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Did we prioritize quality improvement in general surgery: Time for a focus on outcomes and enhanced recovery care plans☆

DR. ASGEIRSSON: The premise of this study is that for over a decade, surgeons have been contributing to large data sets both at the regional and national level that have led to a multiplicity of costly process measures which have and have not improved our quality of outcomes. Authors were interested in comparing whether our efforts have truly shifted outcomes to our national NSQIP data set.

As pointed out, about 80% of adverse events were associated with only ten procedure groups which represented about 74% of the total number of cases. Most interestingly, in the 2015 data set several procedures increased in their overall proportions of adverse events compared to ten years prior. So I have a couple questions and a comment.

These data sets that we're working through have a lot of redundancy and noise, where only a small number of procedures contribute to surgical morbidity. If we cherry pick what to monitor, we may miss the trends that are seen in your data, such as in regard to outpatient lap cholecystectomies which you think would have a low contribution to complications. How do we change our current data sets or gathering to be cost effective and truly useful or meaningful to monitor and improve our practices.

Question number two: As surgeons in various practice environments, we want current data to be representative of the real world. In the data from 2005 to 20066, 67% of participating hospitals were teaching hospitals. Does that matter? Are authors aware of these percentages, and if they have changed over the time period since they looked at their data?

Third question, colectomies in your study were not categorized into elective and emergent as you rightfully point out. This could explain the increase in the complication profile between the two timeframes. If it is so, how do we get better outcomes in the emergent patient population. If not, where do we go from here? Is this as good as it's going to get?

The final question is regarding the percentage rate of reoperation after an outpatient lap cholecystectomy, which in your data set was 1.04%. How did that compare to the data set from ten years ago? And my final comment in the discussion, efforts are made to point out factors within ERPs that are evidence based and have been shown to improve outcomes in colorectal surgery. This is mostly relevant in elective surgery. That is where we, as surgeons, have the biggest opportunity to impact care from start to finish. Authors have enough cases. A subanalysis would be useful.

DR. HUGHES: With more participation in a NSQIP program, it gives a more realistic snapshot of the volume of the procedures, as well as the event breaks. While we do not advocate cherry picking procedures to monitor, we do suggest focusing on a few areas with mitigating strategies coupled with pre and post analysis because resources are not unlimited.

In regards to your question about cost effectiveness. To be more efficient and cost effective, hospitals and providers as aforementioned with have to eliminate the process of sole data reporting and move to our implementing meaningful use of the data set. I envision a process similar to quality improvement project, which targets a procedure, executes the problem solving tactic, reanalyze the data and repeat the process as necessary. Once it's fixed, move on to the next procedure. It's a long-term vision, but I believe it's our best approach to be the most cost effective in its process.

Regarding the 67% of participating hospitals regarding that were teaching hospitals, I think the clinical environment matters or sure. I think it's safe to say that the more recent data mirrors the current practicing environments which we are here in the United States. When NSQIP initially rolled out, it targeted academic centers. We do know that more hospitals, non-teaching and teaching hospitals are participating in NSQIP at a greater percentage than previous years, however, I do not have the exact data points as it relates to the percentage of hospitals that are teaching and non-teaching.

Regarding your question regarding colectomies, elective and emergent cases, we sought to understand patients in both elective and emergent populations to understand which area to identify and which are lacking overall. New data suggestive of implementing laparoscopy for carefully selected emergent cases is available. I don't think this is as good as it gets. I perceive more of these data forthcoming for the emergent population. As surgeons venture away from the traditional laparotomy for all emergent cases and carefully select patients which may undergo the minimally invasive technique, we may be able to readily capture this information in the future and would hope for future improvement in patient outcomes.

Regarding the 1.04% return to the operating room in lap cholecystectomy, unfortunately, the rate of return was not previously reported. However we do note from our study that previous data, laparoscopic outpatient cholecystectomy was ranked number 12 in relation to its proportion of adverse events, where now it ranks as the number one with respect to its relative point difference as it relates to complications.

As far as the comment regarding the subanalysis, your point is well received and I concur that subanalysis would help to further refine our data.

DR. JAMES G. TYBURSKI (Detroit, Michigan): Just kind of a comment and a question all at once. Presidential address in this Society three years ago was the good old days. They weren't all that

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good. The idea behind it was your overall slide showed that hospitals, whether in the NSQIP or not, were slowly getting better and, you know, there was an improvement along whether they were in it or not.

Were the same processes going on in the non-reporting hospitals going on in the reporting hospitals? It's hard to tell. And then the other thing is, it shifts. So did definition of outpatient cholecystectomy change? In other words, if you were overnight as an observation status, is that still outpatient? Was it then and now that at change out? And, again, I want you to speculate on, is an outpatient lap cholecystectomy now even pushed farther? In other words, the sicker people are being looked at as outpatient? What characterizes now inpatient laparoscopic cholecystectomy?

DR. HUGHES: As far as the draft that I show, the NSQIP hospitals and the non-NSQIP hospitals, I think overall, as we can see in all of the literature, there was an increase in ERPs and minimally invasive surgical techniques were revolving from the '90s to now. That was the first description of the laparoscopic colectomy. What we see now is that there are more processes that are in place. The problem is that a lot of hospitals, or providers, if you will, are using NSQIP to report data, but the question remains, what are we doing with that data? We are reporting it, but are we utilizing it to enhance our processes of care.

Regarding your second question as far as the definition of outpatient cholecystectomy, I agree with you. That's definitely before my time that the patients and how we categorize them as far as outpatient versus 23 hour observation is definitely changing. I can't say for sure if that's really making a difference or not, because the NSQIP data set itself is capturing what we have available. And I think that's the best that we can do with regard to the data. We look at the data. It defines, based on the CPT code, outpatient cholecystectomy, and so I think that's the definition we have to use regardless of whether or not it's 23 hour observation or not.