CPQR
Canadian Partnership for Quality Radiotherapy
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Partenariat canadien pour la qualité en radiothérapie

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NSIR-RT BULLETIN

Welcome to the electronic bulletin of the National System for Incident Reporting – Radiation Treatment (NSIR-RT). This bulletin promotes continuous learning through sharing incident data trends and case studies, and provides system users with information on program developments and enhancements.

ABOUT

The NSIR-RT Bulletin has been published since 2016 by the Canadian Partnership for Quality Radiotherapy's (CPQR's) NSIR-RT Advisory Committee, with support from the Canadian Institute for Health Information (CIHI), and since 2021, from the Canadian Association of Provincial Cancer Agencies (CAPCA). Earlier editions of the NSIR-RT Bulletin are available on the CAPCA website at www.capca.ca.

We welcome your ideas for future case studies, as well as patient testimonials related to radiation treatment safety. Please contact Kristi MacKenzie, CAPCA Executive Director at info@capca.ca with content ideas and testimonials.

CIHI

CAPCA Canadian Association of Provincial Cancer Agencies

CAPCA brings together cancer programs from all provinces to work together to improve cancer control across Canada. CAPCA champions a sustainable pan-Canadian cancer control system that enhances access and quality, fosters research and innovation, and improves cancer outcomes.

Re-irradiation on the rise

Survey reveals gaps across Ontario

Re-irradiation is no longer a rare or unusual treatment choice in Ontario. As patients live longer and radiation techniques improve, more people are returning for multiple courses of treatment, often at a different radiation treatment facility. But a new provincial survey led by radiation therapist Brian Liszewski and published in *Technical Innovations & Patient Support in Radiation Oncology* suggests the systems that support these cases have not kept up.

The study looked at practices across Ontario's 15 regional cancer centres. It highlighted wide differences in how various programs handle re-irradiation, from policies and workflows to how prior treatment data are gathered and used. In some centres, clear guidelines are in place. In others, decisions rely more on individual judgment.

One of the most concerning findings was how often teams move ahead without full information. When a patient's earlier treatment happened at a different centre, records were requested in only about a quarter of cases. In fact, 60 per cent of centres said they sometimes proceed without complete prior dose data.

The survey also showed growing use of advanced techniques. About one-third of metastatic treatments now use stereotactic approaches, which can make dose tracking even more important.

The authors say the solution is not just new technology, but stronger systems. They call for provincial guidelines, better access to past treatment records, and closer teamwork across centres.

As re-irradiation becomes more common, the message is clear: consistent processes will be key to keeping care safe and effective.

Read the full paper

Together, strengthening the future of radiotherapy in Canada

By Erika Brown, Executive Director, COMP and Heather Donaldson, Program Lead, CADRA

In late January, Canada's radiation oncology community gathered at COMP's Winter School in Ottawa to reflect on Quality and Safety in the Practice of Radiation Medicine and Medical Imaging over the past 15 years. One message came through loud and clear: as the system evolves, so too must the programs and tools that support radiotherapy quality and safety across Canada.

Quality and safety programs benefit from periodic refreshes to remain relevant and sustainable. Winter School attendees discussed increasing treatment complexity and workforce shortages, both of which place pressure on clinical teams, but also highlight the need for efficient tools to support the safe delivery of high quality RT.

Advances in AI and the growing opportunity to learn from and leverage big data present opportunities to modernize CPQR's legacy tools – such as reducing manual reporting effort, enabling automated trend detection in incident data and simplifying self-audit processes – so that quality improvement remains achievable rather than burdensome.

Every partner has a role to play in supporting, reviving, and refreshing these programs and it was exciting to see members of COMP, CARO, CAMRT, CADRA, CANO, CPQR, CAPCA, and CAR demonstrate a shared commitment to continue the exciting work initiated by CPQR over a decade ago.

The foundation is strong. The tools exist. The community is ready. Now is the time to reinvest, re-energize, and build the next chapter together.

NSIR-RT OPERATIONS TO TRANSITION TO ISMP CANADA

CIHI and the Institute for Safe Medication Practices Canada (ISMP Canada) have announced a transition of the National System for Incident Reporting (NSIR), including NSIR-RT for radiotherapy incident reporting. NSIR will move to ISMP Canada by March 2026.

The change shifts national stewardship of the NSIR program and reinforces a shared commitment to patient safety and data-driven improvement.

During the transition period, radiotherapy centres can continue using the system exactly as they do today. As part of this transition, the enrolment of new facilities in NSIR through CIHI ended on November 13, 2025. ISMP Canada will enrol new organizations in NSIR beginning April 2026.

CIHI and ISMP Canada will provide updates and guidance as the transition moves forward.
For more information: **www.cihi.ca/news**.

CASE STUDY

Beyond the first dose: Learning from Canadian re-irradiation practice

By Donna Murrell, London Health Sciences Centre; Alanah Bergman, BC Cancer; Marija Popovic, The Ottawa Hospital

Reirradiation (reRT) requires a complex balance between potential tumour control or symptom relief and increased risk of side effects and adverse events due to cumulative dose to healthy organs.

While initial treatment is guided by well-established protocols and organ-at-risk tolerances, reRT practice is variable; further uncertainty is introduced due to cumulative dose calculation and often limited access to prior radiotherapy dose data. Understanding risk assessment and quality assurance in this context is important because of the growing prevalence of reRT in Canadian practice.

A recent review of reirradiation practice patterns among radiation therapists (RTTs) across the country reported that 57% of Canadian RTTs encounter reRT cases at least monthly. This survey highlighted gaps in access to prior treatment records, lack of standardized workflows, and communication challenges within multidisciplinary teams as important barriers to high-quality reRT practice.

A recent COMP survey of Canadian medical physicists echoes these concerns with 32% of responding centres reporting no standardized institutional procedure for managing reRT cases despite indicating that an average of 16% of the radiotherapy workload included a reRT component.

A safety incident reported in Ontario in 2022 reinforces these risks: fragmented access to historical treatment data and lack of standardized reRT assessment protocols were identified as contributory factors. This incident catalysed a province-wide response, including knowledge sharing and current-state mapping to identify opportunities for reducing preventable harm.

Reflecting on our own practices, an area of vulnerability for reRT that is often identified in physics QA arises from assumptions about prior treatment. Sometimes, the potential for overlap is not immediately obvious from available imaging or individual treatment plans, leading to inadvertent high cumulative dose to organs nearby. Even more concerning, entire prior treatment courses may be missing, incomplete, or inaccessible in the patient record; particularly when care spans multiple institutions.

Efforts to address these concerns were launched at COMP Winter School 2026 and are now in progress.

Recognizing common pitfalls is essential to preventing near-misses from escalating into patient harm. Leveraging the NSIR-RT platform to capture reirradiation considerations would create an opportunity for shared learning and support ongoing evidence-based refinement of reRT practice across the country.

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NSIR-RT BY THE NUMBERS

The data we don't have – yet

Each issue, this newsletter shares RT data to help radiation therapists see broader trends and usage patterns. But for re-irradiation, there are no data to share.

Re-irradiation is becoming a more common part of practice. Patients are living longer, and treatment options continue to expand. Yet most reporting systems are still built around single courses of radiation, not the full history of treatment over time. When care happens years apart—or at different centres—it can be difficult to track the cumulative picture.

Without consistent data, it's harder to understand workload, plan resources, and support safe, coordinated care. Radiation oncology professionals observe this reality in daily practice, but the numbers that would show the broader trend aren't currently captured in one place.

This is a sign that RT practice has evolved faster than our reporting systems. The next step is clear: build the tools and processes that let our data reflect the care we're actually delivering.

LOOKING FOR THE CPQR TQC GUIDELINES?

Following CPQR's transition to a standing committee of CAPCA, all CPQR content is now available at CAPCA.ca.

As the CAPCA website is refined to support radiotherapy professionals in better locating the content they used to find at CPQR.ca, here is **a shortcut to access the CPQR technical quality control guidelines.** You can bookmark this link for easy reference.

Access the CPQR TQC guidelines now

To navigate to the TQC guidelines on your own, visit **www.capca.ca/resources** and click the box entitled "CPQR TQC guidelines" under Resource type, as shown in the image below.