

Select Medical Imaging Modalities and Utilization in NL

Objective

To examine the utilization of specific medical imaging modalities for NL compared to the Canadian average for 2019–20.

Practice Points

1. Modern imaging includes computed tomography (CT); medical resonance imaging (MRI); positron emission tomography (PET); single-photon emission computed tomography (SPECT); and single-photon emission computed tomography-computed tomography (SPECT-CT). SPECT is a nuclear medicine tomographic imaging technique using gamma rays and the additional CT uses a lower dose radiation to help the SPECT scan a better image.
2. NL has 15 CT units; five MRI; one PET-CT; three SPECT and nine SPECT-CT.

Data

- This information was taken from the CADTH Health Technology Review report titled: The Canadian Medical Imaging Inventory 2019–20.
- Table 1 compares units provided per million population for specific medical imaging modalities used in NL compared to the Canadian average.
- Table 2 compares tests performed per thousand population for specific medical imaging modalities used in NL compared to the Canadian average.

Results

Table 1: Units Available per Million Population in 2019–20

	Population	CT	MRI	PET-CT	SPECT	SPECT-CT
NL	521,922	28.7	9.6	1.9	5.7	17.2
Canada	37,797,496	14.5	10.0	1.5	8.1	7.2

- NL has double the rate of CT and SPECT-CT units provided compared to Canada.

Table 2: Tests Performed per Thousand Population in 2019–20

	Population	CT	MRI	PET-CT	SPECT/SPECT-CT
NL	521,922	189.6	42	3.3	63.4
Canada	37,797,496	143.3	61.6	3.3	32.9

- The rate of CT testing in NL is 32% higher compared to Canada and the rate of SPECT/SPECT-CT is 93% higher, whereas the rate of MRI testing is 32% lower in NL.

Conclusions

1. The higher rate of CT and SPECT units provided in NL is associated with higher rates of testing than in Canada.
2. The rate of MRI testing is lower than in Canada. It is possible that an increase in appropriate MRI testing may reduce the rate of CT scanning. Adherence to Choosing Wisely Guidelines in the use of CT scanning could rebalance the ratio of CT:MRI in NL from the current ratio of 4.5:1 down towards 2.3:1.