The role of the Transfusion Practitioner at BC Children's & Women's Hospitals

Disclosures

I have no disclosures

Learning Objectives

At the end of the presentation, attendees will:

- identify at least three similarities & differences between the Transfusion Practitioner role in UK & British Columbia
- list three key activities of the C & W

Vector Stock/4123778

https://www.worldatlas.com/r/w768/webimage/countrys/namerica/province/lgcolor/bccolor.gif

Outline

Brief:

- Geography lesson
- Overview of the Canadian Blood System
- Overview of Children’s & Women’s Hospitals (C&W)

Discuss six key TP activities at C&W

- Rank compliance with standards
- Share lessons learnt or insights

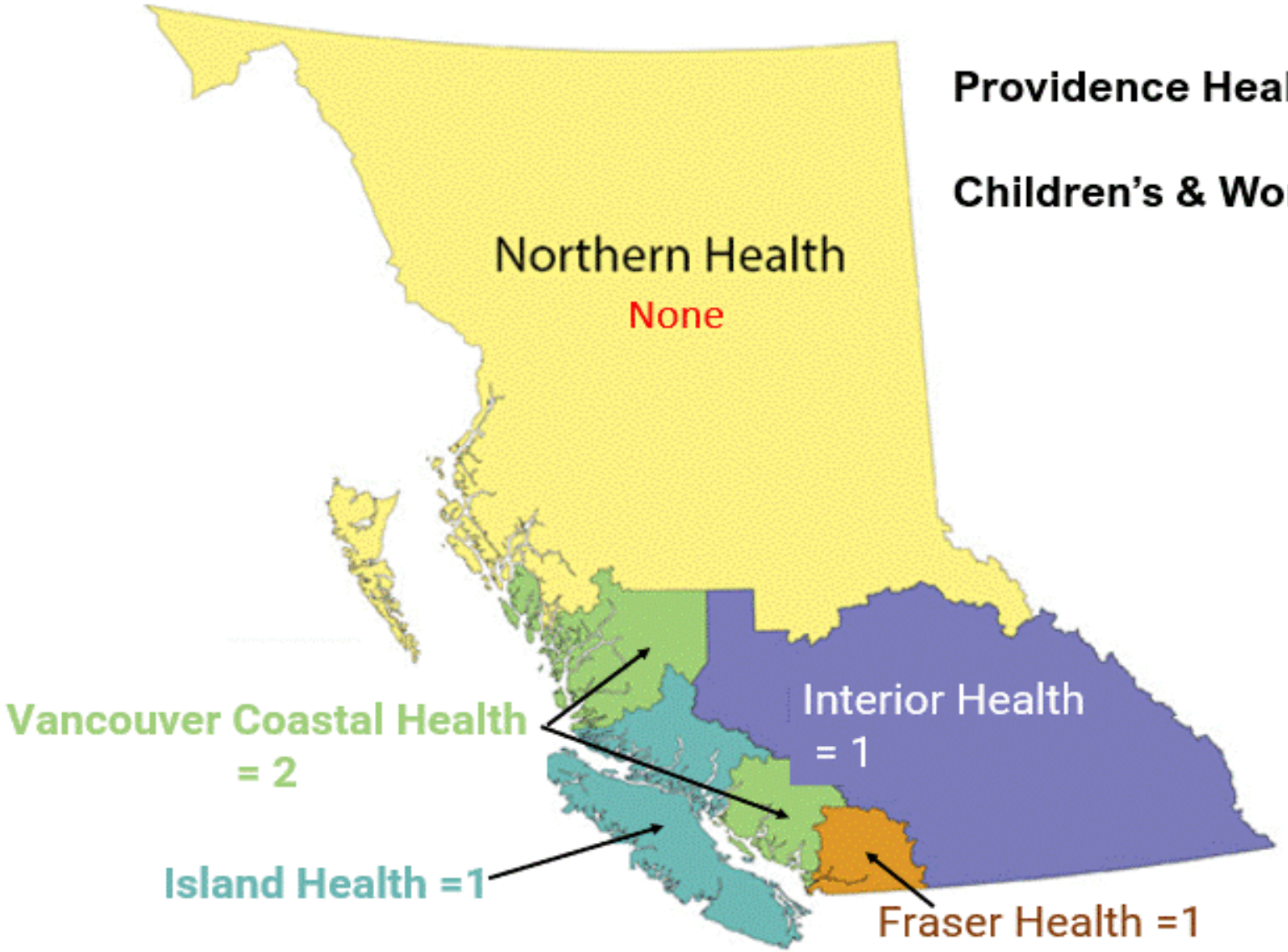
The value of membership of Professional Organisations

https://www.guideoftheworld.com/wp-content/uploads/map/canada_map_with_provinces.jpg

BC is very big; it is larger than the UK and Ireland

https://www.bcrobyn.com/2012/12/how-big-is-british-columbia/

Number of TPs per BC Health Authority



Providence Health =1 part-time

Children's & Women's Hospitals = 1

https://th.bing.com/th/id/

Canadian Blood System

- Two suppliers
  - **Canadian Blood Services (CBS)**
  - Hema Quebec
- Voluntary unpaid donors; however, some plasma protein products are sourced in the USA (paid donors)
- CBS supply
  - Blood components (components)
  - Plasma Protein Products (products)

Governance

- Health Canada Regulations
- Standards

BC Children's

Children's Hospital beds:

- 231 single rooms
- PICU 28 beds
- 87 outpatient beds

BC Women's

Women's Hospital has 106 beds

NICU has 70 beds & is part of Women's Hospital.

Bing.com


High-risk L&D & NICU next to TML on level 2 of TACC Acute Care
Canadian Blood Services
Clinical Support Building
BC Children's Hospital Research Institute
Underground Parking
Ambulatory Care Building
TACC Acute Care
BC Children's Hospital
1982 Building
TML
BC Women's Hospital
Shaughnessy Building
Human Resources
Plant Services
Healthy Minds Centre
Brock Fahrni
Ronald McDonald House
Djavad Mowafaghian Child Care
Willow St.
55
97
26
18
20
21
53
17
42
51
67
73
76
59
35
11
5
77
81
83
85
87
99
93
98

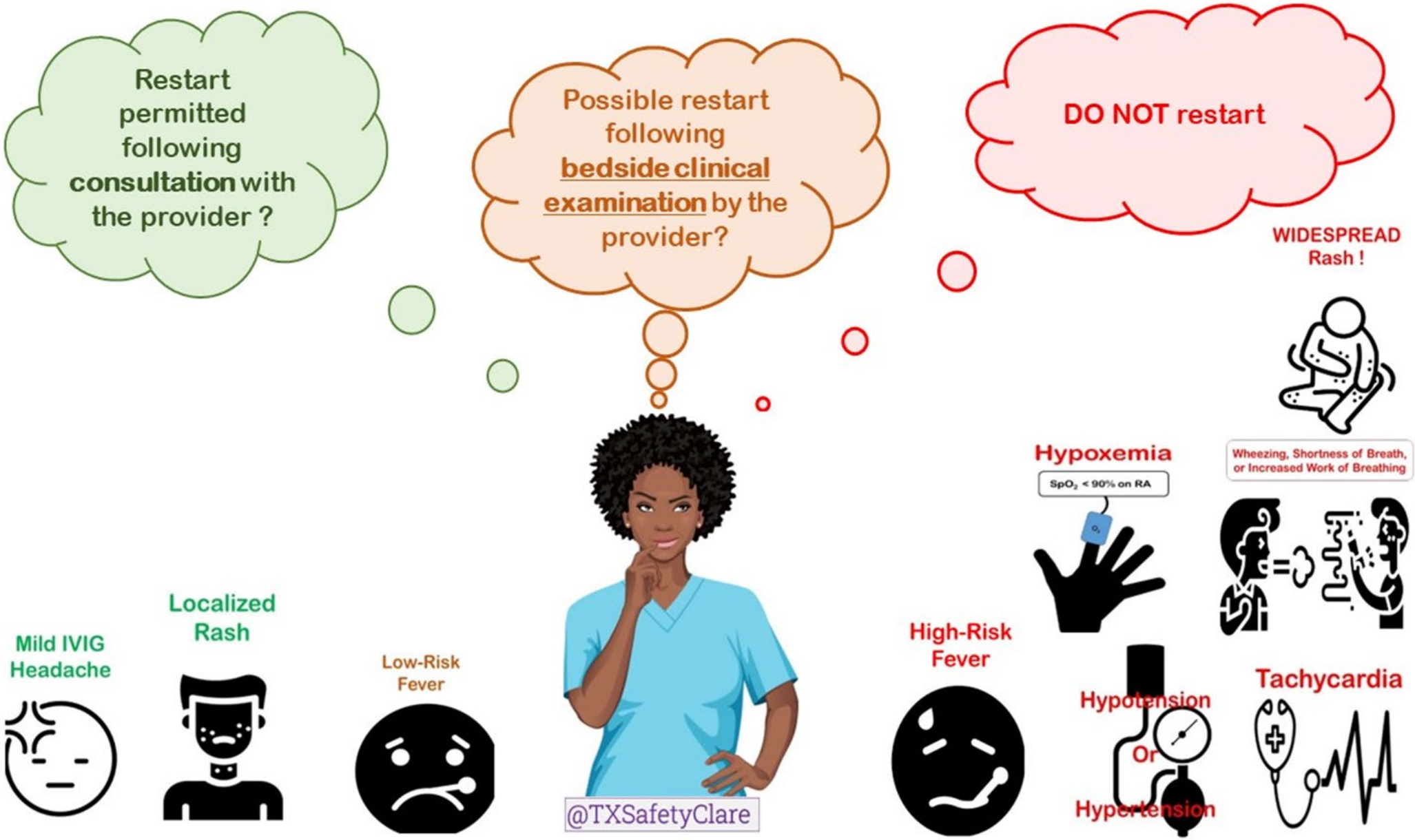
C&W Transfusion Medicine Lab (TML)

- TML **issue** both **components & products**
- **Irradiate** RBCs & platelets on site
- Prepare syringe & mini bag **aliquots**
- Prepare “**plasma-removed saline-replaced**” platelets
- Prepare “**concentrated RBC**” for **Intra-Uterine transfusions**
- **Reconstitute whole blood** for **Neonatal Exchange Transfusions**
- **Reconstitute factor concentrates** & other products before issue

Bridge the gap between Transfusion Medicine Lab & Clinical Environment

I am a TP of course I follow SOPs when making fake-blood bags

Haemovigilance



Haemovigilance

Two separate systems

- **T**ransfusion **T**ransmitted **I**njury **S**urveillance **S**ystem (TTISS)
- **T**ransfusion **E**rror **S**urveillance **S**ystem (TESS)

Managed by the Public Health Agency of Canada (PHAC)

TTISS

- Report **all reactions to components & plasma products** to the BC Provincial Blood Coordinating Office (PBCO)
  - PBCO collate information & submit data to PHAC
  - Minor allergic & FNHTR are not submitted to PHAC

- **Health Canada:** Death related to a transfusion of blood components

In addition

Report **severe reactions to components** to CBS:

- Severe allergic / Anaphylactic
- TRALI (separate form)
- Bacterial Contamination

Report **severe reactions to plasma products** to:

- Vigilance Canada (separate form)
- Manufacturer (process for each company)

My role in Haemovigilance

Investigate

- **Liaise** between clinical unit, lab, & haematopathologist
- **Perform** a chart review
- **Collate** relevant information
- **Report** to relevant agency
- **Manage** future transfusions
- **Education**

How are we doing ?	Compliant with standards ☺

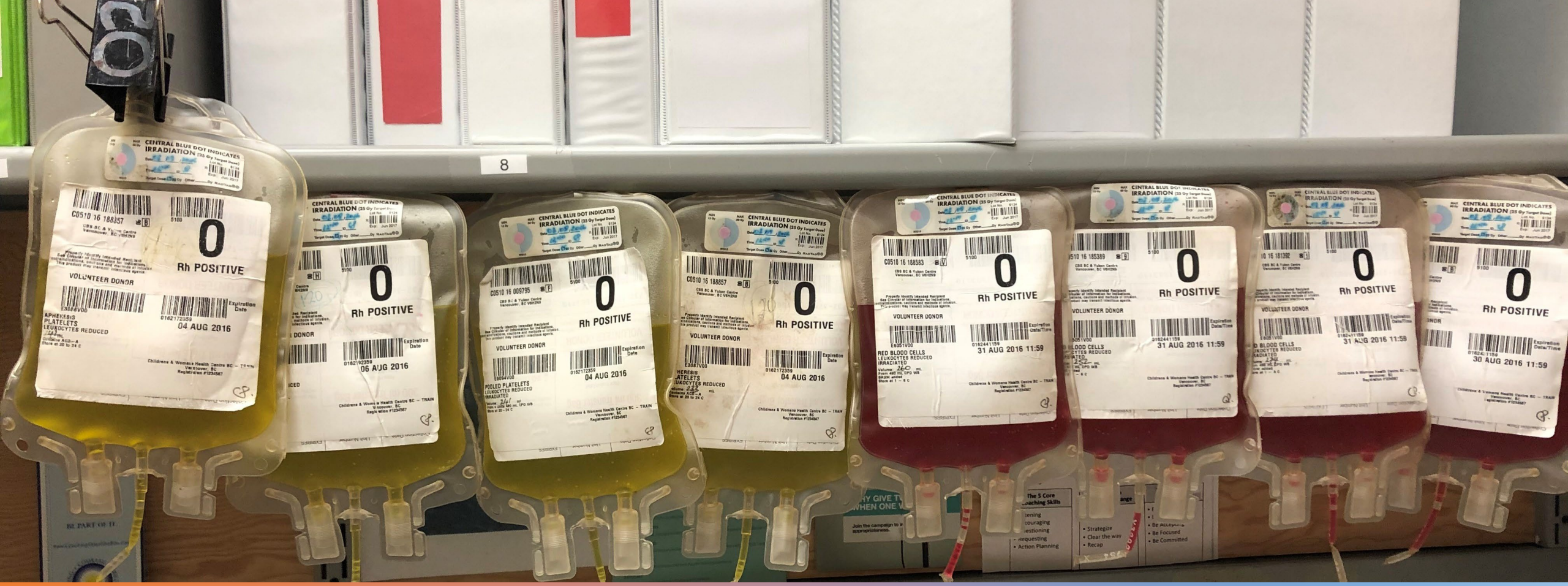
Deliverables

2013 to 2023	
Suspected Reactions Investigated	1351
Not a Transfusion Reaction	219
Reported to Provincial Blood Coordinating Office	1132
Additional Reporting Components	
Canadian Blood Services	23
Health Canada	0
Additional Reporting Plasma Protein Products	
Vigilance Canada & Manufacturer	11

Don’t use two, when one will do !

Fever is defined as a TEMPORAL temperature of 38.5ºC, or higher, AND a one degree or more rise in temperature above the pre-transfusion baseline. (24)

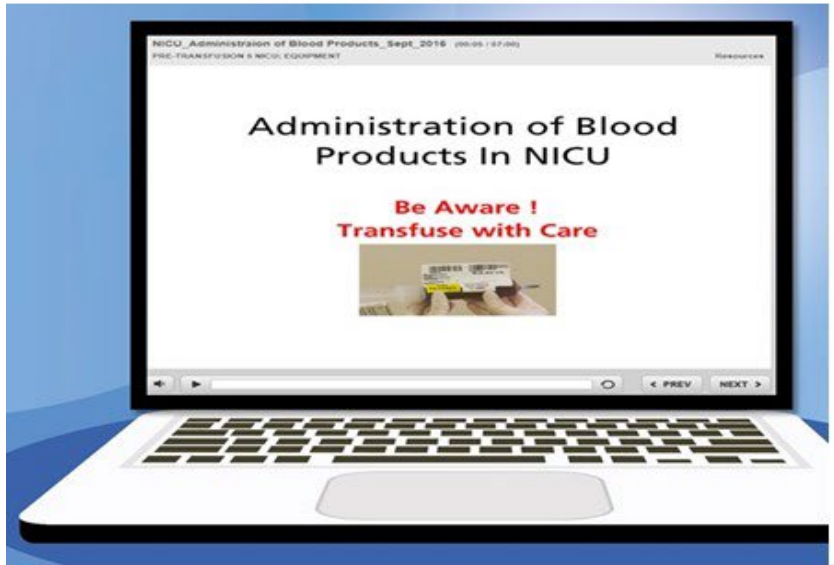
TEMPORAL temperature of 38.5ºC, or higher, AND a one degree or more rise above the baseline. (15)

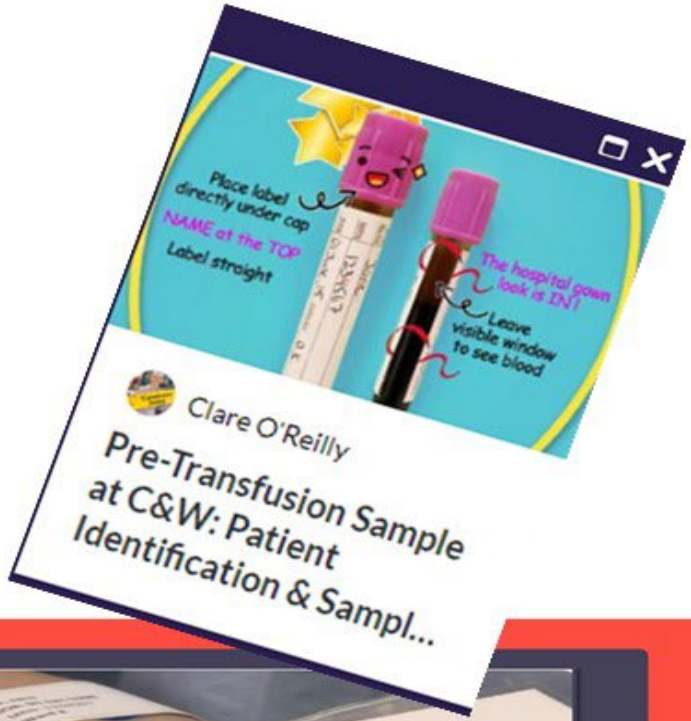


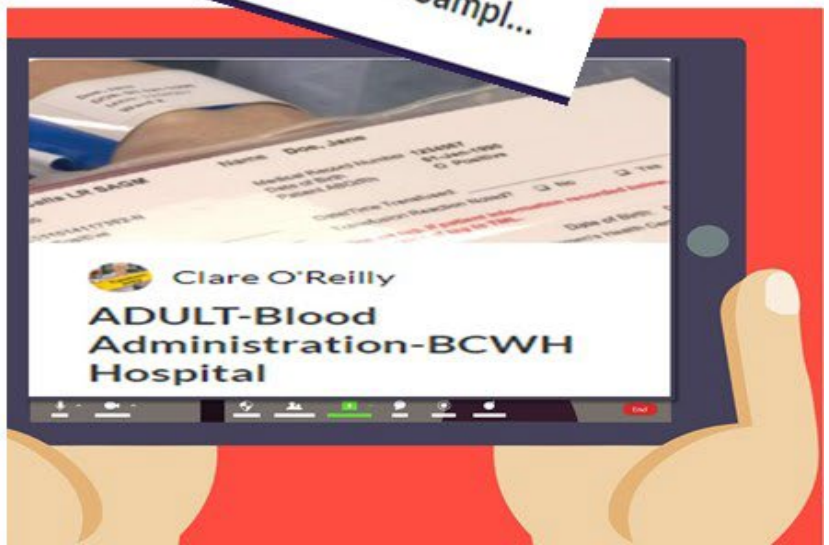
I am a TP of course I hang fake-blood bags in my office to dry

Education


Clare O'Reilly
Blood Administration
BC Children's Hospital


Administration of Blood
Products In NICU
Be Aware !
Transfuse with Care


Place label directly under cap
NAME at the TOP
Label straight
The hospital gown look is IN!
Leave visible window to see blood
Clare O'Reilly
Pre-Transfusion Sample at C&W: Patient Identification & Sampl...


Clare O'Reilly
ADULT-Blood Administration-BCWH Hospital

Current & Future

Ongoing education:

- Online education modules
- Skills days
- Unit specific education days
- Edu-Quicks (practice change)
- Simulations
- **Ad-hoc “at the elbow help”**

How are we doing?

Compliant with standards.

Future:

- Boot camp for nurse educators & clinical resource nurses

Deliverables - Education Modules

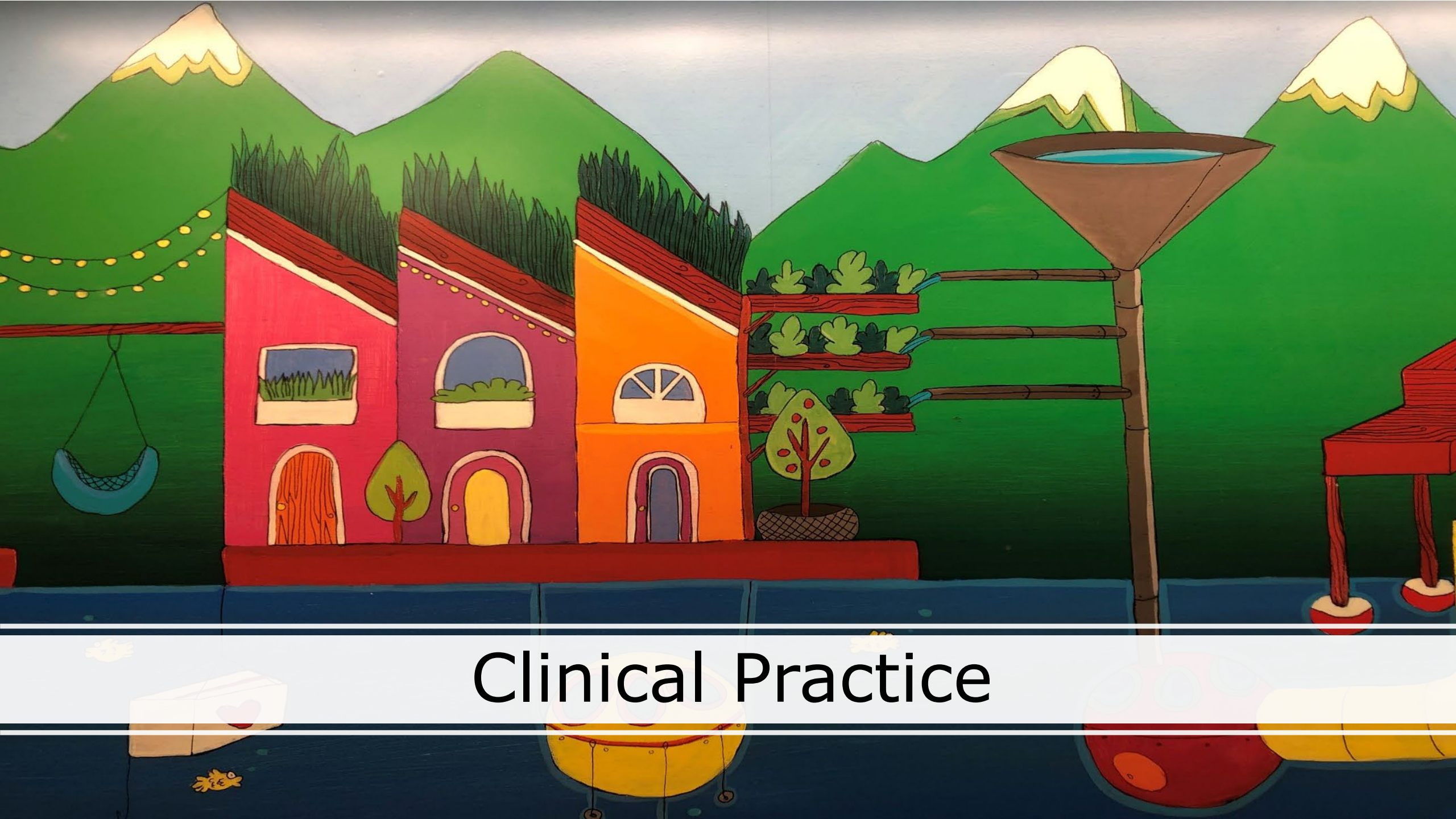
Module	Completions
Neonatal Blood Administration	159
Paediatric Blood Administration	535
Adult Blood Administration	230
Pre-Transfusion Sample Collection	808
Transport of Blood for Porters	33
Daily Temperature Reading-Satellite Fridge	87
Satellite Fridge use	105
How to pack blood box	73
Totals	2030

Education Modules - Lessons Learnt

High-quality & engaging education demands:

- **Support** from leadership
- **Financial investment** in:
  - Software
  - human hours to develop, promote & sustain
- A **team approach** with **collaboration** between laboratory, practice leads & educators
- **Compliance** is achieved by **respecting learners**
  - giving them control over learning
  - an opportunity to share feedback

I am a TP of course I carry fake-blood in picnic basket



Clinical Practice

Transfusion-Practice Manual

Work involved for all documents:

- Seek input & collate feedback from stakeholders
- Ensure content aligns with national & international guidelines & recommendations
- Revise three yearly schedule
- Archive appropriately

Collaborate with:

- Medical Director
- Nursing Practice Leads
- Educators for all units
- Informatics team

Coordinate:

- Uploading documents to intranet
- Informing staff

Deliverables

Document	Number
Consent	4
Transfusion Practice Standards	1
Pre-Transfusion Sample Collection	1
Administration of Blood Procedures	11
Administration of Blood Reference Guides	2
IVIG Rate Tables	10
Fact Sheets–Blood Basic Reference Guides	22+
Transport of Blood Reference Guides	2
Transfusion Reaction Management	5
Satellite Fridge Standard Work	7
Patient Pamphlets	2

Clinical Practice – Analysis

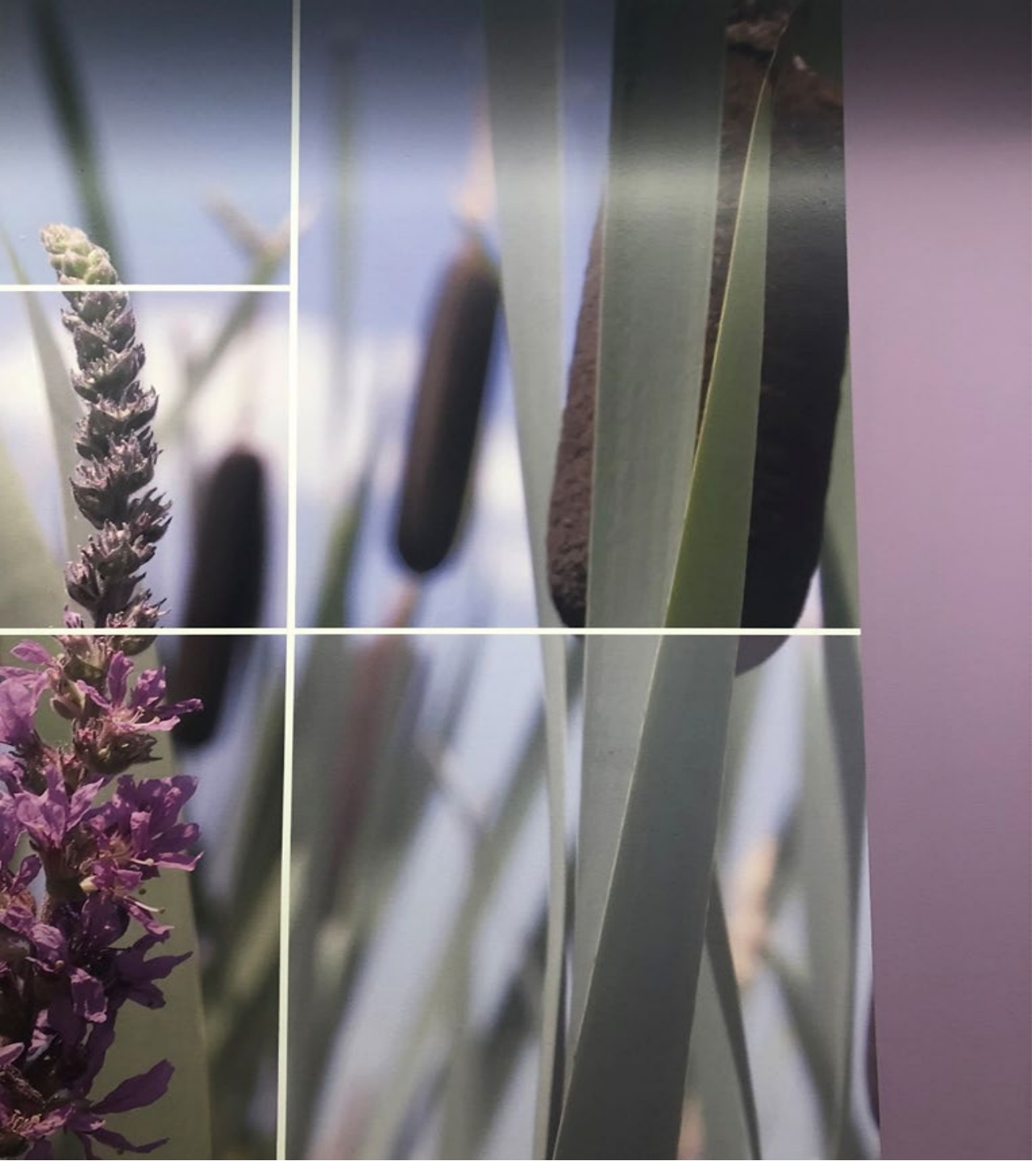
How are we doing?

- Compliant with standards
- However, some documents are outside the “three-year” revision requirement

Lessons learnt

- Utilise your expert reviewers
- Be sincere when collaborating

I am a TP of course I look for inappropriate storage of blood everywhere!



Audits

Audits – an evolving process

Audits

- Administration of Blood – electronic
- Transfusion Sample Collection - Spreadsheet
- Emergency Transfusion –Spreadsheet

How are Doing?

- Compliant with standards
- However, it is a “glass half-full” situation

Lessons Learnt

- Have an action plan in case the audit reveals a high degree of non-conformance

Change Management

Transport of Blood

- New hospital site (TACC) (two separate buildings connected by 3 walkways)
- Increase in size of hospital & distance from TML for some units
- Introduction of a 6 inch pneumatic tube system (PTS)

Expectations:

- The 6 inch PTS will be used to send blood in TACC
- Porters will spend less time transporting blood
- Hospital will reduce the number of porters

Reality:

- Only RBCs & plasma can be sent via the PTS to units in TACC
- Cannot “tube” blood to units in the 1982 building
- Transport of blood became more complex
- Existing challenges intensified
- Porters have further to travel

Happy Ending

1. Transport Tracking System
2. iPods for porters

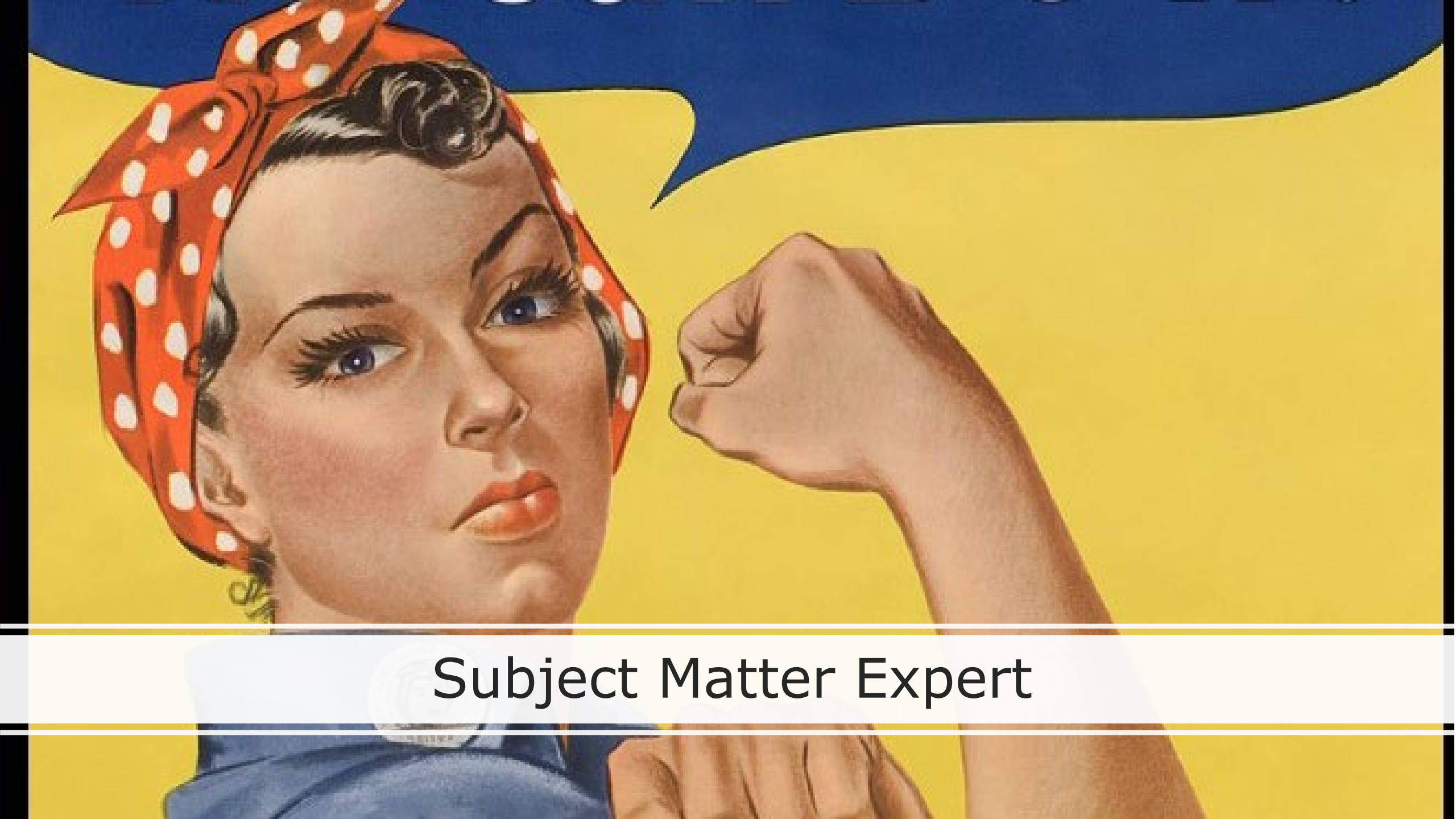
How are we doing?

- Improved Patient Safety

1. Blood requests are prioritised
2. Porters always have the required information
3. Enhanced traceability

Lesson Learned

- Collaboration is essential
- Perseverance pays off



Subject Matter Expert

SUBJECT MATTER EXPERT

Examples

- Introduction of new blood components & products
- Electronic order entry (CST)
- Electronic patient identification systems for:
  - sample collection
  - initiating a transfusion
- Transfusion reaction reporting
- Compliance with Health Canada regulations & standards
  Accreditation
- Blood shortages

Clinical Collect (CC)

CC an electronic patient identification (EPID) system was introduced to:

- improve patient safety, *and*
- comply with relevant standards and accreditation requirements

Actions:

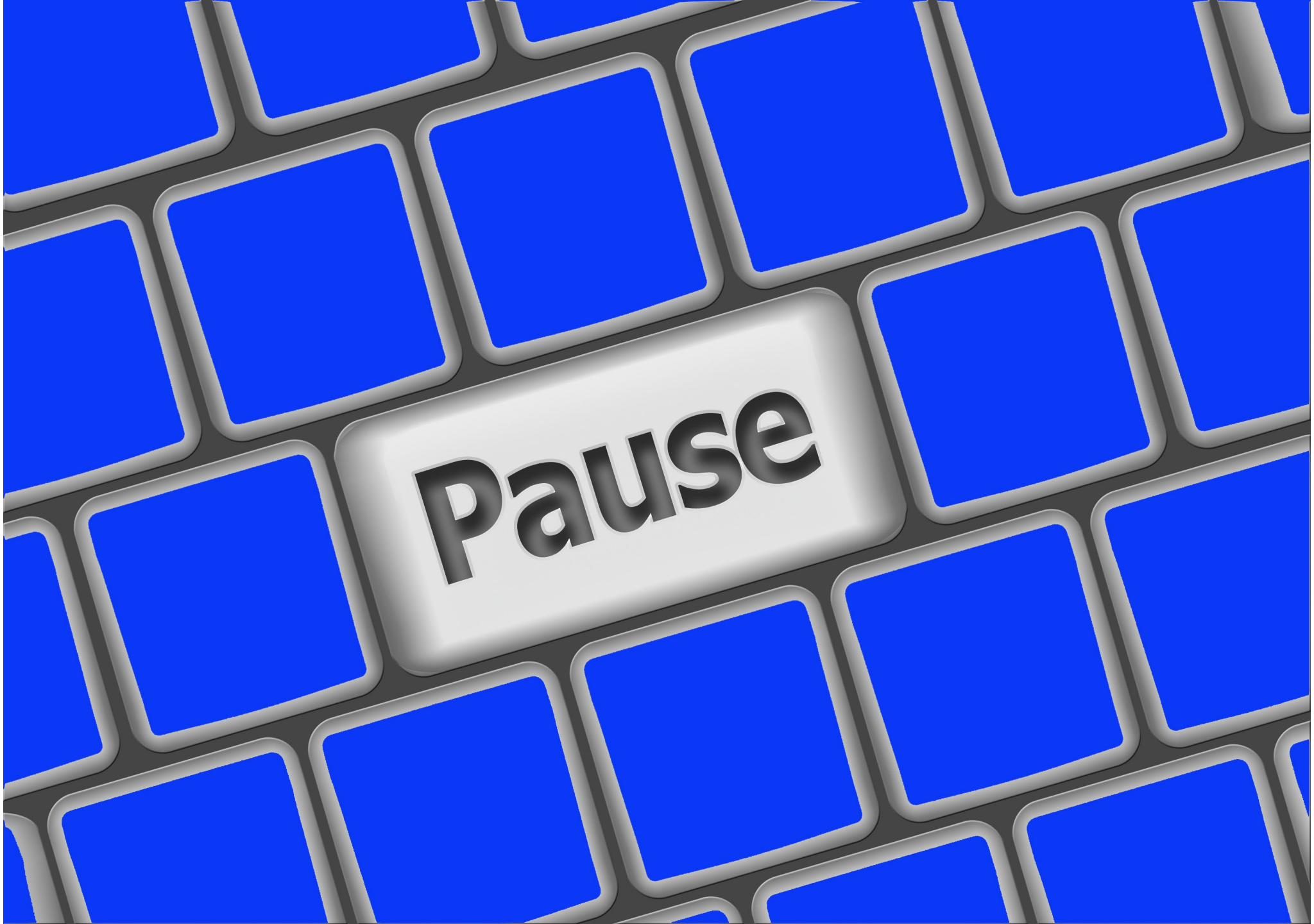
- Participate with working group & give input on the design

How are we doing ?

- Good uptake
- Compliant with standards because we have EPID & second sample process
- **Multiple issues**

Insights

- **It is never "once & done"**
  - Revise existing reference guide & education module (more than once)
  - Create "Practice-Updates" (6 over since 2022)


Pause

I am a TP of course I take photos of a PBM number plate

Work in progress !

Patient Identification	• Poor compliance with positive patient identification & wearing ID bands
Group & Screen	• Sample labelling • Wrong blood in tube
PBM	• Single unit transfusions
Audits	• Increase number of audits • Improve feedback cycle
Transfusion Manual	• Out of date documents

Professional Organisations

National:

Canadian Society of Transfusion Medicine (CSTM)

- Standards Committee
- Canadian Obstetric Pediatric Transfusion Network
- Transfusion Safety Network (co-chair)

International:

International Society of Blood Transfusion (ISBT)

- Transfusion Practitioner Forum
- Pediatric & Neonatal Subgroup

Bridge the gap between Transfusion Medicine Standards & Clinical Practice Standards

Questions ?