

Improving outcomes and quality of care in Oncology through Patient-Based Funding in Quebec

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Introduction

With \$61.9 billion allocated in 2024-2025, Quebec's universal public healthcare system accounts for 41.9% of ministerial spending, underscoring its central role in the province's policy priorities.¹ The healthcare system includes over 140 hospitals organized under integrated public institutions, and mobilizes around 595,000 workers, accounting for more than 13.6% of the provincial workforce.² To improve both efficiency and value, Quebec has introduced a new funding model, the Patient-Based Funding (PBF), inspired by Value-Based Health Care (VBHC). This model aims to better align healthcare expenditures with quality of care and patient outcomes. This study examines the early impacts of the PBF in radiation oncology, focusing on performance, care quality, and system value.

Methods

The PBF model in radiation oncology was implemented from in 2015 across the majority healthcare facilities in Quebec. Designated to improve efficiency and value, this model links funding more directly to service volumes, care complexity, and outcomes. This analysis draws on nearly a decade of data, allowing for a longitudinal evaluation of FAP's impact on multiple dimensions of system performance. Key indicators include cost efficiency, productivity, the adoption of advanced technologies, notably Intensity-Modulated Radiation Therapy (IMRT) and access to care assessed through a set of performance-based variables.

Results

Nearly a decade after its implementation, the PBF model in radiation oncology has improved efficiency, access, and technology adoption while reducing treatment costs through better resources and salary management. Productivity has increased, with more care delivered using stable or reduced resources. A major shift toward advanced techniques like IMRT has replaced outdated 2D approaches. Ten-year data show sustained improvements in breast cancer care quality and lower per-patient treatment costs. Standardized clinical pathways and improved care coordination have enhanced outcomes, patient experience, and cost-effectiveness, as reflected in higher productivity and greater use of advanced planning techniques.

Discussion

Advancing understanding of the impact of the Patient-Based Funding model in radiation oncology is critical for improving the planning and delivery of cancer treatments across diverse clinical contexts. By integrating validated clinical data with robust performance indicators, the PBF model enables more accurate forecasting of future needs, optimal resource allocation and informed support for strategic decision-making. This proactive, evidence-based approach fosters improved clinical outcomes, while ensuring cost containment and sustained improvements in the quality of care.

Certain limitations remain, including inter-institutional variability, potential effects on equity of access, classification of diagnoses and the challenges of uniformly adopting best practices. These issues need to be addressed in order to improve the model and ensure its sustainability.

Topics: Connecting funding with patient outcomes and quality of care

Key Words: Patient-centered funding, health value, quality of care, oncology, funding reform, clinical performance, breast cancer, VBHC, Quebec, Cost Efficiency, FAP, PBF

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