

Winning the QI Race through the Ontario Transfusion Quality Improvement Plan (OTQIP) and Choosing Wisely Canada

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Purpose of Today



1. Provide you with a transfusion QI background as an example with linkages to Choosing Wisely Canada (CWC)
2. Explain how CWC statements translate into a QIP and subsequent action (change)
3. Explore CWC statements for medical laboratory technologists and professionals
4. Start a CWC movement for lab technologists/professionals!





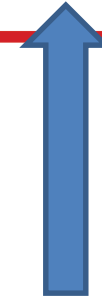
Vision: to be an innovative and valuable
resource for promoting appropriate,
standardized and safe transfusion practices

Values: patient safety, accountability, collaboration,
stakeholders, knowledge transfer

Strategic Directions:

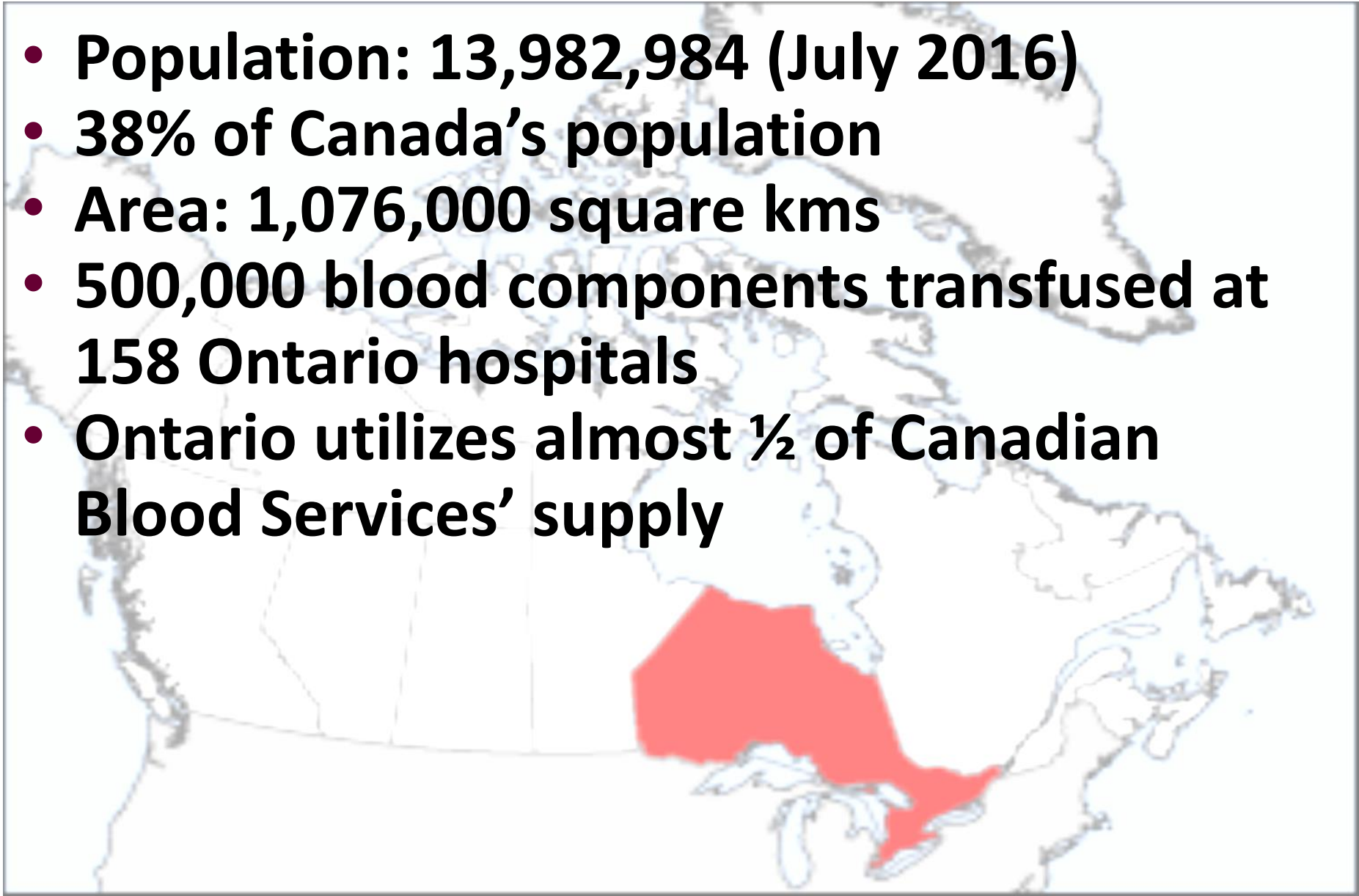
- promote and support utilization improvement activities
- provide educational resources to improve patient safety and
standardize best practices
- promote and support best practices in inventory management
- provide/receive timely and relevant information to/from hospital
stakeholders
- quality and safety

Mission



Ontario: by the Numbers

- **Population: 13,982,984 (July 2016)**
- **38% of Canada's population**
- **Area: 1,076,000 square kms**
- **500,000 blood components transfused at 158 Ontario hospitals**
- **Ontario utilizes almost $\frac{1}{2}$ of Canadian Blood Services' supply**



Objectives

1. Explain the need for a provincial QIP
2. Describe Ontario Transfusion QIP Toolkit including CWC linkage
3. Explain the purpose of the Choosing Wisely Canada (CWC) campaign
4. Describe the format of the CWC statements
5. Develop at least 5 CWC statements for use by technologists (and laboratorians) to improve effectiveness, patient safety and/or efficiency



Transfusion QI Background

- Many restrictive transfusion guidelines and evidence
- E.g. AABB RBC guidelines, critical care societies, hospital medicine societies, American and Canadian hematology societies, Canadian Society for Transfusion Medicine (CSTM)
- Opportunities to collaborate with other health quality organizations
- Create quality opportunity for hospitals: 74/158 are interested (2016)



MORE IS **NOT** ALWAYS **BETTER**



The same is true for medical tests and treatments. Talk with your health care provider about what you need, and what you don't. To learn more, visit www.choosingwisely.ca

**Choosing
Wisely
Canada**



Which CW Statements Applied?

From CSTM-

1. Don't transfuse if other non-transfusion therapies or observation would be just as effective
2. Don't transfuse more than 1 RBC at a time (non-bleeding, stable patients)

From CHS-

5. Don't transfuse patients based solely on an arbitrary Hb threshold

From CCCS-

5. Don't routinely transfuse RBCs in hemodynamically stable ICU patients with a Hb > 70



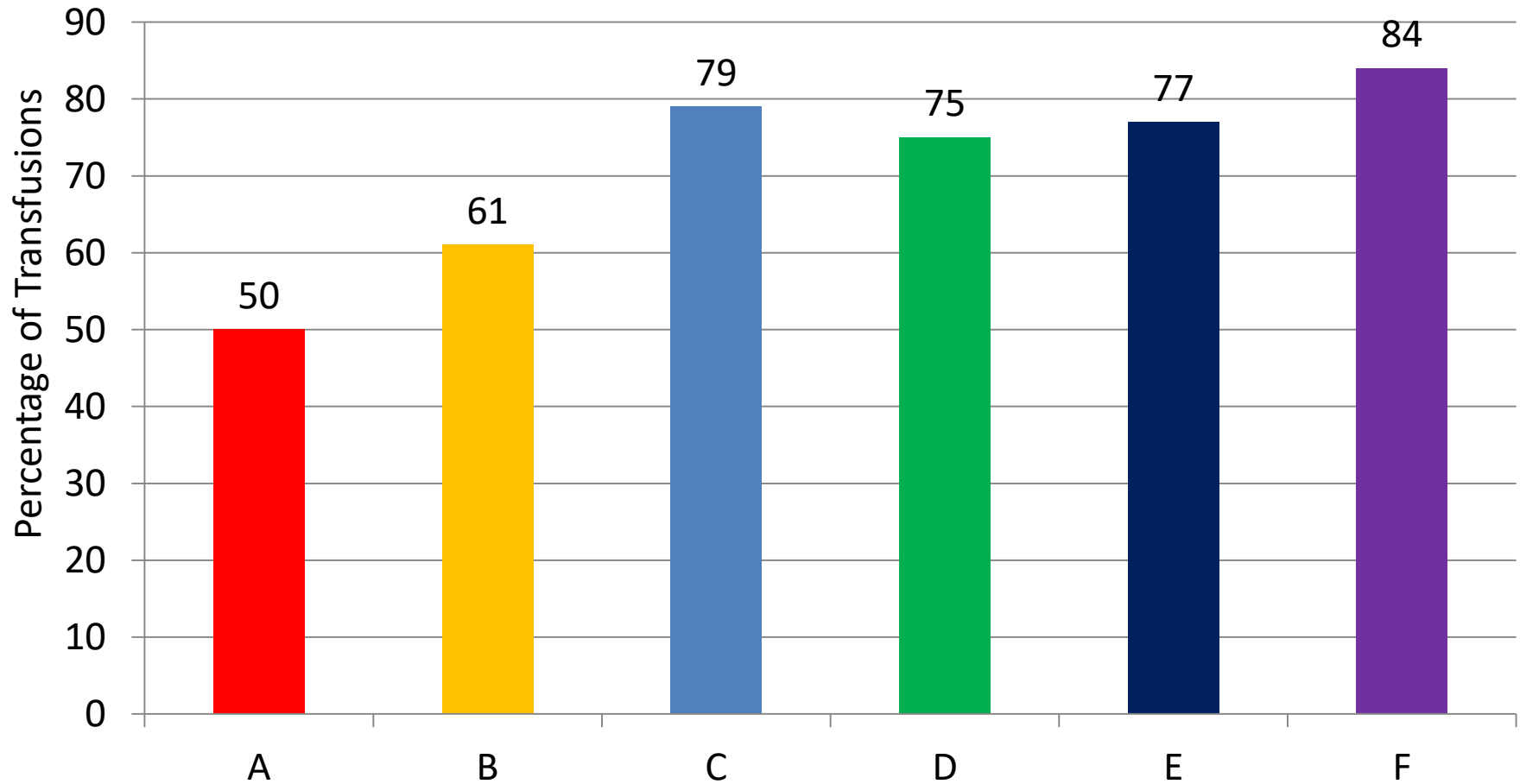
So Why QI in Transfusion?

- ORBCoN RBC audit in 2013:
 - Low single unit RBC transfusion orders
 - Low compliance with Hb trigger of 80 g/L
- Anecdotal evidence hospital site visits 2014/15:
 - Inconsistent adoption of transfusion guidelines and order sets
 - Sporadically enforced
 - Little prospective screening/medical back up
- ORBCoN survey in 2016: room for improvement



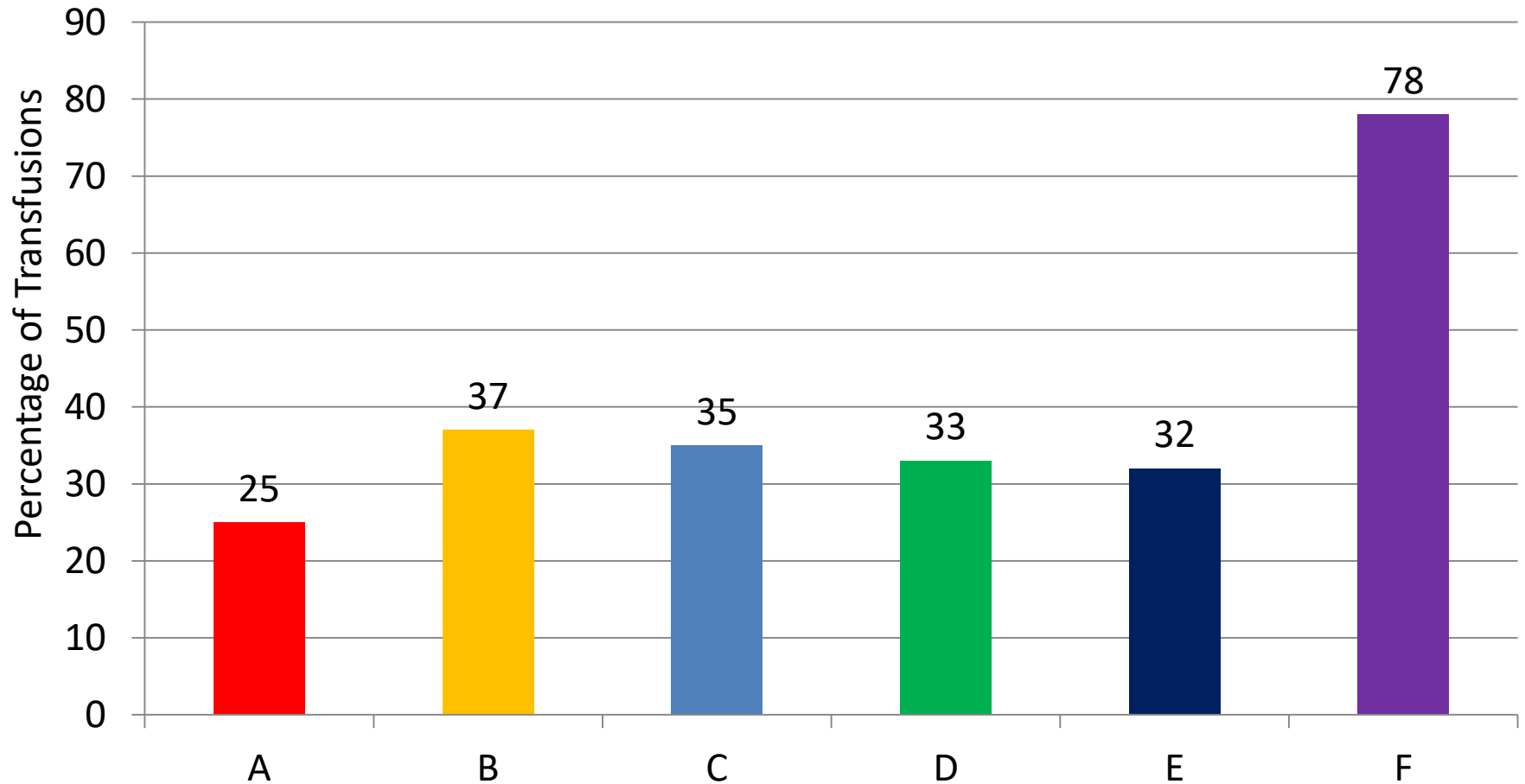
Pre-transfusion Hb < 80 g/L

(excluding outpatients 20-25%)



Percent Single Unit Transfusions

(excluding outpatients 20-25%)



What did we Do?

2014

- Hosted Quality Focus Day-fact finding
- Established OTQIP Committee
- RBC identified as first quality indicator

2015

- Started toolkit based on Health Quality Ontario (HQO) model
- Contains 5 year QIP
- Worked in collaboration with CWC



What did we Do?

2016

- Refined OTQIP: provincial and hospital versions
- Sought further collaboration and promotion
- Hospital communication
- Launched OTQIP

2017

- Developed e-tracker tool, dissemination

2018

- User guide, e-tracker metrics, collaboration



Start “Simple” before Tackling the Complex



Contents of the OTQIP Toolkit

- Plan narrative
- Spreadsheet outlining plan
- Adult transfusion clinical practice recommendations & order sets
- MLT prospective screening learning tool and SOPs
- RN/MD information page
- Baseline data collection & on-going measurement via an E-tracker tool



<http://transfusionontario.org/en/documents/?cat=quality-improvement-plan>



WHY GIVE TWO WHEN ONE WILL DO?

**Help reduce unnecessary red blood cell
transfusions in our hospital**



Narrative: Explanation to Patients & Families

Institution Transfusion Quality Improvement Plan Narrative Template (Red Blood Cells)

Overview

Blood transfusion can save lives, but every transfusion carries risks. Some complications of transfusion are not very serious, such as mild fever and mild allergic reactions (hives). Others may be life-threatening, such as lung damage or heart failure.

The Quality Improvement Plan for blood transfusion will help us to measure how well we are using blood for our patients, and show us where we can improve. It requires a team approach, including the doctors and nurse practitioners who order the blood, the laboratory staff who prepare it for transfusion, the nurses who transfuse it, and the patients who receive it.



Template

Institution Transfusion QIP Template 2016-2021 (23 March 2016 v1)

AIM			MEASURE				CHANGE			
Quality Dimension	Objective 2016/17	Rationale	Measure/Indicator	Current Performance	Target (state if multi-year)	Target Justification	Initiative #	Planned Improvement	Methods and Process Measures	Goal for Change Ideas
Effectiveness	Reduce unnecessary harm by improving appropriate RBC transfusions	1. Patient receives evidence-based care 2. Applicable to all hospitals 3. There is evidence (practice guidelines) 4. There is a performance gap 5. Aligned with HQO and CWC 6. Effective transfusion care will support all dimensions of quality	Percent of all patient RBC transfusions occurring when Hb less than 80g/L		80% over 4-5 years 2016/17: establish baseline (BL) 2017/18: BL + 10% 2018/19: BL + 20% 2019/20: Continued/sustained improvement 2020/21: Continued improvement	1. Matching best performance 2. 100% target unrealistic due to critical patients	1	Implement ORBCoN's Clinical Practice Recommendations that are consistent with Ministry endorsed, evidenced based RBC transfusion guidelines 2016	Hospital MAC/TC adoption of Recommendations. Recommendations available to clinicians 2016/17	Recommendations passed by MAC/TC. 80% of physicians and nurses can locate guidelines YRS: 2016/17
			Percent of all patient single unit (at a time) transfusions		80% over 4-5 years 2016/17: establish baseline (BL) 2017/18: BL + 10% 2018/19: BL+ 20% 2019/20: Continued or sustained improvement	1. Matching best performance 2. 100% target unrealistic due to critical patients	2	Implement ORBCoN's standard RBC transfusion order sets 2016/17	RBC transfusion order sets adopted by MAC/TC and implemented 2016/17	80% of RBC transfusion orders use the order set YRS: 2016/17
							3	Utilize ORBCoN's toolkit including prospective screening of RBC transfusion orders by MLTs 2016/17	Implement prospective RBC screening by MLTs 2017/18	80% of RBC transfusion orders are screened by MLTs YRS: 2018/19



Recommendations

Clinical Setting	Recommendation and dose
Hb less than 60 g/L	Transfusion likely appropriate*. Transfuse 1 unit and re-check patient symptoms and Hb before giving second unit.
Hb less than 70 g/L	Consider transfusion. Transfuse 1 unit and recheck patient symptoms and Hb before giving second unit.
Hb less than 80 g/L	Consider transfusion in patients with pre-existing cardiovascular disease or evidence of impaired tissue oxygenation. Transfuse 1 unit and recheck patient symptoms and Hb before giving second unit.
Hb 80 to 90 g/L	Likely inappropriate unless evidence of impaired tissue oxygenation.
Hb greater than 90 g/L	Likely inappropriate. If transfusion is ordered clearly document indication in patient's chart and discuss reason with patient.
Bleeding patient	<ul style="list-style-type: none"> • Maintain Hb greater than 70 g/L • If pre-existing cardiovascular disease – maintain Hb greater than 80g/L



Order Set

Admitting Diagnosis: _____

☐ informed consent completed as per institutional guidelines

Date of transfusion: ☐ today ☐ other (DD/MM/YYYY) _____ ☐ STAT (call blood bank at XXXXX)

Pre-transfusion laboratory tests ☐ group and screen

Previous transfusion within 3 months ☐ yes ☐ no **Previous pregnancy within 3 months** ☐ yes ☐ no

Previous transplant ☐ yes ☐ no

☐ if no existing IV initiate IV 0.9% NaCl to keep vein open

☐ discontinue peripheral IV after transfusion complete

Pre-transfusion medications

☐ furosemide _____ mg po prior to transfusion or _____ mg IV prior to transfusion

☐ _____

☐ irradiated product required as per hospital guidelines , specify reason:

☐ specially matched product required as per hospital guidelines , specify reason:

Red Blood Cells

Pre-transfusion Hb: _____ g/L

Indication: ☐ low Hb ☐ significant bleeding ☐ symptomatic ☐ other

☐ Transfuse 1 unit, over _____ hours (e.g. 1 unit over 2-3 hours, maximum 4 hrs)

☐ Transfuse _____ units, each over _____ hours

Note Consider IV iron instead of red blood cells for patients with stable iron deficiency anemia



Ontario Transfusion Quality Improvement Plan

Prospective Transfusion Order Screening

What, Why, Who and How?

Rewind



<http://transfusionontario.org/en/download/prospective-transfusion-order-screening/>

Screening Orders for Red Cell Transfusion: Information for Physicians, Nurses, and Transfusion Medicine Laboratory Technologists

Starting on _____, red blood cell (RBC) orders for selected patients will be screened by the transfusion medicine (TM) laboratory technologists (non-urgent requests only). This process is similar to the screening of orders by pharmacy and diagnostic imaging. The laboratory technologists will follow an algorithm which incorporates pre-transfusion hemoglobin level, the patient's clinical history, and signs and symptoms. If an order appears to be outside of institution guidelines, the ordering physician may be contacted to discuss the order. The institution guidelines are available at _____.

Significant signs and symptoms of anemia include: heart rate >100 bpm, systolic blood pressure <90 mmHg, presyncope, syncope, dizziness upon walking/standing, chest pain, dyspnea, ST segment changes on ECG, and positive troponin. Fatigue, pallor, or decreased exercise tolerance alone are not considered to be symptoms of anemia requiring immediate transfusion therapy. Transfusion is not the recommended treatment for iron deficiency anemia, as it exposes the patient to the risks of RBC transfusion in the face of alternative treatments (oral or intravenous iron).

For Physicians: The screening process is not intended to question or cancel non-urgent orders, but to clarify the reason for the transfusion, and to discuss the rationale for a transfusion which appears to be outside of institution guidelines.

RBC QIP e-Tracker Tool

Home > QIP Tracker Tools

QIP Tracker Tools

RBC Quality Improvement Tracker Tool



Data for All Patients (10 Hospitals)

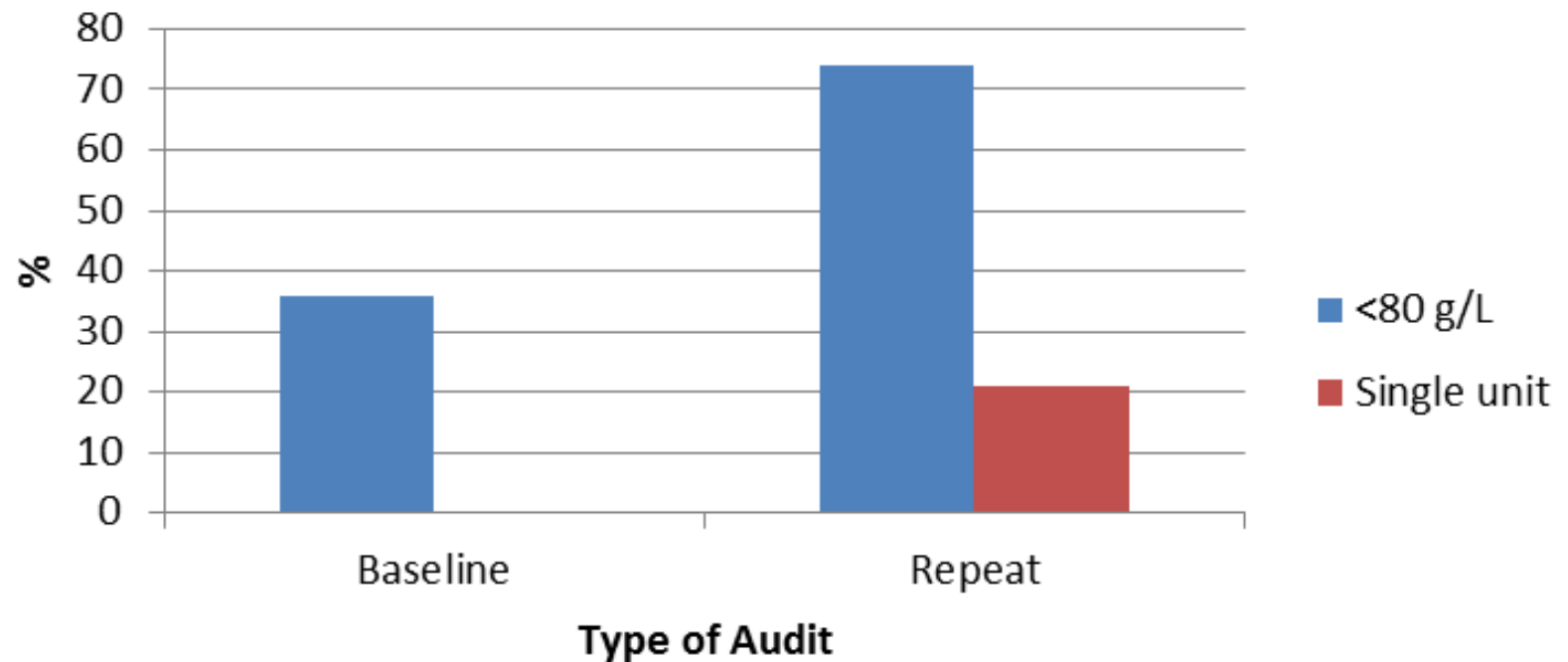
SUMMARY BY AUDIT TYPE FOR ALL PATIENTS

ITEM	BASELINE AUDIT TOTAL (#)	BASELINE AUDIT AVERAGE (%)	REPEAT AUDIT TOTAL (#)	REPEAT AUDIT AVERAGE (%)
Total number of RBC transfusions during audit period	369	--	397	--
Total number of consecutive transfusions audited (minus exclusions)	349	--	397	--
Total number of transfusions with a pre-transfusion Hb	223	60.4	397	100.0
Total number of transfusions with pre-transfusion Hb <80	166	45.0	336	84.6
Total number of single unit transfusions	61	16.5	188	47.4



E-tracker Results from 2018 (18 hospitals)

Percentage of Audits at 80% or above (QIP target)



Successes

- Engagement of senior and quality leadership at some hospitals
- Positive hospital feedback & “stories”
- Community hospitals with little in house medical transfusion expertise are still making quality in-roads
- Leveraging partnerships: HQO, LHINs (regional health networks), CSTM, CWC
- Interest from other provinces, CWC, HQO



Challenges

- Lack of medical support at some hospitals
- E-tool tracker uptake has been slow
- Raise the profile of transfusion medicine
- Keeping the momentum going in hospitals (many competing priorities)



Hospitals' Keys to Success

- Motivated TM technologists willing to screen
- Back up from Charge Tech and TM Med Director
- Back up from highly engaged TC Chair (ICU MD)
- MDs receptive to changing practice with gentle reminders, especially when receiving direct calls
- MD feedback letters (email) and follow up
- Administration willing to support TM initiatives



Acknowledgements

OTQIP Committee

Yulia Lin, MD, Chair
Denise Evanovitch,
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Donna Berta, RN
Chris Campbell, MLT
Craig Ivany, CEO
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Robert Romans, CBS
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Technologist Screening WG

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Sandra Bakker, MLT
Krista Walters, MLT
Tracy Cameron, MLT

Questions?



Let's Switch Gears to CWC Focus...





Choosing Wisely Background

- Global movement that began in US in 2012
- Launched in Canada in 2014 by small team from U of T, CMA and St. Michael's hospital
- Initial focus on physicians and patients and discussions about unnecessary tests, treatment and procedures
- Now spans 20 countries across 5 continents



Dr. Mike Evans: The Whiteboard Doctor

Is more better?

<https://www.youtube.com/watch?v=8c7qTsVVxXw>

CWC Background

- 30% of tests, treatments and procedures unnecessary in Canada
- Why don't things change?

Drivers:

1. Practice difficult to change, even with new evidence

4. Outdated decision support system encourage over ordering

2. Patients and families may want tests, procedures

5. Defensive medicine and fear of malpractice

3. Lack of time for shared decision making

6. Physician payment systems reward doing more, not less

What is CWC?

- Initially a campaign to help MDs and patients have conversations about unnecessary care
- “Things clinicians and patients should question”
- 5 elements:

1. Engaging physicians with patients about overuse	4. Public dialogue about more is not better
2. Empowering patients to make informed choices	5. Engaging health system and non-medical stakeholders at all levels
3. Cultivating responsible stewardship of resources	

Choosing Wisely Core Principles

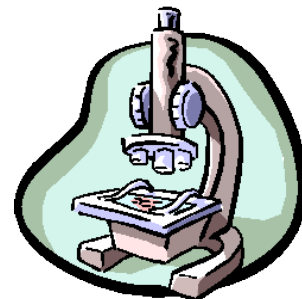
1. Patient-Focused (involve them)
2. Clinician/Health Care-Led (not administrators)
3. Multi-Professional
4. Evidence-Based
5. Openness (with patients and health care professionals)
6. Executive-Supported (in words and actions)



Which Non-MD are Involved with CWC?

1. Canadian Nurses Association
2. Nurse Practitioner Association of Canada
3. Canadian Association of Medical Radiation Technologists
4. Canadian Chiropractic Association
5. Canadian Pharmacists Association
6. Canadian Society of Respiratory Therapists

Let's get Technologists and the lab on the list!



What do CWC Statements Look Like?

From internal medicine: don't order repeated CBC and chemistry testing in the face of clinical and lab stability

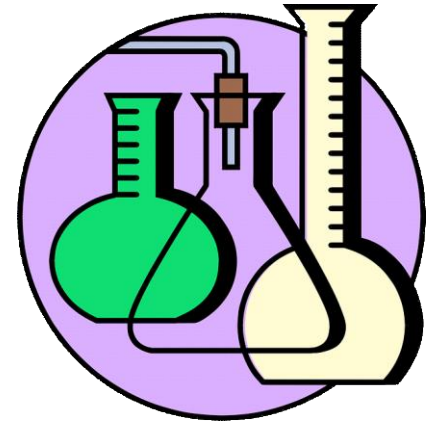
From family medicine: don't do annual screening blood tests unless directly indicated by the risk profile of the patient **AND** don't routinely measure vitamin D in low risk patients

From endocrinology: don't use free T4 or T3 to screen for hypothyroidism or to monitor in patients with known primary hypothyroidism

From anesthesiology: don't order baseline laboratory studies (CBC, coagulation, biochemistry) for low risk, non-cardiac surgical patients

What are Overused/Poor Practice Issues the Lab Identifies?

- Patient identification
- Wrong tests ordered
- Unnecessary tests ordered
- Follow up tests not ordered
- Poor sample quality
- Incorrect specimen or specimen container
- Overuse of “STAT”
- Antibiotic stewardship
- Others?



Small Group Work: 15 mins

- Identify QI opportunities: improve patient care, effectiveness, efficiency or reduce overuse
- Are they likely to be backed up by evidence?
- How would we engage patients?
- Phrase in CWC language, beginning with DON'T
- Phrases can refer to general hospital /laboratory processes, or specific laboratory discipline (e.g. genetics, biochemistry, transfusion)
- Present back to large group for discussion



Large Group Discussion Takeaways

- Any similarities?
- Any differences?
- Any collaboration with other groups?
- Consensus on top 5-10 statements?
- Any other ideas?

Next Steps

1. Keep momentum going back in your lab/hospital/organization. “Talk it up!”
2. Email me at evanovd@mcmaster.ca if you are interested in joining a laboratory CWC WG to refine these statements and assist in sourcing supporting evidence
3. CSMLS is also starting this journey: CWC statement research
4. Engaging patients and interprofessional collaboration
5. Will submit an article to CJMLS about this process and our final statements
6. Submission to CWC for posting statements
7. WG: will need to review and update statements. Possible additions too

Further Thoughts/Questions?

