



Complete Summary

TITLE

Intra-procedure colonoscopy complication rate: percentage of patients who developed one or more intra-procedure complications.

SOURCE(S)

AAAHC Institute for Quality Improvement. Procedure specific colonoscopy survey [Colonoscopy CPT-45378-45385]. Wilmette (IL): AAAHC Institute for Quality Improvement; 2003. 2 p.

Brief Abstract

DESCRIPTION

This measure assesses the percentage of patients who developed one or more intra-procedure colonoscopy complications.

RATIONALE

Part of the rationale for studying colonoscopy (Current Procedure Terminology [CPT] codes 45378-45385) is that it is the second most frequently performed procedure in U.S. ambulatory care, with more than 1.1 million of the almost 1.4 million colonoscopies reported as occurring in the ambulatory setting in 1996. Additionally, colonoscopies are a means of detecting colorectal cancer and of preventing deaths from this third leading cancer (not including skin cancer) for American men and women. Further, although there will continue to be disagreement about what the "best" test is for detecting colorectal cancer, colonoscopy allows the endoscopist to remove lesions and polyps at the time of the procedure (unlike a barium enema) and may detect cancer in a substantial proportion (maybe 45%) of people whose colon cancer would otherwise go undetected (as opposed to sigmoidoscopy). Colonoscopy is not without cost; direct costs, risks to patients (such as bowel perforation), potential patient discomfort, and other related costs must be considered in a cost-benefit analysis. Many national organizations have clinical practice guidelines that recommend colorectal cancer screening for select populations and several refer to the use of colonoscopy as the screening process in certain patient populations.

PRIMARY CLINICAL COMPONENT

Colorectal cancer; colonoscopy; intra-procedure complications (arrhythmia, bleeding requiring treatment/intervention, extended recovery, hospital transfer, hypotension, hypoxia, noted perforation[s], respiratory arrest)

DENOMINATOR DESCRIPTION

Patients undergoing colonoscopy procedure (Current Procedure Terminology [CPT] codes 45378-45385) at the ambulatory health care organization

NUMERATOR DESCRIPTION

Number of patients from the denominator who developed one or more intra-procedure complications*

*Complications include arrhythmia, bleeding requiring treatment/intervention, extended recovery, hospital transfer, hypotension, hypoxia, noted perforation(s), respiratory arrest.

Evidence Supporting the Measure

PRIMARY MEASURE DOMAIN

Outcome

SECONDARY MEASURE DOMAIN

Not applicable

EVIDENCE SUPPORTING THE MEASURE

A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence

NATIONAL GUIDELINE CLEARINGHOUSE LINK

- [Polyp guideline: diagnosis, treatment, and surveillance for patients with colorectal polyps.](#)
- [Screening for colorectal cancer: recommendations and rationale.](#)
- [Colorectal cancer screening and surveillance: clinical guidelines and rationale-update based on new evidence.](#)

Evidence Supporting Need for the Measure

NEED FOR THE MEASURE

Use of this measure to improve performance

EVIDENCE SUPPORTING NEED FOR THE MEASURE

AAAHC Institute for Quality Improvement. Colonoscopy 2003 study. Wilmette (IL): Accreditation Association for Ambulatory Health Care, Inc. (AAAHC); 2003. 21 p.

State of Use of the Measure

STATE OF USE

Current routine use

CURRENT USE

Internal quality improvement

Application of Measure in its Current Use

CARE SETTING

Ambulatory Care

PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Advanced Practice Nurses
Nurses
Physicians

LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Single Health Care Delivery Organizations

TARGET POPULATION AGE

Unspecified

TARGET POPULATION GENDER

Either male or female

STRATIFICATION BY VULNERABLE POPULATIONS

Unspecified

Characteristics of the Primary Clinical Component

INCIDENCE/PREVALENCE

Colonoscopy is the second most frequently performed procedure in U.S. ambulatory care, with more than 1.1 million of the almost 1.4 million colonoscopies reported in the ambulatory setting in 1996.

EVIDENCE FOR INCIDENCE/PREVALENCE

Owings MF, Kozak LJ. Ambulatory and inpatient procedures in the United States, 1996. Vital Health Stat 13 1998 Nov; (139):1-119. [PubMed](#)

ASSOCIATION WITH VULNERABLE POPULATIONS

Because colonoscopy is generally recommended for those over 50 and those with higher risk or history of cancer, elderly and therefore elderly frail will be disproportionately represented.

EVIDENCE FOR ASSOCIATION WITH VULNERABLE POPULATIONS

Bond JH. Polyp guideline: diagnosis, treatment, and surveillance for patients with colorectal polyps. Practice Parameters Committee of the American College of Gastroenterology. Am J Gastroenterol 2000 Nov; 95(11): 3053-63. [PubMed](#)

U.S. Preventive Services Task Force. Screening for colorectal cancer: recommendations and rationale. Ann Intern Med 2002 Jul 16; 137(2): 129-31. [PubMed](#)

Winawer S, Fletcher R, Rex D, Bond J, Burt R, Ferrucci J, Ganiats T, Levin T, Woolf S, Johnson D, Kirk L, Litin S, Simmang C. Colorectal cancer screening and surveillance: clinical guidelines and rationale-Update based on new evidence. Gastroenterology 2003 Feb; 124(2):544-60. [102 references] [PubMed](#)

BURDEN OF ILLNESS

Colorectal cancer is the fourth most common cancer in the United States and the second leading cause of cancer death. A person at age 50 has about a 5 percent lifetime risk of being diagnosed with colorectal cancer and a 2.5 percent chance of dying from it; the average patient dying of colorectal cancer loses 13 years of life.

EVIDENCE FOR BURDEN OF ILLNESS

U.S. Preventive Services Task Force. Screening for colorectal cancer: recommendations and rationale. Ann Intern Med 2002 Jul 16; 137(2): 129-31. [PubMed](#)

UTILIZATION

Unspecified

COSTS

Colorectal cancer screening is effective in reducing mortality from colorectal cancer. Current data are insufficient to determine the most effective or cost-effective strategy for screening, although all major strategies have favorable cost-effectiveness ratios compared with no screening. Estimates of average cost per year of life saved by having a colonoscopy every 10 years range from approximately \$9,000 to \$26,000.

EVIDENCE FOR COSTS

Pignone M, Rich M, Teutsch SM, Berg AO, Lohr KN. Screening for colorectal cancer in adults. Systematic Evidence Review No. 7 (prepared by the Research Triangle Institute, University of North Carolina Evidence-based Practice Center under contract No. 290-97-0011). AHRQ Publication No. 02-S003. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ); 2002 Jun 1.

Institute of Medicine National Healthcare Quality Report Categories

IOM CARE NEED

Living with Illness
Staying Healthy

IOM DOMAIN

Safety

Data Collection for the Measure

CASE FINDING

Users of care only

DESCRIPTION OF CASE FINDING

Procedure specific data are collected in a prospective manner for approximately 3 months for all patients having a colonoscopy (Current Procedure Terminology [CPT] codes 45378-45385).

DENOMINATOR SAMPLING FRAME

Patients associated with provider

DENOMINATOR (INDEX) EVENT

Diagnostic Evaluation

DENOMINATOR INCLUSIONS/EXCLUSIONS

Inclusions

Patients undergoing colonoscopy procedure (Current Procedure Terminology [CPT] codes 45378-45385) at the ambulatory health care organization

Exclusions

Unspecified

NUMERATOR INCLUSIONS/EXCLUSIONS

Inclusions

Number of patients from the denominator who developed one or more intra-procedure complications*

*Complications include arrhythmia, bleeding requiring treatment/intervention, extended recovery, hospital transfer, hypotension, hypoxia, noted perforation(s), respiratory arrest.

Exclusions

Unspecified

DENOMINATOR TIME WINDOW

Time window is a single point in time

NUMERATOR TIME WINDOW

Encounter or point in time

DATA SOURCE

Patient survey

LEVEL OF DETERMINATION OF QUALITY

Not Individual Case

OUTCOME TYPE

Adverse Outcome

PRE-EXISTING INSTRUMENT USED

Unspecified

Computation of the Measure

SCORING

Rate

INTERPRETATION OF SCORE

Better quality is associated with a lower score

ALLOWANCE FOR PATIENT FACTORS

Unspecified

STANDARD OF COMPARISON

External comparison at a point in time
External comparison of time trends
Internal time comparison

Evaluation of Measure Properties

EXTENT OF MEASURE TESTING

Limited reliability and validity testing have been completed.

Reliability testing has included comparing information in the surveys to patients' charts and surgical logs - different sources of much the same data.

Validity testing has included examining face validity, content validity, and external validity (generalizability), with survey developers and participating organizations from year-to-year.

Unfortunately, there is little in the way of established measures to test criterion validity.

EVIDENCE FOR RELIABILITY/VALIDITY TESTING

AAAHC Institute for Quality Improvement. Colonoscopy 2003 study. Wilmette (IL): Accreditation Association for Ambulatory Health Care, Inc. (AAAHC); 2003. 21 p.

Identifying Information

ORIGINAL TITLE

Intra-procedure complication rate.

MEASURE COLLECTION

[AAAHC Institute for Quality Improvement Performance Measurement Initiative](#)

MEASURE SET NAME

[Colonoscopy](#)

SUBMITTER

Accreditation Association for Ambulatory Health Care Institute for Quality Improvement

DEVELOPER

Accreditation Association for Ambulatory Health Care Institute for Quality Improvement, Performance Measurement Initiative, Colonoscopy Work Group

ADAPTATION

Measure was not adapted from another source.

RELEASE DATE

2000 Jan

REVISION DATE

2003 Jan

MEASURE STATUS

This is the current release of the measure.

SOURCE(S)

AAAHC Institute for Quality Improvement. Procedure specific colonoscopy survey [Colonoscopy CPT-45378-45385]. Wilmette (IL): AAAHC Institute for Quality Improvement; 2003. 2 p.

MEASURE AVAILABILITY

The "Intra-Procedure Complication Rate" measure was derived from the Accreditation Association for Ambulatory Health Care (AAAHC) Institute for Quality Improvement, "Procedure Specific Colonoscopy Survey."

For more information, please contact the AAAHC Institute for Quality Improvement at info@aaahciqi.org.

COMPANION DOCUMENTS

The following is available:

- Colonoscopy 2003 study. Wilmette (IL): Accreditation Association for Ambulatory Health Care, Inc. (AAAHC); 2003. 21 p. This document can be ordered from the [Accreditation Association for Ambulatory Health Care \(AAAHC\) Web site](#).

NQMC STATUS

This NQMC summary was completed by ECRI on May 25, 2004. The information was verified by the measure developer on May 27, 2004.

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