EXECUTIVE SUMMARY

Human Resources Survey: Medical Imaging and Radiation Therapy

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Executive Summary

The purpose of the CAMRT Human Resources Survey was to provide the broader MRT community improved insight in both current and anticipated HR requirements in their respective fields.

Review of the survey data shows the profession of Medical Radiation Technology appears to be generally in good health. The need for technologists is stable across disciplines while current vacancy rates vary considerably. As well, there are some modalities where there will be significantly more growth over the next three years. The executive summary and survey report illustrate this perspective.

This CAMRT Human Resources Survey was an online survey. An announcement letter plus two reminders and a final follow up with non-respondents resulted in a 43.50% response rate for Medical Imaging (MI) and a 69.77% for Radiation Therapy (RT). These response rates provided a confidence limit of +/-5.76, 19 times out of 20 for MI, and a confidence limit of +/-9.95, 19 times out of 20 for RT (both at the 95% confidence limit). For both MI and RT these confidence limits were good indeed, which provides significant confidence in the accuracy and reliability of the results.

This section will highlight the demographic features in MI and RT detailed in the survey report. The most common title for the population who responded to this survey was manager (see page 9); and the managers by far were mostly female (see page 10). However, while the ratio of female managers in MI is approximately the male-to-female ratio in the general MI population, it is somewhat less so for RT. Overall the managers in MI were considerably older than those in RT (see page 11), which likely means that some MI organizations should begin succession planning as soon as possible.

For both MI and RT, the provinces where most of the respondents resided were Ontario, Quebec, British Columbia and Alberta (see page 12). Proportionally, more RTs tended to work in bigger cities compared to MIs (see page 13). For MIs and RTs, their facilities / multiple facilities tended to be funded publicly, with very few being funded publicly and privately (see page 15).

This section highlights information gleaned in this survey about retirement, leaves and hiring. Most respondents (approximately 75%) for both MI and RT indicated that staff who retired would be replaced (see page 36). For staff on leave, both MIs and RTs (approximately 50%) indicated that these positions would be replaced (see page 37). To replace or increase MRT staff, for both MI and RT, the preferred choice would be first an experienced MRT from another Canadian facility, followed by a new Canadian MRT graduate, and lastly by internationally educated MRTs (see pages 38, 39 & 40).

This next section highlights the information about modalities, particularly in which modalities in both MI and RT where there will be net increases in FTEs over the next three years.

Medical Imaging

	CURRENT Human Resource FTE Profile			CHANGES over the next 3 years in FTE requirements					
				Decrease		Remain the same		Increase	
	N	Mean	STD	N	%	N	%	N	%
Radiological Technology / OR	148	16.47	24.57	6	4.29%	111	79.29%	23	16.43%
Computed Tomography	101	5.99	8.5	2	2.06%	79	81.44%	16	16.49%
Angiography / Interventional	47	3.02	3.5	0	0.00%	35	83.33%	7	16.67%
Electrophysiology / Cardiac Cath	23	1.94	3.45	1	4.35%	21	91.30%	1	4.35%
Mammography	102	3.12	4.65	4	4.00%	87	87.00%	9	9.00%
Bone Mineral Densitometry	75	1.07	1.66	2	2.67%	71	94.67%	2	2.67%
Nuclear Medicine	73	5.37	6.26	2	2.78%	66	91.67%	4	5.56%
Cyclotron	6	0.33	0.82	0	0.00%	5	83.33%	1	16.67%
PET-CT	21	1.96	2.99	1	4.76%	17	80.95%	3	14.29%
PET-MR	3	0.33	0.58	0	0.00%	3	100.00%	0	0.00%
Magnetic Resonance	74	4.94	6.3	1	1.45%	47	68.12%	21	30.43%
Sonography	137	5.58	6.91	3	2.22%	102	75.56%	30	22.22%
Echocardiology	76	1.47	2.43	1	1.32%	66	86.84%	9	11.84%
PACS	127	1	1.7	1	0.79%	120	95.24%	5	3.97%
Clinical Education	94	0.68	1.08	0	0.00%	94	100.00%	0	0.00%
Research	41	0.37	1.01	0	0.00%	40	100.00%	0	0.00%
Professional Practice	78	0.81	3.27	0	0.00%	78	100.00%	0	0.00%
Quality Control / Quality Improvement	117	0.63	1.08	0	0.00%	111	94.87%	6	5.13%

From the highest to the lowest, the four modalities across the facilities / multiple facilities in MI that showed the highest net growth over the next three years were as follows: Sonography, Magnetic Resonance, Radiological Technology / OR, and Computed Tomography. To see the projected net FTE increases over the next three years in these modalities go to Sonography (page 28), Magnetic Resonance (page 27), Radiological Technology / OR (page 17), and Computed Tomography (page 18). The four modalities in MI that showed the greatest vacancy rates were as follows: Radiological Technology / OR (page 17), Sonography (page 28), Magnetic Resonance (page 27), and Computed Tomography (page 18).

Radiation Therapy

	CURRENT Human Resource FTE Profile			CHANGES over the next 3 years in FTE requirements					
				Decrease		Remain the same		Increase	
	N	Mean	STD	N	%	N	%	N	%
Brachytherapy	30	2.2	2.31	0	0.0%	19	70.4%	8	29.6%
Dosimetry / Treatment Planning	30	7.95	6.34	0	0.0%	15	53.6%	13	46.4%
External Beam Treatment	30	26.6	19.09	0	0.0%	20	74.1%	7	25.9%
Simulation / Mold Room	30	5.52	5.1	2	7.7%	23	88.5%	1	3.8%
Radiation Therapy, Advanced Practice	30	0.8	1.85	1	4.2%	18	75.0%	5	20.8%
Clinical Education	30	1.79	3.18	2	7.4%	24	88.9%	1	3.7%
Research	30	0.29	0.94	0	0.0%	18	75.0%	6	25.0%
Professional Practice	30	0.43	1.25	0	0.0%	22	88.0%	3	12.0%
Quality Control / Quality Improvement	30	1.08	1.69	0	0.0%	20	76.9%	6	23.1%

From the highest to the lowest, Dosimetry / Treatment Planning, Brachytherapy, and External Beam Treatment are the three modalities in Radiation Therapy where there will be the greatest increases in staffing over the next three years. For the details on the projected net increases in FTE requirements over the next three years and on vacancy rates in RT see page 35.

This next section will highlight the information for MI and RT about hiring and training in multiple modalities, as well as the effects of leaves, and how to facilitate recruitment and retention. To hire new staff, RTs more so than MIs prefer to hire staff who have training in multiple modalities (see page 41). The prime reason both MIs and RTs reported that staffing was inadequate was lack of funding for increased workloads and increasing complexity of cases followed by shortages in key modalities, particularly in sonography (see pages 42 & 43).

To facilitate recruitment or retention, for both MI and RT, the most effective strategies are as follows: employing recruitment activities, treating staff well, and finally offering incentives (see page 44).

Temporary leaves, for example maternity leaves, seem to affect RT organizations more so than MI (see page 45). More RT organizations report using nursing services as support services compared to MI; and RT also reports that they need more of these nursing support services compared to MI (see page 46).

The efforts of the CAMRT Professional Practice Department to develop a population for this survey have dramatically improved the reliability of the results reported in this executive summary and survey report.