

Medical Imaging in Canada 2017: Provincial Summary for Alberta

CADTH's Canadian Medical Imaging Inventory (CMII) collects data on medical imaging equipment across Canada. The national results are published in a comprehensive report (cadth.ca/imaginginventory). This provincial summary consolidates Alberta's data from the report. If additional information on the technical characteristics of imaging equipment is required, please send a request to requests@cadth.ca.

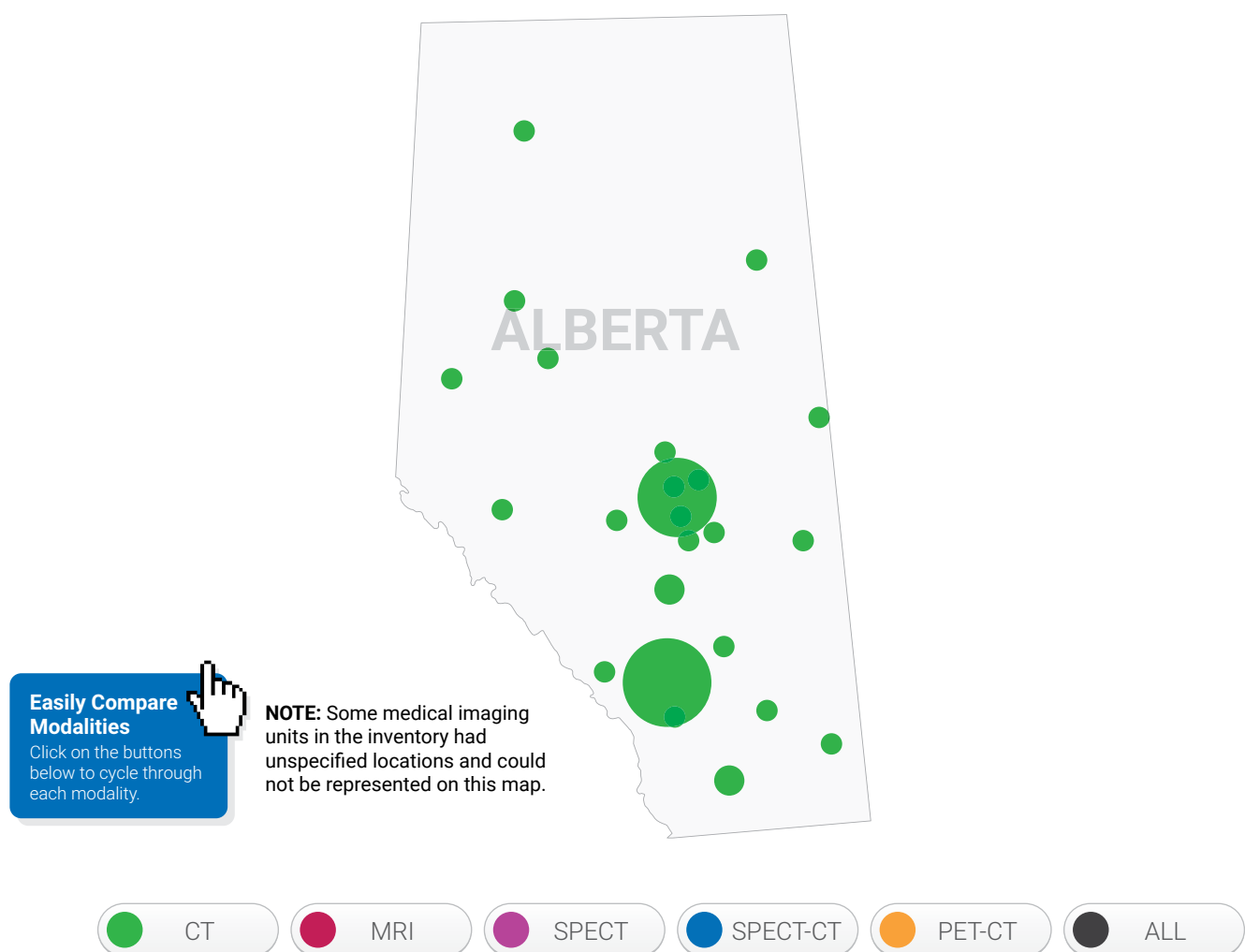


Table 1: Imaging Units in Alberta

	CT	MRI	PET-CT	SPECT	SPECT-CT
Number of imaging units out of national total for 2017	56/561	41/366	4/51	42/330	32/261
Number of imaging units out of national total for 2007 ^a	41/419	27/222	3/31	57/603 ^b	0/35
Units per million population 2017	13.1	9.6	0.9	9.8	7.5
Mobile equipment	0	2	0	0	0

CT = computed tomography; MRI = magnetic resonance imaging; PET = positron emission tomography; SPECT = single-photon emission computed tomography.

^a Canadian Institute for Health Information, *Medical Imaging in Canada, 2007* (Ottawa, Ont.: CIHI, 2008).

^b For all nuclear medicine.

Table 2: Operation and Age of Medical Imaging Units in Alberta

	CT	MRI	PET-CT	SPECT	SPECT-CT
Total Publicly Funded Exams in Alberta					
Exams per year out of national imputed total for 2017 ^a	405,332	192,375	11,005	17,996	8,134
Exams per 1,000 people	94.4	44.8	2.6	4.2	1.9
Hours of Operation in Alberta Facilities					
Average hours of operation per week	63.1	63.2	50.0	44.8	45.8
Number of machines in operation 24 hours a day	8	1	0	0	0
Number of machines in operation on the weekend	17	9	0	0	1
Average Age of Units in Canada					
Average age of units (years)	7.2	7.6	7.7	11.5	6.3
Age of oldest unit (years)	20	19	12	30	17
Age of newest unit (years)	0	0	2	0	0

CT = computed tomography; MRI = magnetic resonance imaging; PET = positron emission tomography; SPECT = single-photon emission computed tomography.

^a Exams from Alberta Health Services facilities, only.

Alberta has 56 computed tomography (CT) units, three of which are 320-slice CT units (located at the Chinook Regional Hospital in Lethbridge, the Sturgeon Community Hospital in St. Albert, and the Royal Alexandra Hospital in Edmonton). There are at least 17 sites that provide weekend access to CT, including eight sites that are in operation 24 hours a day. Alberta has 41 MRI units, including two mobile units that are shared between facilities or communities (located at Cold Lake Healthcare Centre in Cold Lake and St. Mary's Hospital in Camrose). There are four positron emission tomography (PET)/CT units (two located in Calgary at the Foothills Medical Centre, and two located in Edmonton at the Cross Cancer Institute and the University of Alberta Hospital), 42 single-photon emission computed tomography (SPECT) units, and 32 SPECT/CT units in Alberta. The modality that has seen the largest increase in the number of units in operation over the last ten years is SPECT/CT, which has increased from zero in 2007 to 32 in 2017.

Data Limitations

Data were imputed for a limited number of missing values if no response was obtained. In particular, if the questions regarding the mobility of imaging equipment or weekend and 24-hour availability were left blank, the answer was assumed to be no. Technical information, including the age of machines, was incomplete for some sites. If the age of equipment was not available, it was excluded from the calculation of averages. Out-of-range values for the number of hours of operation per week (more than 168 hours) were set to missing.

By preference, examination data supplied by the validators was reported. If we did not have validator data for a given province or territory, then data from the survey was used. Not all sites reported examination data. Where sites with available unit counts were missing data for the total number of examinations for 2017, we imputed the missing data. These imputed values were gathered by calculating the mean number of exams per unit for sites that reported examination data, and then using this mean to impute the total number of exams for the remaining units. The total number of exams for each province or territory was the sum of the exams reported and exams imputed.

Additional details on the methodology used for the collection and imputation of this data are available in the 2017 Canadian Medical Imaging Inventory report.

Questions or comments about CADTH or this tool?



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