



MLAs in Transfusion Medicine!?

Rethinking HRLMP's TM labs

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Learning Objectives

At the end of this session, you will be able to:

- ❖ Describe the duties of MLAs in a hospital Transfusion Medicine laboratory
- ❖ Discuss the challenges in implementing MLAs
- ❖ Describe the future of MLAs in Transfusion Medicine

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Hamilton Regional Laboratory Medicine Program



The HRLMP has more than 700 staff members including 50 medical and scientific staff with cross appointments at McMaster University. With laboratories located at each acute care site in Hamilton, we are one of the largest integrated laboratory service programs in Canada.

700+

Scientific, Medical,
and Lab Staff

11M+

Tests performed
each year

800+

Clinical Diagnostic
Tests



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2 Corporations 5 Transfusion Medicine Labs



Hamilton
General
Hospital
HAMILTON HEALTH SCIENCES

Juravinski
Hospital and
Cancer Centre
HAMILTON HEALTH SCIENCES


McMaster
Children's
Hospital
HAMILTON HEALTH SCIENCES

West Lincoln
Memorial
Hospital
HAMILTON HEALTH SCIENCES


St. Joseph's
Healthcare  Hamilton
Charlton Campus

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HRLMP TM by the numbers




2.3 million people




4 tertiary care hospitals




2 level I trauma centres




> 4000 babies born



~ 1600 open heart surgeries




64,406 group and screens performed in 2023




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HRLMP TM by the numbers




30,483 units of RBC




6,673 units of FP



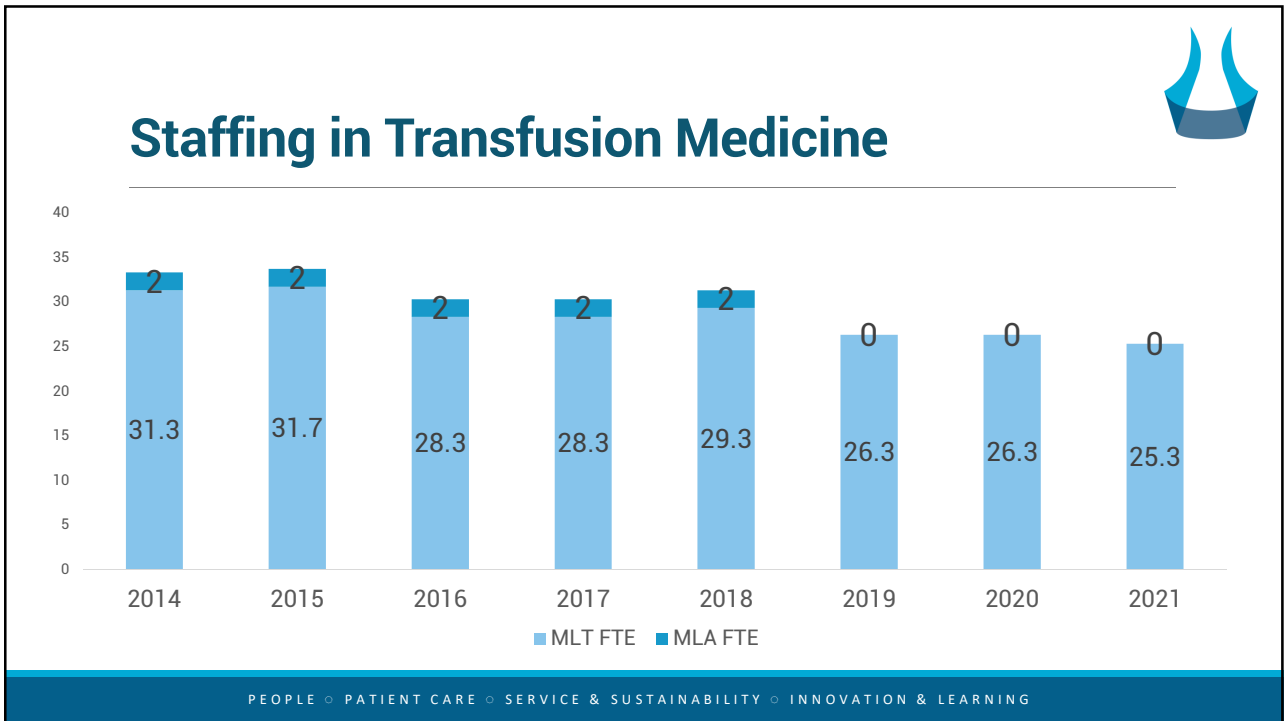
10,847 units of PLT



295,568 grams of IVIG

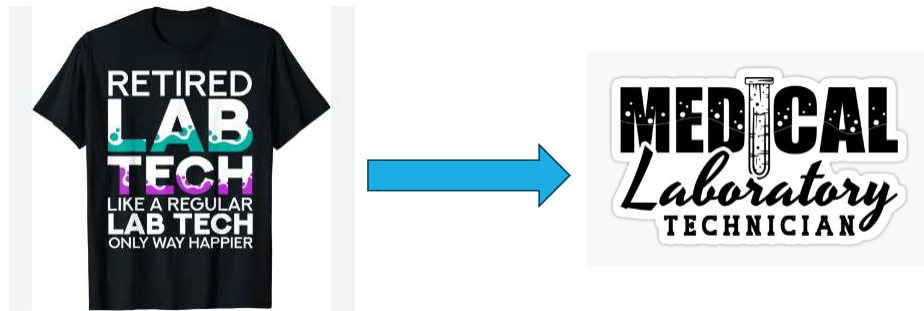


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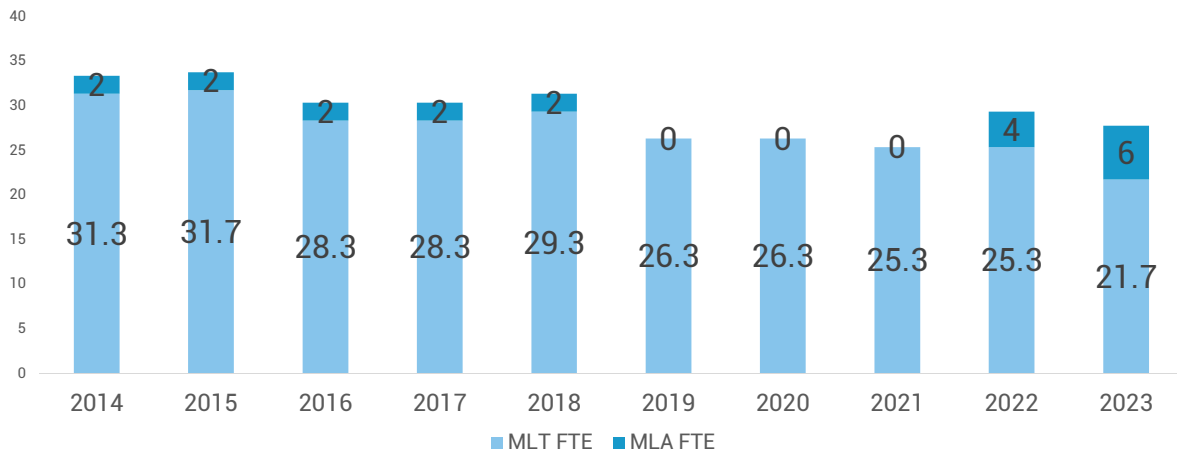
How did we fix it?



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Staffing in Transfusion Medicine



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Juravinski Hospital Transfusion Medicine Lab



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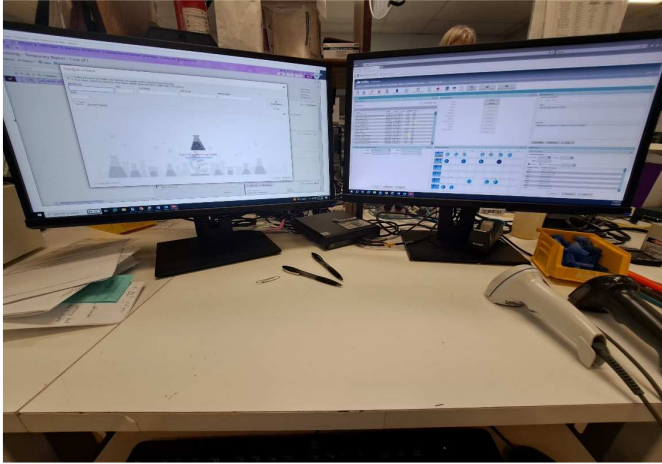
McMaster Children's Hospital Transfusion Medicine Lab



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Duties of MLAs



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Issuing of blood products and derivatives to nurses or porters

Patient Chart Copy

PATIENT NAME	MEDICAL RECORD NUMBER	PATIENT AGENCY
PRODUCT TYPE	PRODUCT CODE	UNIT AGENCY
UNIT NUMBER	DATE / TIME / SIGN	
CHECKED BY (NPI)	CHECKED BY (NPI)	
ADMINISTERED BY	START TIME	END TIME

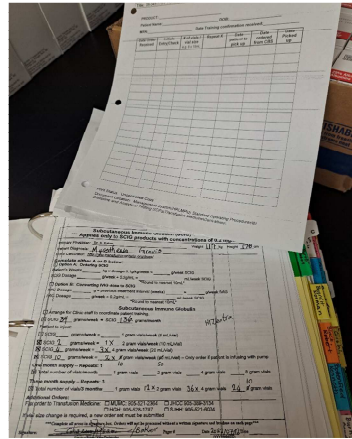
PATIENT NAME	PATIENT AGENCY
MEDICAL RECORD NUMBER	LOCATION
PRODUCT TYPE	PRODUCT CODE
UNIT NUMBER	UNIT AGENCY
PARAMETER RESULT	DATE / TIME / SIGN

For patient safety, please double-check the information on this form before administering. DO NOT administer if there is a discrepancy.



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Issuing of factor products, SCIG, C1 Esterase Inhibitor, Alpha-1-proteinase-inhibitor to homecare patients



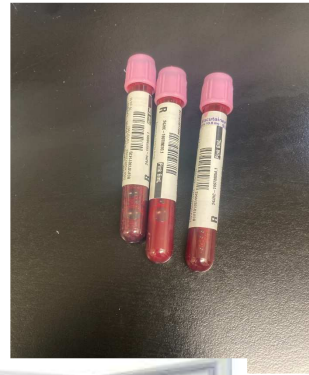
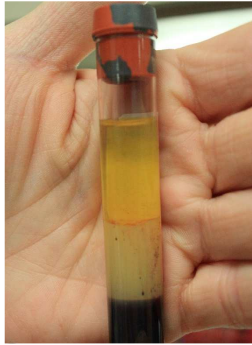
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Receiving specimens & helping in the collection of cold agglutinin testing



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Receiving & processing send out tests



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Receiving products from CBS & vendors

- RBC
- PLATELETS
- FROZEN PLASMA
- DERIVATIVES
- REAGENTS
- SUPPLIES



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Loading specimens & maintenance of NEO IRIS



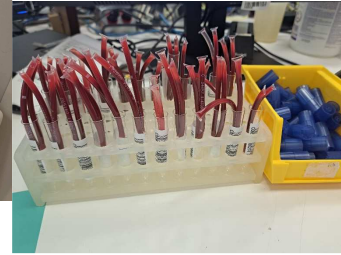
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Weekly & Monthly Maintenance



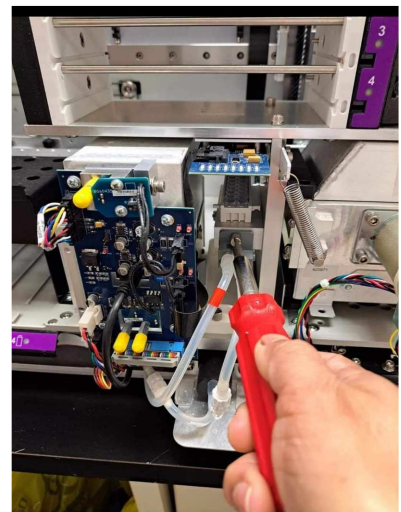
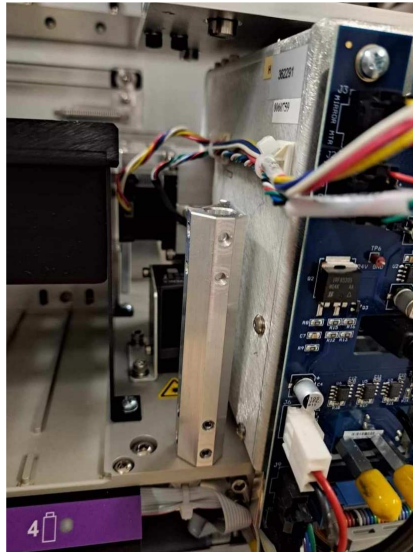
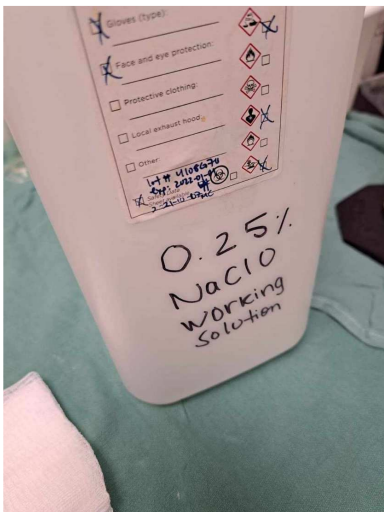
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Loading specimens / blood units & maintenance of ECHO LUMENA



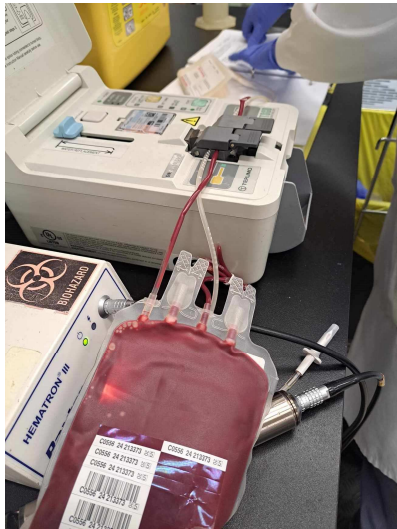
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Monthly maintenance of ECHO



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Preparing aliquots for neonates (RCC & Platelets)



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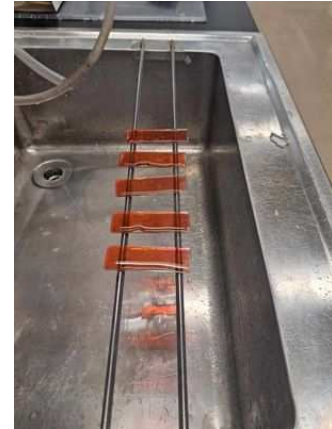
Preparing Volume Reduced Platelets



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Preparing slides for Kleihauer-Betke

used for the detection of fetal cells in prenatal and postnatal venous blood samples



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Irradiating blood products



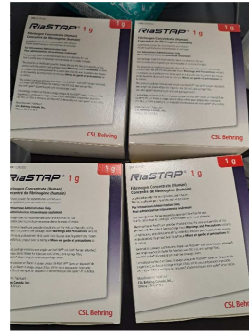
- ❖ Requires police clearance before one can enter the irradiation room
- ❖ Requires additional training in using the gamma radiation



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Helping MLTs during Code Omega



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Hemobank

- ❖ Deal with outstanding alerts
- ❖ Change temperature chart weekly
- ❖ Monitor stock levels
- ❖ Resolve any units at unusable status
- ❖ Review expiring units & remove from stock as needed and return to TM

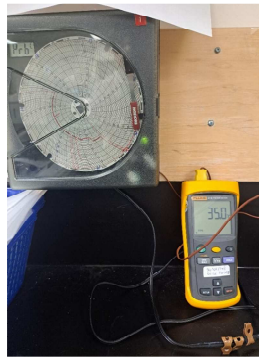


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Validation of thermometers, coolers, charts recorders

- ❖ Coolers are validated yearly at a temperature between 1-6°C
- ❖ Thermometers for fridges, freezers, water baths, plasma thawers are validated every year at a specific temperature
- ❖ Charts are validated using reference thermometer at 3 different temperatures



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Sending blood, derivatives & reagents to other hospitals



Transfer/Shipping Form

Product Name: PLASMA Quantity: 1

Product Code: 3551 Product Code: HYPLOT

Batch: 3551 HYPLOT

T	R	T	R
T	R	T	R
T	R	T	R
T	R	T	R

DATE RECEIVED AND VISUAL INSPECTION OF ALL RECEIVED PRODUCTS COMPLETED BY: _____ Date & Time Received: _____

IF UNUSABLE: _____ Reason for Unusable: _____

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Weekly count of products:

- ✓ Short dated
- ✓ "IN" status
- ✓ "XM" status
- ✓ Missing
- ✓ Wrongly inventoried

Blood products

Fractionated products

The image shows a 'PACKING SLIP' from Canadian Blood Services, a 'Monoclonal Factor VIII-150mg' label with lot number B0122B02 and expiration date 29/02/2024, and a screenshot of a software interface showing a list of derivatives with columns for Lot #, Derivative CD, Exp D/T, Vol, Height, Width, and Length. The software interface also shows a search bar with 'Behring' and 'P100621016' entered.



Challenges

- ❖ Training
- ❖ Out of scope questions from the ward when they call TM
- ❖ Skills – attention to details / inquisitive / technical/ computer savvy
- ❖ No clearly defined expectations
- ❖ No clearly defined duties





Future of MLAs in Transfusion Medicine

- ❖ Do we keep the same number of MLAs?
- ❖ Do we consider advance practice options?
- ❖ Do we introduce MLAs working night shifts?

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References

Canadian Society for Medical Laboratory Science. (January 2016). CSMLS Competency Profile Medical Laboratory Assistant. https://go.csmls.org/cert/MLA_CP_2016.pdf

Hamilton Regional Laboratory Medicine Program. (2024). <https://www.hrlmp.org/>

Medical Laboratory Professionals' Association of Ontario. (May 2016). Certified Medical Laboratory Assistant / Technician Competency Guidelines. Medical Laboratory Professionals' Association of Ontario. https://www.mlpao.org/_files/ugd/b8cf07_f53ca89be1ac4ad39541cd4d04107068.pdf

MLA certification. (n.d.). Medical Laboratory Professionals' Association of Ontario. <https://www.mlpao.org/mlat>

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