Unobstructed Flow of Urine	Bag Emptied At Least Once Per Shift	Tubing Free of Kinks	Tubing Free of Dependent Loops
20	3	1	19

Results

- Despite common focus on providers as drivers of utilization, we found it may be driven by nursing concern for safety (e.g. skin integrity) and ease of care (e.g. strict I/O)
- It appears teams already are discussing catheter removal daily
- Despite utilization increasing by ~10%, CAUTI outcomes are meeting/exceeding target

Future Directions

- Clinical observations are revealing “low hanging fruit” opportunities for coaching around practice
- Our theory that focusing on utilization would drive improvement has not panned out
- We will remain open to finding opportunities to focus on utilization as the work expands and matures

Thank You

Any questions?

You can find us at:

trey.coffey@sickkids.ca

angie.lim@sickkids.ca

Choosing Wisely Canada

Children's Healthcare Canada | Santé des enfants Canada

Dr. Krista Oei (Endocrinology)
Dr. Carol Lam (Endocrinology)
Dr. Lusia Sepiashvili (DPLM)

Choosing Wisely: Vitamin D

Choosing Wisely Canada
Children's Healthcare Canada | Santé des enfants Canada

Disclosures

- None

Background

- Many children have low Vitamin D levels, but few have symptomatic or severe Vitamin D deficiency
- Adherence to recommended age-based DRI's for Calcium & Vitamin D and increasing safe sun exposure is sufficient for healthy children
- **Routine 25-OH Vitamin D (25OHD) population-based screening in healthy children is not required**

Background

2014 CADTH Rapid Response Reports

- Assessed **clinical effectiveness**, **cost-effectiveness**, and **evidence-based guidelines** associated with vitamin D testing in the general population
- Clinical effectiveness: trend towards no testing for general population but supported testing for those at risk of deficiency
- Cost-effectiveness: no Canadian data; opposing US and UK data on universal supplementation vs. universal testing

Overall: Evidence did not support Vitamin D testing in the general population

Background

Medical societies recommend no routine Vitamin D testing in otherwise healthy children

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™
Section on Endocrinology

Five Things Physicians and Patients Should Question

AAFP / Publications / American Family Physician / Collections / Choosing Wisely / 354

CHOOSING WISELY RECOMMENDATIONS

Avoid ordering Vitamin D concentrations routinely in otherwise healthy children, including children who are overweight or obese.

ADLM Association for Diagnostics & Laboratory Medicine
Formerly AACC

- 25-hydroxyvitamin D should only be ordered for individuals at risk of vitamin D deficiency and not as a population screening test.

Overtesting and overtreatment—statement from the European Academy of Paediatrics (EAP)

EAP Statement | Published: 10 September 2019

Volume 178, pages 1923–1927, (2019) Cite this article

Choosing Wisely Canada
Children's Healthcare Canada | Santé des enfants Canada

Background

Adherence to recommendations is low

- UK Royal Osteoporosis Society recommends against routine vitamin D testing in children without clinical indications
- Children's hospital in UK showed 61% of tests did not fit indications recommended

Davies et al., Arch Dis Child 2023

Background

2016 Choosing Wisely in Alberta on Vitamin D Testing

(Ferrari & Prosser, JAMA Intern Med 2016)

- Intervention: new lab form with new vitamin D testing guideline

  "All medically necessary 25OHD testing will be supported by Alberta Health. Any 25OHD testing that does not meet the testing criteria listed below will be deemed not medically necessary and will not be performed… metabolic bone disease, abnormal blood calcium level, malabsorption syndrome, chronic renal disease, liver disease"

- Outcome: 92% reduction in vitamin D test ordered from Apr – Dec 2015, savings of $4 million USD per year

Background

2018 Choosing Wisely in London, ON on Vitamin D Testing

(Tai et al, BMJ Open Quality 2020)

- Intervention: Computer decision support tool requiring selection of acceptable testing indication for both 25OHD and 1,25 di-OH
- Outcome: 27% decrease in 25OHD monthly test volume from Jan – July 2018, savings of $30,000 CAD per year

Background

- For higher-risk patients where 25OHD testing is indicated, repeat testing is not necessary on a frequent basis
  - When 25OHD is **low**, repeat testing should not be completed until **after 3 months** on vitamin D3 treatment
  - When 25OHD is **normal** and there is no change to vitamin D intake, repeat testing is not indicated until **6–12 months**.

Recommendation

Don’t routinely order vitamin D levels in otherwise healthy children. Vitamin D testing is only indicated for children at risk for osteoporosis, rickets, malabsorption syndromes, renal disease and medications affecting vitamin D metabolism.

Repeat testing is not indicated within three months or less for a patient with previously low results or within six months if previously normal.

Aim

To reduce the rate of inappropriate 25OHD retesting by 20% at SickKids.

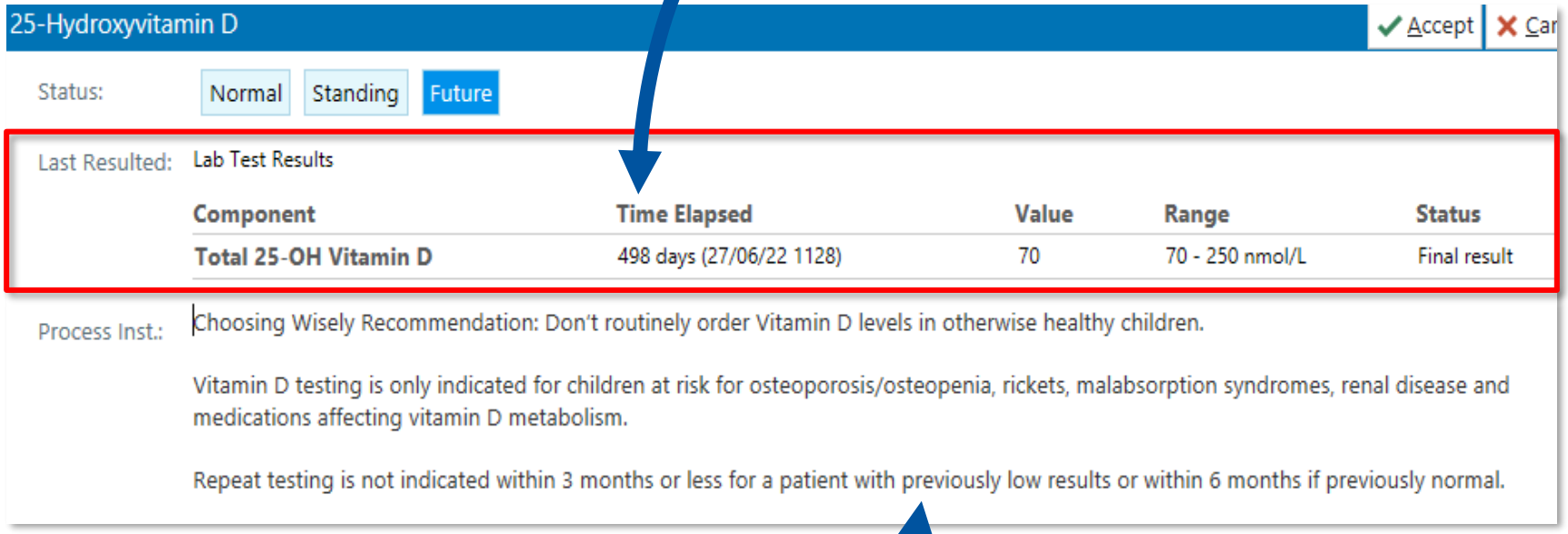
Measures

- **Outcome Measure:**
  Number of occurrences where two or more 25OHD were performed within 3 months

- **Process Measure:**
  Number of 25OHD performed each month

Intervention

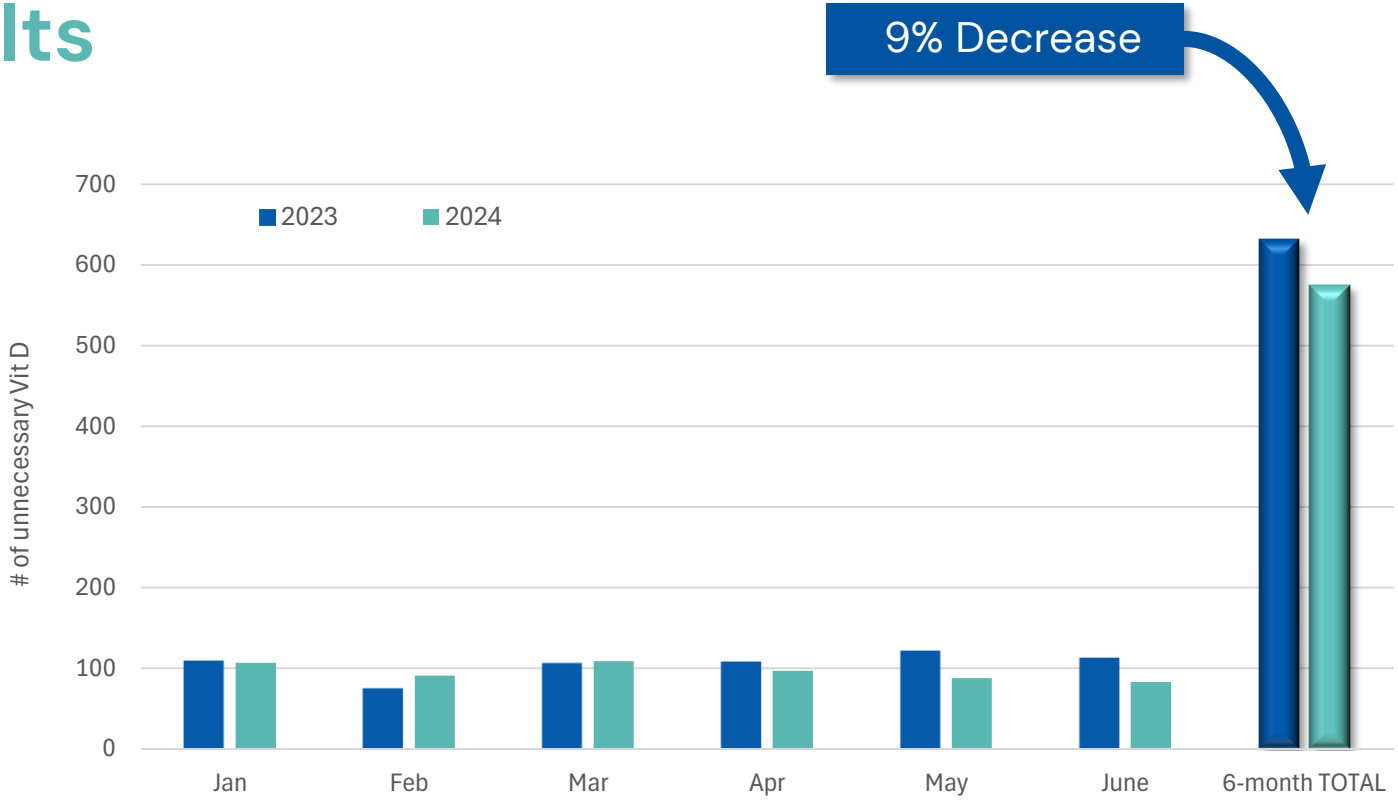
Automated display of result and time elapsed since last 25OHD level in SickKids electronic medical record when provider orders 25OHD



Automated display of Choosing Wisely recommendations in SickKids electronic medical record when provider orders 25OHD

Choosing Wisely Canada | Children's Healthcare Canada | Santé des enfants Canada

Results



Choosing Wisely Canada | Children's Healthcare Canada | Santé des enfants Canada

Future Directions

1. Review of order sets with 25OHD orders
2. Identification of provider groups with frequent 25OHD measurement & provide targeted education
3. Consideration of forced function – providers must specify indication for ordering 25OHD

Thank You

Any questions?

You can find me at:

Krista.oei@sickkids.ca

Choosing Wisely Canada

Children's Healthcare Canada | Santé des enfants Canada