Author's response to reviews

Title: Disparities in the Use of Ambulatory Surgical Centers: A Cross Sectional Study

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Author's response to reviews: see over
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Dear BioMed Central Editorial Team:

Please accept for review our revised manuscript entitled, “Disparities in the Use of Ambulatory Surgical Centers: A Cross Sectional Study.” This manuscript has been formatted as a Research Article for BMC Health Services Research. We have made the following changes and additions in response to the editorial comments and those of the reviewers:

Reviewer 1

MAJOR COMPULSORY REVISIONS:
The idea of the manuscript is excellent; however, the authors make numerous statements throughout the abstract and text which are not based on the evidence. The number of statements made and the references quoted with regards to ASCs being more efficient and less expensive etc., are not proven by evidence or the statements in those documents. There is no question that an increasing number of surgeries are being performed on an outpatient basis. However, the present impressions are that the location of the surgical procedure being performed is based on the surgeon’s preference, sometimes the surgeon’s ownership interest in a surgery center, ownership in a specialty hospitals, and finally, convenience.

We agree with the reviewer that there is not a large empirical literature on costs in ASCs versus hospitals, and that issues of ownership, surgeon preference, and convenience are all important factors in determining location of surgery. We also agree that the Lynk and Longly reference is not the best for illustrating the potential cost advantages of ASCs over hospitals, and we have changed this reference to two more appropriate references on page 3 in the manuscript.[1, 2]

However, in terms of expenditures by patients and payers on a per unit basis (efficiency), ASCs are consistently more efficient than hospital outpatient departments. Examining Medicare reimbursements under both the old and new rules reveals lower unit expenditures in ASCs than in hospitals.[3] In fact, the office of the inspector general noted in 2003 that more cases should be performed in the ASC setting as a cost saving measure.[4] We have added these two references to page 3 in the manuscript.

Furthermore, private insurers have encouraged their members to use ASCs as opposed to hospital outpatient departments for procedures such as colonoscopy.[5] We have added text with this reference on page #3. The new text for this paragraph with the added and revised references reads as follows:

“Since many insurance companies develop guidelines similar to Medicare reimbursements for their own policies,[6] and encourage their patients to use these environments,[5] patients with co-payments or co-insurance
experience substantial reductions in their out of pocket expenses with greater use of ASCs for outpatient surgery.[1, 2]”

While copay was a major issue in the past, the new regulations are equalizing these differences. For private insurances, copay is similar whether it is performed in an outpatient surgery in a hospital or in ASCs. In the majority of the cases, private insurers are more biased towards the hospital setting with their contracts with copay rather than outpatient setting.

We continue to see copayment as a significant issue. The American Hospital Association trendwatch in July 2006 succinctly summarized the impact of Medicare coinsurance in the ASC versus hospital outpatient department.[7] For most major procedures, significant savings for patients are achieved when a service is performed in an ASC. The July 2008 implementation of the new Medicare reimbursement rules will not eliminate this savings. In fact, for procedures such as colonoscopy, the savings will grow.

There is also substantial difference between certificate of need states and those without certificate of need.

We agree that CON requirements will impact on the development of new ASCs. The lack of CON in Florida was one of the reasons we studied the state. We have added a section to the limitations to better address the issues surrounding the use of Florida as the substrate for our study.

“A further issue to be addressed is our inclusion of only one state, Florida, in the analysis. Florida has a more elderly population than many other states, more for profit facility ownership, no certificate of need requirements, and higher per capita health care use than other states. Despite these issues, data from Florida provided a valuable substrate for our study due to the ability to gather discharges from both the ASC and hospital environments. Furthermore, the factors that make Florida a potentially unique market, including the lack of certificate of need requirements, allow us to see ASC utilization patterns independent of regulatory forces. ASC use, and disparities in use, may be lower in states with certificate of need requirements.”

The type of cases reviewed are also of concern. For example, interventional pain management is one of the major areas of utilization of ASC services, specifically in Florida, probably more common than urology and this was not included.

We reviewed the most common surgical procedures performed in both ASCs and hospitals. These procedures were not meant to be all encompassing, but they did account for 43% of all ambulatory surgical procedures in 2005.

The statement with regards to expansion of multiple services in surgery centers basically does not increase access to patient care, it only lets physicians perform the procedures which are being performed in the offices.
When Medicare increased the procedures eligible for reimbursement in ASCs, the fees paid to the ASC for many procedures commonly performed in the office were cut.

Reviewer 2

Discretionary revision:
1. In the abstract, I would include the year of data used from the SASD in the methods section.

Minor essential revision:
1. In the abstract under the methods section, you refer to the database as State Ambulatory Surgical Database. The correct name is “State Ambulatory Surgery Database.”

We have corrected these issues in the abstract as follows:

**Methods:** From the 2005 State Ambulatory Surgery Database for Florida, a cohort of discharges for urologic, ophthalmologic, gastrointestinal, and orthopedic procedures was created. Socioeconomic status was established at the zip code level. Logistic regression models were fit to assess associations between socioeconomic status and ASC use.

Discretionary revision:

2. On page 5, the 2nd paragraph is redundant. I would say: “…with higher numbers reflecting more advantaged socioeconomic status. Quintiles of socioeconomic status were then created. Distribution of the components of the neighborhood score is shown in Table 1.” I would then eliminate the next paragraph with all of the numbers in it. These can be difficult to look at in the text, but are explained well in your table.

We have made this change on page 5 as follows:

“The overall scores for zip codes in Florida ranged from -16.19 to 19.43, with higher numbers reflecting more advantaged socioeconomic status. Quintiles of socioeconomic status were then created. **Distribution of the components of the neighborhood score is shown in Table 1.”**

**Major compulsory revisions:**
1. I believe that the disparate use of ASC’s by the lowest socioeconomic status group likely has more to do with economic profiling than it does physician profiling. You allude to this in your text on page 9 of the discussion. You mention that ASC’s may not be available in areas of lower socioeconomic status. ASC’s are well known to operate with financial considerations in mind, and one could speculate that opening an ASC in a low socioeconomic status community would not be a profitable endeavor for the investors. I realize that it is not possible with your data to examine the location of the ASC’s to see if they were in fact more likely to be located in affluent areas (and less likely to be located in lower socioeconomic areas.) It is impossible to determine if the higher socioeconomic groups were more likely to commute to an ASC, or if the ASC’s were simply located in the higher socioeconomic communities. A statement reflecting this would help clarify this part of your discussion.
We agree that economic profiling is likely playing a role in the lower use of ASCs by patients from the lowest socioeconomic status groups. We have changed the wording on page 8 to better reflect that it is patients, and not physicians, who are being profiled.

“One possible barrier raised by our results is patient profiling. Such profiling may be valid as in selecting patients with less comorbidity for surgery in ASCs,[8] or may be inappropriate if barriers are created for groups based on economic status, race, or ethnicity.[9-11] Since the findings of decreased ASC use in the least affluent patients were robust to control for comorbidity, sources of inappropriate profiling need to be considered.”

We have also extensively revised the discussion on pages 8 and 9 to better illustrate both physician and structural level factors on the utilization differences of ASCs among the different socioeconomic status groups:

“Data from observation of physician encounters with patients supports the contention that patient profiling based on race and ethnicity may be responsible for differences in ASC use. These studies show that physicians will often recommend different procedures for the same clinical situation when the race or gender of the patient is changed.[12] In addition, economic profiling of patients by the physician may occur. Since most ASCs are for profit enterprises with significant physician ownership,[13, 14] physicians have active incentives to ensure high reimbursement through these facilities. As such, similar to results seen for specialty hospitals,[15] they may discourage the use of ASCs among patients with poor insurance and lower socioeconomic status.

In addition to physician factors, structural factors in the health care system may be responsible for the utilization patterns found. As for profit enterprises,[14] investors in ASCs have financial incentives to avoid ventures where lack of reimbursement potential is perceived. These facilities may not be established in areas of lower socioeconomic status due to investor concerns about the insurance mix in the population. Thus, a physical barrier to ASC use based on community economic profiling may exist that limits the access of less advantaged patients to ASCs.”

2. Another limitation of your study is the inclusion of a single state in the analysis. It is not feasible to include multiple states in the analysis due to coding differences in the SASD. However, there are well described variances in practice and referral patterns in the US. The results that you provide may, or may not be applicable to other communities in the US. The limitations due to using only one state for analysis should be mentioned in your discussion.

We have added text to the limitations section as follows:
“A further issue to be addressed is our inclusion of only one state, Florida, in the analysis. Florida has a more elderly population than many other states, more for profit facility ownership, no certificate of need requirements, and higher per capita health care use than other states. Despite these issues, data from Florida provided a valuable substrate for our study due to the ability to gather discharges from both the ASC and hospital environments. Furthermore, the factors that make Florida a potentially unique market, including the lack of certificate of need requirements, allow us to see ASC utilization patterns independent of regulatory forces. ASC use, and disparities in use, may be lower in areas with certificate of need requirements.”

3. The first sentence of your conclusions on page 10 may be worded a bit strongly. Your study demonstrated lower use of ASC’s for low socioeconomic groups. Based on data from your references, this might suggest that the low socioeconomic groups are encountering higher cost burdens for care. Your statement suggests that your results directly support the idea that low socioeconomic groups endure higher costs. I think that this should be revised, especially, since it could be argued that the magnitude of the differences found were small. Your study was not designed as a cost comparison. The way that you worded your findings in the first paragraph of your discussion on page 8 sounds like a better way to explain what your study found.

We have adjusted the wording of the conclusion to address the reviewer’s concerns:

“Regardless of the cause of the disparity, patients of lower socioeconomic status likely encounter a higher cost burden for their care than people from more advantaged neighborhoods.”

We appreciate the opportunity to revise our manuscript and continue to believe that BMC Health Services Research is the best venue to disseminate our findings on this topic. Please do not hesitate to contact me with additional questions.

Sincerely,

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