Maximizing *Quality* in Colonoscopy

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Outline/Goals

- Economic mandates for colonoscopy quality
- Evidence that quality matters
- New national benchmarks
- Implications for GI practice
Optimizing Colon Prep

Importance of Timing

- **Split dose**
  - Same day prep/colon
- Time intervals important
  - Begin 4-6 hours before time of colonoscopy
  - Completion last dose at least 2 hours before
- Likelihood decrease adequate prep by 10%
  - Each hour between prep complete – colon

Gastrointest Endosc 2009;69:700-6
Gastroenterology 2014:10:1-22

Important Lesions Missed

Baseline Colonoscopy

- Colonoscopy miss rate
  - Up to 17% of lesions ≥10 mm
- Most interval cancers
  - Missed lesions at baseline colonoscopy
- Missed lesions
  - Directly related to quality exam
- GI providers vs non-GI
  - Important but less we throw stones…

Clin Gastroenterol Hepatol 2010;8:858–864
Gastrointest Endosc 2005;61:385–391
Gastroenterology 2005;129:34–41
Incomplete Polypectomy

- Interval cancers
  - 19%–27% same portion colon as prior polypectomy
- Large sessile polyps (≥2 cm)
  - 17.6% had residual adenoma at repeat exam

Clin Gastroenterol Hepatol 2010;8:858–864
Gastrointest Endosc 2005;61:385–391
Gastroenterology 2005;129:34–41
Gastrointest Endosc 2009;70:344–349

Incomplete Polyp Resection

**CARE** Study

- 269 patients/11 gastroenterologists
  - polyp resection 5-20mm
- 4 quadrant biopsies post-polypectomy
- 10.1% residual adenoma
  - range 6.5%-22.7%
- Risk increased
  - Edges indiscrete /difficult to identify
  - Serrated lesions (RR 3.7)

Gastroenterology 2013; 144:74-9
Mechanical Improvements
Retroflexing in Cecum
Diminutive Polyp Optimizing Quality Removal

- Removal of diminutive polyps (≤5 mm)
  -randomized cold snaring or cold forceps
  -single experienced colonoscopist
  -117 eligible polyps (mean = 3.66 mm)
-70% tubular adenomas

- Better histologic eradication *93.2% vs 75.9%; P=0.009*
- Greater efficiency *14.29 vs. 22.03 seconds; P<0.001*
- Predictors incomplete histologic eradication

Use of forceps and polyp size ≥4 mm were independent

Am J Gastroenterol 2013;108:1593

Quality Indicators

- Poland CRC screening database: 45,206 patients/186 endoscopists
- Adenoma detection rate correlate with CRC
- Risk reduction for ADR >20%
  -<11% HR 10.94
  -11-14% HR 10.75
  -15-19.9% HR 12.50

p= 0.008

Poor Adenoma Detection Results in Cancer (PLCO)

- 66,711 FS exams (93 examiners)
- 32 interval cancers
- High quartile ADR range 11.2-15.8%
- Low quartile ADR range 2.0-7.2%

Interval distal cancer risk
OR 2.4; p=0.02

Gastroenterol Hepatol 2013; 11:73-78

CRC and Colonoscopy Global Protection at Last!

Coloscopy by GIs

100% 77% 84% 56%
0% Overall Left colon Right colon

Ann Intern Med 2011 Jan 4; 154:22

n= 1688 CRC
n= 1932 controls
ADR and CRC Death: Quality Matters!

- ADR was inversely associated risks of:
  - Interval CRC
  - Advanced-stage interval CRC
  - Fatal interval CRC

- 1.0% increase ADR was associated with:
  - 3.0% decrease risk CRC
  - 4.0% reduction CRC death

N Engl J Med 2013;370;14:1298-1306

Quality Indicators for Colonoscopy

Withdrawal Times

Serrated lesion increased detection
9 min withdrawal time

**Bottom line:**
- Important to record
- ADR most important
- Useful information if low ADR

Am J Gastroenterol 2014;109(3):417-26
Quality and QUALITY

- Retrospective cohort – average risk screening colonoscopy
- 15 GIs - 2 academic endoscopy units
- 11,049 polyps / 6681 colonoscopies
  - 13% exams found > proximal serrated polyp (SP)
- Detection of SP Range 1%-18%
  Correlated with adenoma detection rates (p=0.0005)


2015 ACG/ASGE
Quality Indicators for Colonoscopy

- Pre-procedural
  Appropriate indication >80%
  Informed consent >98%
  Frequency appropriate >90%
  Colitis surveillance appropriate >90%

Am J Gastroenterol 2015; 110:72-90
2015 ACG/ASGE Quality Indicators for Colonoscopy

- Intra-procedural

Bowel prep quality documented $\geq 98\%$

Bowel prep adequacy $\geq 85\%$

Notation/photo cecum
- $\geq 90\%$ overall
- $\geq 95\%$ screening

Am J Gastroenterol 2015; 110:72-90
2015 ACG/ASGE
Quality Indicators for Colonoscopy
• Intra-procedural
  Bowel prep quality documented \( \geq 98\% \)
  Bowel prep adequacy \( \geq 85\% \)
  Notation/photo cecum
    - \( \geq 90\% \) overall
    - \( \geq 95\% \) screening

Am J Gastroenterol 2015; 110:72-90
2015 ACG/ASGE
Quality Indicators for Colonoscopy

• Intra-procedural
ADR average risk >25%
  - men >30%
  - women >20%
Appropriate tissue sampling IBD >98%
  - 4 biopsies/10cm (avg 28-32)
  - chromoendoscopy with target biopsies
Endoscopic before surgery referral >98%
  - polyps <2 cm

Am J Gastroenterol 2015; 110:72-90

• Post-procedural
Incidence perforation
  - all exams <1:500
  - screening <1:1000
Incidence bleeding
  - <1%
Post polypectomy bleed
  - manage w/o surgery >90%

Am J Gastroenterol 2015; 110:72-90
Priority Quality Indicators
What You Need to Do NOW

- Adenoma detection rate
  - average risk screening
- Appropriate interval adherence
  - Post polypectomy
  - Post cancer resection
  - Average risk/adequate prep
- Documentation of cecum

Am J Gastroenterol 2015; 110:72-90

Quality Measures for Colonoscopy
Best Validity

- Cecal intubation rate
- Adenoma detection rate

25% (M/F) blended ADR

Am J Gastroenterol 2015; 110:72-90

www.giquic.org
Quality Measures for Colonoscopy

Best Validity

- Cecal intubation rate
- Adenoma detection rate
- Recs for post-polypectomy surveillance
- Performance linked to payment?

Best combination for incentive system

National registry participation will be key!

ACG/ASGE GIQuIC

- Adenoma detection rate
- Recs for post-polypectomy surveillance
- Performance linked to payment?

Best combination for incentive system

Public reporting of data

www.giquic.org

Am J Gastroenterol 2015; 110:72-90
What will Payors Look at?
My Predictions…..

• Colon surveillance intervals
• Colon surveillance intervals
• Colon surveillance intervals
• Colon surveillance intervals
• Colon surveillance intervals

Will be increased scrutiny
Adherence to national guidelines

Gastroenterology 2012; 143(3): 844-857

Do Patients Care about Colonoscopy Quality Metrics?

Am J Gastroenterol 2014 Jul 29; [e-pub ahead of print]
(http://dx.doi.org/10.1038/ajg.2014.201)
Do Patients Care about Colonoscopy Quality Metrics?

- Researched physician rating

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Do Patients Care about Colonoscopy Quality Metrics?

- Researched physician rating 20%
- Familiarity with quality metrics
  - Bowel prep
  - ADR
  - Cecal intubation
  - Withdrawal time

Am J Gastroenterol 2014 Jul 29; [e-pub ahead of print]
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Do Patients Care about Colonoscopy Quality Metrics?

- Researched physician rating 20%
- Familiarity with quality metrics
  - Bowel prep 88%
  - ADR 30%
  - Cecal intubation 26%
  - Withdrawal time 21%
- Important to report ADR to other physicians

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Do Patients Care about Colonoscopy Quality Metrics?

- Researched physician rating: 20%
- Familiarity with quality metrics:
  - Bowel prep: 88%
  - ADR: 30%
  - Cecal intubation: 26%
  - Withdrawal time: 21%
- Important to report ADR to other physicians: 96%
- Selection of colonoscopist by PCP: 87%

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Do Patients Care about Colonoscopy Quality Metrics?

- Researched physician rating 20%
- Familiarity with quality metrics
  - Bowel prep 88%
  - ADR 30%
  - Cecal intubation 26%
  - Withdrawal time 21%

None ranked selection by quality as most important
- Important to report ADR to other physicians 96%
- Selection of colonoscopist by PCP 87%

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Colonoscopy Benchmarking
What else to measure?

- Serrated adenoma detection rate Target at least 5%
- Interval cancers
- Non-recoverable pathology
- Incomplete polypectomy Objective achieved?
- Use of biopsy vs. snare resect polyps
- Inadequate preps
To Measure is Good
To React is Critical

- Quality measurement nothing
  W/o response to deficiencies
- Non-confrontational, collaborative
  Focus on patient care
- Poor preps
  Institute split preps
  Review instructions
  Review preps used
- Misidentify landmarks/missed polyps
  Cecum consensus-team
  Serrated polyps training videos

- Low ADR
  Review withdrawal times
  Stopwatch for sectional withdraw
  Pair with high ADR detector

- Incomplete polypectomy
  Training videos
  Mentor experienced examiner

- Incomplete exams
  High % females- use pediatric scope
  External pressure instructions
  Repositioning tricks
  Water instillation technique
Quality Indicators for Colonoscopy

Summary

• Creating check points for your procedures
• You need to care

Gastroenterologists should take the lead

• Procedure
  – Pre-assessment
  – Intra-procedural 2105 National Benchmarks
  – Post-procedural
• Documentation

Take Home Messages

• Paradigm shift emphasis on quality Patient outcomes
• Initiatives/regulations for quality Costs of care
Take Home Messages

- Paradigm shift emphasis on quality
- Initiatives/regulations for quality
- Time to begin quality benchmarking \textbf{YESTERDAY!}

- Important to measure quality
- Critical to respond to deficiencies
Take Home Messages

- Paradigm shift emphasis on quality
- Initiatives/regulations for quality
- Time to begin quality benchmarking
- Important to measure quality
- Transparency of quality metrics coming…

Will drive:
- Patient access
- Patient selection
- Insurer preference
- Insurer payments

Will drive:
- Patient access
- Patient selection
- Insurer preference
- Insurer payments

Receive incentive$/prevent penalties$

www.giquic.org
Importance of Early Detection

Need for Assessing Quality Delivery

Winner of the "Not My Job" Award - ADOT
Litchfield Park, AZ 85