Author's response to reviews

Title: Self-reported colorectal cancer screening of Medicare beneficiaries in family medicine vs. internal medicine practices in the United States: a cross-sectional study

Authors:

Angela Y. Higgins (angela.higgins@umassmed.edu)
Anna R. B. Doubeni MD, MPH (Anna.Doubeni@umassmed.edu)
Karon L. Phillips PhD, MPH (karonlphillips@hotmail.com)
Adeyinka O. Laiyemo MD, MPH (adeyinka.laiyemo@Howard.edu)
Becky Briesacher PhD (Becky.Briesacher@umassmed.edu)
Jennifer Tjia MD, MSc (Jennifer.Tjia@umassmed.edu)
Chyke A. Doubeni MD, MPH (Chyke.Doubeni@umassmed.edu)

Version: 3 Date: 27 January 2012

Author's response to reviews: see over
January 27, 2012

Mark Andrew Cardinez
BMC Gastroenterology
BioMed Central Ltd.
236 Gray's Inn Road
London, WC1X 8HB, United Kingdom

Dear Mr. Cardinez:

We are grateful to the reviewers for their thoughtful comments with regard to our manuscript entitled “Self-reported colorectal cancer screening of Medicare beneficiaries in family medicine vs. internal medicine practices in the United States: a cross-sectional study.” We have carefully addressed the concerns raised by reviewers as outlined below.

Reviewer # 1 - Alexander Link

1. Please revise the conclusion statement in the abstract. Since the study was designed to evaluate the self-reported awareness and personal adherence to the recommendations, I believe that there is not enough data to support the “failure” statement.

We thank the reviewer for recommending a more cautious interpretation of the results. We have changed the conclusion as follows:

"Patients cared for by FPs had a lower rate of screening compared to those cared for by internists, despite equal or higher levels of awareness; a difference that remained statistically significant after accounting for socioeconomic status and access to healthcare. Both groups of patients remained below the national goal of 70%.”

2. This is U.S. national-based study and the results may not be applicable to other countries. Please state this in the limitations.

We have done as requested and added the following statement to the limitations section:

"This study was based on data on Medicare beneficiaries in the United States and as such, may not be generalized to other populations or settings with different health care systems. However, the findings provide important lessons for evaluating and improving the delivery of cancer screening services in primary care for a broad range of settings.”

3. I would strongly recommend adding following descriptions to the title of the paper: in United States and self-report.
We thank the reviewer and have done as recommended. New title: **Self-reported colorectal cancer screening of Medicare beneficiaries in family medicine vs. internal medicine practices in the United States: a cross-sectional study**

4. *According to the Figure 1, the patients were asked about the recent colonoscopy time point (<1, 1-2, 2-3 etc). The authors may wish to complete the information in the table.*

There are no additional time points available as noted in response to reviewer #2 below. However, in our analyses, in order to address potential concerns that screening may have occurred before a patient was empanelled with a specific physician, we did sensitivity analyses restricting to exams performed in the 2-year period prior to the interview date. These produced similar results. We will be happy to provide any additional clarification if needed.

5. *Please include the characteristics and adherence to CRC screening for the disabled patients. What is the percentage of the disabled patients in this study?*

We are glad for the opportunity to add additional information about the characteristics and screening practices of persons in Medicare because of disability. We have added the following to the results sections:

"There were a total of 527 beneficiaries in the sample who were in Medicare because of disabilities. Compared to persons in Medicare because of age-eligibility, a higher proportion of those with disability were non-Hispanic blacks (8% vs. 18%) or were Hispanic (0.8% vs. 2%) (*p*—value <0.01). They were less likely to be married (*p*—value <0.01), have supplemental insurance (*p*—value <0.01) or have received a high school diploma (*p*—value <0.01). Beneficiaries with disability were more likely to report fair or poor health (*p*—value <0.01), have an annual income of <$25,000 (*p*—value <0.01). The proportion receiving care from FPs (53%) or internists (47%) was similar irrespective of disability status."

"Compared to persons in Medicare because of age-eligibility, disabled beneficiaries were less likely to report having received a recommendation for colonoscopy/sigmoidoscopy (25% vs. 13%, *p*<.01)."

**Discretionary Revisions:**

6. *One of the main limitations of the study is the defined normal screening variable within five years and not as usually recommended 10 years. The authors may wish to elaborate more on that in discussion.*

We agree with the reviewer that this is a limitation of the study. In fact, both colonoscopy and sigmoidoscopy could offer 10 or more years of protection from CRC if negative. Unfortunately, the Medicare Current Beneficiary Study does not provide specific data on receipt of colonoscopy beyond 5 years. Colonoscopy became popular in the United States after 2001. Specifically, Medicare began providing reimbursement for screening colonoscopy beginning in July 2001. Therefore, the 5-year cutoff point is reasonable. We believe that it is probably not necessary to change the discussion or limitation section, but will be happy to do if considered essential.
7. To simplify the understanding of the Table 1, this may be split into two tables separating characteristics and results.

We have changed the table as recommended and renumbered other tables accordingly.

8. The identification of the specialty of the usual care primary care physician may have strong biased overlap because of the self-reported context. The authors may wish to provide the numerical distribution of particular subjects regarding “greater number” of services prior to the assignment to FPs or internist.

We thank the reviewer and believe that our approach for assigning patients to FPs or internists was reasonable. We have provided the patients with overlap (n=208) on page 5.

9. To simplify the understanding of the Table 1, this may be split into two tables separating characteristics and results.

Done

10. The authors state in the discussion part that the CRC screening rate was lower than the national goal of 70%. Since CRC screening was defined within a 5-year time period and not as recommended within 10-year period, this statement may be misleading.

We share the reviewer’s concern and have added a statement to the limitations section indicating that:

“The screening rates may have been higher if the exposure measurement considered a 10-year period prior to the interview date rather than the interval used for this report. However, screening colonoscopy was relatively uncommon in the early 2000s. Thus, extending the window for ascertainment of colonoscopy is unlikely to have a substantive impact on the findings.”

Reviewer # 2 - Montserrat Andreu

1. Information and conclusions of the study is only relevant for the health system from which data was obtained, and cannot be generalized to other systems.

We agree with the reviewer that the findings may not be directly generalizable to other settings, since the population studied was unique to the United States. However, our findings appeal to the general challenges of providing cancer screening or prevention services to diverse populations and holds lessons for all health systems and health care providers. Of particular interest is the fact that this population is insured and, despite that, there were persistent variations in the receipt of screening. The consistency of the findings according to specialty strongly suggests the importance of examining provider variations in delivery of these services, which can help to drive quality improvement processes.

We have added the following to the manuscript on page 12:
“This study was based on data on Medicare beneficiaries in the United States and as such, may not be
generalized to other populations or settings with different health care systems. However, the findings
provide important lessons for evaluating and improving the delivery of cancer screening services in
primary care for a broad range of settings.”

2. Reliability of the questionnaire on having been offered a CRC screening methodology
(FOBT or colonoscopy) has not been tested, and is potentially exposed to considerable recall
bias, which in its turn may be dependent on some of the demographic factors analyzed (e.g.
level of education, income).

We agree with the reviewer regarding recall bias. Indeed, measurement of colorectal cancer
screening remains a scientific challenge (see Schenck AP et al. Cancer Epidemiol Biomarkers
Prev 16: 2118-2127). Studies suggest that people generally accurately recall that they
received an endoscopy, but may have trouble differentiating colonoscopy from sigmoidoscopy.
Thus, the approach of combining the tests eliminates such concern.

It is true that recall bias, if present, may affect the population differently according to various
socioeconomic groups. However, this will likely be non-differential by specialty and will not
account for the findings. It may have actually attenuated the magnitude of the differences we
found.

3. As the authors acknowledge in the discussion, recommendation to undergo sigmoidoscopy
every 5 years is acceptable, but colonoscopy is recommended at 10 years interval.

We agree with the reviewer that this is a limitation of the study and have addressed this
comment under “discretionary revisions”, #6, for reviewer 1.

Sincerely,

Chyke A. Doubeni, MD, MPH
Associate Professor of Family Medicine and Community Health
University of Massachusetts Medical School
55 N. Lake Avenue
Worcester, MA 01655
Phone (o): 774-443-7772; (c): 508-579-3934
Fax: 774-441-6212
Email: chyke.doubeni@umassmed.edu