Panel Discussion: Lessons Learned in Using the AHRQ QIs to Improve the Quality and Safety of Care

Wednesday, December 9, 2015

Frequently Asked Questions

Q&A with Steve Allegretto, Vice President, Analytic Strategy & Financial Planning, Yale New Haven Health System

1. ***During your presentation, you showed a graph comparing cases with and without QVI (Quality Variation Indicators[1]). Was the analysis on all medical discharges? And if so, what did you use as a definition for medical discharge?***

   We have multiple definitions of patient populations that we use depending on the question that is raised. Let's use heart and vascular as an example. In addition to medicine there are medical cardiology cases that are in the Department of Medicine. We also pulled those cases out to take a look at those when they're cared for by an interventional cardiologist or a general cardiologist versus a hospitalist. So we have multiple definitions. That particular slide (slide 14) includes only those cases that are in medicine. And, given our multiple definitions of populations, we're allowed to get down to the individual on either DRG or an ICD9 basis. I know we talked about ICD9 and ICD10. We've actually cross-walked all of the QVIs from ICD9 to ICD10 and we have some different classifications of patients. But that's how we define our service lines, in multiple different ways, depending on the question that's asked.

2. ***Is Epic[2] identifying your Patient Safety Indicators (PSIs) within Epic? Or are you running Epic output data through the AHRQ QI software?***

   For those areas where we have specific project improvements and where we have position champions leading those efforts, we have Epic-defined fields that allow us to track that both concurrently and retrospectively. So depending on what we are working on, we can either run the PSIs within Epic while the patient is in the hospital or we can run batches of data and look back. We are also developing a couple of tools based on the data that we have to combine Epic and our cost accounting system to look at predicting QVIs.

3. ***How do you handle gain-sharing? Are the savings felt by the hospital? Or are they passed on to purchasers?***

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[1] YNHHS has developed a tool called the Quality Variation Indicator that allows us to identify potentially avoidable conditions or circumstances with current patients so that we can mitigate these events with future patients. QVIs are things that happen to a patient in the hospital that no one, especially the patient, wants to happen. They are also associated with higher cost per case. We identify QVIs based on coded data from hospital charts. We may select them based on existing data, or they may be events that quality leaders want to get to zero and that we are currently endeavoring to prevent.

[2] Epic is an electronic medical record (EMR) software for mid-size and large medical groups, hospitals and integrated healthcare organizations – working with customers that include community hospitals, academic facilities, children's organizations, safety net providers and multi-hospital systems.

I think it's important to look at this issue as we're trying to understand how cost and quality are linked together. I look at the gain-sharing program that we put together as our ability to lower cost and improve quality. For example, we found that by decreasing the number of vendors we used for our 2,900 hip and knee joints from four to two, we could save about $3 million per year. Over the last five years, as an institution, we probably spent $15 million more than we needed to give our patients selection. We recruited an individual from the Mayo Clinic, who was passionate about integrating the quality and cost of the care that we provided. She was able to use our data around clinical variation to identify that we needed to reduce our number of deep vein thrombosis (DVT) rates and our compliance with protocols. We then were able to look at how we can gain-share that with physicians. We used our cost accounting system to demonstrate that there was a quality improvement as well as a cost savings at the physician level, allowing us to share some of those dollars.

4. ***Is this cost savings and gain-sharing model published in a peer review journal or elsewhere for people to be able to access?***

It's not in a peer reviewed journal. However, we were featured in a December of 2014 article around variation and quality in the Healthcare Financial Management Association's (HFMA) HFM Magazine. It was actually the cover story. The article, *Looking at Variation Through a Quality Lens*, is available at http://www.hfma.org/Content.aspx?id=26235.

5. ***How do you share the PSI results across your organization? Who receives them, and does sharing that information spur action in your organization?***

Really, we're on a journey of sharing the data. We do have a monthly report that's included with the financial statements, and there's a quarterly quality report where the quality and financial reports are integrated. We have some areas where there are physician champions and where that data is shared at the provider level. And, of course, there are board reports around quality improvement. We have a corporate objective this year to reduce our deep vein thrombosis (DVT), our blood clot rate, by 10%, above and beyond what's included in the Medicare value-based purchasing. So we select a number of measures because you can't work on all of them simultaneously. There are just too many of them. So you really need a physician champion, and the data that we end up using with both the physician and the nursing champions are at a very detailed level.

6. ***How has using the PSIs improved care at the bedside? Can you share an example of how your work with the PSIs has contributed to better outcomes for the people in your care, for the patients?***

One of the issues that has been of interest to us is respiratory failure. It's one of our QVIs, internally, and it's also PSI11 (postoperative respiratory failure). We identified that, for our coronary artery bypass graft (CABG) surgery cases, respiratory failure was one of our most frequent occurrences. Then as we were preparing a presentation for our providers, we found that there was clinical concordance between what the PSIs and QVIs said and some of our clinical registry data. Specifically for the American College of Cardiologists (ACC) Registries, our respiratory failure or pleural effusion rates were very high over the last three

or four years. That discussion led us to discover that there was variation in when chest tubes are removed for CABG patients, depending on the provider. And now, that has led to an improvement process to standardize that for each of our patients. So I know if I come in as a CABG two months from now, there'll be a standardized procedure, which will, hopefully, reduce our pleural effusion rates.

7. ***What do you do when you identify a PSI occurrence? Do you do a Root Cause Analysis, peer review, etc.?****

   Coded PSIs—for the top four most frequent PSIs—are flagged PRIOR to the final bill being sent to Medicare. This allows performance management folks the opportunity to review each case to ensure that medical records appropriately coded the PSI. Given this control procedure, each PSI that appears on the Medicare bill will be reviewed and followed up on.

8. ***For the slide on financial outcomes (slide 18), are these savings that the hospital accrues or does the hospital actually lose the revenue of caring for ventilator-associated pneumonia (VAP) patients?****

   This slide represents direct costs that we have not spent on patients as we have reduced the number of patients with a VAP. So we actually saved this cost.

9. ***Without current AHRQ specification sheets to help define which ICD-10 codes are being utilized as inclusion and exclusion criteria, what tools are you using to review PSIs for actual events versus events with potential need for clarification of coding?****

   We are reviewing our top four categories of PSIs defined by AHRQ in ICD-10.

10. ***What tools do you use to calculate PSI rates on a monthly basis for value-based purchasing?****

    We have a 4-year trend report available year-to-date each month showing our PSI performance trends. As we all know, we have no idea how others are performing, but we know we need to reduce our PSIs given everyone else's assumed improved performance. And we are currently developing an integrated model by patient to show for that patient, all Medicare Financial Penalties "incurred" by that patient. We are excited about the potential to show how one patient's PSI impacts all components of the Medicare Financial Penalties including the Medicare Spend per Beneficiary penalty.

Q&A with Verna Alverson, RN, BSN, Inpatient Clinical Quality Analyst, Essentia Health

11. ***How did you get your coders to understand the nuances of how to code accidental punctures in abdominal cases with adhesions where small enterotomies were made?***

    We formed a workgroup where we brought in the director of coding, the supervisor, and one of the actual coders along with several providers. Then we did case reviews to look at how we could differentiate accidental from non-accidental punctures in cases with adhesions. We explained that sometimes when they're working on dense adhesions there is no way to avoid these punctures, so we looked at specific terminology that was used in the documentation of each case.

12. ***How do you share the PSI results across your organization? Who receives them, and does sharing that information spur action in your organization?***

    We do share information across the organization; not just within the facility, but across the system as a whole. One of the tools we use for that is a dashboard. Any employee has access to it, so they can go in and look at how we're doing as a system under the PSIs, for instance. They can look at how we're doing as a region, a facility, and even down to the department level. We also report on quality quarterly to our Western Region, and that report goes up to the system quality folks and to the Chief Medical Officer.

13. ***How has using the PSIs improved care at the bedside? Can you share an example of how your work with the PSIs has contributed to better outcomes for the people in your care, for the patients?***

    Since I've been involved, we've taken a close look at the subgroup of patients experiencing hemorrhage and hematoma (PSI 09) and identified a problem. We realized that the staff were doing different things post-procedure. When we went back to look at the process, we found that there was variance in how we were utilizing the homeostatic device that we put on the patient's wrist. So we standardized that process and re-educated our staff on how to apply that specific device and when to take it off, our patient care improved. Now our next steps are to go back and look at what other areas we need to look at for PSI 09 to improve our rates of hemorrhage and hematoma.

14. ***What do you do when you identify a PSI occurrence? Do you do a Root Cause Analysis, peer reivew, etc?****

    When we identify a positive PSI, a peer review is requested and completed as appropriate. Our director also brings them (positive PSIs) monthly to our procedural meeting (we recently implemented this process) to bring awareness and to drive change if and where appropriate.

15. Do you have a compilation of your literature search around PSI 15 (Accidental Puncture or Laceration Rate) that you can share?*

It was difficult to find information detailed enough to assist with defining accidental versus unavoidable or inherent to the procedure. In my opinion, the most valuable resources are:

- University HealthSystem Consortium. (2013). *PSI Documentation Consensus Statement: Accidental Puncture or Laceration (PSI 15)*. Retrieved from https://www.uhc.edu/docs/49018566_PSI15ConsensusStatement.pdf

- Barney, L., Mabry, C.D., Ollapally, V.M., Savarise, M.T., & Senkowski, C.K. (2014). Reporting patient safety indicator-15. *Bulletin of the American College of Surgeons.* Available at http://bulletin.facs.org/2014/05/reporting-patient-safety-indicator-15/

16. Without current AHRQ specification sheets to help define which ICD-10 codes are being utilized as inclusion and exclusion criteria, what tools are you using to review PSIs for actual events versus events with potential need for clarification of coding?*

To identify cases pre-billing we utilize the *AHRQ Quality Indicators ICD-9-CM and ICD-10 CM/PCS Specification Enhanced Version 5.0, Provider-Level Indicator Type of Score: Rate (October 2015)*, available on the AHRQ QI website at http://www.qualityindicators.ahrq.gov/Modules/PSI_TechSpec_ICD10.aspx. Each technical specification document (for each PSI) includes a brief description of the measure, numerator information, denominator information and details on cases that should be excluded from calculations. We re-run reports from Truven software as soon as our cases are uploaded for auditing and trending purposes.

To learn more about Yale New Haven Health System's experiences using the Patient Safety Indicators, view the case study at: http://www.qualityindicators.ahrq.gov/Downloads/Resources/Case_Studies/AHRQ_QI_YNHHS_Case_Study.pdf.

To learn more about Essentia Health's experiences using the Patient Safety Indicators, view the case study at: http://www.qualityindicators.ahrq.gov/Downloads/Resources/Case_Studies/AHRQ_QI_Essentia_Case_Study.pdf.

To access additional materials from this webinar, including a close-captioned video, slides, and a full transcript, please visit http://www.qualityindicators.ahrq.gov/Resources.

**These questions were asked during the event and answered later by email. They will not be in the transcript or video recording of this event.*