Quality Management Partnership

Methodology

Advancing Quality: Progress on Key Priorities in Colonoscopy, Mammography and Pathology

The College of Physicians and Surgeons of Ontario

Ontario
Cancer Care Ontario

Quality Management Partnership

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COLONOSCOPY

SELF-REPORT FACILITY SURVEY FOR PROVINCIAL COLONOSCOPY STANDARDS

The 2017 Colonoscopy Quality Management Program (QMP) Facility Survey was distributed to all hospitals providing colonoscopy in the province (N=103) and to all out-of-hospital premises (OHPs) that provided the QMP with the name of a contact person (N=65). Of the 103 hospitals that received the survey, 100 (97%) completed it. Of the 65 OHPs that received the survey, 49 (75%) completed it. Questions about survey methodology should be directed to info@qmpontario.ca.

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INADEQUATE BOWEL PREPARATION

Indicator	Inadequate bowel preparation
Rationale	"Proper bowel preparation is important as it is associated with higher colonoscopy completion rates and adenoma detection rates." (QMP phase 2 report 2015)
Indicator Definition	Percentage of outpatient colonoscopies with poor bowel preparation
Denominator	**Definition** Number of outpatient colonoscopies performed during the reporting period **Inclusions** • Individuals, age 18 and older, who had an outpatient colonoscopy • Only outpatient colonoscopies are included **Exclusions** • Individuals with a missing or invalid HIN, date of birth • Individuals with a total colectomy prior to colonoscopy; total colectomy was identified using OHIP fee code S169A, S170A and S172A • Endoscopists with ≤5 CIRT colonoscopy procedures in the reporting period • Facilities with ≤10 colonoscopy procedures in the reporting period
Numerator	**Definition** Number of outpatient colonoscopies with poor bowel preparation
Data Year	2015, 2016 calendar year
Data Sources	• CIRT (Colonoscopy Interim Reporting Tool) – inpatient/outpatient colonoscopy and hospital location, patient demographics, and bowel preparation • OHIP's CHDB (Claims History Database) – total colectomy claims
Analysis	• Results are presented by hospital, region/LHIN and province o LHIN is determined by LHIN of practice where the colonoscopy procedure was performed • This indicator includes CIRT colonoscopy data only • There is a 1-month reporting lag for this indicator as bowel preparation details have approximately one month to be submitted and updated into CIRT

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POSITIVE FECAL OCCULT BLOOD TEST (FOBT) TO COLONOSCOPY WAIT TIME

Indicator	Positive FOBT to colonoscopy wait time
Rationale	The Canadian Association of Gastroenterology (CAG) has published a Canadian consensus on medically acceptable wait times, and has set benchmarks that recommend a colonoscopy be completed within two months for those with a positive FOBT. CCO's ColonCancerCheck (CCC) program has adapted this benchmark. This indicator measures follow-up within eight weeks, among all individuals who had a positive FOBT and colonoscopy within 6 months. A six month window is used as colonoscopies performed more than 6 months after an abnormal screen date may have been performed for a different indication. (QMP phase 2 report 2015)
Indicator Definition	**75th percentile wait time in days** 75th percentile wait time in days between a positive FOBT and a follow-up colonoscopy for Ontario screen-eligible individuals, 50-74 years old, who had a positive FOBT result and follow-up colonoscopy within 6 months
Denominator	**Definition** Number of Ontario screen-eligible individuals, age 50–74, who had a positive CCC program FOBT result in the reporting period, and follow-up colonoscopy within 6 months of a positive FOBT result **Inclusions** • Individuals, age 50–74 at the index date, who had a positive program FOBT result in LRT in the reporting period and follow-up colonoscopy within 6 months of their screen date. • Index date was defined as the first positive FOBT date per person by kit receipt date in LRT in the reporting period • FOBTs were identified by CCC program FOBT records in LRT • Positive FOBT results were defined as at least one positive flap out of three flaps • Colonoscopy was defined as a record in CIRT or in OHIP by the fee codes: Z codes (Z555A, Z491A-Z499A) • Each individual was counted once regardless of the number of tests performed **Exclusions** • Individuals with a missing or invalid HIN, date of birth, sex • Individuals with an invasive colorectal cancer before the index date; prior diagnosis of colorectal cancer was defined as: ICD-O-3 codes C18.0, C18.2-C18.9, C19.9, C20.9, a morphology indicative of colorectal cancer, microscopically confirmed with a pathology report • Individuals with a total colectomy before the index date; total colectomy was identified using OHIP fee code S169A, S170A and S172A • Endoscopists whose billing number could not be associated with a CPSO number • Endoscopists with ≤5 colonoscopies in the reporting period • Facilities with ≤10 colonoscopies in the reporting period
Numerator/ Calculation	**75th percentile wait time in days** 75th percentile wait time in days between a positive FOBT and a follow-up colonoscopy for Ontario screen-eligible individuals, 50-74 years old, who had a positive FOBT result and follow-up colonoscopy within 6 months

Indicator	Positive FOBT to colonoscopy wait time
Data Year	2014, 2015 calendar year
Data Sources	• LRT (Laboratory Reporting Tool) – CCC FOBTs • OHIP's CHDB (Claims History Database) – colonoscopy claims • CIRT (Colonoscopy Interim Reporting Tool) – CCC program colonoscopy records • OCR (Ontario Cancer Registry) - resolved invasive colorectal cancers • RPDB (Registered Persons Database) – patient demographics • CIHI DAD/NACRS – hospital location
Analysis	• Results are presented by hospital, region/LHIN and province; Out-of-Hospital Premises (OHP) results are presented only at the provincial level o Hospital colonoscopies were identified by linking OHIP colonoscopy records with CIHI DAD/NACRS o OHP colonoscopies were identified as total OHIP colonoscopies minus hospital colonoscopies o LHIN was determined by LHIN of practice where the colonoscopy procedure was performed • There is a 12-month reporting lag for this indicator, as six months of follow-up are required to determine if an individual had a colonoscopy and an additional 6-month data lag for CCO to receive colonoscopy claims data in OHIP

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MAMMOGRAPHY

ABNORMAL CALLS

Indicator	Abnormal calls
Rationale	"Abnormal call rate is an important indicator of the quality of the mammography image and interpretation. It is most meaningful when considered in the context of positive predictive value, cancer detection rate, post-screen cancer rate and the underlying breast cancer incidence rate." (CPAC 2013)
Definition	Percentage of OBSP screening mammograms that were referred for further testing
Denominator	**Definition** Total number of OBSP screening mammograms in a given screen year **Inclusions** • Average risk screens for women age 50 and over who had an OBSP screening mammogram • Mammograms were identified by OBSP mammogram records in ICMS for screening purposes • All mammograms in ICMS were counted, including those with partial views **Exclusions** • Women with a missing or invalid date of birth
Numerator	**Definition** Total number of OBSP screening mammograms with an abnormal result **Inclusions** • Average risk screens for women age 50 and over who had an abnormal OBSP screening mammogram • An abnormal screening mammogram was defined as an OBSP screening mammogram referred for further testing by the screening radiologist
Data Sources	ICMS (Integrated Client Management System): OBSP mammograms, demographics, assessments and screen-detected cancer
Data Year	• 2013, 2014 calendar screen year
Analysis and Data Limitations	• Results are presented by OBSP breast screening centre (IHF or hospital), region/LHIN and province o LHIN was determined by LHIN of the centre where the screening mammogram was performed • This indicator includes OBSP mammograms only • There is a one-month reporting lag for this indicator, as the regions have one month to enter the mammogram screening result (normal or abnormal) in ICMS

POSITIVE PREDICTIVE VALUE

Indicator	Positive predictive value
Rationale	"Positive predictive value (PPV) is an indicator of the predictive validity of screening. Factors that influence cancer detection and abnormal recall rates must also be taken into consideration when evaluating a program's PPV." (CPAC 2013)
Definition	Percentage of OBSP screening mammograms with an abnormal result that were diagnosed with breast cancer (ductal carcinoma in situ [DCIS] or invasive)
Denominator	**Definition** Total number of OBSP screening mammograms with an abnormal result in a given screen year **Inclusions** • Average risk screens for women age 50 and over who had an abnormal OBSP screening mammogram • Mammograms were identified by OBSP mammogram records in ICMS for screening purposes • Women with abnormal program screening mammograms were identified as those referred for further testing by the screening radiologist in ICMS • All mammograms in ICMS were counted, including those with partial views **Exclusions** • Women with a missing or invalid date of birth o Screens with a final result of "unknown/lost to follow-up"
Numerator	**Definition** Total number of OBSP screening mammograms with an abnormal result that were diagnosed with a screen-detected breast cancer (DCIS or invasive) **Inclusions** • All breast cancers were counted, including those with unknown type
Data Sources	ICMS (Integrated Client Management System): OBSP mammograms, demographics, assessments and screen-detected cancer
Data year	• 2013, 2014 calendar screen year
Analysis and Data Limitations	• Results are presented by OBSP breast screening centre (IHF or hospital), region/LHIN and province o LHIN was determined by LHIN of the centre where the screening mammogram was performed • This indicator includes OBSP mammograms only • There is an eight-month reporting lag for this indicator, as the regions have eight months to close off assessment cases and enter the information in ICMS

INVASIVE CANCER DETECTION RATE

Indicator	Invasive cancer detection rate
Rationale	Cancer detection rate is an indicator of how effective a screening mammography program is at finding invasive cancers. It is most meaningful when considered in relation to the abnormal call rate, post-screen cancer detection rate, and the underlying rate of breast cancer in the eligible population. Cancer detection rates are affected by age, screening interval recommendations, and screening technology (digital vs. screen-film). (Adapted from CPAC 2013)
Definition	Number of OBSP screening mammograms with an invasive screen-detected breast cancer per 1,000 mammograms
Denominator	**Definition** Total number of OBSP screening mammograms in a given screen year **Inclusions** • Average risk screens for women age 50 and over who had an OBSP screening mammogram **Exclusions** • Women with a missing or invalid date of birth o Screens with a final result of “unknown/lost to follow-up”
Numerator	**Definition** Total number of OBSP screening mammograms with a screen-detected invasive breast cancer diagnosis **Inclusions** • Breast cancer type (invasive or ductal carcinoma in situ [DCIS]) is obtained through linkage with the OCR
Data Sources	• ICMS (Integrated Client Management System): OBSP mammograms, demographics, assessments and screen-detected cancer • OCR (Ontario Cancer Registry): invasive vs. DCIS, screen-detected and non-screen detected cancer
Data year	• 2013, 2014 calendar screen year
Analysis and Data Limitations	• Results are presented by OBSP breast screening centre (IHF or hospital), region/LHIN and province o LHIN was determined by LHIN of the centre where the screening mammogram was performed • This indicator includes OBSP mammograms only • There is a two-year reporting lag for this indicator, as there is a two-year lag for entering cancer stage details (tumor size, nodal status, invasive vs. DCIS) in ICMS

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PATHOLOGY

SELF-REPORT FACILITY SURVEY FOR PROVINCIAL PATHOLOGY STANDARDS

The 2017 Pathology Quality Management Program (QMP) Facility Survey was distributed to all surgical pathology facilities providing interpretative pathology in the province (N= 55). Facility leads were asked to complete the survey and the response rate was 100% in 2017. In 2016, a total of 5 facilities did not report their data.

Additional methodology considerations include:

Consideration	Description
Integrated hospital laboratory organization	For facilities that are integrated as part of one hospital laboratory organization, a single survey was completed by the organization, which represents all the facilities within the organization.
Denominator	The denominator includes only those facilities that provide the service identified in the standard, if a facility did not provide the service (e.g. intra-operative consultation), they are excluded from the denominator for these standards.
Site vs facility level data	In 2016, data was reported at the “site level”, in 2017 a change has been made (based on feedback from the field) to change reporting to the “facility level“. A facility is defined as a corporate entity that offers the service, one facility may include multiple sites. The impact on the 2016 to 2017 comparator data required rolling up the 2016 data to the facility level, and omitting data for those facilities that are no longer in scope. The facility rollup for 2016 was not impacted greatly as the 2016 reported data by facilities was generally duplicated at the site level.

Questions about survey methodology should be directed to info@qmpontario.ca.

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ACRONYMS AND ABBREVIATIONS

Abbreviation	Description
CCC	ColonCancerCheck
CHDB	Claims History Database
CIHI	Canadian Institute for Health Information
CIRT	Colonoscopy Interim Reporting Tool
CPAC	Canadian Partnership Against Cancer
CPSO	College of Physicians and Surgeons of Ontario
DAD	Discharge Abstract Database
DCIS	Ductal carcinoma in situ
FOBT	fecal occult blood tests
HIN	Health Insurance Number
ICMS	Integrated Client Management System
IHF	independent health facility
LHIN	Local Health Integration Network
LRT	Laboratory Reporting Tool
NACRS	National Ambulatory Care Reporting System
OBSP	Ontario Breast Screening Program
OCR	Ontario Cancer Registry
OHIP	Ontario Health Insurance Plan
OHP	Out-of-Hospital Premises
QMP	Quality Management Program
RPDB	Registered Persons Database

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REFERENCES

QMP phase 2 report 2015: The Quality Management Partnership. Phase 2 report Provincial Quality Management Programs for Colonoscopy, Mammography and Pathology in Ontario; Mar 2015.

CPAC 2013: Canadian Partnership Against Cancer. Report from the Evaluation Indicators Working Group: Guidelines for Monitoring Breast Cancer Screening Program Performance, 3rd ed. Toronto: Canadian Partnership Against Cancer; Feb, 2013.