



College of Medical  
Laboratory Technologists  
of Ontario

# Registration Statistics Report

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## Medical Laboratory Technologists: 2022 Health Human Resource Report

25 ADELAIDE STREET EAST, SUITE 2100  
TORONTO ONTARIO M5C 3A1  
T 416 861 9605 1 800 323 9672 F 416 861 0934  
[www.cmlto.com](http://www.cmlto.com)

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## Table of contents

### A. Introduction

A.1 The College of Medical Laboratory Technologists of Ontario.....	1
A.2 Purpose of the 2022 MLT Health Human Resource Report.....	1

### B. Methodology

B.1 Data set description.....	3
B.2 Registration classes.....	4
B.3 Electoral districts.....	5

### C. MLT Health Human Resource Report

C.1 MLT data overview.....	7
C.2 Practising Medical Laboratory Technologists.....	8
C.2.1 Age distribution.....	9
C.2.2 Electoral districts.....	11
C.2.3 Employment status.....	12
C.2.4 Specialties.....	13
C.2.5 Main area of practice.....	14
C.2.6 Major function.....	15
C.2.7 Provision of MLT clinical education.....	16
C.2.8 New registrants.....	18
C.2.9 Resignations.....	19

### D. Conclusion

D.1 Summary.....	20
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## A. Introduction

### A.1 The College of Medical Laboratory Technologists of Ontario

The College of Medical Laboratory Technologists of Ontario (CMLTO) is one of 26 health regulatory Colleges defined by the *Regulated Health Professions Act, 1991*, which oversees 29 healthcare professions in Ontario. The CMLTO exists to protect the public's interest and ensure the highest healthcare standards through regulation of the province's approximately 6700 Medical Laboratory Technologists (MLTs). The CMLTO sets practice entry requirements for the profession and professional standards of practice, as well as investigates complaints regarding MLT's conduct within Ontario.

### A.2 Purpose of the 2022 MLT Health Human Resource Report

The CMLTO's health human resource report is an analysis of the 2022 CMLTO registration data that examines MLT practice, employment status, MLT specialties, provision of clinical education, and demographic information. The CMLTO, as part of its mandate and as required by legislation, captures this data during initial registration and the annual registration renewal processes. The report provides insights into relevant demographics and practice changes in the MLT profession.

Health human resource planning is oftentimes informed by professional demographics and practice-specific data. The CMLTO's data supports the broader-based health human resource planning initiatives for medical laboratory technology that the Ontario Ministry of Health undertakes. The Health Professions Database is administered by HealthForceOntario, which is part of Ontario Health. Once populated, the database will:



“...provide standardized, consistent and comparable demographic, geographic, educational, and employment information on all of the regulated allied health professionals in Ontario.”<sup>1</sup>

The information and analysis produced by the Health Professions Database are publicly accessible. The information contained in the HealthForceOntario report may also be useful to those who are interested in health human resource issues affecting the medical laboratory technology field.

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<sup>1</sup> For further information on the Health Professions Database, please refer to:  
[http://www.health.gov.on.ca/en/pro/programs/hhrsd/evidence\\_research/health\\_professions\\_database.aspx](http://www.health.gov.on.ca/en/pro/programs/hhrsd/evidence_research/health_professions_database.aspx)



## B. Methodology

### B.1 Data set description

As part of the annual registration renewal process, per the [CMLTO By-Law](#), all registrants are required to renew their registration by December 31 of the current year. During renewal, registrants provide information related to various aspects of their practice, including employment, specialties, and provision of clinical education. In addition to the annual renewal process, any in-year changes to a registrant's registration status or demographic information are processed as reported. This approach ensures that the CMLTO registration database is up-to-date and dynamic.

Certain fields in the data set used to produce this report are complete and comprehensive, such as electoral district, age, and specialty. However, many data fields rely on MLT self-reporting. Two limitations arise from this process: firstly, the data in certain areas may not be comprehensive. Throughout this report, the number of MLTs who self-reported on any question is noted. Secondly, there are certain parts where registrants have made multiple selections. This information is noted where relevant.

This report is a comprehensive snapshot of CMLTO's 2022 Practising and Non-Practising registrant data as of February 23, 2023.



## B.2 Registration classes

In accordance with the *Medical Laboratory Technology Act, 1991*, CMLTO has two classes of registration: Practising and Non-Practising. At the time of the data retrieval, there were **6675 CMLTO registrants** which included **6109 Practising and 566 Non-Practising MLTs**.

Practising MLTs are subject to the requirements set out in the *Regulated Health Professions Act, 1991*, the *Medical Laboratory Technology Act, 1991*, and other applicable regulations, including the CMLTO By-Law. These include, but are not limited to, the Quality Assurance Program, the Inquiries, Complaints & Reports, Fitness to Practice, and Discipline processes.

Non-Practising MLTs have met the CMLTO registration requirements but do not practice medical laboratory technology. Non-Practising registrants are subject to the same requirements as Practising registrants, with the exception of the Quality Assurance Program. Non-Practising registrants may change their class of registration to Practising by meeting the requirements in force at the time.

In addition to the registration classes outlined in the *Medical Laboratory Technology Act 1991*, there are MLTs who fall into categories defined by internal CMLTO registration statuses. For example, individuals who submitted applications to become MLTs were not included in this analysis as they were not registered with the CMLTO at the time of the data retrieval. Registrants suspended for non-payment of registration fees were also excluded.



## B.3 Electoral districts

The CMLTO By-Law describes eight electoral districts that delineate the physical areas of Ontario from which the Board of Directors are elected. The CMLTO performs data analysis using electoral districts as it is a fully comprehensive data set that assists in identifying practice trends related to specific jurisdictions in Ontario.

**Figure B.3 – CMLTO electoral districts**





**Table B.3 – Description of CMLTO electoral districts**

District 1- Southwest Region	District 2 – Central West Region
Composed of the Cities of London, St. Thomas, Stratford, and Windsor; Bruce, Elgin, Essex, Grey, Huron, Lambton, Middlesex, Oxford, and Perth Counties; Municipality of Chatham-Kent; Town of St. Mary’s; and the Township of Pelee.	Composed of the Cities of Brantford, Guelph, and Hamilton; Brant, Dufferin, Haldimand, Norfolk, and Wellington Counties; and the Regional Municipalities of Halton, Niagara, and Waterloo.
District 3 – Metropolitan Toronto	District 4 – Central East Region
Composed of the City of Toronto.	Composed of the Cities of Barrie, Kawartha Lakes, Orillia, and Peterborough; Haliburton, Northumberland, Peterborough, and Simcoe Counties; and the Regional Municipalities of Durham, Peel, and York.
District 5 – East Region	District 6 – Northeast Region
Composed of the Cities of Belleville, Brockville, Cornwall, Kingston, Ottawa, Pembroke, Prince Edward County, and Quinte West; Frontenac, Hastings, Lanark, Lennox, Addington, and Renfrew Counties; Towns of Gananoque, Prescott, and Smith Falls; and the United Counties of Leeds and Grenville, Prescott and Russell and Stormont, Dundas, and Glengarry.	Composed of the City of Greater Sudbury; the Districts of Algoma, Cochrane, Manitoulin, Nipissing, Parry Sound, Sudbury, and Temiskaming; and the District Municipality of Muskoka.
District 7 – Northwest Region	District 8 – Registrant-at-Large
Composed of the Districts of Kenora, Rainy River, and Thunder Bay.	Composed of the whole province and registrants residing outside Ontario for the purpose of electing a member-at-large.

**Note:** Districts named in Electoral District 6: Northeast Region, and Electoral District 7: Northwest Region include all single-tier municipalities contained within them. A complete list of single-tiered municipalities contained in each district is provided by the Ontario Ministry of Municipal Affairs and Housing.



## C. MLT Health Human Resource Report

### C.1 MLT data overview

Figure C.1 – Age distribution for all CMLTO registrants

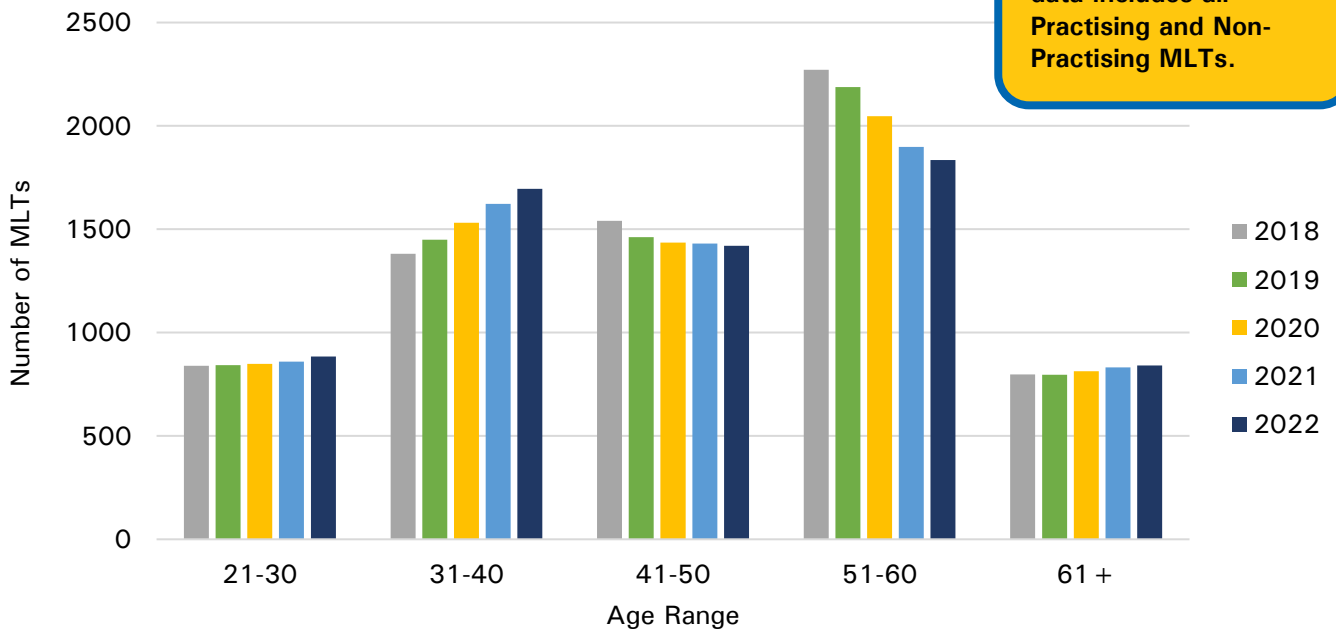
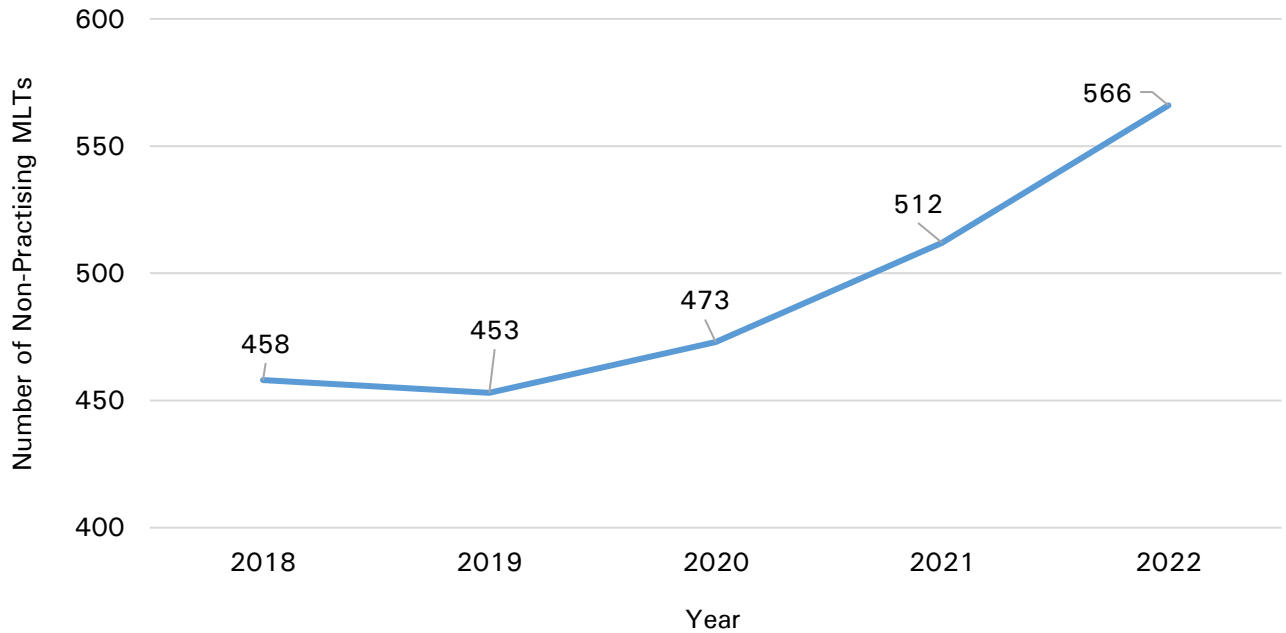


Table C.1 – Age distribution for all CMLTO registrants

Age range	Number of all registrants (Practising & Non-Practising)					Number of Practising registrants				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
21-30	839	842	848	860	884	817	826	832	838	845
31-40	1381	1450	1532	1622	1695	1302	1375	1458	1529	1576
41-50	1541	1461	1436	1431	1420	1463	1375	1353	1336	1326
51-60	2271	2188	2047	1898	1835	2117	2025	1871	1714	1654
61+	797	796	813	831	841	672	683	689	713	708
<b>Total</b>	<b>6829</b>	<b>6737</b>	<b>6676</b>	<b>6642</b>	<b>6675</b>	<b>6371</b>	<b>6284</b>	<b>6203</b>	<b>6130</b>	<b>6109</b>



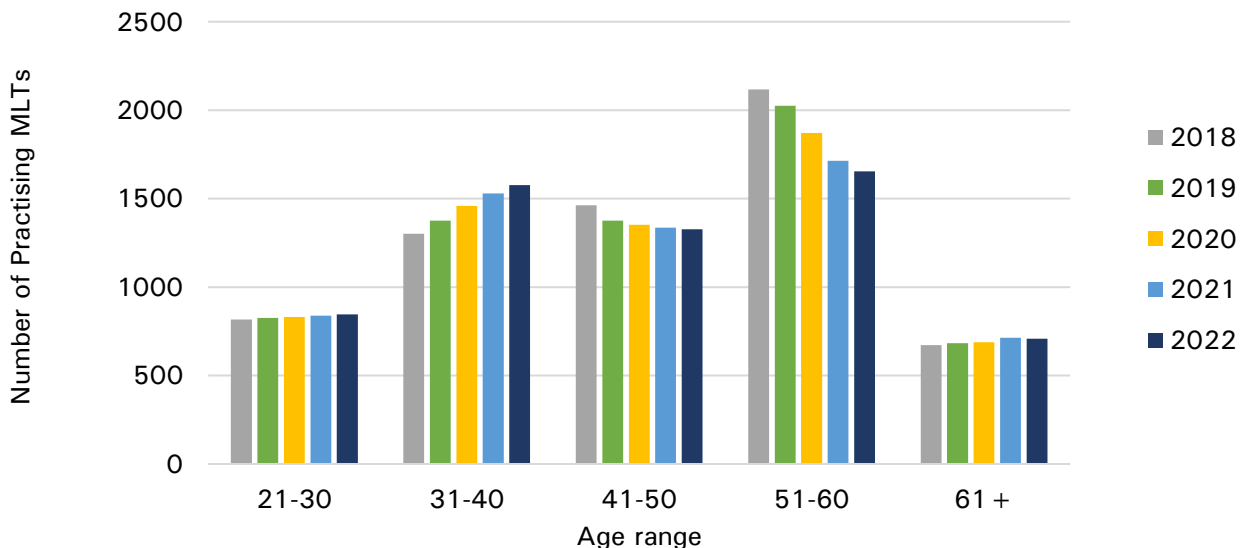
**Figure C.1.2 – Number of Non-Practising MLTs**



## C.2 Practising Medical Laboratory Technologists

All further analysis presented in this report is based only on those who were registered as Practising in the CMLTO database at the time of data retrieval. Please note that MLTs may change their class of registration at any time during the year.

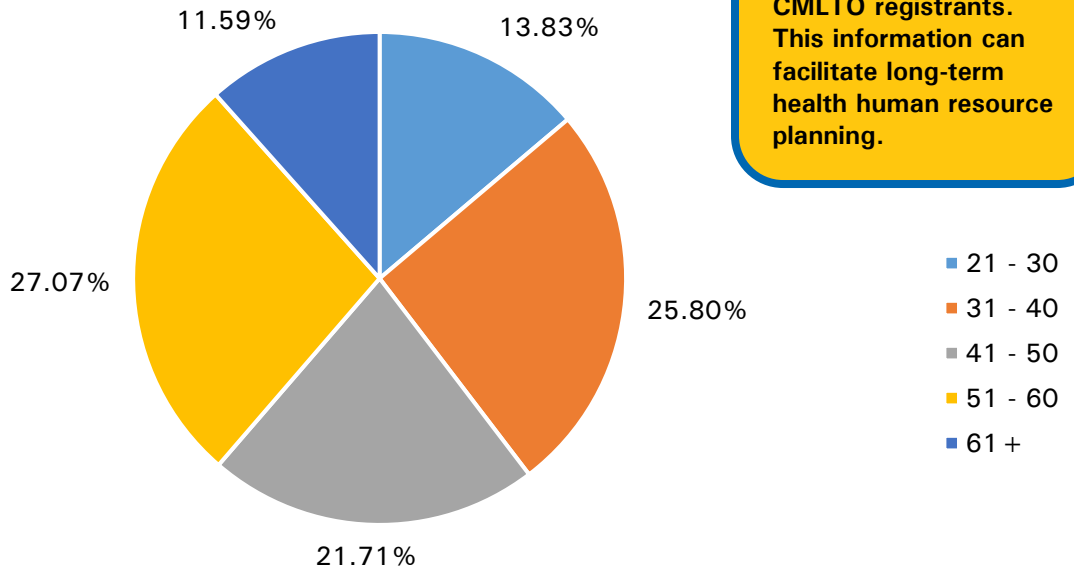
**Figure C.2 – Age distribution for Practising MLTs**





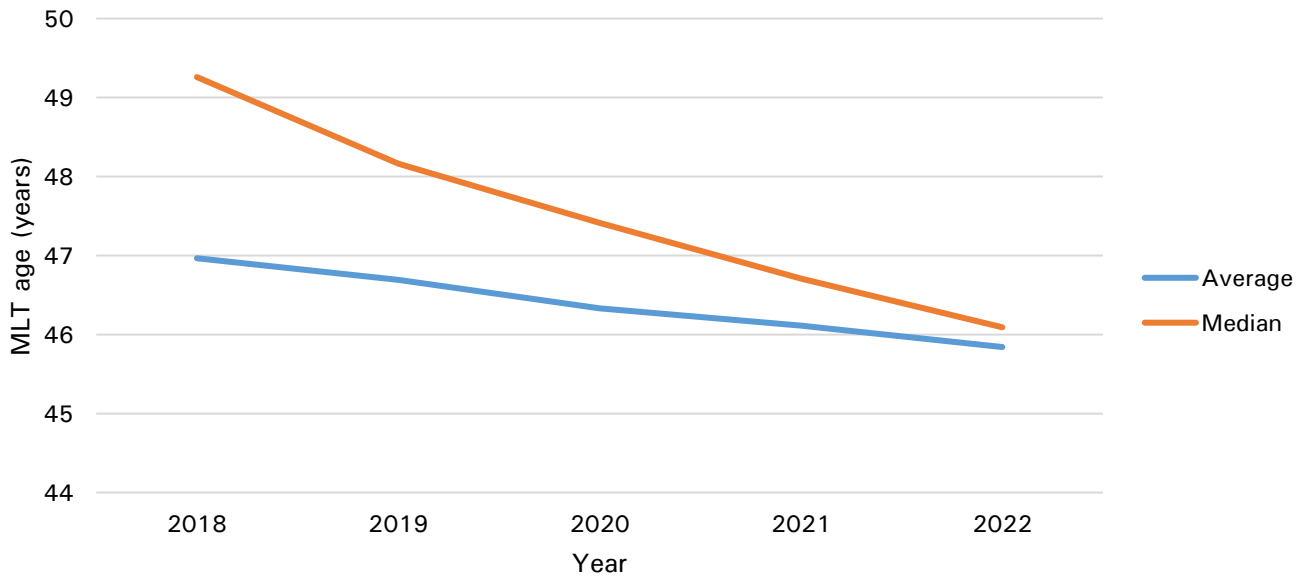
### C.2.1 Age distribution

Figure C.2.1.a – Age distribution for Practising MLTs



The age of Practising MLTs is available for all CMLTO registrants. This information can facilitate long-term health human resource planning.

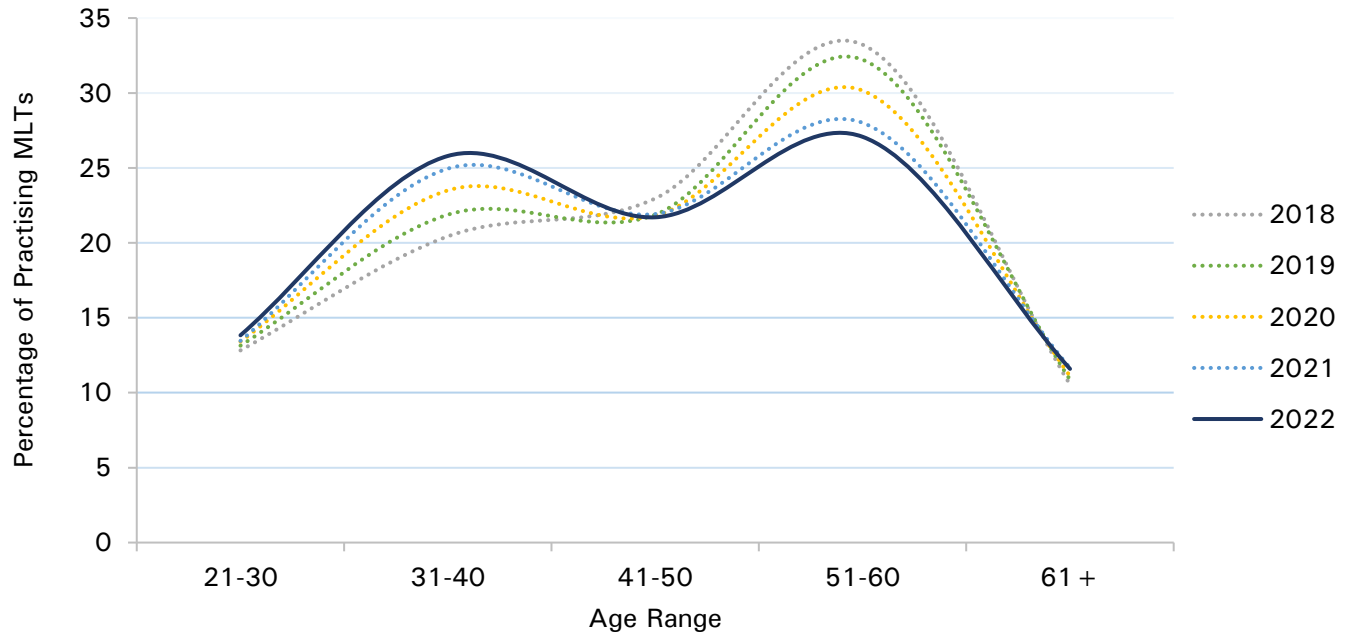
Figure C.2.1.b – Average and median age for Practising MLTs



**Note:** Overall, the average age for Practising MLTs in 2022 was 45.84 years and the median was 46.09 years. The average age for Practising MLTs in 2021 was 46.02 years and the median was 46.70 years.



Figure C.2.1.c – Age distribution curve for Practising MLTs





## C.2.2 Electoral districts

Figure C.2.2 – Number of Practising MLTs in each electoral district

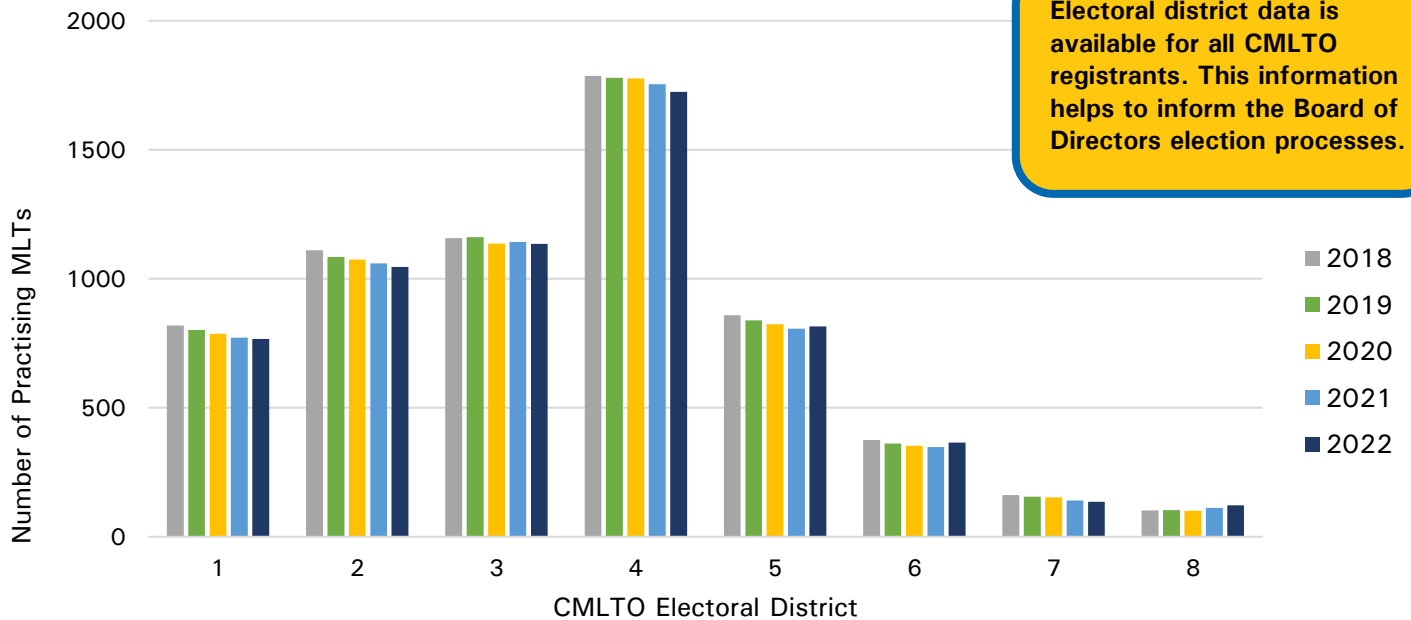


Table C.2.2 – Number and percentage of Practising MLTs in each electoral district

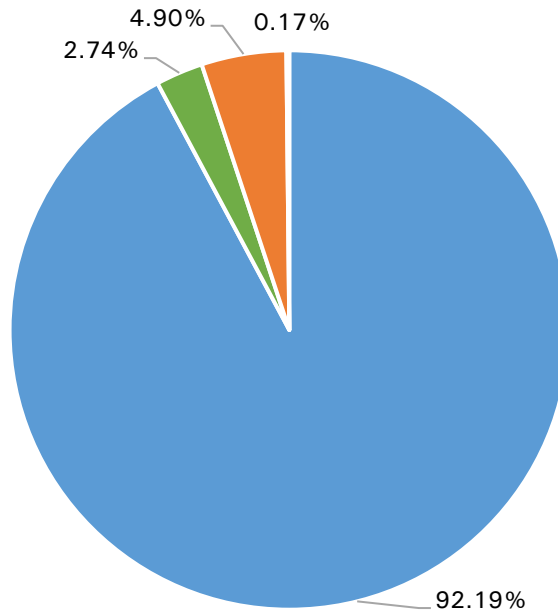
Electoral district		1	2	3	4	5	6	7	8*
Number of Practising MLTs	2021	772	1062	1144	1758	803	349	140	102
	2022	767	1046	1135	1724	815	365	135	122
Percentage of all Practising MLTs	2021	12.59%	17.32%	18.66%	28.68%	13.10%	5.69%	2.28%	1.66%
	2022	12.56%	17.12%	18.58%	28.22%	13.34%	5.97%	2.21%	2.00%

**Note:** Electoral District 8 is composed of all CMLTO registrants in Ontario along with those who practise outside of Ontario for the purpose of electing a member-at-large for the Board of Directors. The data in Table C.2.2 only reports Practising MLTs who reside outside of Ontario.



### C.2.3 Employment status

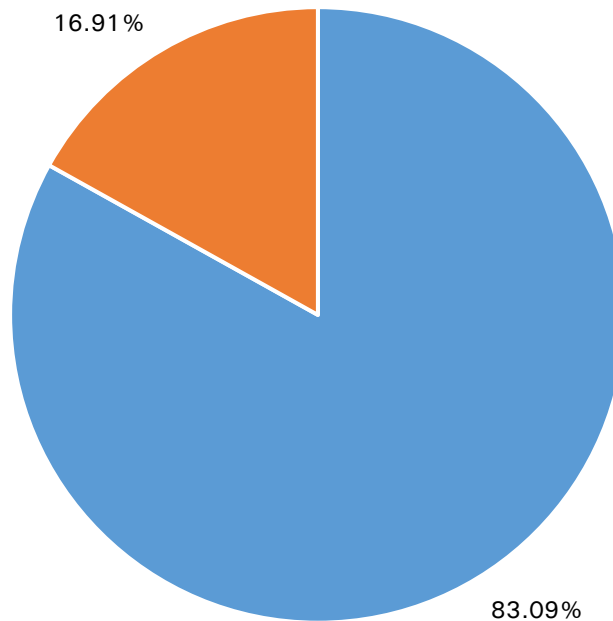
Figure C.2.3.a – Percentage of Practising MLTs by employment category



Employment category is self-reported by MLTs through the annual renewal process. In 2022, 5996 (98.15%) Practising MLTs reported an employment category.

- Permanent
- Casual
- Temporary
- Self-Employed\*

Figure C.2.3.b – Percentage of Practising MLTs by employment status



Employment status is self-reported by MLTs through the annual renewal process. In 2022, 5996 (98.15%) Practising MLTs reported an employment status.

- Full time
- Part time



## C.2.4 Specialties

**Table C.2.4 – Number of Practising MLTs by specialty**

Specialty	Number of Practising MLTs				
	2018	2019	2020	2021	2022
Biochemistry	5557	5501	5458	5413	5398
Cytogenetics	293	299	300	300	309
Cytology	263	261	251	255	252
Hematology	5526	5478	5441	5395	5385
Histology	5263	5248	5246	5240	5238
Microbiology	2037	2212	2428	2608	2814
Molecular Genetics	279	284	292	298	308
Phlebotomy	4857	4869	4904	4922	4983
Transfusion Science	5447	5403	5372	5336	5327
Virology	157	191	224	249	269
Former specialties	108	89	80	67	63

**Notes:**

- MLT specialties are listed in Ontario Regulation 207/94, Schedule 1.
- MLTs may have multiple specialties listed on their certificate of registration. This does not necessarily indicate that an MLT actively practices in all listed specialties.

## C.2.5 Main area of practice

Table C.2.5 – Number of Practising MLTs by main area of practice

Main area of practice	Number of Practising MLTs				
	2018	2019	2020	2021	2022
Biochemistry	953	1105	1070	1041	1037
Cytogenetics	141	149	141	136	135
Cytology	201	215	200	197	194
Education	52	52	50	46	51
Hematology	623	693	666	667	644
Histology	604	650	645	631	659
Infection Control	53	53	49	46	43
Laboratory Information Systems	86	88	90	93	95
Management	251	241	234	228	245
Microbiology	547	627	647	669	651
Bacteriology	201	189	159	144	139
Virology	100	101	151	147	122
Molecular Genetics	163	188	227	241	231
Point of Care Testing (POCT)	36	44	47	49	52
Quality Management	93	96	94	98	116
Research	25	24	23	21	21
Transfusion Science	493	510	520	529	507
Other specialty areas (i.e., sales, specimen procurement)	136	154	147	146	149
Cannot Identify	967	1004	971	923	905

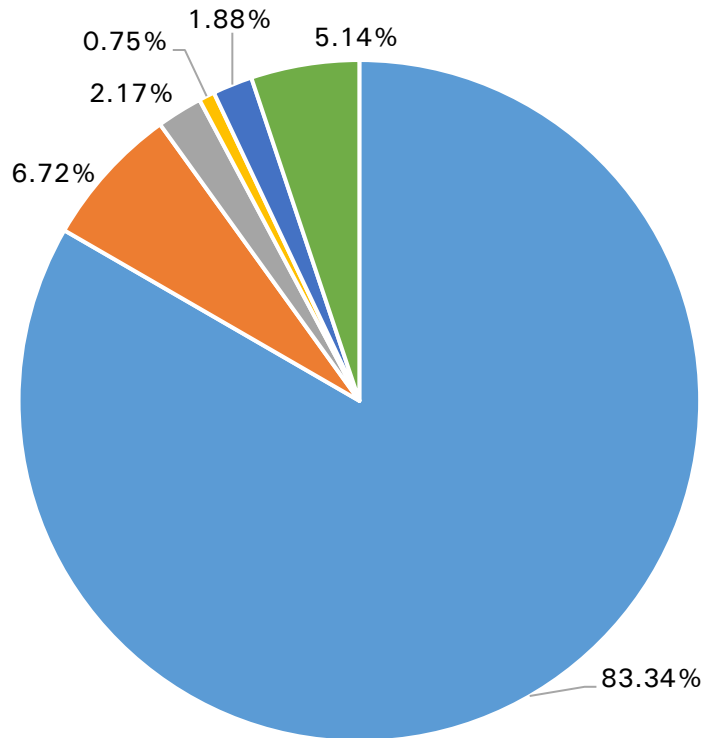
The shaded rows indicate selections under “Main area of practice” that do not correspond directly with a “Specialty” described in Ontario Regulation 207/94, Schedule 1.

Main area of practice is the area in which an MLT works the greatest number of hours. This information is self-reported through the renewal process. In 2022, 5996 (98.15%) Practising MLTs reported their main area of practice.



## C.2.6 Major function

Figure C.2.6 – Major function of Practising MLTs



The major function of Practising MLTs is self-reported through the renewal process. In 2022, 5996 (98.15%) Practising MLTs reported their major function.

- Diagnostic and therapeutic laboratory services
- Administration
- Quality Management
- Research
- Post-secondary teaching
- Other



## C.2.7 Provision of MLT clinical education

**Table C.2.7.a – Age range of Practising MLTs involved in MLT clinical education**

Age range	Number of Practising MLTs involved in MLT clinical education		Percentage of Practising MLTs involved in clinical education		Percentage of MLTs involved in clinical education from all Practising MLTs within the age range	
	2021	2022	2021	2022	2021	2022
21-30	152	159	8.88%	9.19%	18.14%	18.82%
31-40	391	411	22.84%	23.74%	25.57%	26.08%
41-50	379	408	22.14%	23.57%	28.37%	30.77%
51-60	537	512	31.37%	29.58%	31.33%	30.96%
61 +	253	241	14.78%	13.92%	35.48%	34.04%

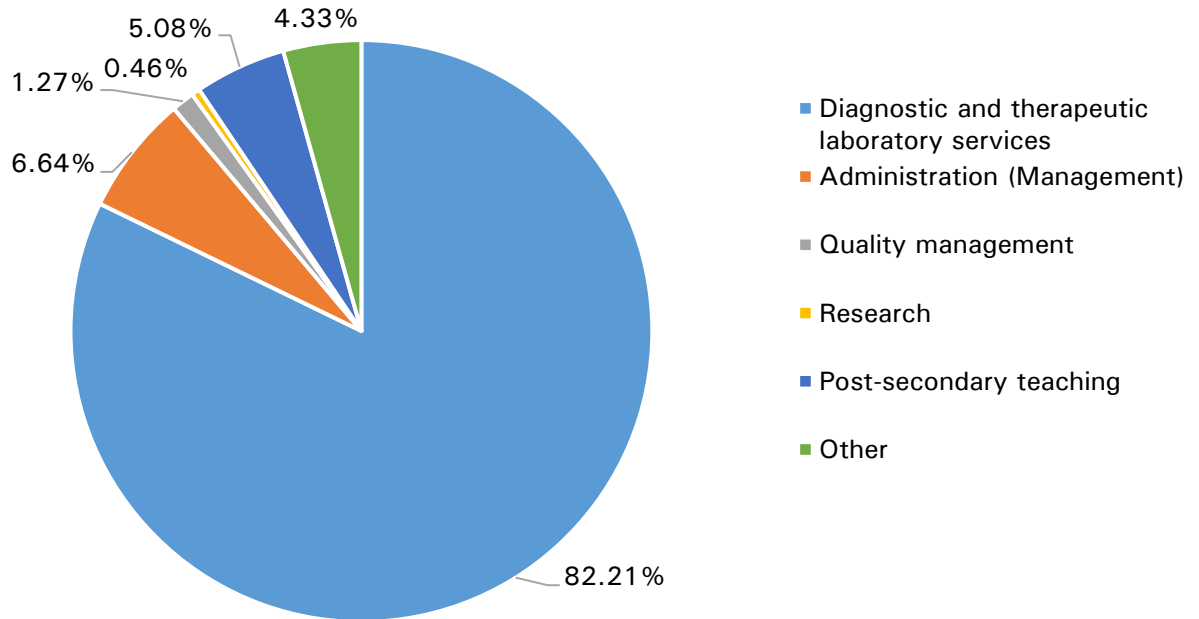
**Note:** Total number of MLTs indicating that they “...provide clinical education (part-time or full-time) to MLTs and/or other health professionals” is 1731 in 2022 and 1712 in 2021.

**Table C.2.7.b – Practising MLTs involved in clinical education by electoral district**

Electoral district	Number of Practising MLTs involved in MLT clinical education	Percentage of Practising MLTs involved in clinical education	Percentage of MLTs involved in clinical education from all Practising MLTs within the district
1	218	12.56%	28.42%
2	296	17.06%	28.30%
3	331	19.08%	29.16%
4	473	27.26%	27.44%
5	231	13.31%	28.34%
6	114	6.57%	31.23%
7	40	2.31%	29.63%
8	28	1.61%	22.95%



**Figure C.2.7 – Major function of MLTs involved in clinical education**



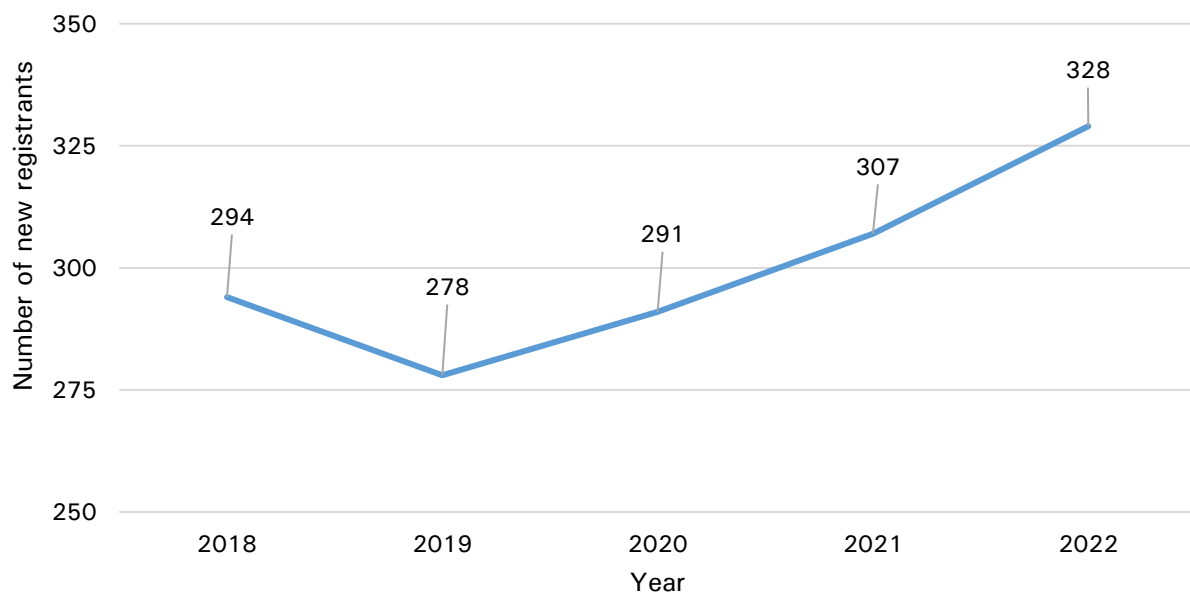


## C.2.8 New Registrants

**Table C.2.8 – New registrants each year**

New registrants	2018	2019	2020	2021	2022
Canadian-educated/trained	237	243	258	267	258
Internationally educated/trained	57	35	33	40	70
Total	294	278	291	307	328

**Figure C.2.8.a – Total new registrants each year**





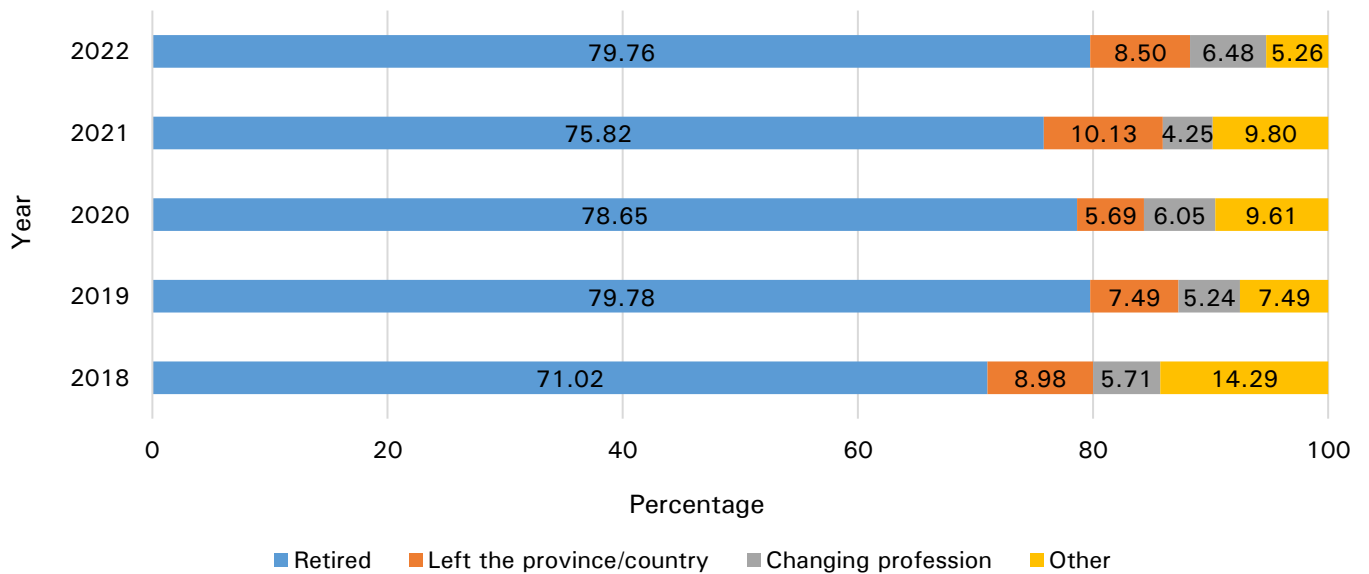
## C.2.9 Resignations

**Table C.2.8 – Resignation each year**

Reason for resignation	2018	2019	2020	2021	2022
Retired	174	213	221	232	197
Left the province/country	22	20	16	31	21
Changing profession	14	14	17	13	16
Other (i.e., health, family)	35	20	27	30	13
<b>Total</b>	<b>245</b>	<b>267</b>	<b>281</b>	<b>306</b>	<b>247</b>

**Note:** MLTs self-report their reasons for resigning their CMLTO registration through the resignation process. Both Practising and Non-Practising registrants may resign at any time throughout the year or through the annual renewal process. The resignations for each year are comprised of both in-year resignations and resignations completed during annual renewal.

**Figure C.2.8.a – Reason for resignation**





## D. Conclusion

### D.1 Summary

Analyzing health human resource data is an essential planning tool for the current and future needs of the healthcare system. The 2022 CMLTO Medical Laboratory Technologists Health Human Resource Report is the result of an in-depth analysis of CMLTO's registration data.

The data presented in this report is open to interpretation through a variety of perspectives and methodologies. The questions answered by this specific analysis may be valuable to a variety of stakeholders. However, everyone will approach and interpret the data from their own specific perspective. The CMLTO would be pleased to discuss the findings and provide further insight as well as consider other interpretations of the data.

The CMLTO is committed to supporting health human resource planning for medical laboratory technologists in Ontario. Please contact the Registrar & CEO at [executiveoffice@cmlto.com](mailto:executiveoffice@cmlto.com) should you want to connect about the findings of this report or have additional data that you would like to discuss further.

Please visit [www.cmlto.com](http://www.cmlto.com) for more information about the College of Medical Laboratory Technologists of Ontario.