

Medical Laboratory Technology

SUSIE MAIA, MLT BTech

ROBYN WHITE, MLT, BSc (Delegate)

Professional Practice Leader (Charlton, King, West 5th)

Scope of Practice

The practice of medical laboratory technology is the performance of laboratory investigations on the human body or on specimens taken from the human body and the evaluation of technical sufficiency of the investigations and their results.

Number of Members of Discipline:

SITE	Staff	POSITION
All sites (SJHH and HHS) of the Hamilton Regional Laboratory Medicine Program (HRLMP)	384	Medical Laboratory Technologists (MLT)
	211	Medical Laboratory Assistants (MLA)
	22	Pathologists' Assistant (PA)

Major Achievements

CARING

HRLMP Program-Wide:

- External review of the HRLMP was conducted to assess the current organizational structure and capacity to ensure continued ability to provide high quality laboratory services.

Anatomical Pathology

- Continued expansion of solid tumour testing to align with updated Cancer Care Ontario (CCO) standards of care
- Implemented new analyzers in Immunohistochemistry
- Consolidated histology services from McMaster University Medical Centre (MUMC) site to Juravinski Hospital Cancer Care (JHCC) site

Clinical Chemistry and Immunology

- Consolidated Red Cell Disorders (RCD) Laboratory to Clinical Chemistry and Immunology Laboratory at Hamilton General Hospital (HGH)
- Repatriated p50 Oxygen Affinity of Hemoglobin testing
- Implemented new Sebia Capillarys 3 Instruments for HbA1C and Hemoglobin Electrophoresis testing
- Successfully implemented new Binding Site Optilite Analyzers for serum protein testing in CCI

CARING Continued....

Core Laboratory:

- Repatriated ammonia testing at SJHH, JHCC, HGH, West Lincoln Memorial Hospital
- Implemented rivaroxaban and apixaban levels at Hamilton General Hospital Core in support of the Integrated Stroke Program
- Implemented intra-operative PTH (ioPTH) testing at SJHH Core Lab to support patients undergoing parathyroid surgery

Genetic Services

- Launched new Next Generation Sequencing (NGS) panel for Familial Hypercholesterolemia (FH)
- Launched NPM1 minimal residual disease (MRD) qPCR
- Repatriated RCD tests to Genetics: TPMT, FII (PGM), FV, QPD
- Validated of Entrogen Acute Leukemia Assay V2 – new formulation of kit
- Awarded additional funding through CCO for testing related to cancer care

Malignant Hematology

- Launched Lymphocyte Subset quantitation on new BD Analyzers

Microbiology and Virology

- Initiated a laboratory-developed *Pneumocystis jirovecii* PCR testing for broncho-alveolar lavage (BAL) for testing in the immunocompromised patient with suspected PJP pneumonia
- Added penicillin KB disk testing for *S. aureus bacteremia*

Point of Care Testing

- Verified new Point of Care Devices across Hamilton Health Sciences and SJHH

Special Coagulation

- Implemented and validated Sebia Hydrasys 2 for VWF multimers
- Validated and implemented an automated assay (LIA-based) test for Protein C Antigen

Transfusion Medicine and Stem Cell Laboratory

- EPIC/Wellsky Optimization: electronic irradiated blood product request notification
- Re-located analyzer to MUMC to support pre-Op work
- Yescarta, Tecartus CAR-T commercial activation

Learning

Education:

Internal Education

- Training program for Residents/Fellows

Learning

Education:

Internal Education Continued...

- Training program for Medical Laboratory Program students:
 - ◇ Anderson College – General MLT
 - ◇ Anderson College – MLA
 - ◇ Cambrian College – General MLT
 - ◇ Michener Institute for Education at University Health Network (UHN)— General MLT
 - ◇ Michener Institute for Education at UHN — Genetics MLT
 - ◇ Michener Institute for Education at UHN — Diagnostic Cytology MLT
 - ◇ Mohawk College — MLA
 - ◇ Ontario Tech University — General MLT
 - ◇ Oulton College — General MLT
 - ◇ St. Clair College — General MLT
 - ◇ St. Lawrence College — General MLT
- Training new MLT, MLA and PAs across the HRLMP

Formal Teaching

- Clinical Coordinator, Genetics Program, Michener Institute for Education at UHN
- Clinical Coordinator, Cytology Program, Michener Institute for Education at UHN
- Clinical Coordinator, General MLT Program, Michener Institute for Education at UHN
- Clinical Instructor, Transfusion Medicine, Michener Institute for Education at UHN
- Associate Professor, Division of Hematology and Thromboembolism, Department of Medicine, McMaster University
- Adjunct Lecturer, Department of Medicine, McMaster University

Clinical Teaching

- In-services in clinical areas

Research:

- HRLMP participated in over 100 research studies in collaboration with disciplines/departments and health professionals across SJHH, HHS and beyond.

Building

Staff:

Enrollment in:

- MBA programs
- Clinical Management Certificate program
- Quality Management Certificate program
- LEAN program
- MLA Micro-Credentials Program
- Graduate Certificate in Healthcare Management

Building Continued...

Internal Education:

- Participated in nursing annual review sessions across HHS sites
- Developed of Clinical Phlebotomy Education Program

Leading

- Successful Accreditation with Foundation for the Accreditation of Cellular Therapy (FACT)
- Successful Accreditation with American Society for Histocompatibility and Immunogenetics (ASHI)

Committees

- Assessors for Accreditation Canada Diagnostics Laboratory Accreditation Program
- Board of Directors, Medical Laboratory Professionals Association of Ontario (MLPAO)
- Chair of the Royal College of Physician and Surgeons Medical Microbiology Examination Committee
- Consultants to the External Quality Assurance (EQA) division of the Institute for Quality Management in Healthcare (IQMH)
- Co-Chair, Ontario Transfusion Transmitted Injuries Surveillance System Education Committee
- Co-Chair Clinical Genetics Exam Panel, Canadian Society for Medical Laboratory Science (CSMLS)
- Committee Member, College of Medical Laboratory Technologists of Ontario (CMLTO)
- Inspectors for American Society for Histocompatibility and Immunogenetics Accreditation Program
- Member, St. Clair College Medical Laboratory Science PAC
- Member, St. Lawrence College MLT Professional Advisory Committee
- Member, IQMH Cytology Scientific Committee
- Member, Program Advisory Committee, Division of Laboratory Medicine, Michener Institute
- Member, Ontario IQMH Virology Committee
- Member, IQMH Advisory Panel

- Point of Care Testing (POCT) Advisor
- Member, Ontario Regional Blood Coordinating Network Regional Advisory Committee South Western Region
- Member, Southern Ontario Transfusion Services Network Planning Committee
- Member, Canadian Society for Transfusion Medicine – Standards Committee
- Member, Ontario Transfusion Quality Improvement Plan Steering Committee

Major Initiatives for 2024/25:

CARING

- Verification of Next Generation Sequencing (NGS) analyzers in Histocompatibility
- Verification of new automated tissue embedders for Anatomical Pathology
- Verification of new blood gas analyzers for Core laboratories and POCT

LEARNING

- Continued involvement in Medical Laboratory Technologist and Medical Laboratory Assistant/ technician programs

BUILDING

- National Medical Laboratory Week Celebrations (including educational event)
- Rapid Fire Showcase (speakers from laboratories)

LEADING

- Further development and implementation of HRLMP Strategic Plan
- Continued accreditation with:
 - ◊ Accreditation Canada Diagnostics and ISO 15189 (AC Dx)
 - ◊ ASHI
 - ◊ FACT
- Planning for the consolidation of Pathology Services to SJHH
- Point of Care Testing with SJHH, in development of a chronic kidney disease screening program for Indigenous communities