



Canadian Society for Medical Laboratory Science
Société canadienne de science de laboratoire médical

Newly Certified Graduate Employment Survey

2019 Graduates

Survey Disseminated: 2021

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1. Executive Summary

Survey Purpose:

This survey examines the employment trends of medical laboratory professionals (MLPs) who were successful in passing the Canadian Society for Medical Laboratory Science (CSMLS) certification exam within a specified year. The employment information is focused on the graduate's experience one year after certification and the pathways taken to achieve this, including barriers and facilitators. It provides an indication of labour market need for MLPs and their employers as well as information for academic programs and students evaluating entrance into the profession.

Participants:

Medical Laboratory Assistants (MLA) and Medical Laboratory Technologists (MLT; general, clinical genetics and cytotechnologists) who passed their CSMLS certification exam in 2019 are included in the analysis. Employment rates are determined one year after successful completion of the exam in 2019; either in February, June or October. A total of 1184 unique certified graduates completed the certification exam in 2019, resulting in a 25% (299/1184) participation rate (MLA = 17%, 94/532; MLT =31%, 205/652).

One key difference from this year's report with respect to that of previous years is that respondents were not excluded due to missing/erroneous information. Filtering data by respondent (survey) start date, rather than by the respondents' input for certification year was the primary method used to achieve this goal. Input of certification year is prone to occasional human error (e.g. input of the current year rather than graduation year) and was the main cause for exclusion in the past. All surveys were used to extract whatever information the respondent provided, and this has been applied retroactively for 2016-2018 so that the comparison to the previous years can be made.

Methodology:

The survey was administered via SurveyMonkey over three multi-week periods in March, June and November 2020, 12 months after the respondent's certification date.

Results:

77% (i.e. 71/92) of MLAs indicated that they were employed at the time of the survey, with 67% working in a job at their certification level. 22% had a permanent position at their certification level after three months and 27% by six months. 29% had a temporary position at their certification level after three months and 40% by six months. 14 MLAs who had a temporary position initially transitioned to a permanent position at some point later within the first six-month period. Overall, MLA employment at certification level is 3% higher for the 2019 cohort in comparison to a 4-year average. Temporary employment is 4% above average and higher than previous years. Permanent employment is on par with the 4-year average, but it is lower than the last two years. 46% of MLA respondents indicated they wanted to remain with the same department and organization for more than 5 years, and this was an increase by 11% over the previous year. These findings support a greater emphasis on position stability on the part of the MLA. However, the decrease in permanent employment is in contrast with this ambition. In this regard, the trend of 'employers hiring newly certified MLA graduates in precarious positions' as noted in previous years has been maintained.

97% (i.e. 196/202) of MLTs indicated that they were employed at the time of the survey, with 93% working in a job at their certification level. 41% had a permanent position at their certification level after three months and 55% by six months. 40% had a temporary position at their certification level after three months and 50% by six months. 39 MLTs who had a temporary position initially transitioned to a permanent position at some point later within the first six-month period. Employment rates for both permanent and temporary positions are higher this year in comparison to the previous years. Permanent rates increased by 3% in comparison to a 4-year average, and temporary by 1%. These statistics reaffirm the stability of MLT employment as noted in previous years for the 2019 graduates.

Key Findings:

Overall, employment trends for MLAs and MLTs remain consistent with previous years. Increases in employment satisfaction were observed in regards to the jobs meeting expectations. There was a strong positive correlation with the sense of fulfillment choosing these career paths. However, some areas of employment satisfaction experienced a decline and include the perception that guidance is available when needed. MLAs also indicated a significant increase in pressure to accept a job at their training site. MLTs showed an increase in their preference to work part-time, and that shift work was an increasingly important factor when choosing employment.

There is a growing trend for both MLAs and MLTs to want to stay with the same department and organization for more than 5 years. This finding is corroborated by the below average percentage of both groups who indicated they were currently seeking a new job.

2. Introduction to the Newly Certified Graduate Employment Survey: 2019

Survey Purpose:

This survey examines the employment trends of MLPs who were successful in passing the CSMLS certification exam within a specified year. The employment information is focused on the graduate's experience one year after certification and the pathways taken to achieve this, including barriers and facilitators. It provides an indication of labour market need for MLPs and their employers as well as information for academic programs and students evaluating entrance into the profession.

Survey Design History:

The New Graduate Survey was redesigned in 2014 for the 2015 calendar year, incorporating additional skip logic and refinement of questions compared to the previous processes. Thus, comparisons of the 2015 data (representing 2014 certification exam graduates) to years prior to 2014 may not be appropriate for specific items. For 2016 data (representing 2015 certification exam graduates) and later, the progression of these changes was continued as the methodology to disseminate the annual survey was reviewed by CSMLS and deemed necessary for enhanced statistical trending.

The 'New Graduate Survey' was renamed in 2016 to the 'Newly Certified Graduate Employment Survey', which better reflects the participant population and intent of the data gathering effort.

An additional note of importance is that the CSMLS certification exam was reviewed and updated for the 2017 survey. The question "Are you still employed by the first department and organization you work with after graduation?" was added. This limits the ability to draw comparisons between the entire 2016-2019 range for this question.

A chronological list of changes is provided below in **Table 1**.

Table 1: Chronological List of Survey Changes

Dissemination	Certification	Methodological and Survey Comments
2014	2013	Data collection within calendar 2014 and prior may not be comparable to current survey questions. Contact the Research Department at CSMLS for further details. Evaluation and redesign of survey was initiated with small question changes implemented in calendar year 2015.
2015	2014	Survey changes implemented. (referenced as the '2014 survey')
2016	2015	Internal processes were updated and survey methodology was reviewed. Additional changes to be implemented in 2017 with minimal impact on question structure. Renamed to the Newly Certified Graduate Employment survey. (referenced as the '2015 survey')
2017	2016	Methodology improvements were made, which resulted in the approximate doubling of participation rate. (referenced as the '2016 survey')
2018	2017	The question "Are you still employed by the first department and organization you work with after graduation?" was added. (referenced as the '2017 survey')

Survey Dissemination:

The survey was administered via SurveyMonkey over three multi-week periods in March, June and November 2020, 12 months after the respondent's certification date. The survey was sent to all CSMLS 2019 certification exam participants who successfully passed. A protocol was enacted to disseminate the survey through targeted emails using an extraction of potential participants from iMIS (criteria can be found in the CSMLS internal procedure documents). Survey questions have not been made mandatory and thus, some n values (number of respondents) differ between questions.

Participation Rates:

A total of 1184 unique certified graduates completed the certification exam in 2019 (referenced as the '2019 survey'), resulting in a 25% (299/1184) participation rate in 2019. This is a decline in comparison to previous years. In 2016 and 2017 response rates were 35% and 32% respectively and it is unclear why the rates have declined. MLAs comprised 31% (92/299) of the survey participants and MLTs make up the other 69%. The MLT participation was comprised of three subgroups; 94% (193/205) general MLT, 4% cytotechnologists and 2% clinical genetics technologists. The subgroups of MLTs have been grouped together during analysis due to the vast majority being general MLTs in a process that is consistent with previous years' analysis.

Membership Status:

The majority of graduates were CSMLS members at the time of their survey: 78% (72/92) of MLAs and 80% (163/205) of MLTs.

Data Inclusion Considerations:

One key difference from this year's report with respect to that of previous years is that respondents were not excluded due to missing/erroneous information. Filtering data by respondent (survey) start date, rather than by the respondents input for certification year was the primary method used to achieve this goal. Input of certification year is prone to occasional human error (e.g. input of the current year rather than graduation year) and was the main cause for exclusion in the past. All surveys were used to extract whatever information the respondent provided, and this has been applied retroactively for 2016-2018 so that the comparison to the previous years can be made. Thirteen surveys received were essentially blank, including one that selected 'no' to passing their CSMLS certification exam, and do not contribute to the findings.

An investigation of duplicate survey answers from the same IP addresses was conducted. It's noteworthy that in one instance, in 2018, the same IP address was used for a MLA and a MLT. This suggests a public computer was accessed by 2 individuals, and that a duplicate IP address alone is not a sufficient reason to exclude a data set. Thus, the combination of identical IP, date, and responses was selected as the threshold to exclude data. In the 2019 survey, there were 4 occurrences where the same IP address appeared more than once, 9 surveys in total; 6 were nearly blank do not contribute to the findings. 2 were filled out correctly but were from different IP addresses. Further consideration was given to the 9th duplicate. In this case the survey was partially complete and often had very similar responses to one of the completed surveys. However, some responses were different, and in this context, there is insufficient reason to preclude this data.

3. Academic Demographics

Geographic Information:

87% of respondents (259/298) were Canadian trained with the balance being internationally trained. MLA and MLT participants were from a variety of schools across Canada.

For MLAs, Ontario has remained the province with the largest number of respondents and is at a 3-year high at 51% of the total (**Figure 1**). Medix, in Ontario, was the institution that was selected most frequently for the 2019 graduates (12%). However, the data (**Table 2**) reveals a declining trend for this institution over the past four years as other Ontario institutions are now claiming a greater share of the total. The data indicates Nova Scotia has seen increases over the past four years, and in 2019 became the province with the second highest share at 16%. Cape Breton Business College has emerged as the second most frequently selected institution in Canada with 11% of the national total.

For MLTs, Ontario has also remained the province selected most frequently by respondents but fell below its average for the 2019 graduates (**Figure 2**) and within the province the Michener Institute was selected most frequently. However, the data (**Table 3**) reveals a declining trend for this institution over the past four years by -6%, to 14% for 2019. Alberta remains the second most frequently selected province, and its 2019 total is on par with the four-year average. The Southern Alberta Institute of Technology (SAIT) received the largest percentage within the province, and is ranked third nationally. The British Columbia Institute of Technology (BCIT) has seen gains over the past four years and is now the second most frequently selected institution. In effect, SAIT and BCIT have switched places in the rankings in 2019.

Figure 1: MLA Education by Province

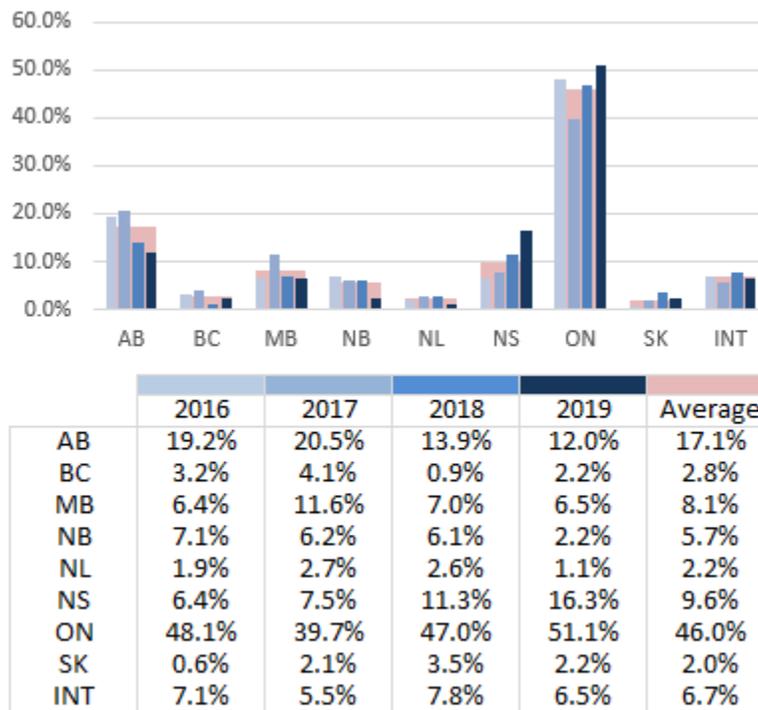
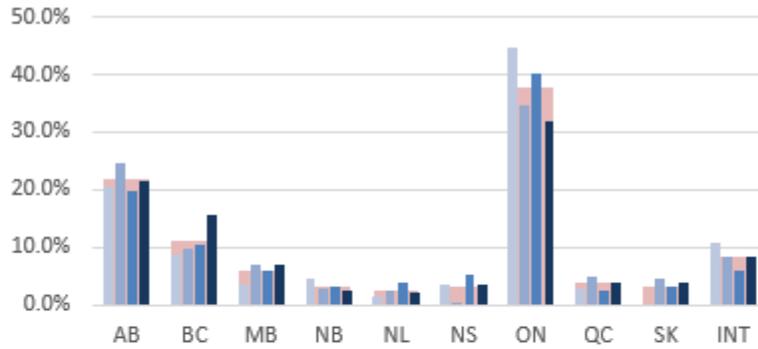


Table 2: MLA Education by Institution

	2016	2017	2018	2019
Total Respondents	158	146	116	93
Algonquin Careers Academy, ON	4 - 2.5%	4 - 2.7%	1 - 0.9%	5 - 5.4%
Anderson College, ON	0 - 0.0%	9 - 6.2%	8 - 6.9%	8 - 8.6%
Cape Breton Business College (CBCB), NS	10 - 6.3%	5 - 3.4%	10 - 8.6%	10 - 10.8%
CCNB - Edmundston, CESAB, NB	1 - 0.6%	0 - 0.0%	0 - 0.0%	0 - 0.0%
Centennial College, ON	14 - 8.9%	10 - 6.8%	5 - 4.3%	6 - 6.5%
Collège Communautaire du Nouveau-Brunswick, NB	0 - 0.0%	0 - 0.0%	1 - 0.9%	0 - 0.0%
College of the North Atlantic, NL	3 - 1.9%	3 - 2.1%	3 - 2.6%	1 - 1.1%
Confederation College, ON	6 - 3.8%	3 - 2.1%	1 - 0.9%	1 - 1.1%
Everest College	1 - 0.6%	0 - 0.0%	0 - 0.0%	0 - 0.0%
Herzing College, MB	4 - 2.5%	10 - 6.8%	1 - 0.9%	2 - 2.2%
Medix, ON	30 - 19.0%	17 - 11.6%	15 - 12.9%	11 - 11.8%
Michener Institute/Mohawk College, ON	2 - 1.3%	4 - 2.7%	1 - 0.9%	1 - 1.1%
MTI Community College, BC	1 - 0.6%	3 - 2.1%	0 - 0.0%	0 - 0.0%
National Academy of Health and Business, ON	0 - 0.0%	4 - 2.7%	1 - 0.9%	2 - 2.2%
National Academy, ON	5 - 3.2%	0 - 0.0%	0 - 0.0%	0 - 0.0%
Neeginan Institute, MB	1 - 0.6%	0 - 0.0%	0 - 0.0%	0 - 0.0%
New Brunswick Community College, NB	2 - 1.3%	5 - 3.4%	0 - 0.0%	1 - 1.1%
North Alberta Institute of Technology, AB	16 - 10.1%	16 - 11.0%	3 - 2.6%	3 - 3.2%
Nova Scotia Community College, NS	3 - 1.9%	6 - 4.1%	3 - 2.6%	5 - 5.4%
Other (International)	8 - 5.1%	8 - 5.5%	9 - 7.8%	6 - 6.5%
Other (National)	3 - 1.9%	5 - 3.4%	5 - 4.3%	1 - 1.1%
Oulton College, NB	8 - 5.1%	4 - 2.7%	6 - 5.2%	1 - 1.1%
Red Deer Community College, AB	4 - 2.5%	0 - 0.0%	8 - 6.9%	2 - 2.2%
Robertson College, MB	5 - 3.2%	6 - 4.1%	7 - 6.0%	4 - 4.3%
Saskatchewan Polytechnic, SK	1 - 0.6%	3 - 2.1%	4 - 3.4%	2 - 2.2%
Southern Alberta Institute of Technology, AB	10 - 6.3%	13 - 8.9%	4 - 3.4%	6 - 6.5%
St Clair College, ON	7 - 4.4%	3 - 2.1%	2 - 1.7%	1 - 1.1%
St Lawrence, ON	6 - 3.8%	3 - 2.1%	6 - 5.2%	9 - 9.7%
Thompson University, BC	3 - 1.9%	2 - 1.4%	0 - 0.0%	1 - 1.1%
Vancouver Community College, BC	0 - 0.0%	0 - 0.0%	0 - 0.0%	1 - 1.1%
Westervelt College, ON	0 - 0.0%	0 - 0.0%	12 - 10.3%	3 - 3.2%

Figure 2: MLT Education by Province



	2016	2017	2018	2019	Average
AB	20.4%	24.7%	19.9%	21.6%	21.8%
BC	8.7%	9.6%	10.5%	15.7%	11.1%
MB	3.4%	7.1%	5.8%	6.9%	5.8%
NB	4.4%	2.9%	3.1%	2.5%	3.2%
NL	1.5%	2.5%	3.7%	2.0%	2.4%
NS	3.4%	0.4%	5.2%	3.4%	3.0%
ON	44.7%	34.7%	40.3%	31.9%	37.7%
QC	2.9%	5.0%	2.6%	3.9%	3.7%
SK	0.0%	4.6%	3.1%	3.9%	3.0%
INT	10.7%	8.4%	5.8%	8.3%	8.3%

Table 3: MLT Education by Institution

	2016		2017		2018		2019	
	Total Respondents	206	239	191	204			
British Columbia Institute of Technology (BCIT), BC	11 - 5.3%	17 - 7.1%	15 - 7.9%	27 - 13.2%				
Cambrian College, ON	9 - 4.4%	10 - 4.2%	8 - 4.2%	11 - 5.4%				
CCNB Campus de Dieppe / Université de Moncton, NB	0 - 0.0%	0 - 0.0%	1 - 0.5%	0 - 0.0%				
Cégep de l'Outaouais	1 - 0.5%	1 - 0.4%	1 - 0.5%	2 - 1.0%				
Cégep de Rimouski, QC	0 - 0.0%	2 - 0.8%	0 - 0.0%	0 - 0.0%				
Collège communautaire du Nouveau-Brunswick, NB	0 - 0.0%	1 - 0.4%	2 - 1.0%	1 - 0.5%				
Collège de Rosemont, QC	0 - 0.0%	1 - 0.4%	0 - 0.0%	0 - 0.0%				
College of New Caledonia (CNC), BC	7 - 3.4%	6 - 2.5%	5 - 2.6%	5 - 2.5%				
College of the North Atlantic (CNA), NL	3 - 1.5%	6 - 2.5%	7 - 3.7%	4 - 2.0%				
Dalhousie University, NS	1 - 0.5%	0 - 0.0%	0 - 0.0%	0 - 0.0%				
Dawson College, QC	5 - 2.4%	8 - 3.3%	4 - 2.1%	6 - 2.9%				
Diagnostic Svs of MB School of Diagnostic Cytology, MB	1 - 0.5%	0 - 0.0%	0 - 0.0%	0 - 0.0%				
Mohawk College, ON	12 - 5.8%	4 - 1.7%	5 - 2.6%	0 - 0.0%				
New Brunswick Community College (NBCC) NB	9 - 4.4%	5 - 2.1%	3 - 1.6%	4 - 2.0%				
Northern Alberta Institute of Technology (NAIT), AB	9 - 4.4%	17 - 7.1%	8 - 4.2%	15 - 7.4%				
Nova Scotia Community College (NSCC), NS	6 - 2.9%	1 - 0.4%	10 - 5.2%	7 - 3.4%				
Other (International)	22 - 10.7%	20 - 8.4%	11 - 5.8%	17 - 8.3%				
Other (National)	0 - 0.0%	1 - 0.4%	0 - 0.0%	0 - 0.0%				
Red River College, MB	6 - 2.9%	17 - 7.1%	11 - 5.8%	14 - 6.9%				
Saskatchewan Institute of Applied Science and Technology (SIASST), SK	0 - 0.0%	10 - 4.2%	0 - 0.0%	0 - 0.0%				
Saskatchewan Polytechnic (SaskPoly), SK	0 - 0.0%	1 - 0.4%	6 - 3.1%	8 - 3.9%				
Southern Alberta Institute of Technology (SAIT), AB	26 - 12.6%	37 - 15.5%	18 - 9.4%	19 - 9.3%				
St Clair College, ON	7 - 3.4%	5 - 2.1%	8 - 4.2%	11 - 5.4%				
St Lawrence College, ON	9 - 4.4%	12 - 5.0%	6 - 3.1%	4 - 2.0%				
The Michener Institute of Education at UHN, (TMI) ON	43 - 20.9%	41 - 17.2%	42 - 22.0%	29 - 14.2%				
University of Alberta, AB	7 - 3.4%	5 - 2.1%	12 - 6.3%	10 - 4.9%				
University of Ontario Institute of Technology (UOIT), ON	12 - 5.8%	11 - 4.6%	8 - 4.2%	10 - 4.9%				

Prior Education:

Combining national and international training programs for MLAs, 90% (i.e. 83/92) completed high school. The most prominent form of post-secondary education, at 39%, was attaining a Bachelor's degree. 74% achieved qualifications considered between a high school diploma and a Bachelor's degree (note that there are numerous categories within this demographic), and 10% completed a Master's degree. The number of incomplete qualifications, primarily university degrees at 16%, is slightly below average and has been on a decline for the past two years.

Combining national and international training programs for MLTs, 95% (i.e. 192/202) completed high school and the most prominent form of post-secondary education, at 56%, was attaining a Bachelor's degree. These metrics are both slightly above the four-year average, but the number of graduates who completed a Bachelor's degree is lower than the previous year. 38% achieved qualifications considered between a high school diploma and a Bachelor's degree, and 7% completed of a Master's degree. The number of incomplete qualifications, primarily university degrees at 15%, is below average and has been on a decline for the past two years.

For six of the eight prior education categories defined in the survey, the ratio of Canadian to international education is higher for MLTs in comparison to MLAs. This suggests a greater barrier to achieving MLT certification for those who were internationally educated.

Table 4: Prior Education

Prior Education		MLT					MLA				
		2016	2017	2018	2019	Av.	2016	2017	2018	2019	Av.
High School	Total	90.0%	90.3%	93.7%	95.0%	92.2%	84.6%	91.4%	86.8%	90.2%	88.3%
	Canada	70.5%	73.4%	76.2%	78.2%	74.6%	65.4%	60.0%	62.3%	62.0%	62.4%
	Int.	19.5%	16.9%	17.5%	16.8%	17.7%	19.2%	31.4%	24.6%	28.3%	25.9%
Trade or vocational diploma or certificate	Total	10.0%	5.9%	6.3%	6.4%	7.2%	11.5%	17.1%	23.7%	23.9%	19.1%
	Canada	5.0%	5.9%	3.2%	3.0%	4.3%	8.3%	10.0%	15.8%	13.0%	11.8%
	Int.	5.0%	0.0%	3.2%	3.5%	2.9%	3.2%	7.1%	7.9%	10.9%	7.3%
Community college of CEGEP certificate or diploma	Total	8.0%	5.5%	9.5%	12.4%	8.8%	17.9%	16.4%	27.2%	29.3%	22.7%
	Canada	5.0%	5.5%	6.9%	8.9%	6.6%	14.1%	12.1%	20.2%	20.7%	16.8%
	Int.	3.0%	0.0%	2.6%	3.5%	2.3%	3.8%	4.3%	7.0%	8.7%	6.0%
Technical institute diploma or certificate	Total	12.0%	8.9%	9.0%	15.3%	11.3%	12.8%	14.3%	18.4%	16.3%	15.5%
	Canada	7.5%	8.9%	7.4%	12.9%	9.2%	9.0%	8.6%	8.8%	6.5%	8.2%
	Int.	4.5%	0.0%	1.6%	2.5%	2.1%	3.8%	5.7%	9.6%	9.8%	7.2%
degree	Total	15.0%	5.9%	12.2%	10.9%	11.0%	12.2%	14.3%	17.5%	25.0%	17.3%
	Canada	6.0%	5.9%	4.8%	3.5%	5.0%	3.2%	3.6%	5.3%	7.6%	4.9%
	Int.	9.0%	0.0%	7.4%	7.4%	6.0%	9.0%	10.7%	12.3%	17.4%	12.3%
Bachelor's degree (e.g., B.A./B.Sc./B.Ed./B.AppSc)	Total	60.0%	40.1%	60.8%	55.9%	54.2%	35.9%	42.1%	39.5%	39.1%	39.2%
	Canada	43.0%	40.1%	41.3%	39.6%	41.0%	13.5%	15.7%	17.5%	14.1%	15.2%
	Int.	17.0%	0.0%	19.6%	16.3%	13.2%	22.4%	26.4%	21.9%	25.0%	23.9%
Diploma or certificate between Bachelor's and Master's	Total	3.0%	0.8%	5.3%	5.0%	3.5%	7.7%	8.6%	14.9%	15.2%	11.6%
	Canada	0.5%	0.8%	0.5%	0.5%	0.6%	0.6%	0.0%	4.4%	4.3%	2.3%
	Int.	2.5%	0.0%	4.8%	4.5%	2.9%	7.1%	8.6%	10.5%	10.9%	9.3%
Master's degree (e.g., M.A./M.Sc/M.Ed/M.B.A./M.A.Sc)	Total	9.5%	3.4%	7.4%	6.9%	6.8%	9.0%	7.9%	11.4%	9.8%	9.5%
	Canada	4.0%	3.4%	2.1%	2.5%	3.0%	0.0%	0.0%	1.8%	0.0%	0.4%
	Int.	5.5%	0.0%	5.3%	4.5%	3.8%	9.0%	7.9%	9.6%	9.8%	9.1%
Other / Not Specified (Completed)	Total	1.5%	0.8%	2.1%	2.0%	1.6%	2.6%	0.7%	2.6%	2.2%	2.0%
Incomplete	Total	20.0%	21.9%	18.0%	14.9%	18.7%	16.0%	16.4%	18.4%	16.3%	16.8%
	Refresher / Bridging / Continuing Education Certificate or Diploma	3.5%	3.8%	1.6%	0.5%	2.3%	1.3%	0.0%	0.9%	2.2%	1.1%
	University Degree	0.0%	1.3%	1.1%	3.5%	1.4%	1.3%	0.7%	0.0%	2.2%	1.0%
	Graduate Degree	11.5%	13.5%	11.1%	9.4%	11.4%	8.3%	12.1%	8.8%	7.6%	9.2%
	Unspecified / Other	0.0%	0.4%	1.6%	0.0%	0.5%	0.0%	0.0%	1.8%	0.0%	0.4%
		5.0%	3.0%	2.6%	1.5%	3.0%	5.1%	3.6%	7.0%	4.3%	5.0%

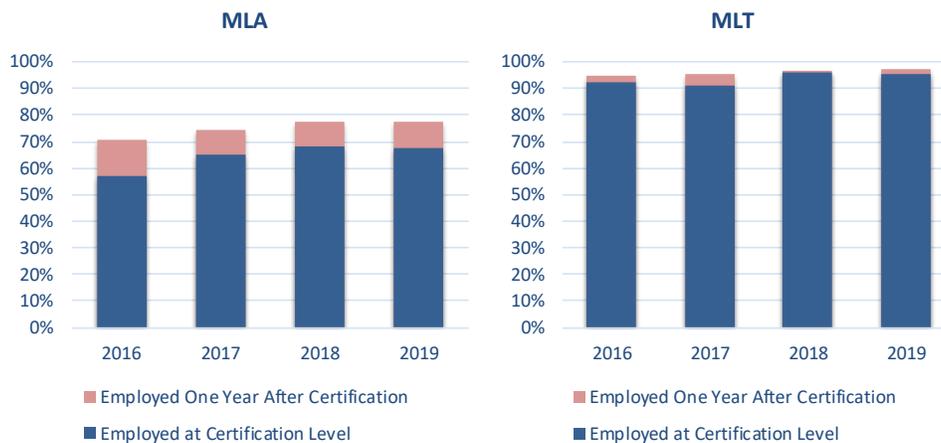
4. Employment Status

One Year Post-Certification Employment Status:

77% (71/92) of MLAs indicated that they were employed at the time of the survey, with 67% of those employed stating they were working in a job at their certification level. After increasing for 3 consecutive years by a total of 12%, the demand for MLA employment for 2019 graduates has decreased by 1% in comparison to the 2018 cohort. See **Figure 5-left**. Six MLAs provided insight into the reasons they were not currently working at their certification level; 2 had chosen an alternate career path. Four indicated they couldn't find a job / no jobs available.

97% (196/202) of MLTs indicated that they were employed at the time of the survey, with 96% of those employed stating they were working in a job at their certification level. The demand for MLT employment for 2019 graduates is nearly identical that observed for the 2018 cohort, which itself was higher than the demand experienced in 2016 and 2017. See **Figure 5-right**. 8 MLTs provided insight into the reasons they were not currently working at their certification level; 2 were temporarily between jobs, 2 for personal / family reasons, 1 furthering education / studying, 1 lack of Canadian experience, and 2 selected couldn't find a job / no jobs available as their reason. The two respondents who selected personal / family reasons indicated they would not consider relocation. The other six MLTs would consider relocation to find a job.

Figure 5: Employment at Certification Level



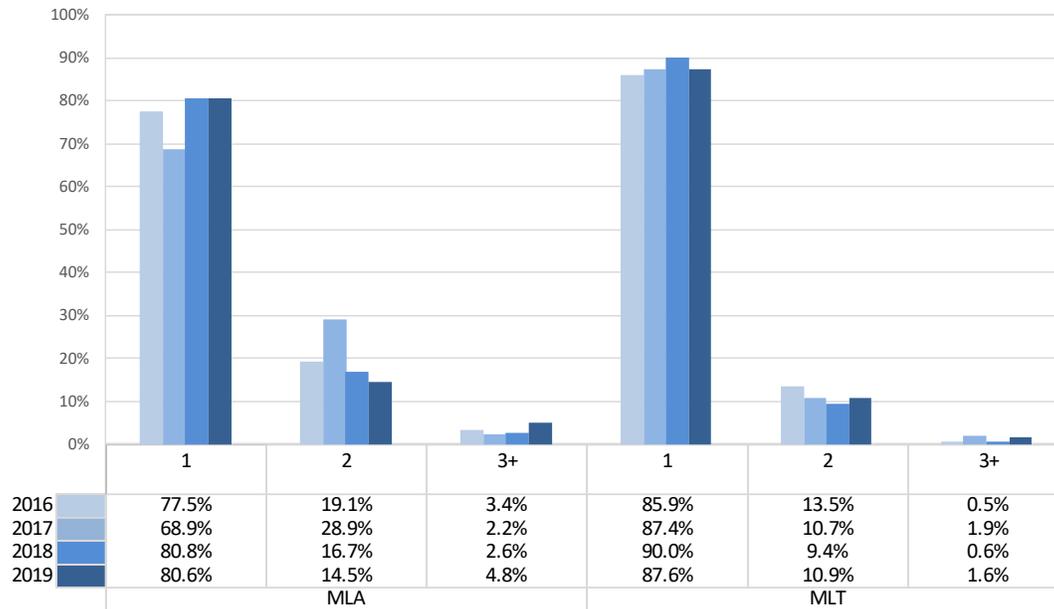
Number of Positions at Certification Level:

81% of MLAs work at one position. This is on par (-0.2%) with the previous year, which itself was the highest observed in the last 4 years. There was a reduction in the number of MLAs working two jobs. However, the number of MLAs working 3 or more jobs in 2019 increased to 5%, a four-year high and nearly double the previous year.

88% of MLTs work at one position, which is a 2% decrease in comparison with the previous year. For comparison, the previous year was the highest observed in the four years analyzed. Corresponding gains were observed in the number of MLTs working either 2 or 3 positions placing those values higher than what was observed for the previous year.

Figure 6 shows that the number of positions held by MLPs over the last 4 years remained fairly consistent, though MLA numbers have higher fluctuation due to the 2017 cohort. No clear trends (upwards or downwards shifts) in the data sets are observed over time.

Figure 6: Number of Positions at Certification Level



Mode of Employment:

Respondents were asked to describe their employment in terms of permanent, temporary, full time, part time and casual (**Table 5**). For the purpose of analysis, one employment type was selected as the primary mode of employment and was determined first by permanency, second by full/part time status and third, casual status. Supplementary employment represents one or more additional jobs held by the respondent that are less than or equal to the status of their respective primary job.

For the last three years the majority of MLAs indicated they work at permanent part-time positions, and for 2019 this reflected 36% (22/62) of respondents. Permanent full time employment was at 24%, 7% above average and 9% above the previous year. An increase in permanent positions, either full time or part time, has been observed for the past 4 years. The percentage of respondents working a permanent position for the years 2016-2019 are 41.4%, 50.0%, 54.5%, 59.7% respectively. Temporary part time or full time and casual work, considered the precarious positions, are all below average as a primary employment category in 2019. The precarious positions all show trends of declining in comparison to previous years. However, the number of MLAs picking up supplementary casual employment was slightly above average for 2019. Taken together, MLA employment trends continue to improve but there is still an opportunity to advocate for more stability.

47% (89/189) of MLT respondents indicated they secured full time permanent employment in 2019, a value which is 2% above average and a three-year high. Permanent part time positions are the primary mode of employment for 25%. This is the second most common employment mode and is identical to the four-year average. This cohort of MLTs is the most likely to have supplementary employment which was above average for 2019. In total, 72% of the 2019 respondents held at least one permanent position. The number of MLTs found working at temporary full time and casual positions is below average for 2019, while those working at temporary part time positions are slightly above average.

Table 5: Mode of Employment One Year After Certification

a) MLA

Employment Status		Year				Average
Primary	Supplementary	2016	2017	2018	2019	
Permanent full time		16.1%	16.3%	15.6%	24.2%	17.6%
	Permanent part time	1.1%	0.0%	0.0%	0.0%	0.3%
Permanent part time		25.3%	33.7%	39.0%	35.5%	33.0%
	Permanent part time	1.1%	0.0%	0.0%	0.0%	0.3%
	Casual	0.0%	1.2%	2.6%	1.6%	1.3%
Temporary full time		12.6%	12.8%	7.8%	8.1%	10.6%
	Casual	1.1%	0.0%	0.0%	0.0%	0.3%
Temporary part time		16.1%	9.3%	9.1%	6.5%	10.6%
	Casual	0.0%	0.0%	0.0%	1.6%	0.3%
Casual		29.9%	27.9%	28.6%	25.8%	28.2%
	Casual	0.0%	1.2%	0.0%	0.0%	0.3%

b) MLT

Employment Status		Year				Average
Primary	Supplementary	2016	2017	2018	2019	
Permanent full time		48.1%	44.3%	40.9%	47.1%	44.7%
	Permanent part time	0.0%	0.0%	0.0%	0.5%	0.0%
	Temporary part time	0.5%	0.0%	0.0%	0.0%	0.1%
	Casual	0.0%	0.5%	0.6%	1.1%	0.5%
Permanent part time		23.5%	25.4%	26.7%	24.9%	24.9%
	Permanent part time	0.5%	0.0%	0.0%	0.0%	0.0%
	Temporary full time	0.5%	0.0%	0.6%	1.6%	0.7%
	Temporary part time	0.0%	0.0%	0.6%	0.5%	0.3%
	Casual	3.8%	1.5%	1.7%	4.2%	2.8%
Temporary full time		15.8%	18.9%	16.5%	13.8%	16.1%
	Casual	0.5%	0.0%	0.0%	0.5%	0.3%
Temporary part time		3.3%	5.0%	9.7%	7.4%	6.2%
	Casual	1.1%	0.5%	2.3%	0.5%	1.1%
Casual		9.3%	6.5%	6.3%	6.9%	7.1%
	Casual	0.0%	1.0%	0.0%	0.0%	0.0%

5. Employer Demographics

Prior Work Experience:

40% (25/63) of the 2019 newly certified MLAs found a position at their academic clinical placement location, which is lower than any of the previous 3 years at 46% for 2018, 47% for 2017 and 51% for 2016.

52% (97/193) of the 2019 newly certified MLTs found a position at their academic clinical placement location, which is higher than any of the previous 3 years at 50% for 2018, 46% for 2017 and 42% for 2016.

Trend in gaining employment at the clinical placement site for MLAs and MLTs can be observed in **Table 6**.

Table 6: Prior Work Experience

a) MLA

Are you still employed by the first department and organization you work with after graduation?											
Yes - Department			Yes - Organization			No			No Data Available		
2016									50.6%	49.4%	
2017	2.2%	5.6%		2.2%			1.1%		44.9%	43.8%	
2018	32.1%	43.6%		5.1%	1.3%		9.0%	9.0%			
2019	34.9%	49.2%		4.8%	3.2%		6.3%	1.6%			
	Yes	No	ND	Yes	No	ND	Yes	No	ND	Yes	No

Are you employed where you completed your clinical placement?

b) MLT

Are you still employed by the first department and organization you work with after graduation?											
Yes - Department			Yes - Organization			No			No Data Available		
2016									42.2%	57.8%	
2017	2.8%	4.3%	3.8%	0.9%	0.5%		1.9%		43.1%	42.7%	
2018	40.0%	33.3%	1.1%	5.6%	5.6%		1.7%	11.1%		1.1%	0.6%
2019	40.4%	33.2%		7.3%	3.1%		2.6%	11.9%		1.6%	
	Yes	No	ND	Yes	No	ND	Yes	No	ND	Yes	No

Are you employed where you completed your clinical placement?

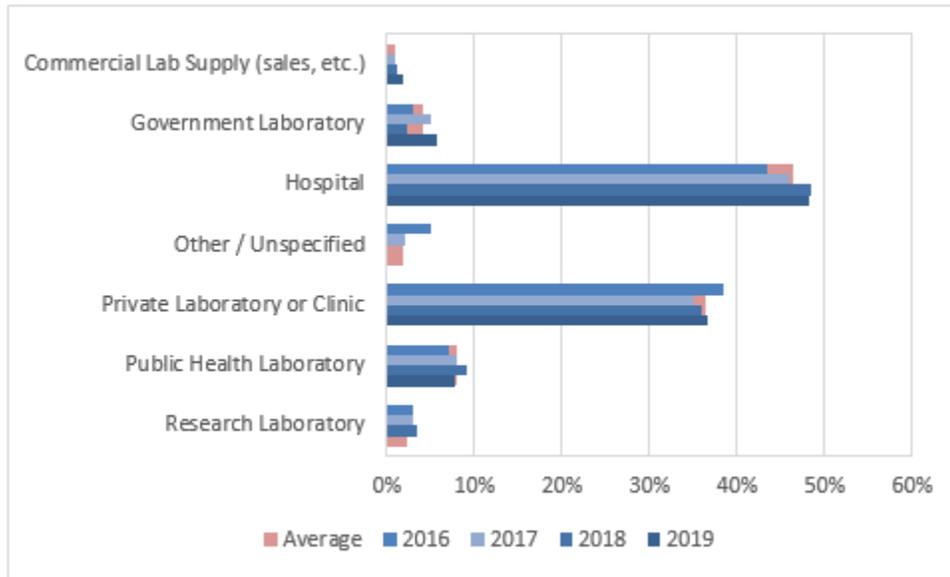
Employment Site:

MLAs indicate the majority (48%, 25/52) of positions they hold are in hospitals, followed by private laboratories or clinics at 37%. These results have remained consistent for the past four years. Though positions located in hospitals have been trending 2% above average for the past two years (**Figure 7a**).

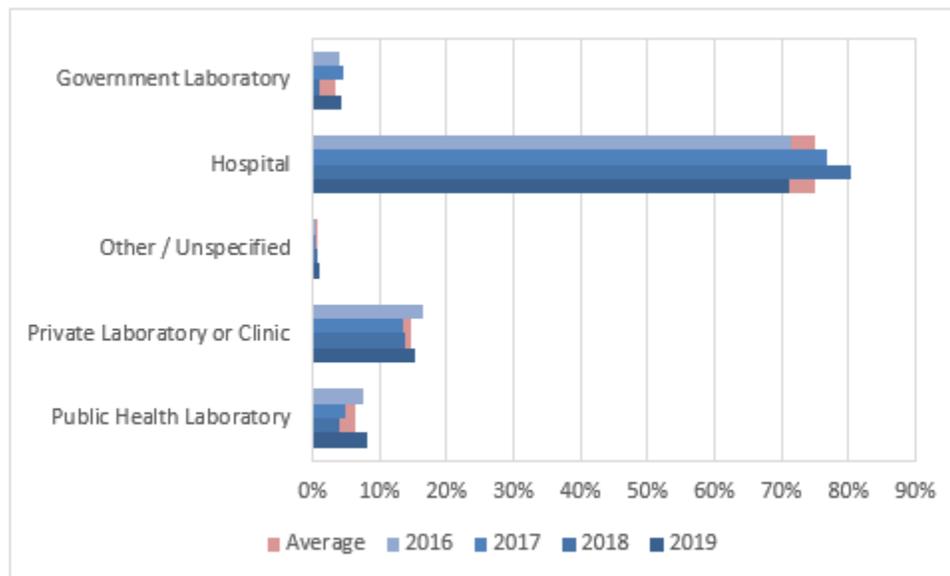
MLTs also indicate the majority (71%, 130/183) of positions they hold are in hospitals, followed by private laboratories or clinics at 15%. Hospitals have remained the overwhelming majority for the past four years. Positions located in public health laboratories saw the largest gains in 2019 representing 8% of the total number of positions (**Figure 7b**).

Figure 7: Employment Site

a) MLA



b) MLT



Employee Retention:

Employee retention demographics, specifically addressing what MLAs and MLTs are planning for the next 5 years are found in **Table 7**. The number of years the respondent plans to work in the same department or for the same organization are considered. In some instances, individuals have already moved on from their first department or organization by the time of the survey and are categorized as “not applicable”.

There is a growing trend to want to stay with the same department and organization for more than 5 years. These percentages increased to 46% (29/63) of MLAs and 35% (67/190) of MLTs in 2019. The second largest cohort of MLAs are those who plan to stay with the same department and organization for 1 year (9.5%). Considering that their second largest demographic in 2018 was comprised of those who had already moved on from the same department and organization, this result is consistent with the overall theme of increased employee retention. The second largest cohort of MLTs (15%) are those who have already moved on to a new department and organization. This result is consistent with the last 3 years, though slightly below the three-year average of 16%.

Table 7: Retention Demographics

MLA					MLT				
Number of years with:		Percentage by Year			Number of years with:		Percentage by Year		
Department	Organization	2017	2018	2019	Department	Organization	2017	2018	2019
N/A	N/A	10.0%	17.9%	7.9%	N/A	N/A	20.0%	13.0%	14.7%
N/A	<1		1.3%	1.6%	N/A	<1		2.3%	0.5%
	1					1		1.1%	1.1%
	2	20.0%				2			0.5%
	3					3	5.0%		1.6%
	4					4			
	5			1.6%		5	5.0%		2.1%
>1	>5		5.1%	4.8%	>1	>5	5.0%	7.9%	4.7%
	<1		6.4%	1.6%		<1		1.7%	4.2%
	1					1			
	2					2			
	3					3	5.0%		0.5%
	4					4			
1 year	5			3.2%	1 year	5	5.0%		
	>5					>5		2.8%	1.6%
	<1					<1			
	1	10.0%	2.6%	9.5%		1		7.9%	3.7%
	2		1.3%			2	5.0%		
	3					3			
2 years	4				2 years	4		0.6%	
	5					5			
	>5		3.8%	7.9%		>5		1.1%	3.2%
	<1					<1			
	1					1			
	2	20.0%	7.7%	4.8%		2	5.0%	9.0%	6.3%
3 years	3				3 years	3		0.6%	1.1%
	4	10.0%				4		1.1%	0.5%
	5		2.6%			5		1.1%	1.1%
	>5		2.6%	4.8%		>5	10.0%	3.4%	4.7%
	<1					<1			
	1					1			
4 years	2			1.6%	4 years	2			
	3		2.6%	1.6%		3	5.0%	2.8%	3.2%
	4					4			
	5					5		0.6%	
	>5			1.6%		>5		1.7%	1.6%
	<1					<1			
5 years	1				5 years	1			
	2					2		1.1%	
	3					3		0.6%	
	4					4			
	5		3.8%			5		2.3%	3.2%
	>5		3.8%	1.6%		>5	5.0%	2.8%	1.6%
>5	<1				>5	<1	5.0%		
	1		1.3%			1		1.1%	0.5%
	2					2		1.1%	1.1%
	3		1.3%			3		1.1%	
	4					4			
	5					5		0.6%	
>5		30.0%	34.6%	46.0%	>5		20.0%	30.5%	35.3%

6. Discipline

Job Type:

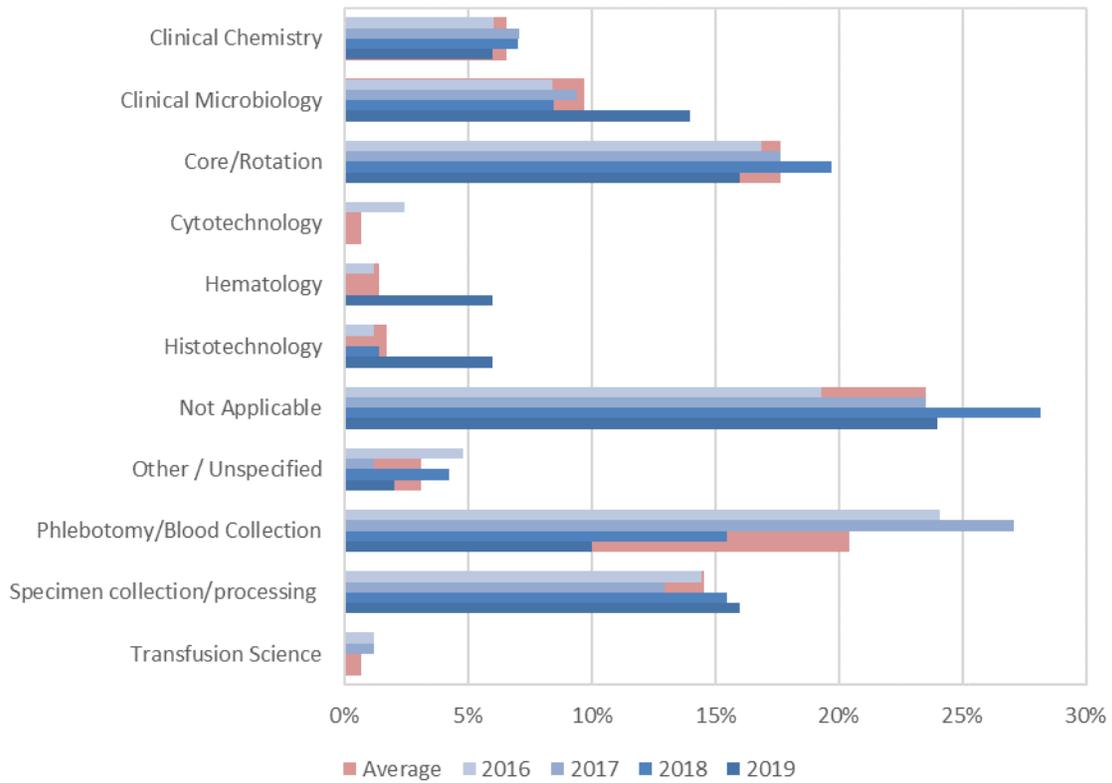
In 2019 MLAs selected 'Core/Rotation' and 'Specimen collection/processing' were tied as the most frequently selected discipline at 16%. Core/Rotation saw gains from 2016 at 17% to 2018 at 20% before dropping to 16% in 2019, whereas specimen collection has seen a three-year rise since 2017 from 13% to 16%. The 2019 cohort selected several disciplines, clinical microbiology (14%, +4%), hematology (6%, +5%) and histotechnology (6%, +5%), more frequently than their respective four-year averages. At 10%, respondents selecting phlebotomy occurred less frequently (-10%) in comparison to its four-year average and this reduction is part of a three-year trend. In 2017 this discipline was selected by 27% of respondents.

When describing their discipline, MLAs opting to select 'not applicable' was part of a rising trend in between 2016-2018. This value increased from 19% in 2016 to 28% by 2018. In 2018 it became the most frequent response. Although slightly lower than the previous year, in 2019 'not applicable' was selected again as the most frequent response (24%). In each instance the respondents verified they were employed at certification level; thus, it is unclear why the largest percentage would choose this option. Taken together this suggests an aspect of the survey that does not accurately reflect the experience of MLAs. To investigate this further the option to change the answer to 'Not Applicable (please specify)' with a prompt to provide a response should be considered.

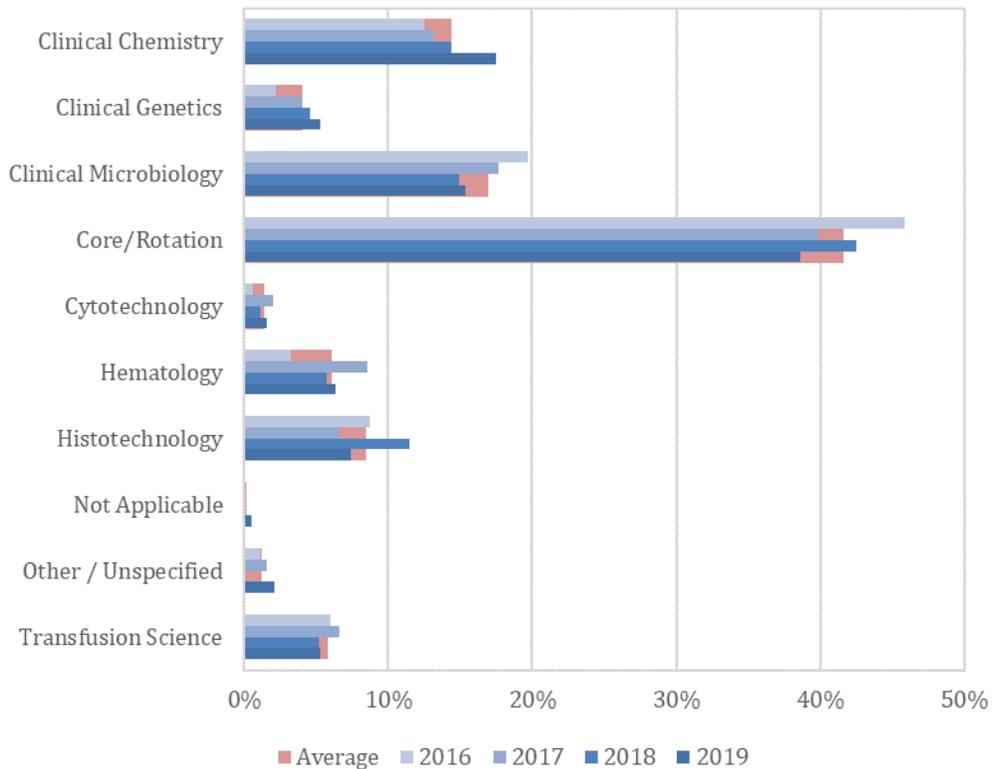
The majority of MLTs work in core/rotation and this has remained constant for the past four years, however its selection at 39% was below the four-year average (-3%) in 2019. Clinical chemistry became the second most frequently selected discipline in 2019 with an increase over the past four years from 13% in 2016 to 18% in 2019. Clinical microbiology is the third most frequently selected discipline at 15% in 2019, with a value that fell 2% below its four-year average. Clinical genetics has also seen a consistent rise over the past four years from 2% in 2016 to 5% in 2019.

Figure 8: Section of Laboratory Work

a) MLA



b) MLT



7. Job Location

Relocation Demographics:

90% (34/38) of MLA participants said they did not move for a position, less than 3% moved out of province and the balance remained in the same province (**Table 8**). Since only 41% said they would not consider moving for work, the results suggest significant employment opportunities at or near their clinical placement sites. The main reason MLAs would not consider relocation is due to family responsibilities, which is consistent for the past four years. 40% of MLAs were working where they completed their clinical training, which is lower than the 3 previous years. This has trended downward consistently for the past 4 years. Patterns associated with relocation for the 2019 MLA graduates are similar to the four-year average, although the total number of individuals relocating to new provinces is below average. A net reduction of MLA workers occurred in Ontario and the corresponding net gain occurred in British Columbia (**Table 9**).

50% (45/90) of MLT participants said that they did not move for a position. 21% moved to another province, 21% moved to another part of the same province and 8% moved to another country to gain employment (**Table 10**). Although to a lesser extent than for MLAs, these values support that employment opportunities at or near clinical placement sites are readily available. However, only 25% indicated they would not relocate for an employment opportunity. This is 11% lower than the four-year average and indicates the 2019 cohort of MLTs is much more amicable to relocation than usual. The main reason MLATs would not consider relocation is also due to family responsibilities. 54% of MLTs were working where they completed their clinical training, which is higher than the 3 previous years. This has trended upward consistently for the past 4 years. Patterns associated with relocation for the 2019 MLT graduates are consistent with the four-year average, though the number of people coming to Canada from the international community was above average. Within Canada, those in Alberta relocated to another province most often, whereas British Columbia and Saskatchewan were the provinces moved to most often (**Table 11**).

Table 8: MLA Relocation Demographics

	2016	2017	2018	2019	Average
Did you move from your place of academic program to find employment?					
No - I did not move	76.7%	70.2%	68.3%	89.5%	75.7%
Yes, to another country - specify in comment box	2.3%	0.0%	0.0%	0.0%	0.6%
Yes, to another part of the same province	14.0%	14.9%	19.5%	7.9%	14.2%
Yes, to another province - specify in comment box	7.0%	14.9%	12.2%	2.6%	9.5%
Would you consider moving to find employment?					
No	50.0%	37.5%	54.3%	41.4%	46.1%
Yes	50.0%	62.5%	45.7%	58.6%	53.9%
What is the main reason you would not move to a job?					
Continuing education	11.8%	22.2%	0.0%	8.3%	10.8%
Costs of living elsewhere	11.8%	16.7%	15.8%	8.3%	13.3%
Family responsibilities	58.8%	27.8%	68.4%	33.3%	50.6%
Moving expenses are prohibitive	2.9%	5.6%	5.3%	0.0%	3.6%
No guarantee of find work elsewhere	8.8%	11.1%	0.0%	25.0%	9.6%
Satisfied with job/living environment	5.9%	16.7%	5.3%	25.0%	10.8%
Unspecified	0.0%	0.0%	5.3%	0.0%	1.2%

Table 9: MLA Provincial Migration

Province Moved To:	Year: 2019														
	Province Moved From:														
	AB	BC	MB	NB	NL	NS	NT	NU	ON	PE	QC	SK	YT	Int.	Un.
Alberta															
British Columbia									2.3%						
Manitoba			2.3%												
New Brunswick															
Newfoundland and Labrador															
Nova Scotia															
Northwest Territories															
Nunavut															
Ontario									4.5%						
Prince Edward Island															
Quebec															
Saskatchewan															
Yukon															
International															
Unspecified															
Annual Change:	0.0%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-2.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Average Annual Change (2016-2019)														
AB	BC	MB	NB	NL	NS	NT	NU	ON	PE	QC	SK	YT	Int.	Un.
0.9%	1.9%	0.0%	1.2%	-0.8%	1.8%	0.0%	0.0%	-3.3%	0.5%	0.0%	0.3%	0.0%	-0.4%	

Table 10: MLT Relocation Demographics

	2016	2017	2018	2019	Average
Did you move from your place of academic program to find employment?					
No - I did not move	39.0%	46.6%	45.7%	50.0%	45.1%
Yes, to another country	3.8%	1.9%	7.6%	7.8%	5.1%
Yes, to another part of the same province	32.4%	33.0%	23.9%	21.1%	27.9%
Yes, to another province/ territory	24.8%	18.4%	22.8%	21.1%	21.8%
Would you consider moving to find employment?					
No	33.3%	40.0%	42.9%	25.0%	36.0%
Yes	66.7%	60.0%	57.1%	75.0%	64.0%
What is the main reason you would not move to a job?					
Continuing Education	0.0%	0.0%	33.3%	0.0%	5.6%
Costs of living elsewhere	0.0%	25.0%	0.0%	0.0%	11.1%
Family responsibilities	80.0%	62.5%	33.3%	100.0%	66.7%
Moving expenses are prohibitive	0.0%	12.5%	0.0%	0.0%	5.6%
No guarantee of find work elsewhere	20.0%	0.0%	33.3%	0.0%	11.1%

Table 11: MLT Provincial Migration

Province Moved To:	Year: 2019															
	Province Moved From:															
	AB	BC	MB	NB	NL	NS	NT	NU	ON	PE	QC	SK	YT	Int.	Un.	
Alberta	9.1%	2.3%							4.5%					2.3%		
British Columbia	18.2%													4.5%		
Manitoba			4.5%													
New Brunswick				2.3%					2.3%							
Newfoundland and Labrador																
Nova Scotia																
Northwest Territories																
Nunavut	2.3%															
Ontario					2.3%				13.6%					4.5%		
Prince Edward Island																
Quebec																
Saskatchewan	6.8%											2.3%		2.3%		
Yukon	2.3%													2.3%		
International									2.3%							
Unspecified	2.3%														6.8%	
Annual Change:	-22.7%	20.5%	0.0%	-2.3%	-2.3%	0.0%	0.0%	2.3%	-2.3%	0.0%	0.0%	9.1%	4.5%	-13.6%	6.8%	
	Average Annual Change (2016-2019)															
	AB	BC	MB	NB	NL	NS	NT	NU	ON	PE	QC	SK	YT	Int.		
	-14.3%	11.6%	-2.7%	-0.1%	0.0	3.8%	0.0%	0.6%	-4.0%	1.3%	-2.5%	12.6%	1.6%	-8.6%		

8. Job Attraction

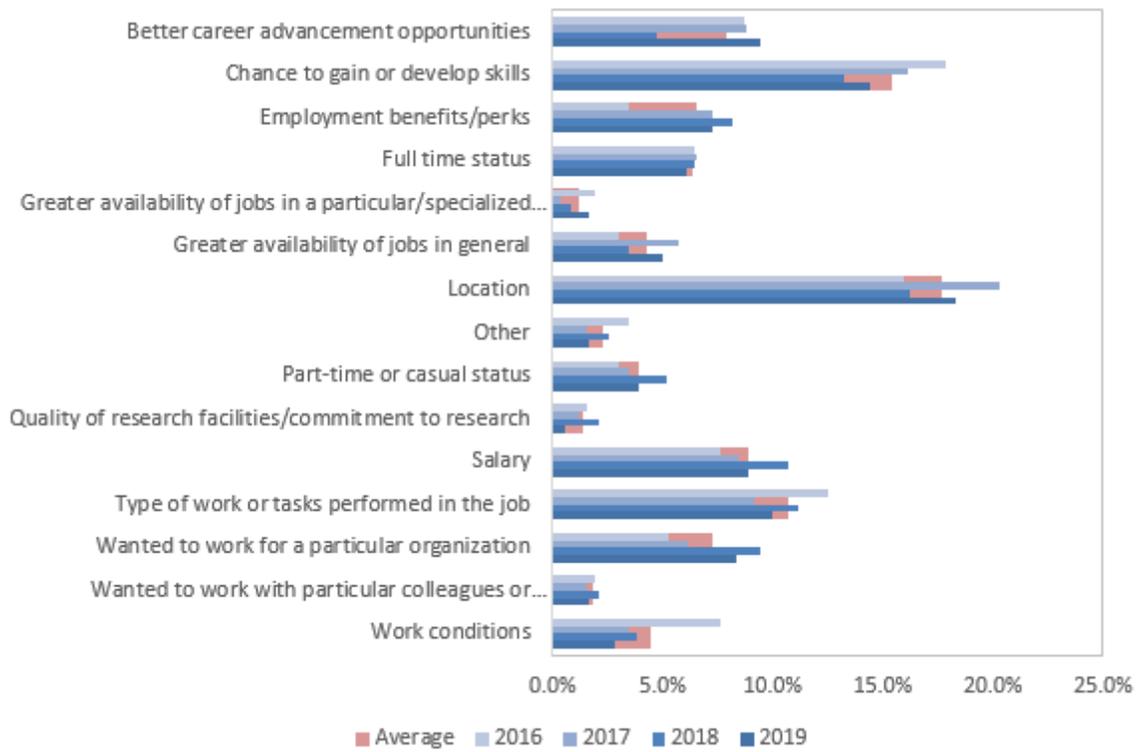
Factor Considerations:

MLAs were asked to select the 3 most important factors under consideration when choosing their position, and they provided a total of 234 selection responses. This year's results are generally consistent with the four-year averages, as each of the criteria evaluated for job attractiveness are within 2% of their average value. At 18% (38/234), "Location" is the most important factor for the 2019 graduates. Location has been chosen as the most important criteria for the last 3 years, and is slightly above average this year. At 14%, "The chance to gain or develop new skills" is the second most important factor, but the ranking falls slightly below its 4-year average. Four years ago, this was ranked as the most important criteria when choosing a position. "Type of work or tasks performed" remains the third most important factor at 10%. "Better career advancement opportunities" and "Salary" are at 9%. In general, concepts of growth and advancement are important to MLAs when choosing their position. Refer to **Figure 9a** for more information.

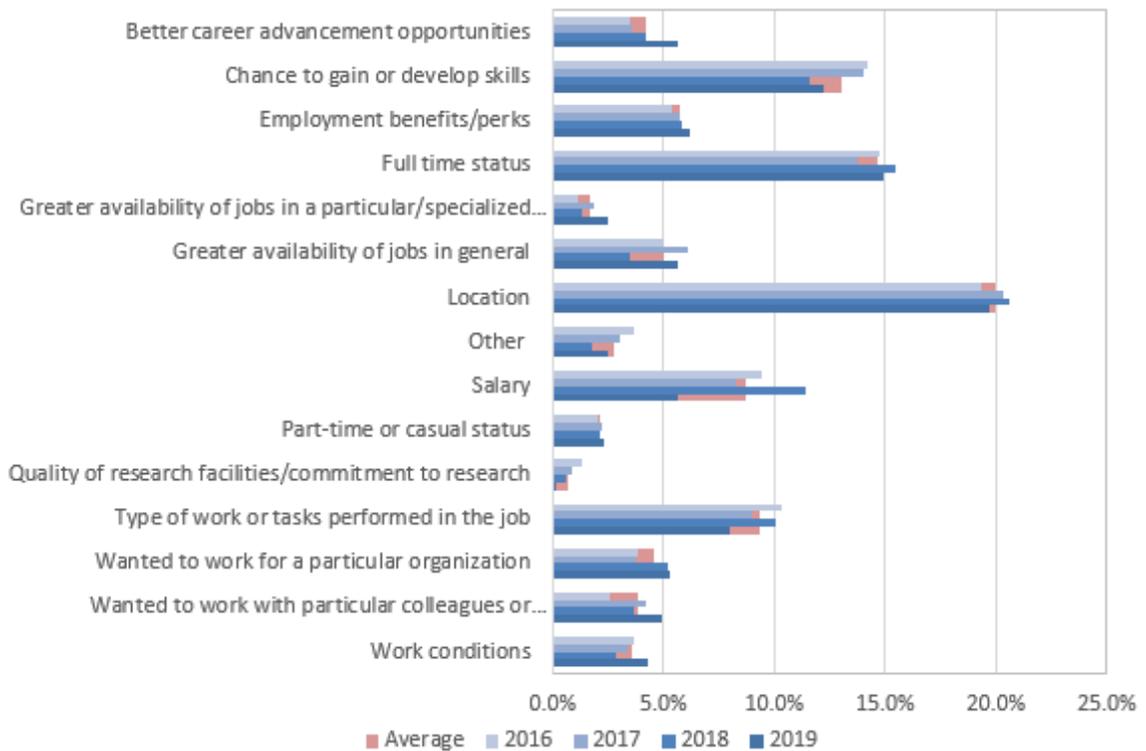
MLTs were also asked to select the 3 most important factors under consideration when choosing their position, and they provided a total of 564 selection responses. This year's results are fairly consistent with the four-year averages, as most of the criteria evaluated for job attractiveness are within 2% of their average value. The exception is salary which ranked 3% less significant this year with respect to its 4-year average. At 20% (111/564), "Location" is the most important factor for the 2019 graduates. Location has been chosen as the most important criteria for the last 4 years, but is slightly below average this year. At 15%, "Full time status" was selected as the second most important factor, a ranking it has held for 3 of the past 4 years. "The chance to gain or develop new skills" at 12%, and "Type of work or tasks performed" at 8%, are noted as the third and fourth highest ranked criteria. In general, criteria that emphasize the quality of the job are most important to MLTs when choosing their position. Refer to **Figure 9b** for more information.

Figure 9: Factor Rankings

a) MLA



b) MLT



9. Preliminary Job Search

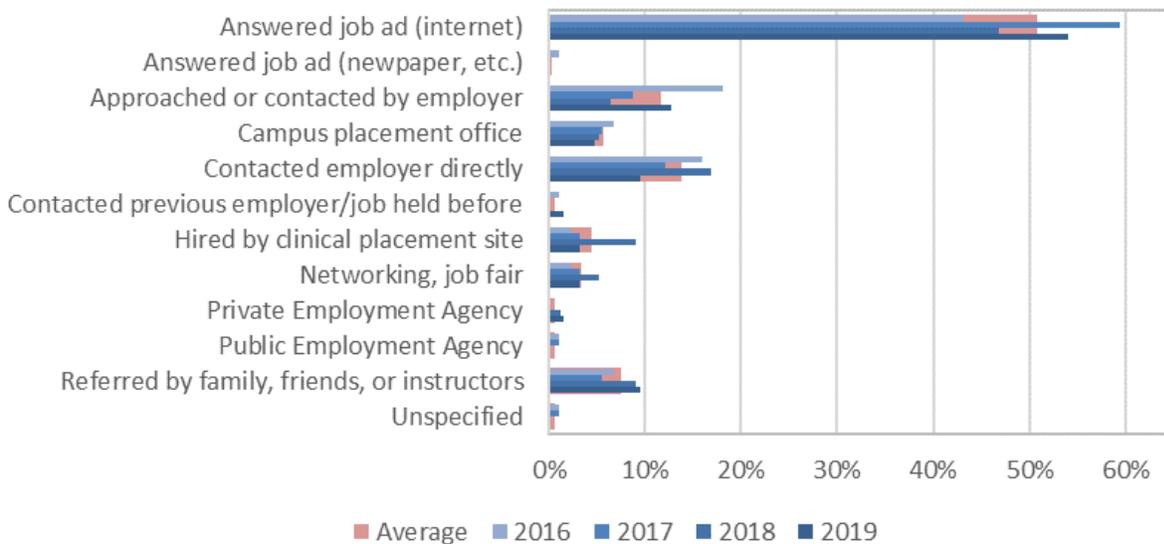
Job Search Methods:

MLA graduates typically found their position(s) by answering a job ad on the internet (54%, 34/63). Contacting an employer directly (13%), being contacted directly by an employer (10%) and by referral (10%) are the other major contributors. When summed together this represents 87% of the methods MLAs used to find a position. Refer to **Figure 10a** for additional information.

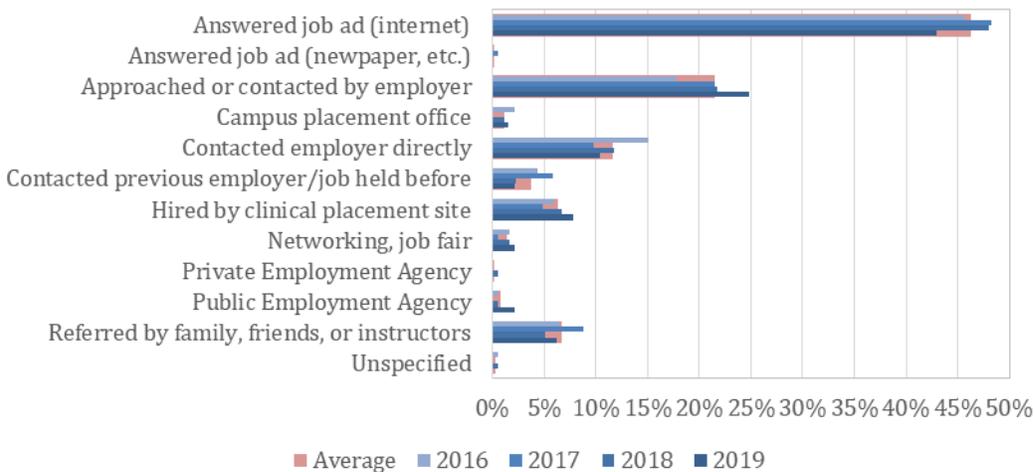
Likewise, MLT graduates also found their position(s) by answering a job ad on the internet (43%, 83/193). Contacting an employer directly (25%), being contacted directly by an employer (10%) or hired by their placement site (8%) and by referral (6%) are the other major contributors. When summed together this represents 92% of the methods MLTs used to find a position. Being contacted directly by an employer has shown gains over the previous year for the past 4 years. Refer to **Figure 10b** for additional information.

Figure 10: Job Search Methods

a) MLA



b) MLT



Length to Time to Find Employment at Certification Level:

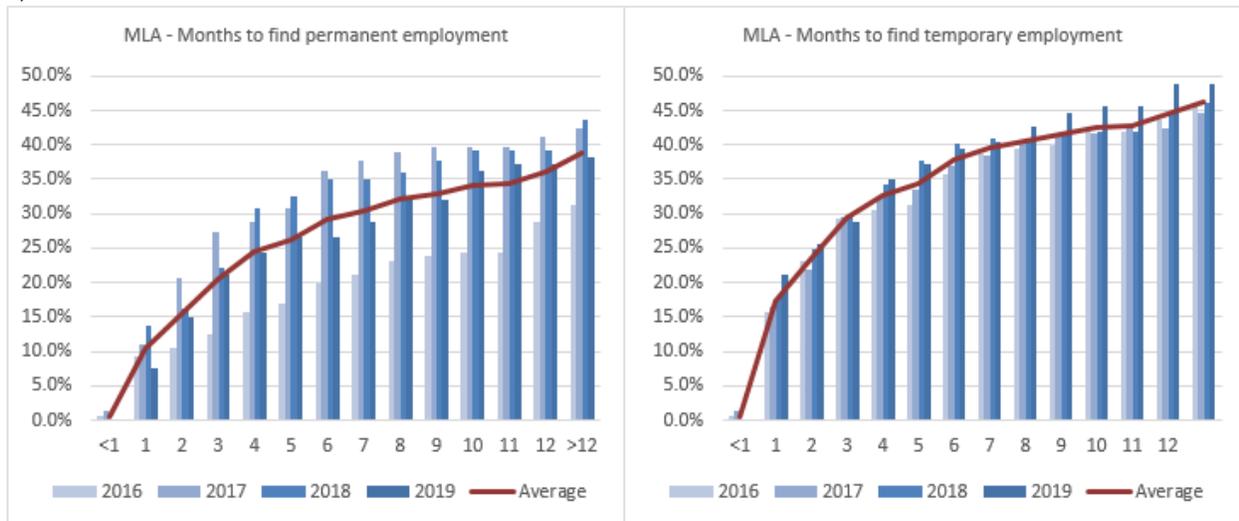
21% (20/94) of MLAs were working at their certification level in a permanent position within three months, 1% above the 4-year average. The 6-month metric was 2% below average at 27%, but by the time of the survey it was on par with the average at 39%. Also, on par with its average, 29% of MLAs were working at their certification level in a temporary position within three months. The 6-month metric was 1% above average at 39%, and by the time of the survey it was 3% above the average at 49%. Refer to **Figure 11a** for additional information.

40% (82/205) of MLTs were working at their certification level in a permanent position within three months, <1% above the 4-year average. The 6-month metric was 4% above average at 55%, and by the time of the survey it remained above the average by 3% at 67%. At 2% below average, 42% of MLTs were working at their certification level in a temporary position within three months. The 6-month metric was 1% below average at 52%, and by the time of the survey it was at 58% and on par with the average. Refer to **Figure 11b** for additional information.

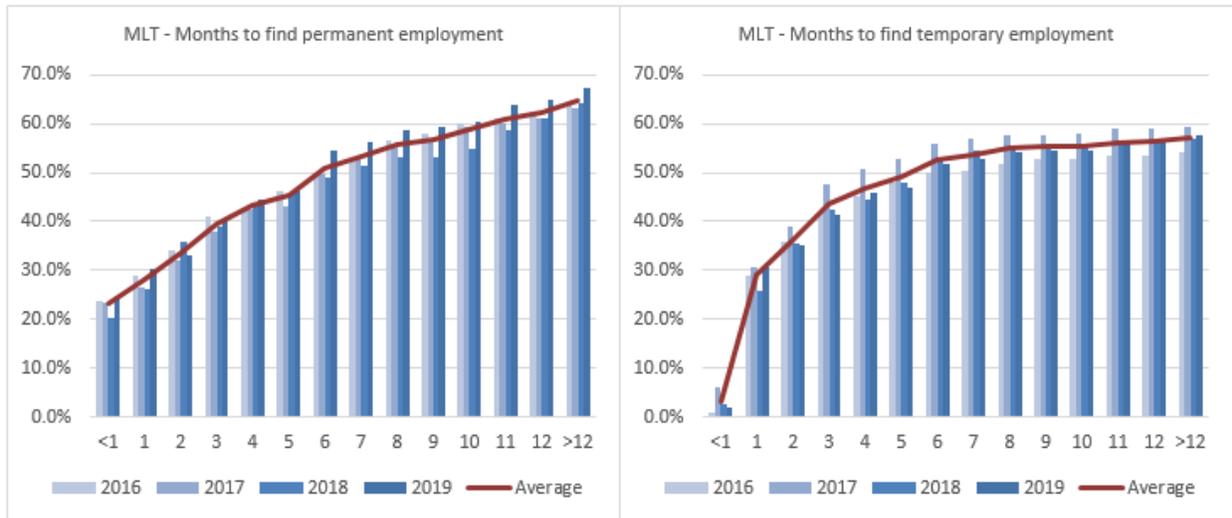
It is noteworthy that the sum of permanent and temporary employment percentages exceeds the total percentage of those working at their certification level at the time of the survey for both MLAs and MLTs. In fact, for MLTs the total is over 100%. It may be surmised that people transitioning from temporary to permanent positions (or vice versa) and those holding more than one position may be the root cause of this anomalous result.

Figure 11: Length to Time to Find Employment at Certification Level

a) MLA



b) MLT



10. Continued Job Search

Respondents Seeking a New Job:

A below average percentage (33%) of the 2019 MLAs are seeking a new job (**Figure 12-left**). Those who are, primarily want to work more hours and receive benefits, both of which were selected as the rationale 20% of the time. Benefits has shown a consistent increase in importance for the past 4 years (+9% total). At 16%, the third most common reason MLAs indicated they were seeking a new job was because they want more challenges and responsibilities. Better compensation and better job conditions saw declines in importance for the 2019 respondents, and are at 5% and 3% respectively. Wanting a job that is a better fit to their qualifications and worry about job loss are both trending towards less important factors (**Figure 13a**).

A below average percentage (29%) of the 2019 MLTs are seeking a new job (**Figure 12-right**). Their primary reason is wanting to work more hours (16%), followed by wanting to receive benefits (13%). Benefits saw a sharp rise in importance for this cohort, both in comparison to the average (+3%) and the previous year (+4%). A job closer to home, although below average for this year, is the third most important factor at 11%. More challenges and responsibilities (10%) and better working conditions (9%) were also ranked comparatively high, though more challenges and responsibilities was 2% below its four-year average (**Figure 13b**).

Figure 12: Respondents Seeking a New Job

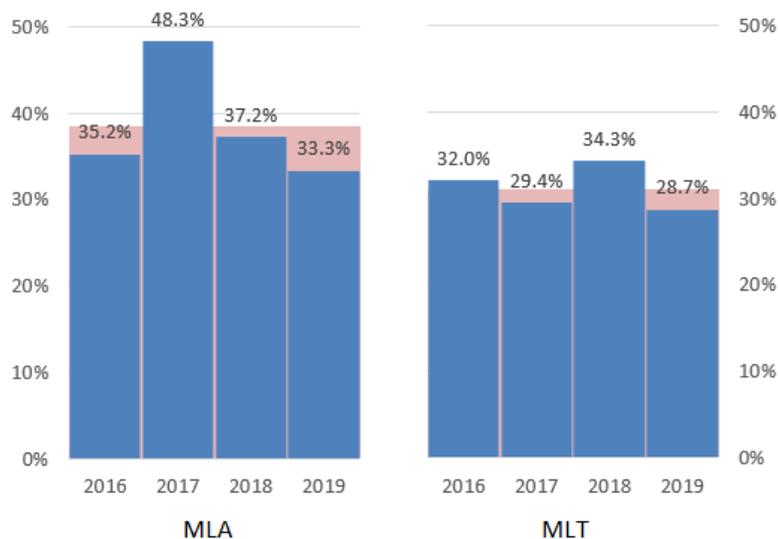
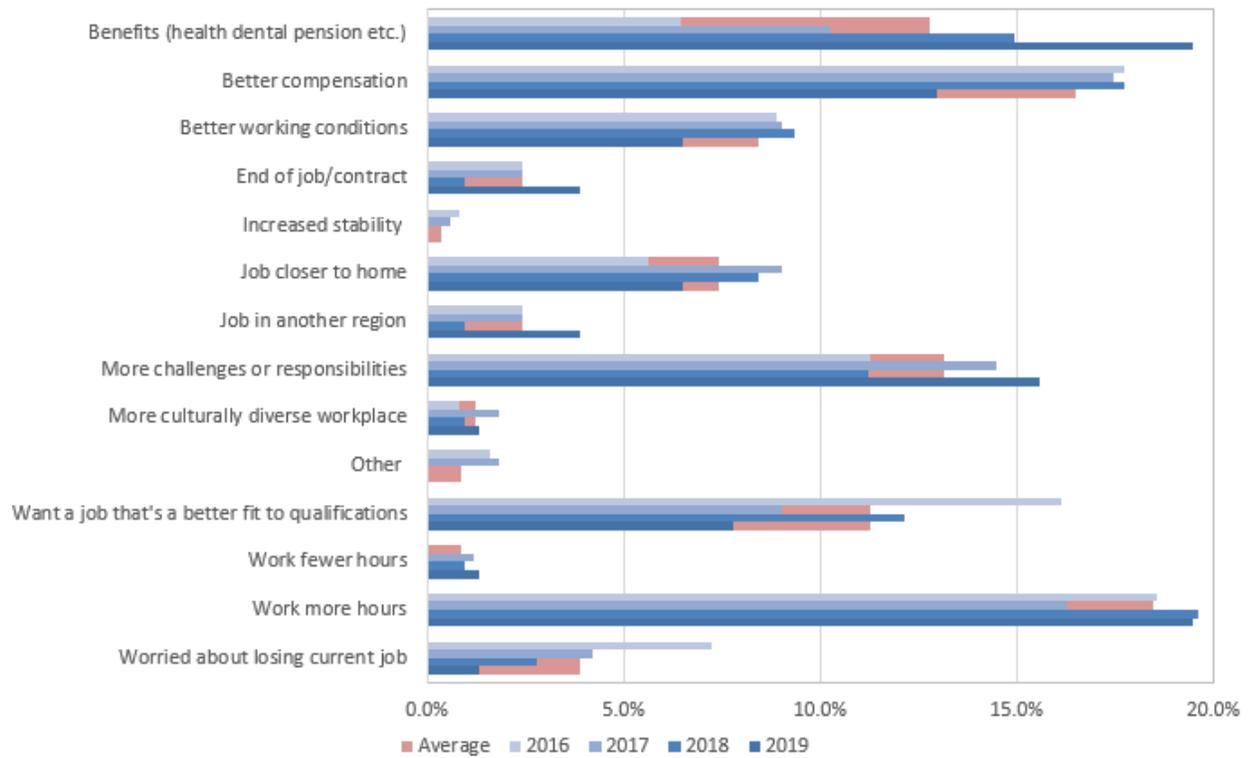
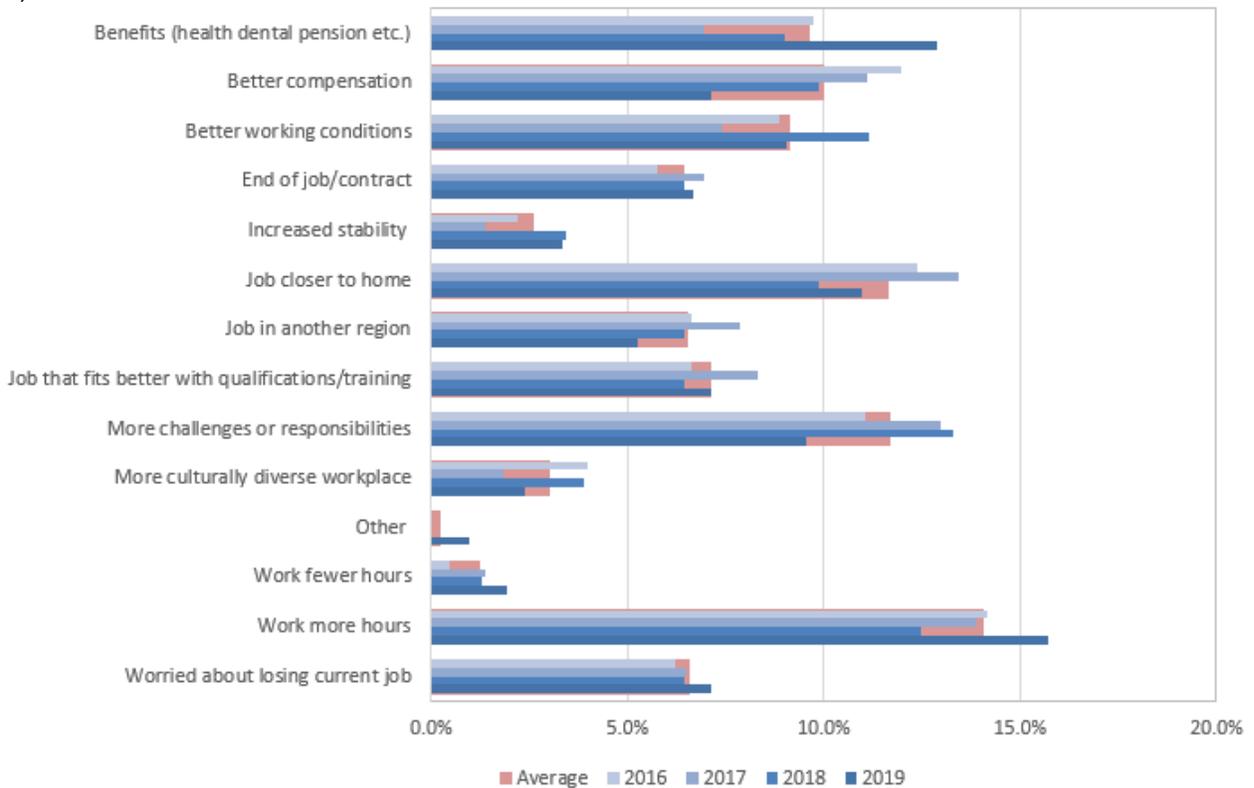


Figure 13: Rational for Seeking a New Job

a) MLA



b) MLT



11. 2019 Graduates' Satisfaction

Overall Satisfaction:

For MLAs, the overall satisfaction was 79%, which is the same value calculated for the previous year and the four-year average (**Figure 14-left**). Shift work considerations being less significant, increased willingness to relocate and increases in pressure to accept a job were among the largest changes between this year and the previous year (**Table 12**). This cohort is above average in the opinion that their job meets expectations and that they have the job they wanted. However, when asked to rank their satisfaction directly those who strongly agree that they are satisfied fell below average. They are also less likely than the four-year average to agree that guidance is available when they need it, and that their employer's expectations are at the right level.

The overall satisfaction score for MLTs was 85%, one percent higher than last year and on par with the four-year average (**Figure 14-right**). Increases in their job meeting expectations, having the job and working in the discipline they wanted were notable gains over the previous year (**Table 13**). Guidance being available when needed fell below average for this year's cohort. The data also supports that an above average ranking in their preference to work part-time has occurred, and that shift work was an increasingly important factor when choosing employment. The belief that a degree is required for promotion has also declined on average, but is slightly higher than the previous year.

Overall Satisfaction Calculation:

To determine the overall satisfaction, score the percentage of respondents who either somewhat or strongly agreed with the following eight questions were combined. The sums were then averaged to determine the overall satisfaction.

- i. The job meets my expectations.
- ii. My employer's expectations of me are at the right level.
- iii. Guidance is available when I need it.
- iv. I did not feel any pressure to accept a job in my training site.
- v. I have the job I wanted
- vi. I work in the discipline I wanted.
- vii. I am satisfied with my job.
- viii. If given the chance, I would choose this career again.

Note that the following questions are omitted from the overall satisfaction calculation because agreement or disagreement does not necessarily correlate with satisfaction. However, these topics are relevant to employment trends and are still examined independently.

- ix. I prefer to work part-time.
- x. I would move to a rural community for a job.
- xi. Shift work was not a factor in my choosing my job.
- xii. I would move to another country for another job.
- xiii. I believe a degree is required for career promotion

Figure 14: Positive Satisfaction



Satisfaction Scores Per Factor:

The following tables show the MLA and MLT responses for each satisfaction question. The numbers represent the 2019 cohorts ranking, and the colour they are superimposed on represents the deviation from either the four-year average or the previous year. It is noteworthy that MLA rankings tend to have greater deviations, and this is likely due to the smaller population of respondents. The colour scheme used to highlight the deviation is depicted below in **Figure 15**.

Figure 15: Satisfaction Score Colour Scale

Colour	Deviation
Dark Red	> 10%
Red	5.0% to 10.0%
Light Red	2.5% to 5.0%
Very Light Red	> 0 to 2.5%
White	0
Very Light Blue	< 0 to -2.5%
Light Blue	-2.5% to -5.0%
Medium Blue	-5.0% to -10.0%
Dark Blue	< -10%

Table 12: MLA Satisfaction Scores

- a) 2019 MLA satisfaction numbers superimposed onto a colour representing their deviation from a four-year average.

	Disagree		Neutral		Agree
The job meets my expectations.	0.0%	5.1%	10.2%	37.3%	47.5%
My employer's expectations of me are at the right level.	0.0%	6.8%	11.9%	20.3%	61.0%
Guidance is available when I need it.	1.7%	3.4%	8.5%	37.3%	49.2%
I did not feel any pressure to accept a job in my training site.	3.4%	6.8%	18.6%	23.7%	47.5%
I have the job I wanted	1.7%	15.3%	10.2%	32.2%	40.7%
I work in the discipline I wanted.	0.0%	6.8%	16.9%	27.1%	49.2%
I prefer to work part-time.	20.3%	28.8%	28.8%	8.5%	13.6%
Shift work was not a factor in my choosing my job.	3.4%	28.8%	22.0%	11.9%	33.9%
I would move to a rural community for a job.	13.6%	23.7%	18.6%	18.6%	25.4%
I would move to another country for another job.	28.8%	35.6%	13.6%	10.2%	11.9%
I am satisfied with my job.	0.0%	11.9%	5.1%	42.4%	40.7%
I believe a degree is required for career promotion.	3.4%	15.3%	22.0%	25.4%	33.9%
If given the chance, I would choose this career again.	3.4%	6.8%	11.9%	37.3%	40.7%

- b) 2019 MLA satisfaction numbers superimposed onto a colour representing their change from the respective 2018 values.

	Disagree		Neutral		Agree
The job meets my expectations.	0.0%	5.1%	10.2%	37.3%	47.5%
My employer's expectations of me are at the right level.	0.0%	6.8%	11.9%	20.3%	61.0%
Guidance is available when I need it.	1.7%	3.4%	8.5%	37.3%	49.2%
I did not feel any pressure to accept a job in my training site.	3.4%	6.8%	18.6%	23.7%	47.5%
I have the job I wanted	1.7%	15.3%	10.2%	32.2%	40.7%
I work in the discipline I wanted.	0.0%	6.8%	16.9%	27.1%	49.2%
I prefer to work part-time.	20.3%	28.8%	28.8%	8.5%	13.6%
Shift work was not a factor in my choosing my job.	3.4%	28.8%	22.0%	11.9%	33.9%
I would move to a rural community for a job.	13.6%	23.7%	18.6%	18.6%	25.4%
I would move to another country for another job.	28.8%	35.6%	13.6%	10.2%	11.9%
I am satisfied with my job.	0.0%	11.9%	5.1%	42.4%	40.7%
I believe a degree is required for career promotion.	3.4%	15.3%	22.0%	25.4%	33.9%
If given the chance, I would choose this career again.	3.4%	6.8%	11.9%	37.3%	40.7%

Table 13: MLT satisfaction scores

- a) 2019 MLT satisfaction numbers superimposed onto a colour representing their deviation from a four year average.

	Disagree		Neutral		Agree
The job meets my expectations.	1.1%	2.7%	3.7%	38.5%	54.0%
My employer's expectations of me are at the right level.	0.5%	1.1%	7.5%	29.9%	61.0%
Guidance is available when I need it.	0.5%	3.2%	7.5%	31.6%	57.2%
I did not feel any pressure to accept a job in my training site.	1.1%	8.6%	16.6%	21.4%	52.4%
I have the job I wanted	2.7%	5.3%	10.2%	34.2%	47.6%
I work in the discipline I wanted.	2.1%	4.8%	13.9%	28.3%	50.8%
I prefer to work part-time.	21.9%	31.6%	22.5%	12.8%	11.2%
Shift work was not a factor in my choosing my job.	3.2%	16.6%	26.2%	33.2%	20.9%
I would move to a rural community for a job.	17.1%	30.5%	20.9%	20.3%	11.2%
I would move to another country for another job.	29.4%	30.5%	18.2%	15.5%	6.4%
I am satisfied with my job.	1.1%	3.2%	9.6%	38.0%	48.1%
I believe a degree is required for career promotion.	6.4%	18.7%	23.0%	26.7%	25.1%
If given the chance, I would choose this career again.	3.2%	1.1%	8.0%	33.2%	54.5%

- b) 2019 MLA satisfaction numbers superimposed onto a colour representing their change from the respective 2018 values.

	Disagree		Neutral		Agree
The job meets my expectations.	1.1%	2.7%	3.7%	38.5%	54.0%
My employer's expectations of me are at the right level.	0.5%	1.1%	7.5%	29.9%	61.0%
Guidance is available when I need it.	0.5%	3.2%	7.5%	31.6%	57.2%
I did not feel any pressure to accept a job in my training site.	1.1%	8.6%	16.6%	21.4%	52.4%
I have the job I wanted	2.7%	5.3%	10.2%	34.2%	47.6%
I work in the discipline I wanted.	2.1%	4.8%	13.9%	28.3%	50.8%
I prefer to work part-time.	21.9%	31.6%	22.5%	12.8%	11.2%
Shift work was not a factor in my choosing my job.	3.2%	16.6%	26.2%	33.2%	20.9%
I would move to a rural community for a job.	17.1%	30.5%	20.9%	20.3%	11.2%
I would move to another country for another job.	29.4%	30.5%	18.2%	15.5%	6.4%
I am satisfied with my job.	1.1%	3.2%	9.6%	38.0%	48.1%
I believe a degree is required for career promotion.	6.4%	18.7%	23.0%	26.7%	25.1%
If given the chance, I would choose this career again.	3.2%	1.1%	8.0%	33.2%	54.5%