URBAN-RURAL DIFFERENCES IN THE COLONOSCOPY WORKFORCE IN SC

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MAY 11, 2017
BACKGROUND

Colorectal cancer (CRC) is the third most common cancer, and the second leading cause of cancer death for both men and women.

- Screening is recommended for average-risk persons aged 50-75 years by the US Preventive Services Task Force.
Colonoscopy has become the favored screening modality over time.

Coverage for colonoscopy among average-risk began
BACKGROUND

National data suggests that the demand for colonoscopy is greater than the supply of providers, and the availability of services is related to patient outcomes.

Selected research findings:

• Using SEER-Medicare, Haas found substantial variation in endoscopy capacity across counties, with increasing capacity associated with greater screening use.

• Mobley found that increased distance to closest endoscopy provider was a predictor of lower utilization of screening and later-stage CRC diagnosis among Medicare beneficiaries.

• Soneji found that state-level gastroenterologist density increased the probability of recent colorectal cancer screening.

References available upon request.
BACKGROUND

The literature is mixed on whether generalists can perform colonoscopy as well as gastroenterologists.

- Regardless of specialty, annual volume seems an important predictor of quality outcomes.
- In rural areas, generalists may fill a need for colonoscopy.

Our study aims to examine the extent to which colonoscopy providers of different specialties perform colonoscopies in South Carolina, by annual procedure volume and urban/rural location.
METHODS

Using the SC Ambulatory Surgery Discharge database, we conducted a retrospective analysis of all colonoscopy procedures between 2001-2010 among persons 50-74 years

- Colonoscopy center = a facility (hospital or ambulatory surgery center) performing ≥1 colonoscopy in any year
- Colonoscopy provider = physicians who performed ≥1 colonoscopy to individuals aged 50-74 years in any year
  - Medical specialty: Board of Labor & Licensing/NPI Registry
  - Categories: gastroenterology (GE), general surgery (GS), internal medicine (IM), colon and rectal surgery (CRS), and family medicine (FM). They performed >99% of colonoscopies in SC.
RESULTS

Figure 3. Percentage of SC population that had colonoscopies by area of residence and year (Unique IDs for each year)

FORHP Research Brief available at: https://www.ruralhealthresearch.org/alerts/134
Ambulatory care surgery centers have had major gains (+125%) versus hospitals (+2%), particularly in urban areas (+230%).
The number of internists and family physicians performing colonoscopies increased most (+165% and +312%, respectively).
Despite more IM and FM physicians doing colonoscopy, their annual procedures volumes stayed fairly constant.
## 2010 RESULTS

<table>
<thead>
<tr>
<th></th>
<th>All&lt;sup&gt;a&lt;/sup&gt;</th>
<th>GE</th>
<th>GS</th>
<th>IM</th>
<th>FM</th>
<th>CRS</th>
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<tbody>
<tr>
<td><strong>Overall Distribution, n (%)</strong></td>
<td>583</td>
<td>153</td>
<td>165</td>
<td>76</td>
<td>106</td>
<td>17</td>
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<tr>
<td></td>
<td>(100)</td>
<td>(26.2)</td>
<td>(28.3)</td>
<td>(13.0)</td>
<td>(18.2)</td>
<td>(2.9)</td>
</tr>
<tr>
<td><strong>Overall Annual Volume&lt;sup&gt;c&lt;/sup&gt;, mean (SD)</strong></td>
<td>152</td>
<td>426</td>
<td>83</td>
<td>38</td>
<td>14</td>
<td>275</td>
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<td></td>
<td>(240)</td>
<td>(268)</td>
<td>(102)</td>
<td>(197)</td>
<td>(38)</td>
<td>(192)</td>
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<tr>
<td><strong>Primary Office Location, n (%)</strong></td>
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<td></td>
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<tr>
<td>Urban County</td>
<td>399</td>
<td>133</td>
<td>117</td>
<td>50</td>
<td>40</td>
<td>17</td>
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<tr>
<td></td>
<td>(68.4)</td>
<td>(86.9)</td>
<td>(70.9)</td>
<td>(65.8)</td>
<td>(37.7)</td>
<td>(100.0)</td>
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<tr>
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<td>66</td>
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<tr>
<td></td>
<td>(31.6)</td>
<td>(13.1)</td>
<td>(29.1)</td>
<td>(34.2)</td>
<td>(62.3)</td>
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</table>

<sup>a</sup> Includes providers not classified in one of the 5 predominant medical specialties providing colonoscopies.
# 2010 RESULTS

<table>
<thead>
<tr>
<th>Primary Office Setting, n (%)</th>
<th>All(^a)</th>
<th>GE</th>
<th>GS</th>
<th>IM</th>
<th>FM</th>
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<td><strong>Hospital</strong></td>
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<td>149</td>
<td>69</td>
<td>99</td>
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<td>(90.3)</td>
<td>(90.8)</td>
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<td>(62.9)</td>
<td>(86.9)</td>
<td>(39.8)</td>
<td>(62.3)</td>
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<td></td>
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<td>(13.0)</td>
<td>(18.7)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

\(^a\) Includes providers not classified in one of the 5 predominant medical specialties providing colonoscopies.
CONCLUSIONS

Observed a major shift in practice settings for colonoscopy, where the number of ASCs has substantially increased, mostly in urban counties.

Disparities in provider availability between urban and rural counties is widening.

• GI availability increased 17% in urban, decreased 13% in rural.
CHALLENGES

- Will physicians come together across specialty lines to ensure better supply?
  - More research needed to examine colonoscopy effectiveness and adverse events among generalists.
- As efforts are underway to screen 80% of the screening-eligible U.S. population by 2018, programs to address colonoscopy capacity limitations in rural America are needed.
- Repeal of ACA likely to remove requirement that private insurers fully cover screening colonoscopy (per USPSTF guidelines).
ACKNOWLEDGEMENTS

COLLABORATORS

Michele Josey, MS
Cassie Odahowski, MSPH
Janice Probst, PhD
Lee Mobley, PhD
Mario Schootman, PhD
Donna Jeffe, PhD
Nicholas Davidson, MD

FUNDING

• T32-GM081740 from NIH-NIGMS (Josey)
• MRSG-15-148-01-CPHPS from American Cancer Society (Eberth, Mobley, Probst, Schootman)
• 5U1CRH0311-12-00 from FORHP (Eberth, Probst)
• P30CA091842 from NIH-NCI (Jeffe)
• HL-38180, DK-56260, and DK-52574 from NIH, and R56AG049503 from NIH-NIA (Schootman, Davidson)
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