

## **RAPID CYCLE IMPROVEMENT**

### **Rationale**

Today's society functions at a pace that would never have been believed by our forefathers. The need to see improvement in quality of care is being put under the same pressurized plan for time and change. PRONJ, The Healthcare Quality Improvement Organization of New Jersey, Inc. is committed to working with healthcare professionals to help them respond to these challenges using the most up-to-date quality improvement methods, including techniques required for **rapid cycle quality improvement**. Rapid cycle plans are not just to do things faster, but to do things better.

Historically, quality improvement teams were convened, received available quality data and planned future activities that often included collecting data from a large number of medical records. These activities frequently required multiple meetings over many weeks or months. Unfortunately, all this activity often led to little change in clinical care processes. As a result, team members would often grow disinterested and withdraw from the quality improvement effort. Even when interventions were developed, they were often ineffective in making improvements.

### **Disadvantage of traditional quality improvement methods**

- Usually collect large numbers of records (monthly or quarterly) before planning a change
- Data from long periods of time may make it more difficult to effectively determine what intervention actually caused the change
- Testing ideas for change takes a long time
- If tested intervention is unsuccessful, quality improvement has been delayed

### **Advantages of rapid cycle improvement using small sample size**

- Can test pilot ideas quickly
- Can test ideas for change side by side with existing process
- Can test many ideas
- Provides opportunity for "failures" without impacting performance
- Minimizes resistance upon implementation of successful changes

### **Where do we start?**

Three fundamental questions must be asked:

- What are we trying to accomplish?
- How will we know that a change is an improvement?
- What changes can we make that still result in improvement?



## What are we trying to accomplish?

When we begin to examine the question regarding what are we to accomplish, a team must understand the need to set a clear aim or goal by developing an aim statement. A specific goal must be set at the beginning and it must have a numerical measure. All team members should understand this goal. Groups can be working together thinking they share common objectives only to discover later that many had not shared some assumptions with the group. Working through these assumptions at the beginning is a must. This will assist the team when other side issues are being addressed and focus begins to wander from the true goal. Reminding the team of the aim statement will bring the group back on track.

## How will we know that a change is an improvement?

The measurement of data is the only way to ensure that changes put into place are actually improvements. Teams should consider the following points when collecting data:

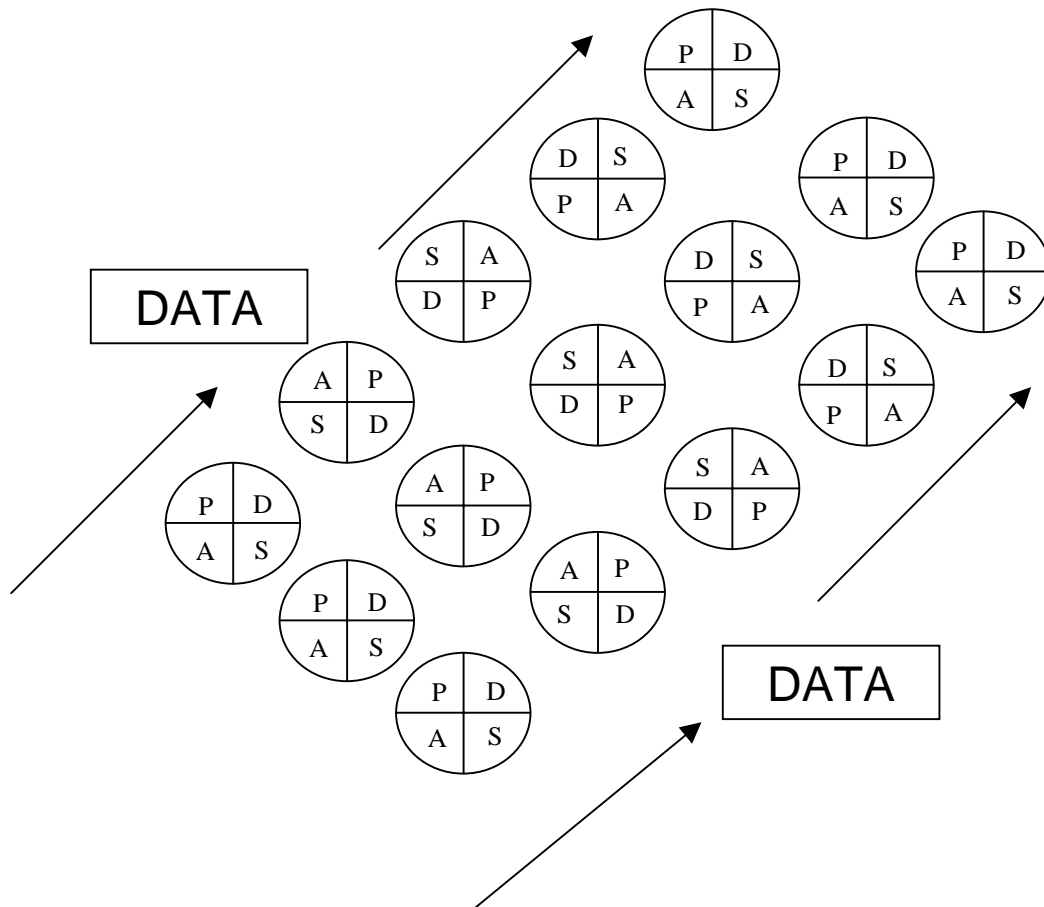
- Do not wait for formal baseline data. Measure where you are now. This is not the time to have people become defensive over data. It is common for people in this stage to challenge data instead of focusing on quality improvement efforts.
- Remember the reason a team is working on a project is to improve care, not to set up a perfect measurement system.
- Collect useful data, not perfect data. The purpose of the data is to learn, not to evaluate. Keep it simple.
- Use small sampling as part of the plan to collect the data. Why measure every case when a few records will give you what you need?
- Train those asked to collect data and give them understandable instructions.
- Encourage those that collect data to share physician practice patterns that are noted during the abstraction of data.
- Plot data over time on a run chart.

## What changes can we make that will result in improvement?

- Team members should identify and apply specific changes that have been used in other settings. **Steal shamelessly!**
- Team members should identify and test specific changes that other organizations have found effective. One example is the idea of reducing the time for administration of antibiotics. Many hospitals now have the recommended antibiotics for patients with pneumonia stored in the Emergency Department. Similarly, operating room staff may consider the idea of keeping recommended antibiotics for prophylactic use in the surgical suite. This can speed up the change process, but will still allow teams to include ideas developed by their own members.



- Use multiple cycles of improvement. Teams are usually familiar with the Deming Cycle of Plan/Do/Check/Act now referred to as Plan/Do/Study/Act. This cycle is used in quick, rapid successions. After a change is made, data is collected on a small sample to see if it worked. The change is then adapted, abandoned or adopted, and then another is tested. Multiple small changes are often more effective than trying to make a major improvement with a single change.



- Have those key stakeholders in the process review the proposed change and comment on its feasibility.
- Consider using multiple versions of the same process that are tailor made to fit the needs of different areas in the facility. For example, nurses may draw blood cultures in an Emergency Department, whereas on a general nursing floor, lab technicians may perform this function.
- Small changes should be encouraged. Start with a frame of mind that begins with “what can we change by Wednesday?” Teams can stalemate waiting for the perfect plan or “the grand fix it all” idea. Grand fixes are often developed by a select few and then are given to others that it affects and who must carry it out. Small changes are more likely to be attempted if they can be reversed when or if it does not work out.
- Help stakeholders see themselves as part of the same system working towards the same goal.

**Change is something that is usually resisted by most. This paradigm shift is no different. Be willing to be a pioneer in change.**

