



Background:

Canadian Partnership for Quality Radiotherapy (CPQR) is an alliance among the key national professional associations involved in the delivery of radiation treatment in Canada. A cornerstone of CPQR, the “Quality Assurance Guidelines for Canadian Radiation Treatment Programs” document outlines overarching organizational structures and processes required to assure high quality and safe radiotherapy. The guidelines include 45 key quality indicators (KQI)s that allow programs to self-audit against benchmarks for achievement and support quality improvement. The 2017 refresh of Accreditation Canada’s Cancer Care Standards incorporated elements of this work, further demonstrating value as a quality measure tool.

To ensure that these guidelines continue to meet the needs of the radiation treatment community, CPQR has worked with members of its National Quality Assurance Committee (NQAC) to undertake periodic audits against the KQIs contained therein. 30 of 44 radiation treatment programs participated in both the 2015 and 2019 audits. This report summarizes pan-Canadian benchmarks contextualizing local compliance.

Pan-Canadian average
overall program
compliance by region



Pan-Canadian Achievements:

Results of the 2019 audit suggest that Canadian radiation treatment programs have appropriate organizational and personnel elements in place to support the planning and delivery of high quality care. Some highlights:

- Reporting centres have established Radiation Treatment Quality Advisory Committees (RTQAC) with appropriate membership and reporting structures
- Personnel involved in the planning and delivery of radiation treatment have the proper qualifications, credentials, certifications, licenses and training. The percentage of professionals certified or licenced has also increased
- Personnel are appropriately trained on new equipment and equipment used in treatment planning and delivery is tested and calibrated in accordance with best practice

Opportunities for Improvement:

Audit results highlight areas where an opportunity for improvement exists:

- Among responding centres, the average percentage of adjuvant or curative treatment plans that undergo peer review prior to the start of treatment has increased by 10% since the 2015 audit. Centres reporting below the national average of 63% may consider adopting best practices to improve the quality and consistency of radiation treatment plans
- Based on data from reporting centres, there was an average overall decline in the percentage of patients meeting the Canadian Association of Radiation Oncology (CARO) wait time guidelines for ready-to-treat to the start of treatment. While mis-alignment between CARO and provincial guidelines may be a factor, programs may consider ways to strive for a higher benchmark
- Understanding what happens to patients undergoing radiation treatment is important. Two “aspirational” KQIs encourage programs to measure the number of patients for whom treatment-related toxicity outcomes and disease control or survival outcomes are reviewed. Responding centres noted the lack of resources as a barrier to measuring treatment outcomes and programs may wish to consider novel approaches to improving measurement in this area

Questions?

Get in
Touch

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The following table represents results from 30 of 44 Radiation Oncology programs that participated in both the 2015 and 2019 audits.

<u>Organizational Quality Indicators</u>	<u>Benchmark</u>	<u>% Compliant Programs</u>
1. The radiation treatment program has clearly defined its reporting structure, and the responsibilities of all personnel and committees, to ensure accountability for the quality of care it provides.	0 or 1	93%
2. There is a Radiation Treatment Quality Assurance Committee (RTQAC) responsible for monitoring adherence to written policies and procedures regarding quality assurance activities.	0 or 1	80%
3. The Radiation Treatment Quality Assurance Committee (RTQAC) has documented terms of reference that meet all the requirements for composition, committee chair, meeting frequency, and accountabilities as outlined in Section 3.4.	0 or 1	83%
4. The Radiation Treatment Quality Assurance Committee (RTQAC) has a “blame-free” process for personnel to access the committee and to report concerns about radiation treatment quality or safety.	0 or 1	87%
5. There is a radiation safety program that has written policies and procedures to address the safe use of ionizing radiation according to the pertinent laws and regulations specified in Section 3.6.	0 or 1	100%
6. The radiation treatment program has written policies and procedures that address the reporting, investigation, action, documentation, and monitoring of radiation treatment incidents.	0 or 1	87%
7. The radiation treatment program identifies critical radiation treatment incidents as defined by Section 3.7.	0 or 1	97%
8. The radiation treatment program reports critical radiation treatment incidents as per requirements of local, provincial, and/or national organizations.	0 or 1	97%
<u>Personnel Quality Indicators</u>	<u>Benchmark</u>	<u>% Compliant Programs</u>
9. The radiation treatment program has a process for assuring that personnel have the necessary qualifications, credentials, certifications, and licenses to fulfill their duties.	0 or 1	93%
10. Percentage of Radiation Oncologists certified by the Royal College of Physicians and Surgeons of Canada (RCPSC) or the Collège des médecins du Québec (CMQ).	0-100 %	95%
11. Percentage of eligible Medical Physicists certified by the Canadian College of Physicists in Medicine (CCPM) or equivalent.	0-100%	82%
12. Percentage of Radiation Therapists licensed by the provincial regulatory body, or where such a body does not exist, who are members of the Canadian Association of Medical Radiation Technologists (CAMRT).	0-100%	88%
13. There is an identified head of the radiation treatment program.	0 or 1	100%
14. There is an identified Radiation Safety Officer who reports directly to the CEO of the organization or senior leadership delegate (other than the head of the radiation treatment program).	0 or 1	100%

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15. There is a radiation safety training program for all personnel at a level appropriate to their job function, according to national regulatory guidelines described in Section 4.8. 0 or 1 97%

Radiation Treatment Equipment Quality Indicators

Benchmark **% Compliant Programs**

16. There are technical quality control policies and procedures for all radiation planning and treatment equipment. 0 or 1 93%

17. Compliance with technical quality control policies and procedures is monitored by the Radiation Treatment Quality Assurance Committee (RTQAC). 0 or 1 63%

18. For new equipment a quality control procedure is implemented during installation and commissioning and tested prior to clinical use. 0 or 1 100%

19. For new equipment all personnel involved with its calibration, operation, or maintenance are appropriately trained. 0 or 1 97%

20. There is an independent audit of radiation treatment machine calibration or dosimetry at least annually. 0 or 1 97%

21. There are written policies and procedures to be followed in the event of an emergency, whereby acute failure of either equipment or systems, has the potential to affect safety. 0 or 1 93%

Policy and Procedure Quality Indicators

Benchmark **% Compliant Programs**

22. The radiation treatment policies and procedures are reviewed, and revised if required, at least every two years. 0 or 1 57%

23. Percentage of patients meeting Canadian Association of Radiation Oncology (CARO) wait time guidelines for referral to consultation in the preceding year. 0-100% 63%

24. Percentage of patients meeting Canadian Association of Radiation Oncology (CARO) wait time guidelines for ready-to-treat to start of treatment in the preceding year. 0-100% 80%

25. Patients are identified using at least two patient-specific identifiers before any radiation planning or treatments provided. 0 or 1 100%

26. Percentage of newly diagnosed patients receiving radiotherapy in the preceding year that had a cancer stage assigned. 0-100% 75%

27. The radiation treatment program has processes for selecting and reviewing clinical practice guidelines. 0 or 1 80%

28. The radiation treatment program utilizes and regularly reviews radiation planning and treatment guidelines. 0 or 1 80%

29. There is documentation of informed consent for radiation therapy prior to the delivery of treatment. 0 or 1 93%

30. The radiation treatment program provides written or online educational materials about radiation treatment planning, treatment delivery, side effects, and follow-up to patients and their families. 0 or 1 97%

31. There are policies and procedures for authorizing a course of radiation treatment or any change to a previously authorized course of radiation treatment. 0 or 1 93%

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32. The radiation treatment prescription meets all criteria outlined in Section 6.10 to deliver treatment addressing dose prescription, site and laterality, patient identification, and authorization.	0 or 1	100%
33. Percentage of adjuvant or curative radiotherapy treatment plans that undergo Radiation Oncologist peer review prior to the start of treatment..	0-100%	62%
34. Percentage of adjuvant or curative radiotherapy treatment plans that undergo Radiation Oncologist peer review before 25% of the prescribed dose has been administered.	0-100%	70%
35. Percentage of adjuvant or curative radiotherapy treatment plans that undergo Radiation Oncologist peer review at any point in time.	0-100%	79%
36. Radiotherapy treatment plans, dose calculations, and patient set-ups are independently reviewed prior to beginning treatment in all cases.	0 or 1	93%
37. There is a process for confirming female patients of reproductive age are not pregnant prior to radiation treatment planning and delivery.	0 or 1	97%
38. There are policies and procedures to monitor patients with pacemakers/defibrillators or implantable devices during radiation treatment.	0 or 1	100%
39. Patients receiving radiation treatment are evaluated at intervals appropriate to patient context during treatment by a Radiation Oncologist or designate.	0 or 1	100%
40. When radiation treatment is being delivered a Radiation Oncologist and a Medical Physicist are present at the radiation treatment facility or capable of responding...	0 or 1	83%
41. There are policies and procedures guiding the planning and safe delivery of emergency radiation treatment.	0 or 1	100%
42. When radiation treatment is being delivered a Radiation Oncologist and a Medical Physicist are present at the radiation treatment facility or capable of responding within a time limit set by the program.	0 or 1	100%
43. The radiation treatment program, as part of the multidisciplinary cancer program, is accredited by Accreditation Canada.	0 or 1	97%
44. Percentage of patients treated with curative-intent radiotherapy for whom the radiation treatment program reviews treatment-related toxicity outcomes. These outcomes are regularly compared to available benchmarks.	0-100%	30%
45. Percentage of patients treated with curative-intent radiotherapy for whom the radiation treatment program reviews relevant disease control or survival outcomes. These outcomes are regularly compared to available benchmarks.	0-100%	18%

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