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Wait times and patterns of care in the colorectal cancer diagnostic interval

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Objective

There is concern that patients are waiting too long to be diagnosed with colorectal cancer (CRC) after presenting to the healthcare system. A prolonged time from first presentation to diagnosis, also known as the diagnostic interval, may be harmful to patients and indicate problems with the delivery of healthcare. The purpose of this study is to measure the length of the CRC diagnostic interval and describe variations in care that patients receive within the interval.

Approach

This is a population-based, cross-sectional study of CRC patients diagnosed in Ontario, Canada between 2009 and 2012 using data from the Institute for Clinical Evaluative Sciences (ICES). The diagnostic interval will be measured using physician billing, hospital discharge, emergency room and registry data. Patients' healthcare encounters in the 18 months before diagnosis will be analyzed using control charts to identify the earliest cancer-related encounter. The diagnostic interval will be defined as the date of this first relevant healthcare encounter to the CRC diagnosis date. Cluster analysis will be used to identify and characterize groups of patients with similar diagnostic intervals, based on the care received within the interval. Analyses will examine factors associated with the length of the diagnostic interval and care received within the diagnostic interval.

Results

Analyses for this project are ongoing and will be complete by August 2016. Results from this study will describe the length of the CRC diagnostic interval and relevant sub-intervals, and variations in these intervals according to patient and clinical characteristics. Results will describe the care that patients received within the interval, including the number and types of tests received and physicians involved in the interval, and whether the care received in the interval was associated with how long patients wait for diagnosis.

Conclusion

The findings from this study will advance our understanding of the CRC diagnostic interval. The control chart methodology used to identify CRC-related healthcare encounters from administrative health data is an improvement on previous research that has used arbitrary time periods and encounters which likely underestimate the length of the diagnostic interval. The cluster analysis method is a novel approach to characterizing the diagnostic interval that will identify common patterns of care and diagnostic pathways using administrative health data. This study will provide population-level estimates of how long patients are waiting to be diagnosed with CRC and provide an understanding of how patterns of care influence the length of the diagnostic interval.

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