The CAHPS Ambulatory Care Improvement Guide

Practical Strategies for Improving Patient Experience

Section 5: Determining Where to Focus Efforts to Improve Patient Experience

To download the Guide's other sections, including descriptions of improvement strategies, go to https://cahps.ahrq.gov/quality-improvement/improvement-guide/improvement-guide.html.

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The CAHPS Ambulatory Care Improvement Guide is a comprehensive resource for health plans, medical groups, and other providers seeking to improve their performance in the domains of patient experience measured by CAHPS surveys of ambulatory care. Use this guide to help your organization:

- Cultivate an environment that encourages and sustains improvements in patient-centered care.
- Analyze the results of CAHPS surveys and other forms of patient feedback to identify strengths and weaknesses.
- Develop strategies for improving performance.

This resource includes the following sections:

1. About the CAHPS Ambulatory Care Improvement Guide
2. Why Improve Patient Experience?
3. Are You Ready to Improve?
4. Ways to Approach the Quality Improvement Process
5. Determining Where to Focus Efforts to Improve Patient Experience
6. Strategies for Improving Patient Experience with Ambulatory Care

This section discusses ways to identify promising opportunities to improve patient experience in your organization.

5. DETERMINING WHERE TO FOCUS EFFORTS TO IMPROVE PATIENT EXPERIENCE

To identify opportunities to improve patient experience and determine where to direct your resources, you can start by reviewing your CAHPS survey results in combination with other forms of patient feedback, both quantitative and qualitative. You can then use a variety of qualitative methods to confirm and gather further insights into specific problems, identify possible solutions, and monitor progress. Because some qualitative methods are easier and less expensive to implement than surveys, they can be used more frequently to provide ongoing feedback valuable to clinicians, administrators, and staff.

This section covers four ways to figure out which aspects of patient experience could and should be improved:

- Analyze CAHPS survey results to understand your organization's performance.
- Analyze other sources of data for related information.
- Evaluate the process of care delivery.
- Gather input from stakeholders.

Once you have identified the aspects of patient experience for which you want to develop improvement activities, you will have to decide where exactly to focus your resources. Considerations include how widespread the problem is, how different your score is from others (i.e., the size of the opportunity to improve), the nature of current improvement activities, and the importance of the issue based on other forms of patient feedback.

5.A. Analyze CAHPS Survey Results

Once you have results from a CAHPS survey in hand, you can start by seeing where your scores appear low relative to other composite measures in the survey. You can then conduct different kinds of analyses to identify your organization's relative strengths and weaknesses:

- Compare your CAHPS scores to benchmarks.
- Compare your current CAHPS scores to past performance.
- Assess which aspects of performance are most relevant to your members or patients.

Each kind of analysis provides a different perspective on performance. In some cases, you may be able to obtain sufficient information from using just one or two of these methods.

5.A.1. Compare Your CAHPS Scores to Benchmarks

One way to get the information you need to identify specific problem areas, formulate an improvement plan, and select appropriate strategies is to compare your performance to others. To do that, you need to identify benchmarks or comparative data that are appropriate and relevant for your organization. A benchmark could be a regional or national average, the average score for the same type of organization, or a "stretch goal," such as the score achieved by the top performers. Your benchmark choices should be guided by your business strategy and improvement goals.

Major sources of comparative benchmarks include:

- **CAHPS Database** (for both the Clinician & Group Survey and the Health Plan Survey (for Medicaid, CHIP, and Medicare plans)): https://cahpsdatabase.ahrq.gov/cahpsidb/
- **National Committee for Quality Assurance's (NCQA) Quality Compass** (Health Plan Survey): http://www.ncqa.org/HEDISQualityMeasurement/QualityMeasurementProducts/QualityCompass.aspx
- **Centers for Medicare & Medicaid Services** (Health Plan Survey for Medicare only).

Other sources include:

- **Your survey vendor**. Many vendors offer access to comparison norms for their clients.
- **Community-level data**. Depending on the nature of quality measurement activities in your State or region, you may have access to benchmarks specifically for local providers. For example, several multi-stakeholder collaborative organizations gather and report comparative CAHPS results at the clinic site or individual physician level. (Read about regional health improvement collaboratives at http://www.nrhi.org/about-collaboratives/.)

What is the CAHPS Database?

The CAHPS Database is a voluntary initiative sponsored by the Agency for Healthcare Research and Quality (AHRQ) that enables survey users to compare their own results to relevant benchmarks such as overall and regional averages. In addition to a public online reporting system that presents summary-level de-identified comparative data, survey users that submit data to the CAHPS Database are provided free access to the **Submitter's Site**, which is a secure, password-protected area of the online reporting system that allows them to compare their own results to selected benchmarks.

The CAHPS Database presents several views of comparison data, including percentiles, top box scores, and full frequency distributions. Using the online reporting system, a practice site submitting its CG-CAHPS survey results to the CAHPS Database can compare its scores to selected benchmarks for each composite and item.

When comparing your results to a benchmark, keep in mind that the benchmark provides only a relative comparison. Even though your results may be better than the average score, for example, you may believe there is room for improvement in a particular area in an absolute sense. In fact, there may be some aspects of patient experience measured by the CAHPS survey that even the highest scoring sites could improve on.

There are many ways to analyze your CAHPS results in comparison to benchmarks or other reference points. There is no "right" approach, and the selection of methods for data scoring and presentation will depend on both the benchmarks you choose to use and the level of detail needed by your audience. Following are several examples of different approaches for comparing CAHPS survey results to benchmarks. These examples draw on survey results from the Clinician & Group Survey but apply as well to the Health Plan Survey.

Understanding Scores for CAHPS Survey Results

The CAHPS Analysis Program, often referred to as the CAHPS Macro, uses the survey results to calculate two types of scores. First, it calculates the percent of respondents in each of the response categories for a CAHPS composite or question. Those percentages are called **proportional scores**. The proportional score for the best possible response option (e.g., "always" or "yes, definitely") is referred to as a "**top box**" score.

The CAHPS macro then calculates a **mean** for the CAHPS composite or question. To do that, the response scales are first converted to numerical values. For example, the 4-point response scale of "always", "usually", "sometimes,", and "never" is translated into the values of 4, 3, 2, and 1, respectively. The mean value is then calculated across the four numerical values for each question. The mean score for a composite is computed by taking the average across the mean scores for the items that are included in the composite measure.

5.A.1.a. Comparing Mean Scores

The simplest place to start is to compare the organization's mean scores for the CG-CAHPS composite and rating measures with the average mean score for comparable entities (e.g., other physician practices, medical groups, or health plans), as illustrated in Figure 5-1. As can be seen in this example, a practice site's mean score for the Provider Communication composite measure (3.64) is significantly higher than the mean for the medical group (3.44), yet its mean score for the Provider Rating (8.21) is significantly lower than the mean for the group (8.74). The site is not significantly different from the group on the other two composites. The horizontal lines for each composite in the "Comparison to the Group Mean" column show the minimum site score and the maximum site score within that group.

Figure 5-1. Comparison of Mean Scores for a Practice Site and a Medical Group

CG-CAHPS Composite Measures	Comparison to Group Mean	Site Mean	Group Mean
	1 2 3 4		
Access to Care		3.08	3.04
Provider Communication		3.64	3.44
Helpful/Courteous Staff		3.28	3.24
	0 1 2 3 4 5 6 7 8 9 10		
Provider Rating		8.21	8.74

- ● Not significantly different from the group mean
- ▲ Significantly higher than the group mean
- ▼ Significantly lower than the group mean

For the purposes of comparing composite measures and rating items that have different response categories, Figure 5-2 shows the same data with the mean scores normalized to a 0-100 scale. (Learn about normalizing scores in the box below.)

Figure 5-2. Comparison of Practice Site Normalized Mean Scores to Group Normalized Mean Scores

CG-CAHPS Composite Measures	Comparison to Group Normalized Mean	Site Normalized Mean	Group Normalized Mean
	0 20 40 60 80 100		
Access to Care		77%	76%
Provider Communication		91%	86%
Helpful/Courteous Staff		82%	81%
Provider Rating		82%	87%

- ● Not significantly different from the group mean
- ▲ Significantly higher than the group mean
- ▼ Significantly lower than the group mean

What Does It Mean to Normalize a Score?

Normalizing is a way to transform all scores to the same scale, typically 0 to 100. It is done to ease comparison across items and composites that use different response scales.

To transform the scores, one would first transform the response values at the respondent level from 0-100 using the following formula:

> **Normalized Score** = 100*(Respondent's selected response value – Minimum response value on scale) / (Maximum response value – Minimum response value)

For example, the responses on a four-point scale would be normalized as follows:

Response Option	Normalized Response
1	0.00
2	33.33
3	66.67
4	100.00

5.A.1.b. Comparing "Top Box" Scores to Benchmarks

Another option is to compare the percent of responses in the best possible category for a survey question or composite measure (i.e., the "top box" score) to one or more benchmarks. The CAHPS Database uses this method in one of the displays included in its online reporting system.

Figure 5-3 illustrates a comparison of scores for a sample medical group on the CAHPS Database Submitter's Site for the Access composite measure ("Getting Timely Appointments, Care, and Information") and its individual items in the Clinician & Group Survey 2.0. The medical group scores (in the shaded column) are compared to the overall average of scores in the CAHPS Database and to selected percentile scores. (See the box below for an explanation of percentile scores.)

Table 5-1. Comparison of Sample Medical Group Top Box Scores to the Mean Top Box Score (CAHPS Database Overall) and Selected National Percentiles

Composite/Item	Selected Group/Site	CAHPS DB Overall	90th Percentile	75th Percentile	50th Percentile	25th Percentile
Getting Timely Appointments, Care, and Information	58%	59%	73%	66%	59%	52%
Got appointment for urgent care as soon as needed	64%	64%	81%	74%	66%	58%
Got appointment for check-up or routine care as soon as needed	69%	68%	83%	77%	71%	63%
Got answer to phone question during regular office hours on same day	53%	59%	78%	69%	60%	52%
Got answer to phone question after hours as soon as needed	63%	59%	80%	68%	58%	48%
Wait time to be seen within 15 minutes of appointment time	41%	43%	61%	52%	43%	33%

Source: CAHPS Database Submitter's Site for the CAHPS Clinician & Group Survey 2.0

What Are Percentile Scores?

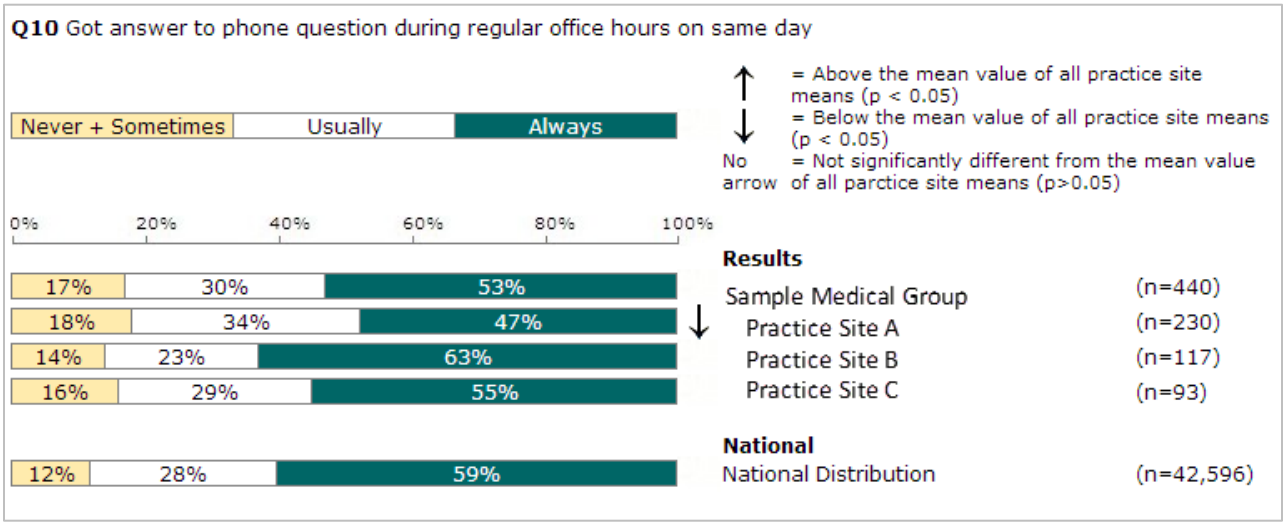
Percentiles provide useful information about the distribution of scores across all of the organizations (e.g., practice sites or health plans) included in a benchmark. To calculate percentile scores, the scores for all participating organizations are ranked in order from low to high. The percentile (e.g., 90th percentile, 25th percentile) indicates the percentage of organizations that scored at or below a particular survey score. For example, the score shown for the 75th percentile is the score where 75 percent of the sites or plans scored the same or lower and 25 percent scored higher.

To compare your scores, look for the highest percentile where your score exceeds the percentile score. For example, in Table 5-1, the group's top box score for the question, "Got answer to phone question after hours" is 63%. This score is higher than the 50th percentile score of 58%, which means that this group scored higher than 50 percent of the groups in the CAHPS Database.

By comparing your organization's top box score for a composite measure and its items to the mean top box score (CAHPS DB Overall) and the percentile scores, you can determine where your organization can improve. For example, the sample comparison in Table 5-1 shows that the medical group's scores for the Access composite measure and its items are roughly in line with the mean score, with the exception of the item, "Got answer to phone question during regular office hours on same day." The medical group's top box score of 53% for this question is close to the national 25th percentile score of 52%, suggesting the need to investigate factors that may be influencing this lower score.

One way to identify what is driving a relatively low score for a large organization is to look at the scores for its components. By calculating benchmark scores for a large organization, such as a health plan, health system, or medical group, you can see how entities within the organization compare to each other. For example, if the medical group in the example above submitted data to the CAHPS Database for several practice sites, the group and its practices could see a display of bar charts showing the full distribution of scores for each practice site. As illustrated in Figure 5-3, among the sample medical group's three practice sites, Practice Site A has the lowest top box score for the question related to getting an answer to a phone question during regular office hours on the same day. In addition, the down arrow indicates that the mean score for Practice Site A is below the average for all practice sites included in the CAHPS Database, calculated at the 0.05 significance level. This type of comparison would allow the medical group to pinpoint improvement opportunities at particular practice sites.

Figure 5-3. Comparison of Practice Site Scores to Medical Group Scores



Source: CAHPS Database

For more information on how the CAHPS Database can be used to compare CAHPS results for both health plan and medical groups, visit: https://www.cahpsdatabase.ahrq.gov/cahpsidb/.

For more information on the pros and cons of different scoring and comparison methods for CG-CAHPS Survey results, read:

- *Aggregating and Analyzing CAHPS Clinician & Group Survey Results: A Decision Guide* – http://forces4quality.org/aggregating-and-analyzing-cahps-clinician-group-survey-results-decision-guide
- *Developing a Public Report for the CAHPS Clinician & Group Survey: A Decision Guide* – http://forces4quality.org/developing-public-report-cahps-clinician-group-survey-decision-guide

5.A.2. Compare Your Current CAHPS Scores to Past Performance

If you have collected CAHPS survey results more than once, another useful way to identify opportunities for improvement is to look at past performance. Comparing your current scores to previous scores can be valuable for:

- Detecting areas where your performance is improving, declining, or holding steady.
- Increasing your confidence that the scores reveal a true picture of performance and are not just a snapshot of performance at a single point in time.

Figures 5-4 and 5-5 present two sample displays to examine CAHPS data over time. In Figure 5-4, bar graphs show trends in "top box" scores from 2010-2014 for the four Health Plan Survey composite measures and two rating items.

Figure 5-4. Bar Graph Example for Trends in Top Box Scores for the Health Plan Survey, 2010 - 2014

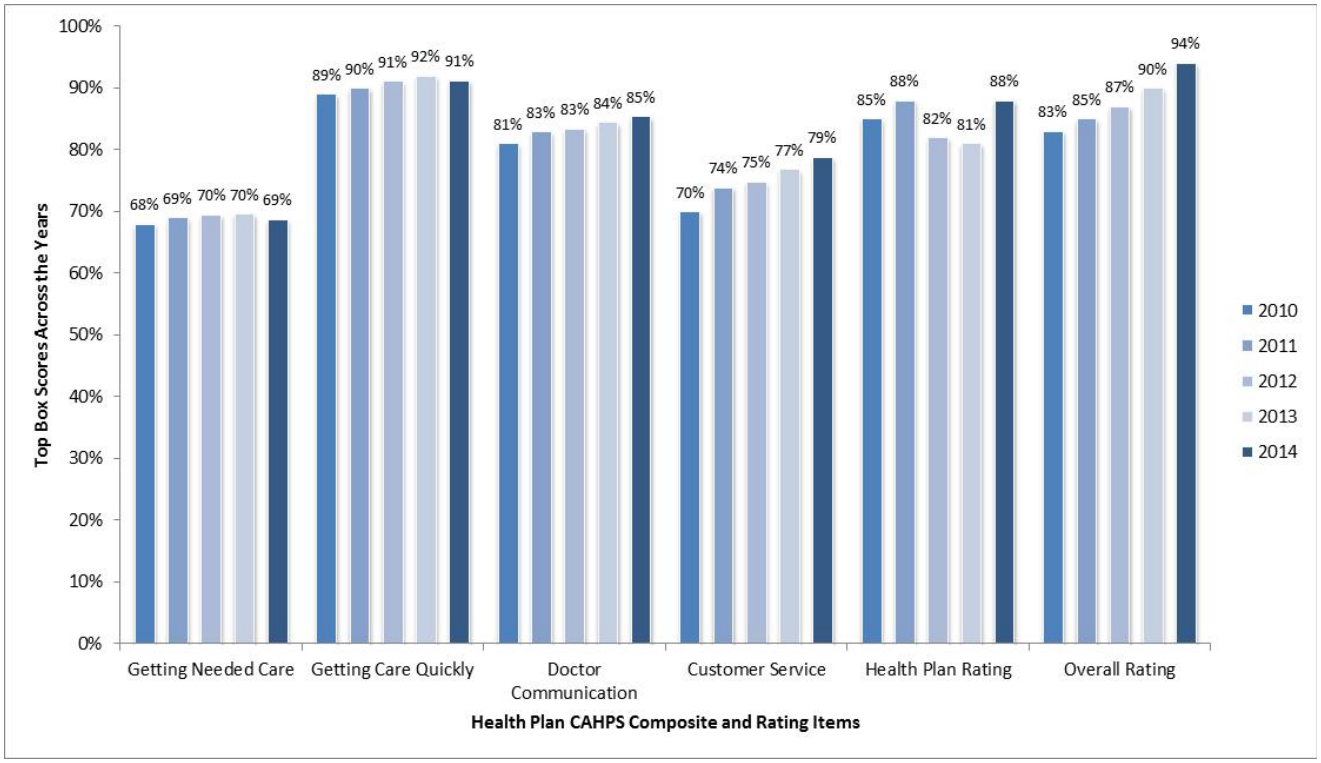
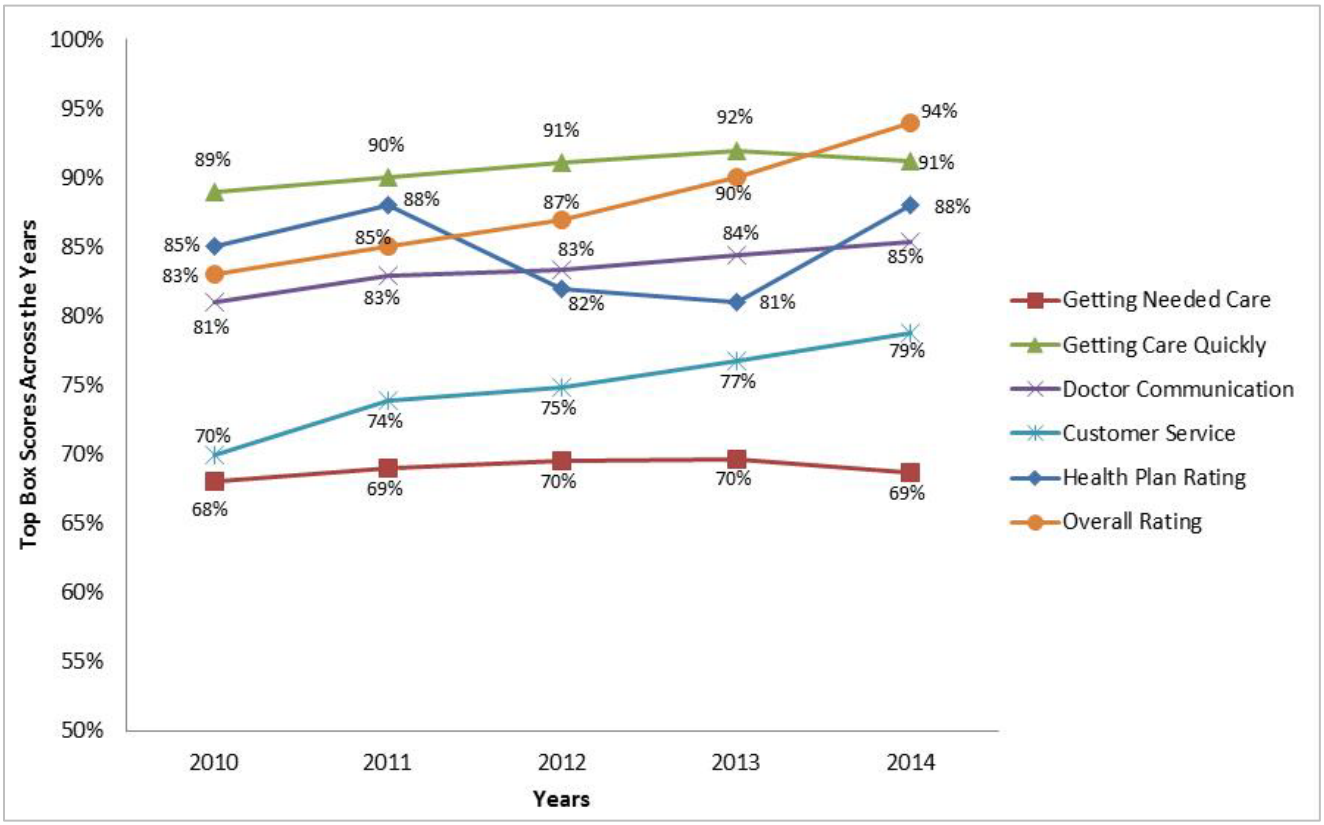


Figure 5-5 shows the same data using line charts to plot the trends over time. With the line charts, it was necessary to alter the y-axis so that it starts at 50% and goes to 100%. Because most of the scores clustered within 30 percentage points of each other, this change to the axis makes it easier to see the differences in scores across the measures.

Figure 5-5. Line Graph Example for Trends in Top Box Scores for the Health Plan Survey, 2010 - 2014



5.A.3. Assess Which Aspects of Patient Experience Are Most Important to Your Members or Patients

Another method you can use to help determine what specific issues to focus on for improvement involves identifying the factors that are most important to members or patients. This analysis of the "importance" of topics in the CAHPS survey—sometimes referred to as a "key driver" analysis—requires an assessment of how strongly a score for a particular question or composite measure is associated with patients' or enrollees' overall rating of their health plan or medical practice. This type of analysis can be conducted with data from multiple groups, sites, or plans.

The statistic commonly used to assess such associations is called a correlation coefficient, which can range from –1.0 to +1.0 (see box below for information about interpreting this statistic). There are several methods for calculating correlations; the method that is recommended for CAHPS scores is the Spearman correlation, but other methods may also be useful.

Interpreting the Correlation Coefficient

- **If the correlation coefficient is between zero and 1,** the overall rating (e.g., how would you rate your care?) has a positive relationship with the score for a question (e.g., how often did your personal doctor explain things in a way that was easy to understand?) or composite measure (e.g., Doctor Communication). This means that the rating increases as the score increases. The higher the value of the coefficient, the stronger the relationship.
- **If the correlation coefficient is 1.0,** the rating and the question or composite measure are perfectly related, i.e., measuring the same concept.
- **If the correlation coefficient is zero,** the rating and the question or composite measure are independent, i.e., not related.
- **If the correlation coefficient is between 0 and -1,** the rating is inversely related to the question or composite measure, which means that the rating decreases when the score increases. This is unusual in a CAHPS survey unless the response options are reversed, in that "never" is the most desired response.

The following examples illustrate the results of a key driver analysis for the Health Plan Survey and the Clinician & Group Survey. These correlations do not necessarily apply to your implementation of a CAHPS survey; it is important to analyze your own data for such correlations because they can be different for each sample.

5.A.3.a. Correlation Coefficients for the CAHPS Health Plan Survey

Table 5-2 below presents Spearman correlations between the Health Plan Survey composite measures and the overall ratings of doctor, care, plan, and specialist. As has been found in previous analyses, the strongest relationship was between the Doctor Communication composite and the Doctor Rating.

Table 5-2. Correlations between top box scores for composite measures and overall ratings in the Health Plan Survey

Composite measure	Doctor rating	Care rating	Plan rating	Specialist rating
Getting needed care	0.53	0.68	0.57	0.43
Getting care quickly	0.48	0.61	0.48	0.31
How well doctors communicate	0.69	0.67	0.44	0.39
Customer service	0.28	0.49	0.61	0.20

Note: All correlations are statistically significant ($p < .001$). Data for analyses came 122 health plans that administered the Health Plan Adult Medicaid Survey.

5.A.3.b. Correlation Coefficients for the CAHPS Clinician & Group Survey

Table 5-3 presents Spearman correlations between the composite measures from the Clinician & Group Survey 2.0 with supplemental Patient-Centered Medical Home (PCMH) items and the overall rating of the provider. Consistent with the example of the Health Plan Survey above, the data indicate a very strong association between the Provider Communication composite and the Provider Rating and strong but slightly smaller relationships between Access to Care and Office Staff scores and the Provider Rating. The correlations for the three PCMH supplemental composites are much lower than those for the core composites.

Table 5-3. Correlations between top box composite scores and the provider rating in the Clinician & Group Survey

Composite measure	Provider rating
Getting timely appointments, care, and information	0.61
How well doctors communicate with patients	0.87
Office Staff: Helpful, courteous, and respectful office staff	0.66
Talking with you about taking care of your own health (PCMH)	0.38
Attention to your mental or emotional health (PCMH)	0.17
Talking about medication decisions (PCMH)	0.52

Note: All correlations are statistically significant ($p < .01$). Data for analyses came from 714 practice sites that administered the Clinician & Group PCMH Survey 2.0.

5.A.3.c. Creating a Priority Matrix

One very useful way to hone in on areas for improvement is to plot a "priority matrix" that graphically displays relative performance on the composite measures along with the relative "importance" of the composite measure as it relates to an overall rating of care.

Using an example based on the CG-CAHPS survey with PCMH supplemental items (shown in Figure 5-6), a priority matrix plots the following two variables:

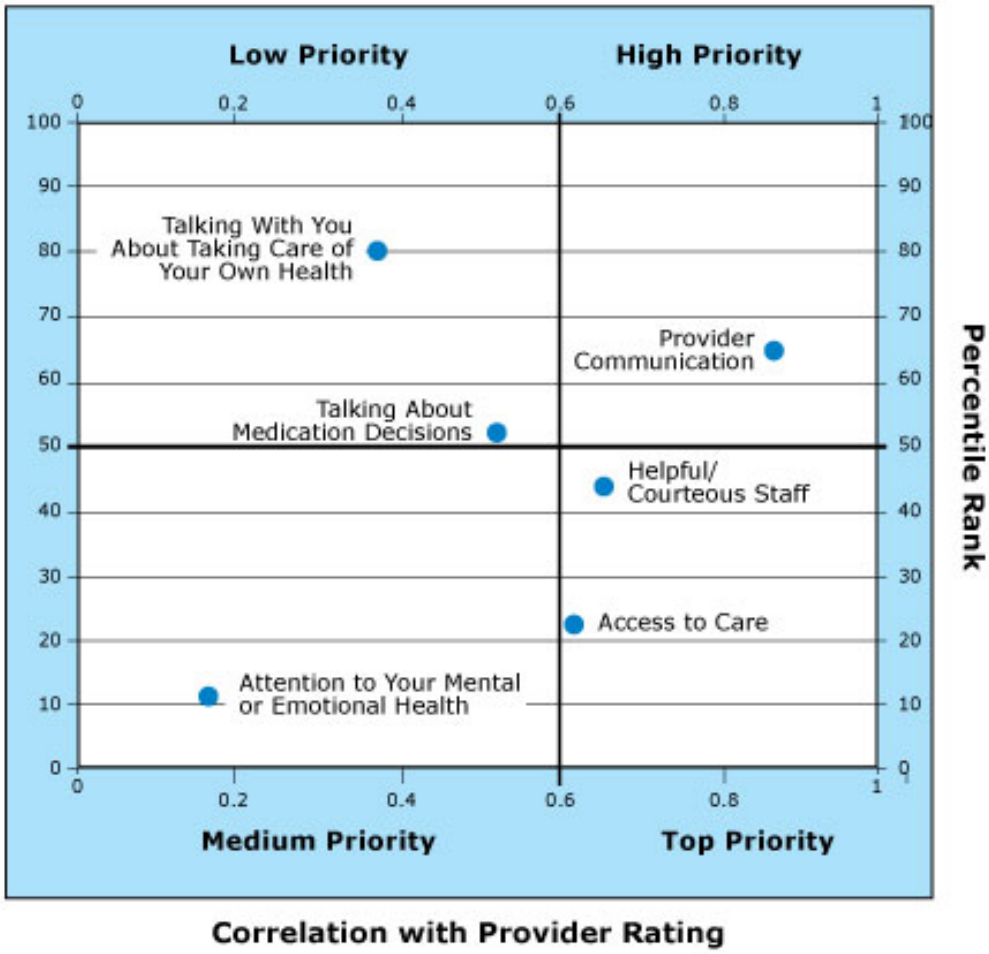
Relative *Performance* on the Y-Axis. On the Y-axis, the chart displays where the practice site's scores stand in relation to all other practices included in the survey. That is, scores below the "50" line denote measures for which the practice's performance is below the 50th percentile, and those above the 50 line denote measures for which the practice's performance is above the 50th percentile.

Relative *Importance* on the X-Axis. On the X-axis, the chart shows the relationship between each survey measure and patients' overall rating of the provider, as measured by the correlation coefficient discussed above. The further to the right a measure is on the chart, the more strongly it is associated with the provider rating. The vertical line at 0.6 illustrates one way to differentiate higher and lower correlations, as correlations at or above 0.6 signify a strong association.

Combining these two pieces of information into a matrix, as shown in Figure 5-6, can help you identify priority areas for improvement in the practice. For example, measures in the bottom right quadrant reflect those that should probably be the highest priorities for improvement in that they are both important to patients (as revealed by high correlations with patients' rating of the provider) and areas in which the practice performed below the 50th percentile. The other quadrants convey similar information about how the practice performed on each aspect of care and the relative importance of this area to patients. Note that Figure 5-6 is an illustrative example; where you choose to place the lines to form the quadrants should be based on your own goals and priorities.

These kinds of analyses and graphical representations of relationships are not difficult to do, but they do require time and access to analytical support. Many survey vendors are capable of providing these services as part of the CAHPS data collection and reporting process.

Figure 5-6. Priority Matrix for a Sample Practice Site



5.B. Analyze Other Sources of Information for Related Information

Once you have compared your CAHPS scores to your previous scores and/or relevant benchmarks (e.g., national, regional, or other comparison group of interest), you may want to review related information to confirm your findings and identify steps you could take to improve patient experience. Sources of information that could be helpful for this purpose include complaints and compliments, patients' comments, and administrative data.

Health plans and providers typically have access to or can easily gather various types of administrative data that you can "mine" to determine which performance issues may be affecting your CAHPS scores. Examples of sources of administrative data include:

- Telephone logs
- Employee work hours
- Visit appointment records

The types of data you choose to use for further analysis will depend on the issues you identified when examining your CAHPS results. For example, if you are interested in improving patients' experiences in getting appointments when needed, you could:

- Examine visit appointment records to assess missed appointments.
- Analyze telephone logs to assess how many dropped calls or failed appointment queries occurred.
- Analyze visit appointment records to determine the amount of time between scheduling an appointment and the actual appointment date.
- Search your complaint records and tabulate the number of complaints received about appointment problems.

5.C. Evaluate the Process of Care Delivery

If it is not clear why you are doing well on some CAHPS survey measures and not so well on others, you may need more detailed information to help you identify actions that can improve patient experience in specific areas. To get that information, you need to go beyond the survey results to do some additional analyses targeted at one or more specific topics addressed by the survey items or composites. The purpose of these analyses is to "drill down" to find very specific, underlying performance problems that are actionable—i.e., that you can change through quality improvement activities.

Consider a clinical practice whose score for the Access composite "Getting timely appointments, care, and information" is lower than average. An initial analysis of this practice's survey scores may find that a key driver of the composite score was a low score on this survey question: *"When you made an appointment for a check-up or routine care, how often did you get an appointment as soon as you thought you needed?"*

Why might patients be having trouble getting a timely appointment for check-ups or routine care? Various operational issues in the practice could contribute to this problem:

- The physicians may not be available sufficient hours to handle all the patients served by the practice.
- Problems in scheduling appointments may have a seasonal pattern related to when physicians take vacations or are otherwise not available.
- Routine appointments may be bumped frequently by last-minute emergency visits.
- Limitations of office hours may make it difficult to find visit times that are convenient for patients.
- The staff working on the appointment calendar may not be interacting well with patients to identify their needs and priorities.

This section uses this example to explore several tools and techniques you can use to examine the underlying causes of performance problems revealed by survey results. Although some of these approaches were developed for use in industrial settings, they apply equally well to health care.

- Root cause analysis
- Process mapping
- Process observation (including shadowing)
- Walkthroughs
- Small-scale surveys

5.C.1. Root Cause Analysis

Root cause analysis, also called "5 Whys," is a method for identifying the root causes of a problem and determining the relationship among different root causes. Repeatedly asking the question "Why" peels away the layers of issues to uncover the fundamental source of a problem. You may find that you will need to ask "why" fewer or more times than five to reach a conclusion. This tool, which does not involve a statistical hypothesis or analysis, is most useful when problems involve human factors or interactions.

Use the following steps to complete a root cause analysis:

Step 1: Write down the specific problem. Articulating the issue in writing helps you formalize the problem and describe it completely. It also helps everyone on the improvement team focus on the same problem.

> *Example of a problem:* A medical practice has received low CAHPS scores for the item on getting an appointment scheduled as soon as patients would like. It also is receiving a large number of complaints from patients on this issue.

Step 2: Ask why the problem happens and write the answer down below the problem.

> *Why? (#1):* There are not sufficient times available on the calendar for scheduling the number of patients calling in a timely manner.

Step 3: If the answer you just provided does not identify the root cause of the problem that you wrote down in step 1, **ask why again** and write that answer down.

> *Why? (#2):* The practice only has office hours 4 days a week and is not open on Saturdays.

Step 4: Loop back to step 3 until the team is in agreement that the problem's root cause is identified.

> *Why? (#3):* The physicians in the practice are not willing to work on Saturdays, and many of them are not always available to see patients for all of the weekday hours.

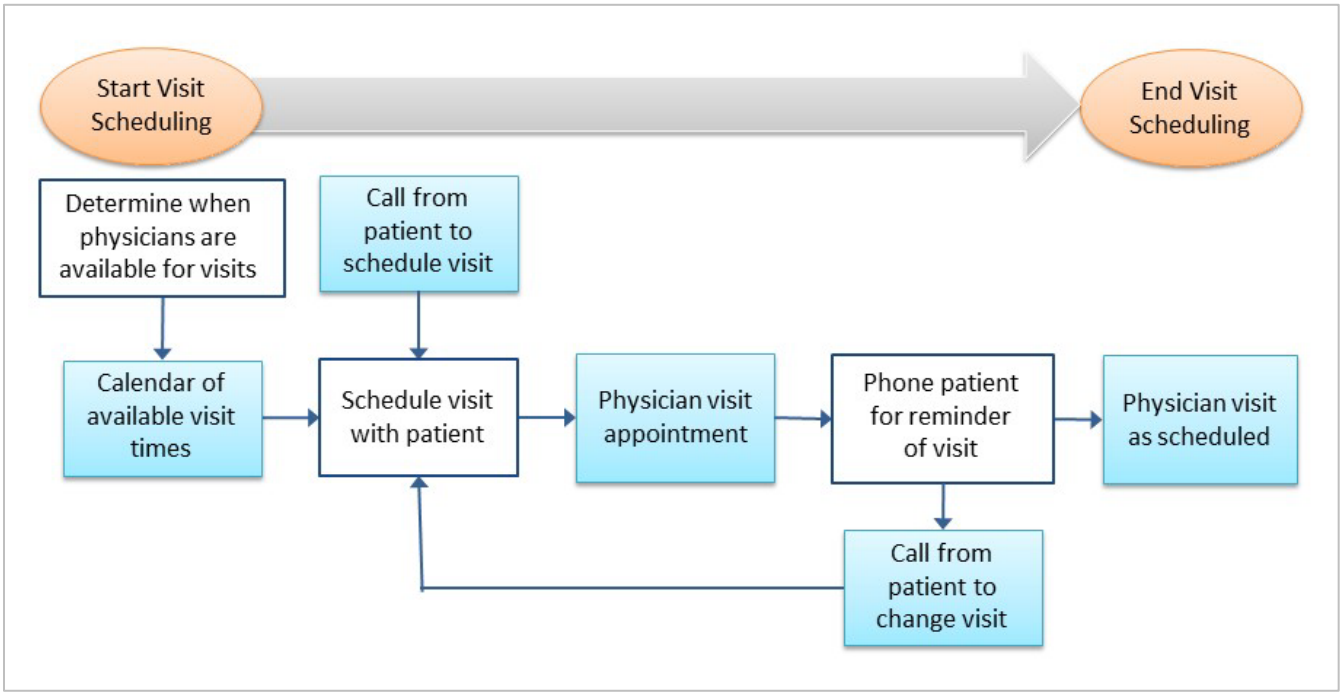
5.C.2. Process Mapping

To figure out how to improve a process, it helps to map it. A process map is a picture or flow chart showing the steps involved in transforming the inputs into the outputs of the process. For example, the practice in the example above would list each step involved in scheduling appointments for routine care. The chart seen in Figure 5-7 shows a simple process map for an appointment process in a medical practice. It includes:

- The process steps (best described using nouns [blue boxes]),
- The activities between the steps (best described using verbs [white boxes]), and
- For each activity, the inputs and outputs involved (arrows).[1]

[1] Cousins M. *Follow the Map2003*; 2003. Available at: http://saferpak.com/process_mapping_art2.htm. Accessed on August 2010.

Figure 5-7. Process map of a physician visit appointment



You can choose from a variety of formats for preparing your process map. But within any given process map, use consistent symbols for each type of process component, such as process steps, activities, and decision steps. This will support clear communication among participants as you develop and work with the process map to guide improvement decisions. Learn more about developing this kind of picture at http://saferpak.com/flowchart_articles/howto_flowchart.pdf.

Process mapping can address two aspects of process improvement:

- Developing an initial understanding of how things are done currently. It is critical to start by depicting the process the way it really works, not the way you think it should work.
- Examining and testing alternative changes to improve the process.

For best results, this method needs to be accurate and fast; it should also involve a high degree of staff ownership as well as input from patients or enrollees who can provide their perspective on what really happens.

5.C.2.a. Steps in Developing a Process Map

- **Start with the big picture.** Draw a macro-level process first, after which you may want to develop other diagrams with increased levels of detail. For example, you could develop a more detailed process map of the "Call from patient to

schedule a visit" to understand the steps a patient goes through with your phone system to make an appointment.

- **Observe the current process.** Walk through the current process, observing it in actual operation. (Read about walkthroughs and shadowing below.)
- **Record the process steps you observed.** Document the steps as they actually occur. Start by writing the steps separately on index cards or sticky notes.
- **Arrange the sequence of steps.** Lay out the cards or sticky notes exactly as you observed the steps. Using cards lets you rearrange the steps without erasing and redrawing and prevents you from discarding ideas simply because it is too much work to redraw the diagram.
- **Draw the final process map.** Depict the process exactly as you observed, recorded, and arranged the sequence of steps.

5.C.2.b. Common Weaknesses of Process Maps

Take steps to avoid and correct for these common pitfalls that can interfere with your interpretation and full understanding of the process.

- Those working on the map may have drawn it for the process as they envision it, not as it really is.
- People may be reluctant to depict the obviously illogical parts of the process for fear they will be asked to explain why things have been working that way.
- Rework loops are either not seen or not documented because people assume rework is small and inevitable.
- The people drawing the map do not really know how the process works.

Resources for Process Maps

- Cousins M. *Follow the Map; 2003*. Available at: http://saferpak.com/process_mapping_art2.htm. Accessed August 2010.
- *Basic Tools for Quality Improvement: Flowchart*. Available at: http://saferpak.com/flowchart_articles/howto_flowchart.pdf. Accessed August 2010.
- Damelio R. *The basics of process mapping*. Quality Resources; 2007.
- Galloway D. *Mapping work processes*. ASQ Quality Press, 1994.

5.C.3. Process Observation

Process observation is a way of confirming exactly what is happening during any particular process. It allows you to gather useful information about almost any process, activity, or human behaviors that you can use to refine your process map as well as to help uncover issues that are compromising the effectiveness of the process.

Often you will not be able to observe all relevant activities by people, location, or over time, so you can observe only a sample of activities. If you sample, consider how important it is to have a probability sample, which would allow you to generalize to the entire process.

5.C.3.a. Methods of Observation

To choose an observation method, start by answering these questions:

- What do you want to learn from the observation?
- What will the users/stakeholders view as credible and useful information?

You may use either structured or unstructured observation methods, depending on the type of information you want to collect.

- **Structured observation** looks for certain things that have already been identified and can be tracked in a preset guide, checklist, or rating scales. This method generates quantitative data from frequency counts, rankings, and ratings.
- **Unstructured observation** looks at what is happening in a process or activity without confining the observer to preset items. The observed activities are recorded during the observation period, which produces qualitative data.

Questions and Answers About Process Observation

When is observation most useful?
Observation is useful when:

- You want direct information on a process.
- You are trying to understand an ongoing process.
- Physical evidence, products, or outcomes of a process can be seen readily.
- Written or other data collection procedures seem inappropriate.

Who should do the observing? Your observers should be neutral parties. They should not be someone who has day-to-day contact with people in the process being observed. The observer must pay close attention to capture details well. He or she will also need to discern what is important in the process being observed and help to interpret the meaning of what was observed. Once the observation is complete, you may want to verify it by either having the observer go back to collect more information or asking others to do additional observation to validate the findings.

Should the observer be open about what he or she is doing?
Observations may be either overt or covert, depending on the situation and the purpose of the assessment. Covert observation is helpful because people often behave differently when they know they are being observed. But if you use covert observation, take care that neither the observation nor the resulting report will harm the people being observed.

5.C.3.b. Observation Tools

Several types of tools are available to record observation data. Choose your recording methods—alone or in combination—based on your observation design.

- **Observation guides.** These printed forms provide space for recording observations, which allows for the consistent collection of information across observers or sites. The more detailed you make the guide, the easier it will be to tally results, but the less flexibility it will provide for recording findings.
- **Recording sheets or checklists.** These forms are used to record observation in either yes/no or rating scale formats. They are used when observations are looking for specific items or activities that are easily identified.
- **Field notes.** This tool is the least structured way to record observations. When the observer sees or hears something of import, he or she records it in a narrative, descriptive style, typically in a notebook. Observations should be accompanied by the date, location, and relevant contextual information.
- **Pictures or videos.** The observer can also record pictures or videos, which can be analyzed later and used to illustrate points in a report.

Shadowing the Care Process

Defined as "the real-time, direct observation of every segment of a patient and family's healthcare journey," shadowing offers a low-cost method for health care organizations to view firsthand how each step of the care process is experienced by patients and families. Shadowing can be performed by individuals with only minimal training—including volunteers, summer interns, college students, patient advocates—and is best conducted by those unfamiliar with the care experience in order to bring a fresh and unbiased perspective to the process being observed.

Shadowing starts at the very beginning of the care experience, such as in the parking lot of an ambulatory clinic visit, and follows the patient and/or family member through every "touch point" encountered, from entry to the practice to the end of the visit. Shadowers document the care experience in a field journal, take notes, and are encouraged to engage patients and families in a dialogue about their impressions of and ideas for improving the care experience.

Learn more: PFCC Innovation Center. “Go Shadow” Web site and resources. Available at: http://www.pfcc.org/go-shadow/. Accessed August 1, 2014.

Resources for Process Observation

- Taylor-Powell E, Steele S. *Collecting Evaluation Data: Direct Observation*, G3658-5, University of Wisconsin-Cooperative Extension. Available at: http://learningstore.uwex.edu/assets/pdfs/G3658-5.PDF. Accessed August 11, 2010.
- Nicolson S, Shipstead SG. *Through the looking glass. Observations in the early childhood classroom*. 3rd ed. Upper Saddle River: Merrill Prentice Hall; 2002.

5.C.4. Small-Scale Surveys

A small-scale survey can be used to drill down on the experience behind CAHPS scores or to survey staff about barriers they encounter when trying to schedule patients. You can conduct a small-scale survey with a convenience sample of as few as 10 individuals and usually no more than 100; examples of a convenience sample include:

- All patients who visit a specific clinic on a given day.
- All patients who report a problem scheduling appointments.
- Staff who participated in a specific training exercise.

These kinds of surveys are useful in that they provide information that you can act on or help you to understand what kinds of experiences may be driving your CAHPS scores. For example, one large health system took advantage of its marketing department's online opinion panel to survey 1,000 clinic patients about what "helpfulness" meant to them and what office staff could do to be more helpful.[2] However, it is important to recognize that the results of small-scale surveys are not generalizable to your patient population because they are not based on a scientific sample. That is, they reflect only the experience of the patients you surveyed, who are not representative of your total patient population.

Resources for Small-Scale Surveys

- Fowler FJ. *Survey research methods*. 4th ed. Thousand Oaks: Sage Publications; 2009.
- Gillham B. *Small-scale social survey methods*. London: Continuum International; 2008.

5.D. Gather Input from Stakeholders

Your analysis of performance issues can benefit from good information on the views, experiences, needs, and motivations of the various stakeholders who are involved in or affected by the processes you're addressing. To help identify and examine the causes of your performance problem, consider contacting the relevant stakeholders to find out

[2] Agency for Healthcare Research and Quality. How Two Provider Groups Are Using the CAHPS® Clinician & Group Survey for Quality Improvement. Available at https://www.cahps.ahrq.gov/quality-improvement/reports-and-case-studies/cgcahps-webcast-brief-2014.pdf. Accessed on July 21, 2015.

what they know, how they feel about issues, and their ideas for improvement. Different stakeholders have unique perspectives that you need to consider together to understand the full dynamics involved in delivering and receiving health care and how those dynamics influence patients' experiences with care.

5.D.1. Overview of the Process of Gathering Stakeholder Input

Imagine that an initial analysis of the practice with poor performance on the access composite found that a key driver of the composite score was a low score on this CAHPS question: "*When you made an appointment for a check-up or routine care, how often did you get an appointment as soon as you needed?*" What can you learn from stakeholders about the problems with timely appointments for care and how to fix those problems?

Step 1: Working as a team, identify the groups that are key stakeholders for the CAHPS performance issue you're addressing. Stakeholders can include patients and their family members, physicians, nurses, other clinical personnel, clerical staff, managers of the health care organization, and staff of other involved organizations. You should include groups who are involved in the process (such as nurses) as well as others who are affected by it (such as patients), since both would be affected by any changes you make during quality improvement work. For example, for a problem related to the appointment process, stakeholders may include:

- The physicians in the practice
- The patients who are getting appointments for care
- The office staff who handle the appointment process
- Nursing staff who initiate the office visit with patients
- The office manager who supervises the practice operation

People on the "front line" of care typically have the best understanding of what works well and what doesn't because they live with it every day. However, front-line caregivers sometimes become so accustomed to working in a "broken" system that they accept some problems as inevitable ("just the way it is") when the problems can—and should—be fixed.

Step 2: Develop a list of the topics you want to discuss with the stakeholder groups to learn:

- How the process works
- What they think is wrong with it
- How they think it needs to be improved

Step 3: Use qualitative data collection methods to gather information from people in each of your stakeholder groups. (Read about these methods below.) The exact methods you choose to use will depend on which types of stakeholders you will be talking with, and whether you want to have group discussions or talk separately with individuals.

Step 4: Summarize your findings. With feedback from all your stakeholder groups on each of the topics, you can compare responses to find similarities and differences in views and concerns across the groups.

Step 5: Use the information from the stakeholders to refine your process map and your list of possible issues affecting performance. You can also use this information to help guide strategies and actions for improving performance on the CAHPS measures.

5.D.2. Techniques for Gathering Feedback From Stakeholders

Techniques you can use to gather information from stakeholders on their experiences and views of performance problems include:

- Focus groups
- Semi-structured interviews
- Walkthroughs
- Patient and family advisory councils
- Patient Partners on improvement teams

5.D.2.a. Focus Groups

A focus group is a moderator-led discussion among staff and/or patients that is designed to collect more precise information about a specific problem and new ideas for improvement strategies. This approach allows for in-depth exploration of the drivers of dissatisfaction and can provide excellent ideas for reengineering services.

In addition, videotapes of focus groups can be very effective at changing the attitudes and beliefs of staff members because the participants' stories often bring to life the emotional impact of excellent service as well as service failures.

Resources for Focus Groups

- Krueger RA, Casey MA. *Focus groups: a practical guide for applied research*. Thousand Oaks: Sage Publications; 2000.
- Bader GE, Rossi CA. *Focus groups: a step-by-step guide*. 3rd ed. San Diego: The Bader Group; 2001.

When conducting a focus group, the moderator uses a written topic guide to ensure that the group addresses all key topics in the discussion; another person usually serves as a note taker. The moderator typically uses various techniques during the discussion so that everyone in the group has a chance to speak and discussion among group members takes place. Examples of these techniques include going around the table to ask each person to

give their views on a topic being discussed and specifically asking people who have not said much for their opinions.

5.D.2.b. Semi-Structured Interviews

In contrast to focus groups, interviews allow you to collect a great deal of rich, detailed information on the experience of an individual. They also offer greater flexibility in terms of the order in which topics are discussed. Interviews are also useful when you want to:

- Collect information that is not influenced by the opinions of others in a group discussion.
- Collect information from staff that is not influenced by the presence of supervisors or managers.

Semi-structured interviews are conducted one-on-one or in groups of no more than three people. The interviewer typically uses a topic guide and is accompanied by a note taker.

Resource for Semi-Structured Interviews

- Lindloff TR, Taylor BC. *Qualitative communication research methods*. 2nd ed. Thousand Oaks: Sage Publications; 2002.

5.D.2.c. Walkthroughs

A walkthrough recreates for clinicians and staff the emotional and physical experiences of being a patient or family member. It is an easy way to give members of your organization the patient's perspective and the fastest way to identify system, flow, and attitude problems. Walkthroughs provide a different perspective and bring to light rules and procedures that may have outlived their usefulness.

How a Walkthrough Works

During a walkthrough, one staff member plays the role of the patient and another accompanies him or her as the family member. They go through a clinic, service, or procedure exactly as a patient and family do. They do everything patients and families are asked to do and they abide by the same rules. They do this openly, not as a mystery patient, and throughout the process ask staff members a series of questions to encourage reflection on the processes or systems of care and to identify improvement opportunities.

The staff conducting the walkthrough take notes to document what they see and how they feel during the process. They then share these notes with the leadership of the organization and quality improvement teams to help develop improvement plans. For many who do this, it is the first time they have ever entered their clinics, procedure rooms, or labs as the patient and family do. Clinicians are routinely surprised about how easy it is to hear staff comments about patients from public areas and waiting rooms. Walkthroughs usually turn up many problems with flow, signage, and wasteful procedures and policies that can be fixed almost immediately.

A walkthrough is similar to shadowing (discussed in *Process Observation*), where a staff member asks permission to accompany a patient through the visit and take notes on the patient's experience. Since shadowing does not require taking a slot away from a real patient, it can be useful in settings where visits are at a premium.

Tips on Conducting a Walkthrough

- **Let the staff know in advance that you will be doing this walkthrough.** As a result of this warning, they will probably be on their best behavior. However, experience suggests that it is far better to have them part of the process than to go behind their backs. Ask them not to give you special treatment.
- **Go through the experience just as the patient and family member would.** Call in advance, if the patient would have to. Get dropped off or find a place to park. Try to act as if you have never been there before. Follow the signs. Tell the clerk that you are simulating a patient's experience and that you want to go through whatever a normal patient would have to do (e.g., the check-in process). Actually fill out the forms if there are ones to fill out. Find out how long a patient would typically wait and sit in the waiting room for that amount of time. Wait your turn. Do the same in the examining room. If a patient would undress, you should undress. If a patient does a peak flow meter, you should too. Ask each health care provider to treat you as if you were a real patient. If you are doing a walkthrough of the cardiac catheterization service, hold the sandbags on your leg the required amount of time.
- **As you go through the process, try to put yourself in the patient's (or family member's) position.** Look around as they might. What are they thinking? How do they feel at this moment?
- **At each step, ask the staff to tell you what changes (other than hiring new staff) would make the experience better for the patient and what would make it better for the staff.** Write down their ideas as well as your own, and also write down your feelings. As you do the walkthrough, think about how you would answer the following questions and ask the staff you interact with to answer them when you can:
    - What made you mad today?
    - What took too long?
    - What caused complaints today?
    - What cost too much?
    - What was wasted?
    - What was too complicated?

  - What involved too many people or too many steps?
  - What did you have to do that was just plain silly?
- **Finally, between the two of you (patient and family member), make a list of any issues you identified and any improvements that could be made.** Keep track of the things that can be fixed the next day versus problems that will take longer to remedy.

5.D.2.d. Patient and Family Advisory Councils

You can obtain feedback as well as improvement ideas from patients and families through strategies that engage their participation on an ongoing basis. A Patient and Family Advisory Council is one of the most effective strategies for involving families and patients in the design of care and ensuring that those on the receiving end of health care have a voice in the organization's decision-making process.

A patient and family advisory council can help overcome a common problem that most organizations face when they begin to develop patient-and family-centered processes: They do not have the direct experience of illness or the health care system. Consequently, health care professionals often approach the design process from their own perspective, not the patients' or families'. Improvement committees with the best of intentions may disagree about who understands the needs of the family and patient best. But family members and patients rarely understand professional turf boundaries. Their suggestions are usually inexpensive, straightforward, and easy to implement because they are not bound by the usual rules and sensitivities.

Council responsibilities may include input into or involvement in:

- Program development, implementation, and evaluation;
- Planning for major renovation or the design of a new building or services;
- Staff selection and training;
- Marketing the plan's or practice's services;
- Participation in staff orientation and in-service training programs; and
- Design of new materials or tools that support the doctor-patient relationship.

While councils can play many roles they do not function as boards, nor do they have fiduciary responsibility for the organization.

Tips for Starting a Patient and Family Advisory Council

- **Recruitment:** You can start with members that are recommended by staff. Look for people who:
  - Can listen and respect different opinions.
  - Are supportive of the institution's mission.
  - Are constructive with their input. Staff members will frequently describe good council members as people who know how to provide "constructive critiques."
  - Are comfortable speaking to groups and in front of professionals.
- **Size:** Depending on the size of the organization, most councils have between 12 and 30 patient or family members and 3 or 4 members from the staff of the organization.
- **Time commitment**: The council members are usually asked to commit to one 2- to 3-hour meeting a month, usually over dinner, and participation on one committee. Most councils start off with one-year terms for all members to allow for graceful departures in case a member is not well suited for the council.

Resources for Patient and Family Advisory Councils

- Webster PD, Johnson B. *Developing and Sustaining a Patient and Family Advisory Council*. Bethesda, MD: Institute for Patient- and Family-Centered Care; 2000.
- *Advancing the Practice of Patient- and Family-Centered Care in Primary Care and Other Ambulatory Settings*. Bethesda, MD: Institute for Patient- and Family-Centered Care. Available at http://www.ipfcc.org/pdf/GettingStarted-AmbulatoryCare.pdf.

5.D.2.e. Patient Partners on Improvement Teams

You can take the strategy of engaging patients in the process of care design and improvement one step further by embedding patients as active partners working together with clinicians and staff on quality improvement teams. This approach, referred to as Patient Partners, recognizes that true patient-centered transformation of care cannot be achieved without enlisting the active involvement of patients in the redesign process. Including patient partners as members of practice improvement teams brings the patient voice and perspective directly into the hard and sometimes messy work of process redesign, and can be an enlightening and rewarding experience for patients, clinicians, and staff alike.

Example: Patient Partners in Humboldt County, California

The Patient Partners strategy was pioneered by the Aligning Forces Humboldt program in Humboldt County, California, one of sixteen community alliances in the Robert Wood Johnson Foundation's Aligning Forces for Quality (AF4Q) program. The Patient Partners program grew out of the alliance's Primary Care Renewal (PCR) collaborative, which was focused on the patient-centered medical home model. Collaborative leaders recognized that true patient-centered transformation of primary care could not be achieved without enlisting the active involvement of patients in the practice redesign process. Including Patient Partners as members of practice improvement teams therefore became a mandatory part of the collaborative process.

Improvement teams at each practice typically include at least one physician, nursing and office staff, and two Patient Partners. Patient Partners receive training for their role on practice improvement teams. Each team is assigned a practice coach from the Humboldt-Del Norte Independent Practice Association (IPA) to help plan and conduct team meetings and to assist in the improvement process. The practice teams meet individually on a regular basis and together at collaborative meetings.

Alliance staff meet separately with the Patient Partners prior to the full collaborative meetings to help prepare them to participate effectively and hold other meetings with just Patient Partners to refresh their training, debrief together, and share lessons learned. A case study evaluation of the program found strong evidence that engaging patients directly in the quality improvement process yielded many perceived benefits to the practices as well as to the patients involved.

Tips for Integrating Patient Partners on Improvement Teams

- Determine how often patients will attend improvement team meetings. Some practices have meetings twice a month and integrate patients into one of the meetings. This leaves one meeting to discuss business-related issues that the practice may not be ready to share with patients. However, this approach may also create discontinuity between meetings and make it difficult for patients to follow unless meeting agenda topics do not cross between meetings, which may be difficult to achieve.
- Select two or three patients that can commit to attend the QI team meetings regularly and can provide “constructive criticism” and input to the team. Practices implementing this approach typically ask patients to make at least a 1-year commitment to being a Patient Partner.
- Create an environment where the patients are encouraged to participate and share positive and negative thoughts and experiences.

- Provide some background and training in quality improvement (QI) for Patient Partners. While Patient Partners are experts at representing the patients' perspective of the practice, they may not be familiar with QI processes, interpreting standard QI data reports, and commonly used acronyms.
- In order to make the meeting time most productive, provide some advance preparation to the Patient Partners. Many practices that have integrated Patient Partners have received support from community collaborative organizations, such as special training sessions to help them prepare for their new roles.
- Give the Patient Partners the same kinds of tasks and activities that staff members would do. For example, Patient Partners can be valuable in doing walkthroughs and conducting interviews with other patients. Similarly, give Patient Partners the ability to add issues to the team's agenda. They may identify issues from the patient perspective that staff do not recognize as problems.

Resources for Patient Partners

- *Engaging Patients in Improving Ambulatory Care*. Washington, DC: Aligning Forces for Quality; 2013. http://www.rwjf.org/en/library/research/2013/03/engaging-patients-in-improving-ambulatory-care.html. Accessed July 10, 2015.
- Roseman D, Osborne-Stafsnes J, Amy CH, et al. Early lessons from four 'Aligning Forces For Quality' communities bolster the case for patient-centered care. *Health Aff* 2013;32(2):232-41.