

Understanding the Use of Patient-Reported Outcomes in Colorectal Cancer: Experience of a Canadian Hospital

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INTRODUCTION

The main objectives of this quality improvement initiative in colorectal cancer (CRC) care were to:

1. Identify the hospital information systems where the ICHOM-recommended CRC indicators are collected for aggregation
2. Identify the specific Patient-Reported Outcomes (PROs) and clinical outcomes being aggregated for patients with CRC at the Jewish General Hospital (JGH)
3. Learn more about healthcare providers (HCPs)' awareness of which PROs and clinical outcomes are being collected at the hospital level and determine whether HCPs relied on PROs to inform their clinical practice

METHODS



Assessment of the 67 ICHOM-recommended CRC indicators through an online survey



Which ones are collected/aggregated by medical archivists and registrars who work in CRC care?



Which ones are used by HCPs in CRC: medical oncologists, surgeons, nurses, and dietitians?

FINDINGS

OBJECTIVE #1

- 50 of the 67 (75%) ICHOM-recommended indicators for patients with CRC are being aggregated at the JGH within the JGH information systems (Table 1).
- The process of collecting data is different from aggregating data (Table 3).

Table 1. JGH information systems where ICHOM-recommended CRC indicators are being collected for aggregation

Key categories of the ICHOM-recommended indicators	Information systems				
	Opera	EIAS	NSQIP	Med Echo	SARDO
Demographic factors	✓	✓		✓	✓
Baseline clinical factors	✓	✓	✓	✓	✓
Baseline tumor factors		✓	✓	✓	✓
Baseline treatment factors	✓		✓		✓
Treatment variables	✓	✓	✓	✓	✓
Disutility of care	✓	✓	✓	✓	✓
Degree of health-PROs		✓			
Survival and disease control			✓	✓	✓
Quality of death					✓

Opera: Information system and a set of tools designed to enhance planning and efficient management of surgeries in the operating rooms
EIAS: Enhanced Recovery After Surgery (ERAS) Interactive Audit System
NSQIP: National Surgical Quality Improvement quality verification program information system of the American College of Surgeons
Med Echo: Information system tracking hospital stays in Quebec hospitals
SARDO: Système d'archivage de données oncologiques (SARDO) information system for the Quebec Cancer Registry

OBJECTIVE #2

Table 2. Current status of aggregated versus non-aggregated ICHOM-recommended CRC indicators based on the key categories of outcomes

Key categories of outcomes	Number (%) of indicators being aggregated	Indicators not being aggregated
Disutility of care (adverse events and complications)	3 of 3 (100%)	
Degree of health (PROs)	8 of 19 (42%)	<ul style="list-style-type: none"> • emotional functioning • social functioning • depression • sexual functioning • fatigue • dietary restrictions • fecal leakage • stool frequency • erectile dysfunction • vaginal symptoms • neuropathy
Survival and disease control	3 of 5 (60%)	<ul style="list-style-type: none"> • progression free survival • pathologic or clinical complete response
Quality of death	1 of 3 (33%)	<ul style="list-style-type: none"> • preference for place of death • hospital admission at the end of life (admission to the hospital > 1 time in last 30 days of life)

OBJECTIVE #3

HCPs believed that **all** ICHOM-recommended indicators (CRC PROs and clinical outcomes) are being collected at the JGH. HCPs reported using the ICHOM-recommended PROs in their practice. The least frequently used PROs were: **sexual functioning, erectile dysfunction, vaginal symptoms**. All HCPs rated the measurement of PROs via standardized collection tools as “very important” or “important” at all points throughout CRC care processes.

CONCLUSIONS

- 8 out of 19 PROs are aggregated within the EIAS information system.
- HCPs' attitudes toward PROs collection are positive.
- HCPs assigned high level of importance to PROs data collection. This finding enhance broader adoption and compliance with PROs recording, as well as their clinical use.

Table 3. Definition of two different concepts: “collection of data” versus “aggregation of data”

Collection of data	Aggregation of data
The act of gathering information, creating « raw » patient data, such as asking questions and recording the answers in patient's chart	The process of integrating raw data from different sources and expressing defined data in a summary form for statistical analysis and interpretation

IMPLICATIONS

