Effective Health Care

Conscious Sedation vs. Anesthesia for Colonoscopy
Nomination Summary Document

Results of Topic Selection Process & Next Steps

- Conscious sedation versus anesthesia for colonoscopy was found to be addressed by two existing systematic reviews: 1) a review published in 2008 by McQuaid and colleagues titled *A Systematic Review and Meta-Analysis of Randomized, Controlled Trials of Moderate Sedation for Routine Endoscopic Procedures;* and 2) a review published in 2008 by the Cochrane Collaboration titled *Propofol for Sedation During Colonoscopy.* Given that these reviews cover this nomination, no further activity will be undertaken on this topic.

  - McQuaid KR, Laine L. A systematic review and meta-analysis of randomized, controlled trials of moderate sedation for routine endoscopic procedures. Gastrointestinal Endoscopy. 2008;67:910-923

  - Singh H, Poluha W, Cheung M et al. Propofol for sedation during colonoscopy. Cochrane Database of Systematic Reviews. 2008;CD006268

- The topic of provider type and setting in regard to colonoscopy sedation and procedures is not feasible for a full systematic review due to the limited data available for a review at this time; however, it could be considered for a potential new research project within the Effective Health Care (EHC) Program.

Topic Description

Nominator: Organization

Nomination Summary: The nominator is interested in the comparative effectiveness of using conscious sedation (e.g., benzodiazepine plus an opiod) versus anesthesia (e.g., propofol) for patients undergoing a colonoscopy. They are also interested in other comparisons including setting (e.g., clinical office versus hospital) and provider type (endoscopist versus anesthesiologist).

Population(s): Adult patients aged ≥50 years at standard risk for colorectal cancer receiving a colonoscopy in a clinical office or hospital. Subgroups of interest include patients defined as high risk, (e.g., persons with familial adenomatosis require screening more frequently and beginning at younger ages).
Intervention(s): Anesthesia given by an anesthesiologist or endoscopist.
Comparator(s): Conscious sedation administered by an anesthesiologist or endoscopist.
Outcome(s): Comparative harms and benefits including avoidance of colonoscopy; incomplete colonoscopy due to inadequate sedation/anesthesia; temporary cognitive

impairment following sedation; need for possible airway support; need for a second health care professional for monitored anesthesia care; longer time needed for sedation than for monitored anesthesia care; and increased rates of early identification of polyps or colorectal cancer.

Key Questions from Nominator:

1. What is the comparative effectiveness of using conscious sedation (e.g., a benzodiazepine plus an opioid) vs. anesthesia (e.g., propofol) for performing colonoscopies?
   a. What are the advantages and disadvantages of each?
   b. What evidence supports sedation vs. anesthesia, given the side effects of each for the patients?
2. How does the setting (physician procedure room vs. outpatient hospital) and the staffing differences (endoscopist to provide sedation vs. need for an anesthesiologist or other person to provide monitored anesthesia care) impact the colonoscopy screening rates and potential harms?
3. How might the evidence be translated to patients, ultimately to increase the rates of early identification of polyps or colorectal cancer?

Considerations

- The topic meets EHC Program appropriateness and importance criteria. (For more information, see http://effectivehealthcare.ahrq.gov/index.cfm/submit-a-suggestion-for-research/how-are-research-topics-chosen/.)

- The McQuaid and colleagues review listed above did not evaluate provider type or setting, which pertains to key question 2 of the nomination that asks, "How does the setting (physician procedure room vs. outpatient hospital) and the staffing differences (endoscopist to provide sedation vs. need for an anesthesiologist or other person to provide monitored anesthesia care) impact the colonoscopy screening rates and potential harms?" The Cochrane Collaboration review by Singh and colleagues only identified one RCT published in 2006 comparing propofol administration by anesthesiologists to that by gastroenterologists. No recent RCTs or CCTs evaluating provider type or setting for colonoscopy procedures were identified in our feasibility scan; therefore, the nominator's key question 2 regarding provider type and setting is not feasible for a full systematic review at this time. However, this question may be considered for a potential new research project within the EHC Program.

- National survey results suggest that sedation practices vary considerably within different geographic regions of the United States, among provider type, and between settings such as hospitals versus ambulatory surgical centers. Given the lack of existing studies, issues surrounding provider type and setting are best suited for health services research rather than a systematic review. A potential new research project on this topic could address any of the following areas:
  - health outcomes as a result of different coverage policies for sedation methods during colonoscopy;
  - safety and efficacy of different sedation regimens; and
  - safety of administration of anesthesia drugs (e.g., propofol) for moderate sedation by anesthesiologists versus nonanesthesiologists.