

**Using PINNACLE Registry Reports
For Quality Improvement (QI):
*Learning from Each Other***
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PINNACLE Registry®

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INTRODUCTION

Let's face it: registry participation is not easy. It requires time, effort and commitment. But we do it first and foremost to improve the care and services we provide to our patients. No matter how good we are, we can always do better.

A question for PINNACLE Registry participants is whether you are using your data in a systematic way to improve and if your data demonstrates this improvement. If the answer is no, you are not getting the full benefits that the PINNACLE Registry provides. You aren't alone if you answered "no," and we are delighted to let you know that help is here, courtesy of five of your peer participants who graciously shared the ideas behind their successes with us so that they could help everyone in the registry.

Each of these five practice leaders indicated on our Spring satisfaction survey that they had put a quality improvement (QI) process in place for using their PINNACLE Registry data. PINNACLE staff then conducted phone interviews with each practice, using a standard set of questions, to find out exactly how they did this, what their QI program looked like and what suggestions they could offer others for either getting started or fast tracking further down the QI road.

As a result of these interviews and analysis by the PINNACLE team, we developed "Ideas for Establishing and Accelerating Quality Improvement through PINNACLE Registry" which is a summary of common themes and recommendations organized in a practical way that we hope can help you and your practice. We also include a detailed summary of our interviews that will give you a rich collection of ideas as well as inspiration. Please provide your feedback about this brief to pinnacle@acc.org. Let us know if you have ideas to share with others or suggestions for other programs, projects or materials that would support your PINNACLE Registry participation.

We want to thank the contributors listed below who so generously shared their ideas with us and allowed us to share them publicly with you. They are a special and talented group of leaders and we owe them a huge debt of gratitude.

CONTRIBUTORS

Molly Flynn, MBA, MHA is the Director of Information Technology at Iowa City & Cedar Rapids Heart Centers, P.C. in Iowa City, Iowa. The practice serves ten locations in the state of Iowa and employs fourteen providers. Iowa City & Cedar Rapids Heart Centers, P.C. uses the System Integrator as their mode of data submission to the PINNACLE Registry. The practice started submitting data to the Registry, October 2010.

Sherry Shults, RN, BSN, CIO is the CIO, QI and Director of Clinical Research at South Carolina Heart Center in Columbia, South Carolina. The practice serves five locations in South Carolina and has twenty-two providers. South Carolina Heart Center uses the System Integrator as their mode of data submission to the PINNACLE Registry. The practice began submitting data to the Registry in June 2009.

Ganpat Thakker, MD, FACC is a solo practitioner at Advanced Cardiovascular Services, PLLC in Charleston, West Virginia. Dr. Thakker uses the System Integrator as his mode of data submission to the PINNACLE Registry. His practice started submitting data in August 2010.

David May, MD, FACC is the President of Cardiovascular Specialists, P.A. based in Lewisville, Texas. The practice services three locations in the state of Texas and employs seven providers. Cardiovascular Specialists, P.A. uses direct extraction to submit its data to the PINNACLE Registry. The practice has been submitting data since June 2009.

Michael Mirro, MD, FACC is a Senior Partner at Fort Wayne Cardiology/PPG based in Fort Wayne, Indiana. The practice serves 15 locations in the state of Indiana and employs twenty-eight providers. The practice uses the Medical Informatics Engineering (MIE) Electronic Health Records (EHR) system as their mode of data submission to the PINNACLE Registry. The practice began submitting data to the Registry in June 2009.

IDEAS FOR ESTABLISHING AND ACCELERATING QUALITY IMPROVEMENT THROUGH PINNACLE REGISTRY

While we have listed these ideas in a step-by-step fashion, they can be implemented in any order and by using any particular ideas that work for you and your practice. This is not intended to be a methodology. If you are interested in learning more about conducting QI initiatives, we highly recommend the QI 101 Tool Kit that is available to PINNACLE Network participants [here](#).

Phase I: Form a Team and Set the Stage for Quality Improvement

The goal at this start-up phase is to set up a system for regular and timely review of PINNACLE Registry quarterly reports and to follow these reports from quarter to quarter and year to year to check progress, flag potential trouble spots, and track results of improvement efforts.

Make it a Team Effort

One lesson each practice knew up front was that they couldn't do this alone; they needed to assemble a team. This was critical so that representatives from all steps in the process of care could contribute their ideas and so that the ideas would be better accepted by all. Also, involving a team familiar with the entire process helped ensure that any changes in operating practices or work flows would be reliable and correct. Each practice we talked to shares data quite openly with the cardiovascular team at regular team meetings or, in one case, at meetings with individual cardiologists. All but one practice shares un-blinded physician-specific reports with the team.

While the value of teamwork can't be underestimated, the presence of a "quality champion" leader is often what keeps a team focused, excited, and committed to change. Leaders can be individuals who have management authority or individuals who are strong leaders in their own right and are very dedicated to QI.

Know Where the Data Come From

It was also clear that each practice understood how its data is generated, where each metric comes from, and how each measure is defined. This does not need to be an overwhelming prospect and with time, after looking at your reports on a regular basis, you will gain more in depth knowledge. In getting started, you want to be able to at least find the information when one of your team members wants to understand how the practice is being measured and where the numbers come from. These are the key source documents:

- Definition of Data Elements. The PINNACLE Registry collects approximately 156 different pieces of information (data elements) about each patient, such as blood pressure, insurance carrier, and past medical history. The "Coder's Data Dictionary" can be found [here](#) and includes a description of how each element is defined and collected.
- Program Metrics. PINNACLE Registry calculates approximately 27 metrics for the office practice setting, including metrics for Coronary Artery Disease, Atrial Fibrillation, Hypertension and Heart Failure. These metrics are contained in your Quarterly Reports and their definitions can be found [here](#).
- Derivation of Metrics. There are two steps to developing metrics:
 - Developing Guidelines. The American College of Cardiology (ACC) and the American Heart Association (AHA) create clinical practice guidelines that review and synthesize

available evidence to better guide patient care. [Developing Performance Measures](#). ACC and AHA also develop performance measures to allow the quality of cardiovascular care to be assessed and improved. The performance measures for each clinical condition represented in PINNACLE Registry and the guidelines can be found on [ACC's website](#). You will need your CardioSource log in name and number to access all of these documents.

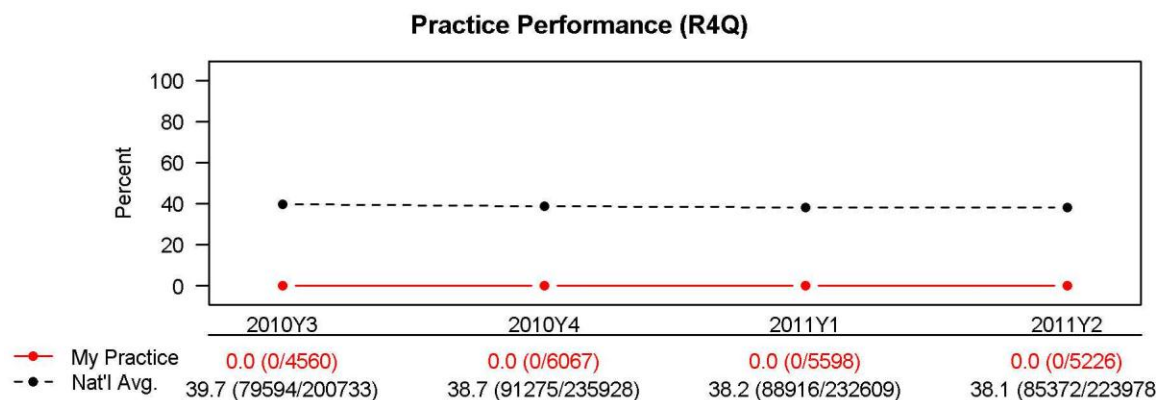
Phase II: Analyze Your Reports and Diagnose Opportunities for Improvement

Each of our featured practices carefully organized how they reviewed their outcomes reports and what they looked for. No quarter went by without the rigorous review of their teams.

Flagging the Outlier Results

A good idea is to identify any results that look plain “quirky,” such as those that show a low performance rate or a zero, and investigate them. Figure 1 shows a practice with 0% on the metric “PINN-75 (Hypertension): Plan of Care” for all four quarters. While it is possible that a plan of care for hypertension is never performed, a zero percent on this metric usually indicates a missing item. These missing data elements may not be present in your EHR or may be present in a way that is not recoverable (scanned documents, images, free text fields).

Figure 1: PINN-75 (Hypertension): Plan of Care
Percentage of patient visits with either systolic blood pressure ≥ 140 mm Hg or diastolic blood pressure ≥ 90 mm Hg, with documented plan of care for hypertension.



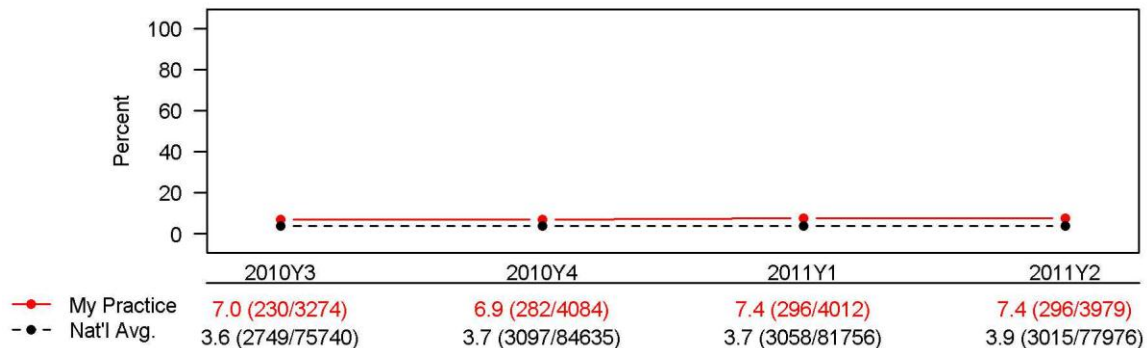
A low (single digit) performance rate, on the other hand, indicates that a data element is being captured. That is, it is correctly mapped in your system but your providers are seldom documenting that data element. Figure 2 illustrates a practice whose performance on “PINN-24: Cardiac Rehabilitation Patient Referral from an Outpatient Setting” averages 7% for all four quarters. While this is superior to the National Averages (all practices in the registry), performance is still low for this standard of care.

Figure 2: PINN-24 (Other): Cardiac Rehabilitation Patient Referral From an Outpatient Setting:

All patients evaluated in an outpatient setting who within the past 12 months have experienced an acute myocardial infarction (MI), coronary artery bypass graft (CABG surgery), a percutaneous coronary intervention (PCI), cardiac valve surgery, or cardiac transplantation, or who have chronic stable angina

(CSA) and have not already participated in an early outpatient cardiac rehabilitation/secondary prevention (CR) program for the qualifying event/diagnosis are to be referred to such a program.

Practice Performance (R4Q)



Check Your Documentation

Any clinician who can spell “JCAHO” knows that performance will only be as good as your documentation. If you didn’t document a particular action in your EHR (and document it in a standardized, recoverable fashion), the performance reports appear as if this action wasn’t taken. Adding to this challenge, in an effort to progress quickly in adopting EHRs and implementing PINNACLE Registry, practices may “shoehorn” an EHR into their existing workflow and then add PINNACLE data collection on to the back end of their EHR system. This approach works for providing practices with initial pictures of their performance. The featured practices we talked to were going farther, aligning their EHR system, the data fields available in their systems, the way they complete those fields, and their actual office processes, to ensure the most complete and accurate data collection. Going this distance, though, is time-consuming and resource-intensive so must be carefully planned within the practice’s fiscal capabilities.

Choose an Approach to Analyzing Your Data

As the teams got started and became familiar with the reports themselves, they took a fairly general approach that fell into one of three categories:

- Evaluate Bottom Ten Percent and Top Ten Percent of Performance
One team started by looking at the 10% of metrics in which their performance was best and the 10% in which they were lowest, in comparison to themselves and to the National Average. This amounted to approximately 3 – 4 measures at the top and 3 – 4 at the bottom.
- Look at Practice Outliers
Another team with multiple sites first looked at the performance of the entire practice. They then looked at the outcomes of each site and compared them with each other and with the entire group. Often times the results reflected the different demographics of each site. Finally, they looked at reports of each individual cardiologist.
- Concentrate on High Impact Metrics and Ones of Great Importance
Several groups narrowed in on metrics that pertained to the Physician Quality Reporting System (PQRS), Meaningful Use, or their respective hospitals’ required metrics. What’s key at this point is

getting familiar with the “baseline,” beginning to identify questions, and gaining some common understanding amongst the group (if you are looking at this together).

Find the Root Cause

In true clinical fashion, after the initial review, teams and individuals began to look for a diagnosis or—in the parlance of quality improvement—a root cause. Just as we don’t make a diagnosis out of a symptom, neither did this group jump to conclusions without a careful work up to determine the cause of any anomaly. Many practices found problems in their system, such as documentation or information that wasn’t pulled from their EHR record and thus made the practice look as if it were performing at a lower level than they were in actuality. Others found glitches in their workflow processes—how a patient moved through their appointment from check in to vitals; to nursing and/ or physician visit; to ordering and performing tests; to treatment planning with the patient; to documentation; to billing and discharge (not necessarily in that order). Several practices were working on clearing up system problems first, such as these examples, before they tackled potential problems in clinical care that might require further evaluation and education.

Phase III: Set Goals and Determine How to Measure Progress

We can’t improve what we can’t measure, which brings us back to why we are participating in PINNACLE Registry to start with. The practices we talked with tended to pick both short-term and long-term goals for themselves, and they often did this as a team, making it a bit of a competition between each other and between the practice and the national benchmarks of the registry. Using this approach, for example, you could consider where you would like to be at the next quarter and where would you like to be in one year. For example, one practice’s long-term goal was to be in the top 10% of national performers on all measures. But their short term goal was to progressively improve in a few specific metrics, which they then followed from quarter to quarter.

It would be overwhelming and unrealistic to attempt to improve in all 27 metrics at once. Instead, select a few specific metrics to follow over time and then gear your improvement efforts around them. You will want to monitor these numbers over time to see how you are improving. As a general guide, we suggest picking something that seems manageable so that you get yourself off to a good start and achieve an easy win, especially if you are new to quality improvement. After all, Rome wasn’t built in a day.

Selecting the specific metrics to target for quality improvement is something to think through carefully so that you can manage your own expectations as well as those of the team. A realistic assessment of your resources will help you narrow down the choices. How much time and money do you have to invest in this effort? How receptive will the members of the practice be to introducing change? Who might have the capacity to potentially take on additional tasks?

In addition to assessing available resources, you may select metrics based on the types of patients you see every day. For example, if your practice is primarily heart failure patients or you have a high percentage of heart failure patients, you may want to consider selecting from the heart failure metrics. You can also consider what type of quality intervention would work best for your practice. For example, perhaps you have spent a lot of time developing your electronic health record and want to use this as an opportunity to further improve with a technical solution. Perhaps your nursing team has a keen interest and skill in patient teaching and would want to concentrate on some of the patient-focused metrics, such as assessing activity levels for heart failure patients or counseling and teaching them about sodium restriction, weight monitoring, and smoking cessation (PINN-58, PINN-60, and PINN-48)? Are there any conditions, tests, referrals that you think constitute a risk management situation and should be

addressed right away? For example, if your metrics on assessing thromboembolic risk factors for atrial fibrillation patients (PINN-66) are not where you'd like them to be, this could be something to investigate.

Lastly, we have learned over time that for certain metrics, the structural data to report these accurately are almost universally not available in electronic health records. Specific to the Registry, this refers to PINN-64 (ordering initial laboratory studies for heart failure patients) and PINN-11 (screening for diabetes in coronary artery disease patients). We would advise not spending excessive time on improving these metrics when there are so many others that are much more ripe for improvement.

Phase IV: Develop a Treatment Plan

Once you've finished your work up and set your goals, it's time to develop a treatment plan. There are several types of solutions that we learned from our featured practices:

- Study your workflow processes to determine where things are falling between the cracks or opportunities where changing workflow could improve efficiency.
- Is there an electronic record solution that could help, such as installing flags when steps are skipped? Of course, you will need to work with your vendor on this kind of approach.
- Keep an ongoing feedback loop with your vendor, so that as glitches are identified, they can make modifications.
- Is more education needed, such as a refresher course on the current guidelines for heart failure, CAD, atrial fibrillation or hypertension? Is there consensus in the practice as to how patients will be managed to follow the guidelines?

As noted in the beginning of this section, the QI 101 Toolkit contains a wealth of ideas and tools for planning and conducting a quality improvement project.

Phase V: Re-measure and Keep Working

Every quarter presents an opportunity to check your progress against previous quarters and, eventually, previous years. As you look at your reports, determine if there has been any improvement in your selected metrics.

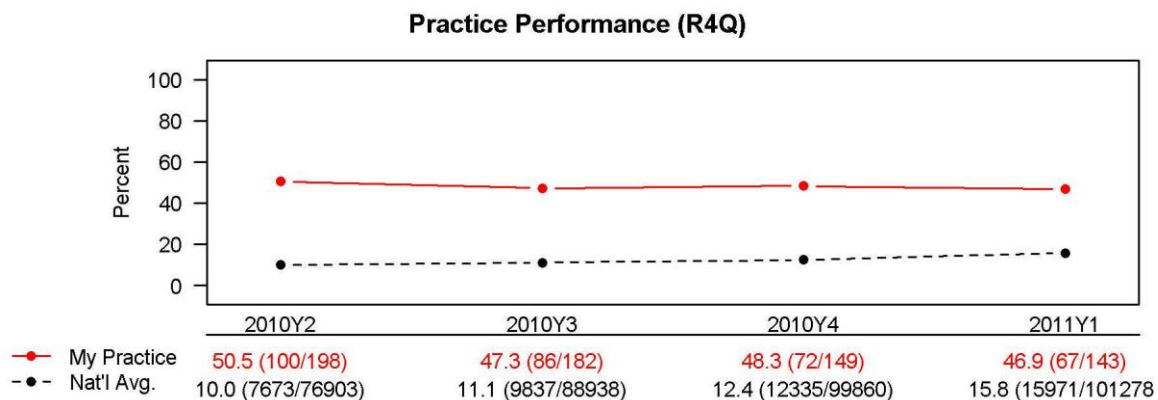
Understanding the Rolling Four Quarters Method of Reporting

All of the NCDR registries, including PINNACLE Registry, use a rolling four quarters method of calculating a practice's metrics for each quarter. Figure 3 illustrates this, using an example from the Quarterly Outcome Report Executive Summary. You can readily see that the current quarter's performance is on the far right and is preceded on the graph with performance from the previous three quarters. Performance for each quarter, however, is calculated **using the metric from the current period and averaging it with the metric from the 3 previous quarters**. This results in what is called "rolling four quarters" data, designated as R4Q in the title of the display.

One reason that performance is calculated in this way is so that the reports smooth over anomalies or random variation generated by patients themselves. Another is that many of the patient level (as opposed to visit level) measures have 12 month measurement periods. For example, the standard is to perform a lipid panel every year, not every quarter, so performance should be reported across the most recent year in its entirety.

There are some difficulties with this method when a practice is looking at changes in performance from one quarter to the next. Changes that you make to improve performance might not be readily visible from quarter to quarter. In fact it could take a full year before improvement is fully realized in your report. Nonetheless, these reports provide your practice with a “snapshot” of how you have performed over the last four quarters. You will want to review the report carefully each quarter to see if any of the data jumped significantly up or down, indicating that it should be investigated.

Figure 3: PINN-66 (Afib/Flutter): Assessment of Thrombolytic Risk Factors
 Patients with nonvalvular AF or atrial flutter in whom assessment of thromboembolic risk factors has been documented.



Take Steps to “Hold the Gains” from Improvement

This ongoing measurement process never stops, which is why it’s called “continuous quality improvement.” Even when you have accomplished a goal, you’ll want to develop a plan to keep those results at optimal levels. All too often we read about a practice or hospital making tremendous gains only to backslide in subsequent months or years. It’s easy to lose focus once you’ve met a goal—we’ve all done it—so it’s highly recommended that you develop an actual plan for how you will “hold the gains” after you have achieved any goal.

“Holding the gains” doesn’t mean, however, that you can’t tackle a new problem and in fact you’ll want to do just that again and again. Successful quality improvement is cyclical and ongoing.

Phase VI and Ongoing: Use Your Data to Demonstrate Quality

Along with each practice’s solid commitment to quality improvement, there was another reason they worked so hard. Looking around at our current environment, they knew that they also wanted to be able to *demonstrate* the quality of their practice to others. There are many stakeholders who are interested in this information, including regulators, payers, and patients/consumers. We found three models for demonstrating quality from our featured practices:

- Using Data as Incentives for Physicians

In one case, after a year of collecting and reviewing data, a practice established a physician compensation program based on the quality results from the PINNACLE Registry. This practice uses

data on a quarterly basis to monitor physician participation in the initiative and then provide financial incentives. Their bonus pool is distributed based on quality. This also gives the physicians in the practice an opportunity to assess the quality of care delivered to their patients.

- Using Data in Negotiation

Other practices were planning to show their results to third party payers in anticipation of receiving more favorable payments, particularly if they were in the process of negotiating to integrate.

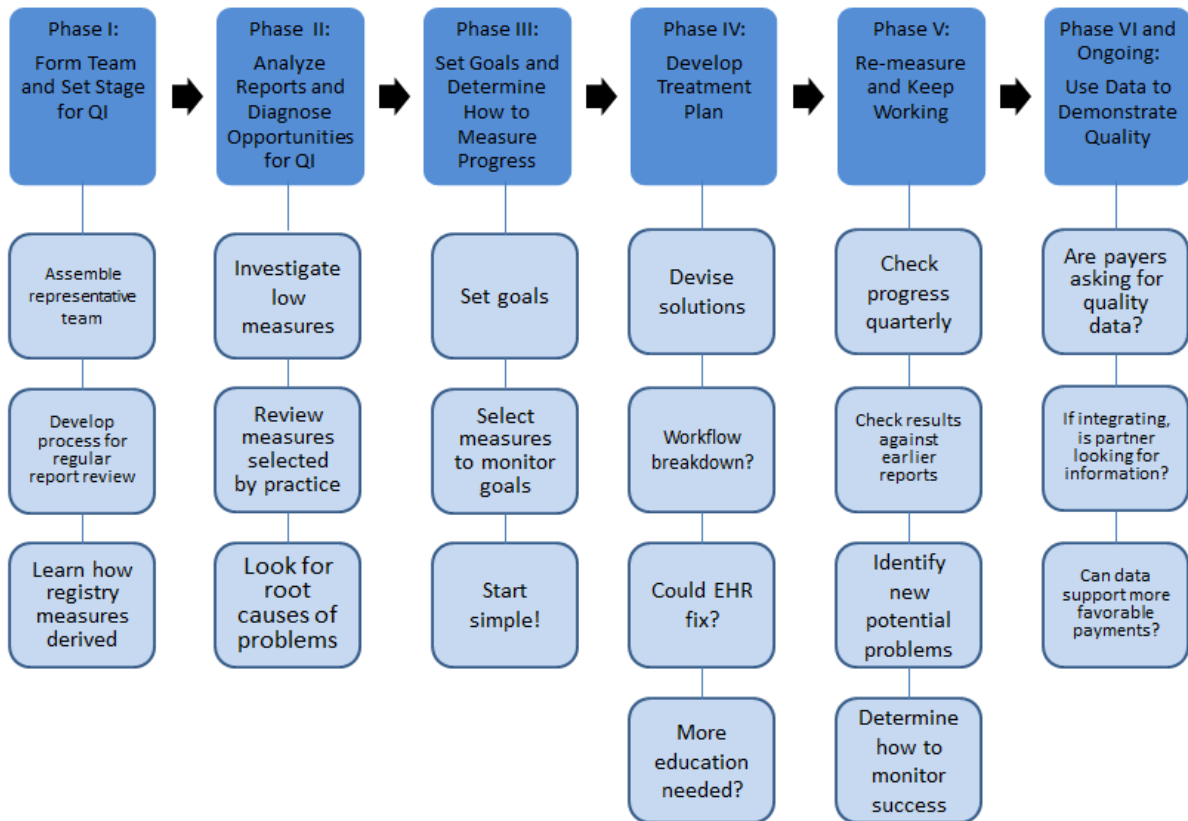
- Demonstrating Registry Participation and Potentially Data on Websites for the Public

We were struck by a practice that posted the fact of their participation in PINNACLE Registry on their practice's website. They felt, and we wholeheartedly agreed, that this participation alone sends a strong message about the practice's strong commitment to quality. It is also in their long-term plans to share the practice's data with their patients.

Conclusion

Discussing your participation in the PINNACLE Registry is a good way to finish this section. As we noted in the introduction, registry participation is not for the faint-hearted. Each and every registry participant should take pride in the fact that by joining the PINNACLE Registry you have shown that quality improvement is valued and taken seriously in your practice. We hope that you will begin or continue to use your PINNACLE Registry to its full potential, by letting your data drive an ongoing dedication to improvement. Let us know how we can help!

Establishing and Accelerating Quality Improvement Through PINNACLE Registry



SUMMARY OF INTERVIEWS

1. What made you decide to join PINNACLE Registry?

Molly Flynn: Since we spend so much time entering data electronically, we didn't want to implement a duplicative paper process for PQRI. The registry allows us to maximize the use of our electronic health record and review our practice performance on national benchmarks. We use the PINNACLE reports to see how we're measuring up against national averages and to look for variances within our practice.

Sherry Shults: Our administration and physicians like to benchmark our data. Additionally, some of the PINNACLE quality measures are the same as third party payers (BCBS, CMS etc.) and hospitals. The PINNACLE Registry has provided our practice with detailed quality data, benchmark information and enabled participation in PQRI and E-RX programs.

Ganpat Thakker: The CathPCI Registry was our first step into such a QI project. Unless you measure something you won't know where you stand and where you are going. You need a baseline measurement. This informed us as to what opportunities there were for improvement within our practice. We have shown great improvement in the hospital and I wanted to do this in individual practice. This is what initially attracted me to the PINNACLE Registry.

Dave May: The basis of our involvement in the PINNACLE Registry was to get the quality data on our practice performance. We wanted to acquire and see clinical data, not claims-made data, and outcomes reports are how the data was delivered to us. I am sure this is the method we will use to demonstrate quality of care in the future.

2. What has been the most valuable aspect of your involvement with PINNACLE?

Molly Flynn: We are able to track how data is flowing over time. We have seen improvements in three of the nine measures we've selected to include in a decision support tool used during office visits thus far. Additionally, our physicians understand how important this is and they are very helpful in pinpointing ways the data might be inaccurate because of system issues, allowing us to better design workflows that help all our providers manage patient quality indicators.

Sherry Shults: Our providers strive to follow the ACC guidelines. We review PINNACLE data to assess our management of CAD, CHF, HTN and A-Fib. Our practice also aligns our quality initiatives with the hospital quality initiatives. The practice administration and providers review the PINNACLE Practice

Executive Quarterly Summary Report to assess the providers' quality data. The providers take the opportunity to learn from each other to improve their quality measures.

Mike Mirro: The greatest value of participating in the PINNACLE Registry is that the data are collected at the point of care. The electronic (EMR) system we have set up in our practice allows the registry to essentially become a decision-support module for cardiovascular disease and a tremendous quality tool. It enables us to validate our management on the spot, rather than having to review data retrospectively. Dr. Patrick Daley, MD, FACC has been our physician champion very effectively.

Ganpat Thakker: Vastly improved interrogation of the patient and documentation of clinically pertinent information. I feel I am more focused on what to ask, ensure accurate documentation of usable information and treatment plan which is evidence-based and tailored for that particular individual. The

information you need to have is right at your fingertips. One example is ejection fraction. This information had previously been “hidden” in an Echo or Cath report but now it is on the first screen.

Dave May: After our initial reports arrived, I wrote an article in *Cardiology* magazine describing my experience with the Registry and the quality of the reports themselves. That article pointed out how the results were excellent in providing a level of granularity about the quality in our practice which we could not acquire in any other way.

Eventually I would like to develop an article about using voluntary registry data for quality improvement as this has not yet made its way into the literature. We have longitudinal comparative data on every measure from the PINNACLE Registry. We can demonstrate quantitatively that our metrics are improving by participation in the Registry. To my knowledge, this has never been shown before in a voluntary registry environment.

There is no question that participation in the PINNACLE Registry helps us demonstrate quality. Currently, we continue to focus on documentation to make continuous improvements in our care. PINNACLE, therefore, helps us to codify how we collect our data and allows us, therefore, to move “upstream” in that data collection process.

3. What is your process for reviewing your PINNACLE outcomes reports?

Molly Flynn: Once we get the quarterly report, we look at our performance in relation to the national average benchmarks. We look at metrics on which we are performing above national averages for cardiology, and where it appears we are performing below national averages. Generally when it appears we are performing below national averages the data are not being captured correctly and we need to fix either data mapping or workflow issues. We report practice and physician-level data to our board of directors with a summary on how metrics have performed over the last six quarters, summaries of trends we see and plans to include new measures in our decision support programming.

Sherry Shults: I look at the reports first to ensure they are accurate. I need to be able to explain any variations in data between quarters to our administration and physicians. In some cases, the reports reflect staff not documenting correctly, the EMR data fields may not be mapped correctly or the data field is not present for a particular measure. Our CEO, Quality Improvement Committee, and Board of Directors review the reports as well as the physicians. The physicians compare their data within the practice and also nationally. The physician-specific data are not “blinded.”

Mike Mirro: As part of our internal quality initiative, our team regularly discusses quarterly results. This has been found to be much more effective than just sending the results to the physicians. Reports are not blinded and the group feels this is critical because they collectively take care of their patients and so their patient outcomes are intertwined.

Ganpat Thakker: The process begins when I receive an email from the PINNACLE Registry staff that my outcomes data is available for download on the Registry website. I log in and look at all the data. I compare the data from quarter to quarter and see how my practice compares with the national average to see if we are improving; the graphs are very helpful. The first few times we reviewed our data, we set up a conference call with a member of the PINNACLE Registry staff and someone from Featherstone Informatics Group (FIG).

Dave May: We begin by reviewing the practice total report to determine how we are doing with our overall performance. If our performance is not up to par for a particular metric, we determine whether that is due to a systematic error (are we extracting data incorrectly) or due to some other problem. Following review of the whole practice report, we look at the practice location report to understand the demographics of the patients much more so than just a quality metric. There is robust quality data in this report specific to each physical office location; in our practice we use this report specifically for payer mix and patient demographics. Finally, we look at the individual physician comparison reports to see how well our data documentation is going and how effective we are being at meeting our quality metrics. In a usual scenario, I will sit with each of my physicians, review their data with them and ask their help in making sure that we meet the metrics.

4. What are you looking for when you review the reports, or, are there any particular metrics that you have selected to look at and follow?

Molly Flynn: We initially chose 9 metrics for improvement and put together a decision support tool in our electronic health record that flags our nurses and physicians if a patient is falling out of what is recommended. The physician must address the issue before he or she can sign the note and bill for the visit.

- a. BP management (check at last office visit)
- b. Lipid Profile (taken within one year of the last visit)
- c. Smoking Cessation (screened for smoking and if smoker, smoking cessation discussed)
- d. Antiplatelet Therapy (CAD diagnosis and prescribed antiplatelet therapy)
- e. LDL Lowering Therapy (CAD dx and Hyperlipidemia dx and prescribed lipid lowering drug)
- f. Beta Blocker Therapy for previous MI
- g. ACE/ARB with LVSD (40%)
- h. Diabetes Screening (CAD dx and screened for diabetes and FBS or GTT done if not known diabetic)
- i. Beta Blocker Therapy with LVSD

Sherry Shults: We focus on measures which fall below the benchmark as well as measures pertaining to PQRI, MU and hospital quality initiatives. Our focus has been management of CAD, CHF and A-Fib.

Mike Mirro: The ultimate goal is to look at intermediate outcomes, such as LDL and blood pressure targets. We also track ejection fraction documentation. This is a high risk area, so it is critical that patients with low ejection fractions are identified, and the problem is addressed.

Ganpat Thakker: On the calls with FIG, we went through each metric to discuss any discrepancies or issues; for example, blood pressure measurement on each encounter. The report states that we were measuring in 95% of cases, but I believe we should be at 100% on this measure, because patients do not leave our office without having their blood pressure taken. Once we've concluded what the root causes are, I am able to sit with practice staff who did not document correctly. This way, we can work on improving our performance for next time.

5. How did you get the ball rolling with reviewing your reports?

Molly Flynn: We used our implementation of the decision support tool for quality indicators as a jumping off point to start reviewing the reports so we could track improvement on our data. The reports were used from the beginning to make sure our data were being captured accurately and

continues to guide us in designing workflow and ensuring any changes in our electronic health record are accurately mapped to the PINNACLE registry reporting tool.

Sherry Shults: We reviewed the PINNACLE reports beginning with 2008 and 2009 data once the data extraction was completed and the PINNACLE quarterly report was distributed. We use the PINNACLE Registry reports to monitor our quality initiatives and to assure we are on track for PQRI and Meaningful Use (MU).

Mike Mirro: We rolled it out in phases. We have been using the PINNACLE Registry for two years, but started the compensation piece at the beginning of this year. We use the data on a quarterly basis to monitor physician participation in the initiative and then provide financial incentives. We have a bonus pool which is distributed based on quality.

Ganpat Thakker: My recommendation for other physicians would just be to break the ice and get started. There is no down side to participation in the PINNACLE Registry. If the practice decides it is not the right time for them, they have the ability to start again at another point in time. I find great value in knowing how I am doing in my practice compared with the best in the country and the direction provided by the Registry data. Once you get your eyes on accurate, usable data you will be hooked and enjoy the process and rewards that come from CQI.

6. Who from your practice is involved in reviewing your reports?

Molly Flynn: Molly Flynn, Director of IT our CEO and all of our physicians

Sherry Shults: Sherry Shults, RN BSN CIO, COO, CEO, Quality Improvement Committee, Board of Directors and physicians.

Mike Mirro: We have the help of our Nurses, as well as our medical records/IT staff and the CNA staff. A specific Nurse and Medical Record/IT "Super User" will help teams that seem to be falling behind in PINNACLE use. We have set up a support system since the collective patient outcomes is the true target.

Ganpat Thakker: Ganpat Thakker, MD , office RN and office manager.

Dave May: Dave May, MD and physicians

7. What sort of improvements have you made as a result of reviewing your outcome reports?

Molly Flynn: Before the physicians can sign a note, warning flags will appear on the screen as reminders to review if a standard hasn't been met or documented correctly. This stops them from completing the visit. We have also put this system in place for the nurses' workflow which requires a physician's review and sign-off. With this system in place, it allows the physicians to rely on our EMR for the quality recommendations on these 9 standards of care. It is our goal to expand this to all measures to improve quality processes for our patients while using our system to remind the physician of key standards of care. We try to take as much work off the physician as possible and start by asking ourselves, "Are there things that the nurse can address after taking vitals? Could this be done during the check-in process?" This also facilitates better care for the patients as the nurse and front desk staff do their review while the patient is in the office while many times the physician is finishing his/her note later that evening after the patient has gone home.

Sherry Shults: We have publicized on our website that we participate in the PINNACLE Registry. We also can use our data as leverage to receive higher payment from third party payers (pay for performance). Our EMR templates had to be modified to assure we had a data field to collect the PINNACLE data. Our staff and providers have ongoing education regarding documentation requirements. The staff and providers learned to “click” instead of free text to enable data collection. Our practice has seen improvement in our PINNACLE measures over the past two years.

Mike Mirro: We use our reports for incentive compensation for our physicians. We are trying to get our physicians to submit data on greater than 80% of the patients they encounter in the office setting, this way, we can keep track of each physician’s performance and they can assess the quality of care delivered to their patients. For example, did the Physician/Nurse/CNA team manage to ask about smoking cessation and did they document it properly?

Ganpat Thakker: Our documentation process has already changed; one example is our process for documenting our patients’ advanced care directive. Previously, we stored this information in a paper file, but now we have created a field for this, so we can either scan the information into the EMR or just make a notation that this information can be found in the patient’s paper file. We are gradually moving everything to our EMR system.

We have several examples where we’ve made clinical improvements. For example, we need to have more specific information about Afib and risk scores for stroke so we can file an inquiry if the patient is not on Coumadin and get the patient back on the medication as soon as possible. We are adding more information so we are able to more precisely decide who is at risk for stroke. Another example would be congestive heart failure which will require readily available information on EF, functional status, medications, etc.

Dave May: There is no question that participation in the PINNACLE Registry helps us demonstrate quality. PINNACLE helps us to codify how we collect our data and allows us, therefore, to move “upstream” in that data collection process. As an example, we have begun to develop an iPad application that allows us to move to our waiting room the collection of information regarding smoking status and advanced directive. Essentially, we hand our patients an iPad so that they get to actually enter the data themselves.

I also think that having a series of reports over time has allowed us to “close the loop” on our quality effort. The reports themselves are the vehicle by which our practice looks at its behavior. The series of reports over time allows us to provide a very rapid feedback system. This concept was advocated several years ago by Dr. Lynn Etheridge at The George Washington University in what he described as a “rapid learning system” in which feedback loops were used to improve care. Our reports over time allow us to demonstrate that quality. I believe that this ability to compare reports over time will be the major strength of the PINNACLE registry, as the volume of data collected over a short period of time is enormous, allowing rapid corrections in physician behavior to effect quality of care provided to our patients.

8. Do you have any new initiatives you are considering for the future?

Molly Flynn: We want to expand our decision support tool embedded in the EMR to capture all of the metrics. Currently this tool is working well and we’ve seen improvement on some measures, mainly that our staff are making sure to correct documentation during the office visit. It would be great to

include our EHR vendor in the development process as well. We are using the PINNACLE data to complete our Meaningful Use attestation in 2011 and in upcoming years.

Sherry Shults: We have considered sharing our PINNACLE data with the public, as we are one of the few practices in South Carolina that have data reflecting our quality of care. We will continue to participate in quality initiatives and improve our outcomes. Recently, we have focused on smoking cessation.

Mike Mirro: Participation is number one, but our ultimate goal is to look at intermediate outcomes such as LDL target in CAD patients and thus have our patients achieve an LDL target of below 100 mg/dL over 80% of the time. We will get more specific in the future looking at other outcomes. There is quite a bit of variation even within our own group, but care teams are excited about this initiative. We send out a composite report to the group and discuss it in our team meetings. This is our big internal quality initiative. Physicians have used this data to participate in the ABIM-MOC and satisfy PIM requirements.

Ganpat Thakker: We are always striving for 100% on our performance reports. I would like to be able to team up with a network of Registry participants and our software engineers to develop some point of care/clinical tools that can be embedded into our software to make this documentation easier during the flow of a typical workday. This point of care tool will enable us to improve quality and reduce costs by not repeating clinical tests that were completed by another physician. I would eventually like to work on integration with primary care providers and hospitals so that this data will be automatically populated into our EMR. This will make our jobs more efficient and more accurate.

Dave May: I believe that the issues that we have faced so far are operational and process oriented; we have not yet reached beyond “how do we get the data” to the position of “what do we do with the data”. I believe that the web based portal will improve that feature of the registry by allowing that real time assessment of our quality performance. That is the ultimate goal.

9. What is your greatest challenge so far?

Molly Flynn: Often times we’ve found if a measure is falling out of range of what we’d expect, it’s not the people that are the problem, it’s the process. We always try to focus on the process first. I am using the metrics from PINNACLE Registry to report for Meaningful Use.

Sherry Shults: In some cases, the reports reflect staff not documenting correctly, the EMR data fields may not be mapped correctly or the data field is not present for a particular measure. For example, we scored low on smoking cessation due to documentation issues.

Every time we upgrade our EMR, it’s critical to notify the PINNACLE Registry staff of any changes where data is extracted. In the past, the data needed to be re-mapped.

Dave May: Early in our experience we noted that we did not perform well on metrics in which data was collected during each evaluation and management encounter. After some review, it became obvious that during our Coumadin clinic INR measurements our nurses would charge a 99211 office visit if an adjustment was made in the patient’s Coumadin dose. This was because that qualified as an encounter where a medical decision was made. However, during those visits additional data such as height, weight, blood pressure and pulse were not necessarily recorded. This resulted in the performance metric looking “worse” than it really was. This systematic error was corrected and the performance measure improved.

We have, by the way, seen a similar phenomenon happening as we perform our attestation for meaningful use. There are systematic errors occurring in that reporting as well and our experience with PINNACLE has been quite helpful in correcting them.