One of the most useful tools for prioritizing your customer service activities is a Key Driver Analysis. Your key drivers are displayed as graphs located on PRC’s web site, https://www.PRCEasyView.com/vanderbilt. The following are frequently asked questions on how to interpret and use key drivers.

1. What is the purpose of key drivers?

PRC provides Key Drivers to help you prioritize your activities. Managers want to increase satisfaction scores, but often do not know where to start. A typical patient satisfaction survey has 25 – 30 questions, and not every issue can be the top priority. The Key Drivers help you know which key issues asked on the questionnaire, most strongly predict, or “drive” how your patients will respond to the Overall Quality of Care question. Another way to think about it, is to say, key drivers tell you what is most influential in your patients’ perception of overall quality…. Key drivers represent HOW patients evaluate quality of care in your area.

2. How does PRC determine my key drivers?

Key Drivers are derived using one of two statistical analyses called Stepwise Multiple Regression, or Discriminant Analysis. In both analyses, we use the Overall Quality of Care question as the “dependent” variable. All of the other questions that are asked on our survey are “independent” variables. In the analysis, we are able to tell which independent variables (that is, which survey questions) are most predictive of responses for the “dependent” variable, Overall Quality of Care.

3. How often do you re-analyze key drivers?

We typically provide Key Drivers annually, based on the calendar year or fiscal year (depending on the preference of the client). For our new clients, we do an initial key driver analysis using the first quarter of data so they have a set of priorities with which to work; initial Key Drivers are analyzed using the Stepwise Multiple Regression method. When we repeat the analysis every year thereafter, we primarily use the Discriminant Analysis.

4. What is the difference between the Stepwise Multiple Regression and Discriminant Analysis for analyzing Key Drivers?

The outcome, which is a list of priorities for understanding what “drives” your patients’ perception of quality, is exactly the same. With both analyses, the manager learns what issue(s) is most predictive of how their patients answered the Overall Quality of Care question. The Stepwise Multiple Regression uses the mean score for the analysis, and is conducted after the first quarter so the maximum number of patient records can be used. The Discriminant Analysis focuses on the patients who answered “excellent,” and identifies which issue(s) is most influential in their answer.

5. Does every unit get a Discriminant Analysis annually?

Only units or segments of the research that have an adequate number of responses in their sample can use the Discriminant Analysis. Units or segments that do not have a large enough sample will still receive annual Key Drivers, but the analysis will be based on mean score. The information received in a Key Driver analysis, regardless of the method of analysis, is still the same, and should be used the same way.
6. **Why don't we get new key drivers each quarter?**

One of the primary reasons you do not see key drivers changing every quarter is that typically, managers use key drivers to set their annual goals/objectives. It would be very hard to focus nurses and staff members on a new priority every quarter. Also, our clients tell us that it typically takes six months to a year to completely change underlying problems that affect an issue, by the time you identify the root causes, construct solutions, test the solutions, and then implement the solutions on a wider scale. Finally, because nursing units typically have 50 interviews per quarter, the regression analysis based on a quarter is not as strong a statistical model as the 200 interviews at the end of the year.

7. **Does the order of key drivers matter?**

Yes. Key driver #1 is listed first for a reason. In the statistical analysis, the first key driver is the issue that is most highly correlated to Overall Quality of Care; therefore, it has the greatest potential to impact Overall Quality of Care perceptions.

8. **What if I'd rather work on key driver #3 than spend time on key driver #1?**

Key drivers #2 and #3 do not, *by themselves*, have as much of an impact on Overall Quality of Care as key driver #1. This is because a regression does not simply list the top three correlated questions. Rather, it lists those three questions, which when improved in tandem, have the greatest statistical impact on Overall Quality of Care. The affect of key drivers 2 and 3 are “cumulative,” that is to say, they have impact on overall quality of care only when altered in conjunction with the first key driver.

A way to understand this cumulative relationship among variables it to think about health status issues that have been statistically proven to be predictors of a heart attack. A patient may have hypertension, which may be his greatest predictor of the heart attack. That would be like key driver #1. However, if the patient is obese, that second condition compounds the first, and increases the potential to predict a heart attack. Then, if the patient also has lots of stress in his life, the cumulative effect of these variables causes the patient to be at even greater risk. If the patient only addressed issue #3 (stress), but didn’t pay attention to treating his hypertension or losing weight, he most likely has not reduced the likelihood of a heart attack by much at all. Your key drivers work the same way. If you do not pay attention to key driver #1, you won’t get much return for your efforts on the Overall Quality of Care question.

9. **Several questions that I would have thought were important do not show up as key drivers – Why?**

This question is related to the issue discussed above. When a regression analysis is done, every question is analyzed for its correlation with every other question; that is, they are “inter-correlated.” Therefore, when the statistical analysis process identifies key driver #1 as the question most important to the patient’s perception of Overall Quality of Care, it also has identified which other questions are highly correlated to key driver #1. Because of this strong correlation, these other issues typically are affected by changes in the scores of key driver #1. One way to think about this is to imagine these other issues riding on the “coat-tails” of key driver #1. So, since the analysis is to find those things, which when addressed in order of importance, most affect Overall Quality of Care, some of those other questions are left out because, by addressing key driver #1, you most likely address related issues, too. Another way to think about this is to see key driver #1 as representative of a tier of issues, key driver #2 representing a second tier, etc. This emphasizes the importance of turning your attentions first, toward key driver #1.
10. **Why not just do an analysis that lists the correlation coefficients for each question?**

A correlation coefficient analysis doesn’t help you prioritize. Typically, you will find that all (or, almost all) of the questions correlate to Overall Quality of Care at a minimum of .4, which is considered the statistical threshold for a correlative relationship. Then, when you look at each question, the differences between the .54 correlation for question 22, and the .56 correlation for question 18, and the .58 correlation for question 15 are minimal at best. According to a basic correlation analysis, EVERYTHING ends up being a priority… and you can’t realistically function that way. The regression analysis behind your Key Drivers weeds out the inter-correlated issues so as to give you the aspects of care which, when improved or attended to, give you the greatest return on your efforts.

11. **Should I set up a process improvement initiative for each of my key drivers?**

Not necessarily. Remember, key drivers are not necessarily a list of those things you do the worst, and are not necessarily the things you do the best. Rather, they are those aspects of care most important in your patients’ perception of quality. So, it can certainly be the case that your key driver #1 is highly predictive of their high Overall Quality of Care scores because it is something you do really well. An important note here… If you do really well on key driver #1, DO NOT MERELY MOVE ON TO ADDRESS KEY DRIVER #2. Too many hospital managers think the only actions that matter are those that focus on improvement, and they miss the opportunity to capitalize on what they are doing well. If you’re doing well in key driver #1, look for ways to get some mileage from it. Make sure your marketing efforts focus on your strengths, give your staff talking points to communicate that what it is patients really value, is also what you’re known as the experts in delivering. Once you’ve gotten some “bang for your buck” on key driver #1 (and you’re itching to have a process improvement program in the hopper), then move on to #2 and #3.

12. **How do I know where to begin, when attempting to improve on key drivers?**

There are a few things you can do without leaving your computer desk. Since 2001, PRC has been asking our top performing hospitals what initiatives they’ve implemented to cause their patients to give the raving reviews. Beside the key driver graphs located on your key drivers home page, there may be two icons. The first is a “Top 10%” icon. This links you to the hospital contact person for those hospitals that scored in the top 10% of our database. (Note, we only list those who give us permission, so not all show up… but you'll have a good list to get you pointed in the right direction.) You can solicit their input, or have them put you in contact with someone in the hospital who works with the question you’re addressing. The second icon may or may not be present, depending on whether we’ve had a client offer input or ideas. It’s a light bulb that links you to our “Ideas at Work” section. There, you can read a brief summary of what the client did to make a difference in how patients scored them on your key driver question. If you like what you read but want more information, you can also e-mail the contact person who is listed for that hospital.

In addition to what you can learn just by networking with other PRC clients, keep in mind that your own staff and your patients themselves can give you immense insight into what is going on behind each satisfaction question. Spend some time brainstorming with your staff on just your key driver question. Identify what they think may go into a patient’s perception. Then consider focus groups with your patients to see what is really underlying their satisfaction.
13. Why is it that the scores for my key drivers no longer follow the same trend as my Overall Quality of Care score?

The regression analysis can only be done using data that is already in place, that is, 2002’s key drivers are derived using 2001 data. For a while, as your internal processes continue to look like they did in 2001, the movement of key driver #1 scores and Overall Quality of Care scores should be very similar. But, as processes begin to change throughout the year, (a new manager comes on, a sour-apple employee leaves, you’ve gotten a new call bell system that has revolutionized things, etc.) the processes you are now measuring may no longer work with the regression model in place. When you inform us of these cases, we re-run the regression after a full quarter’s worth of data is gathered under the new atmosphere or system, and provide a fresh model. If, however, there is only one quarter left in the year, we typically recommend waiting for the end of the year so we can re-do your key drivers at the normal time, and so your staff doesn’t get too many changes in key driver priorities throughout the year; hence making them quite frustrated with those “moving targets.”

14. Are key driver questions the only things that affect Overall Quality of Care scores?

If they were, wouldn’t our jobs be much easier? Unfortunately, there are many factors NOT measured by the patient satisfaction survey that play into their perception of quality of care. It may be how the patient’s mother was treated while visiting (although the patient felt like they got good care), it may be a recent public relations crisis that affects their perception, etc. The top three key drivers typically represent about 50–60% of the variation in how patients answer Overall Quality of Care. Currently, the entire survey typically represents about 70-80% in the variation of the answers found in the Overall Quality of Care question. The other 20-30% of the variation cannot be attributed to anything asked in the survey.

15. Why are my key drivers different from those from another part of the hospital?

When we do a key driver analysis, we take each of the segments that your hospital has identified for us (each nursing unit, outpatient clinic, emergency track, etc.), and conduct individual analyses on each. Obviously, an OB/Gyn patient’s experience is quite different from that of an orthopedic patient… and the processes in place in each respective nursing unit are vastly different. For this reason, each area’s manager is given his or her own, unique set of priorities.

16. It would be easier to undergo a hospital-wide improvement initiative focusing on one thing… Why don’t we just have one set of key drivers for the whole hospital?

A motivated manager can make a lot of positive changes at the grass roots level that may never happen if he or she waited for the hospital-wide committee to agree on a strategy and implement. Health care happens at the bedside, and that’s where changes should start, too. This is why it is important that patient segment have its own set of key drivers. Then, the manager over each area can work on those things unique to his or her setting that can affect Overall Quality of Care perceptions. When each unit does this, it should maximize the potential for increasing the hospitals’ Overall Quality of Care score, hospital-wide.

17. I have some special questions asked only of a select group of patients… Why do these questions not show up as key drivers?

Most likely, these questions are just asked of a small group of the patients (like intensive care questions, for example). The regression is run in such a way that at least 80% of the patients had to answer the question for it to be included in the equation for the analysis. If you only have 30% of the patients answering the question, it would have been excluded.