**Benchmarking Dashboards**

Useful Tools for Central Sterile Supply Departments

**LEARNING OBJECTIVES**

1. Discuss the use of benchmarks and dashboards for Central Sterile Supply Departments
2. Review procedures to develop Central Sterile Supply Department Benchmark Development Plans
3. Review how trend and present status information can be presented on a dashboard
4. Explain how to use dashboards for process improvement

**CENTRAL STERILE SUPPLY DEPARTMENT (CSSD) MANAGERS CAN** use benchmarking to improve the quality of products and services they provide while, at the same time, reducing their expenses. Managers who practice benchmarking tactics establish standards of excellence against which activities, products, or even the entire CSSD can be compared. They then use dashboards to manage, track and communicate key elements of the process to stakeholders.

**OBJECTIVE 1: DISCUSS THE USE OF DASHBOARDS AND BENCHMARKS FOR CSSDs**

In general, all aspects of Central Sterile Supply Department (CSSD) can be benchmarked. Managers must determine what should be tracked with an emphasis on their materiel and human resource priorities. Vendors offer benchmarking software, which reports data generated by electronic tracking equipment or processes, and it can be very helpful. However, traditional “paper and pencil” methods of collecting required information with manual counts and the use of an Excel spreadsheet or tally sheet can be used by managers with limited resources.

A list of common CSSD benchmarking measurements includes those relating to:

- Departmental work volumes
- • Departmental mission, goals and objectives
- • Performance improvement projects
- • Best practices
- • Staffing
- • Productivity
- • Budgeting and financial issues

The extent to which benchmarking is used and details are tracked relates to the time and resources available. Effective benchmarking requires that all team members have input to and ownership of the process. The benefits, risks and results of benchmarking should be routinely shared with those who are impacted by the CSSD.

Early considerations when developing a benchmarking and dashboard system involves defining its objectives, purpose and benefits. For example, managers

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may want to use benchmarking to meet the dynamic changes and variances in workload staffing. If so, benchmarking will focus on tray and instrument production relative to labor hours worked. After sharing the objective (to ensure that instruments are processed in a timely manner for operating room needs) with employees, the manager would explain the need for staffing levels to complete necessary tasks and meet objectives.

Managers spotlight key elements of important CSSD processes with dashboards that illustrate trends and progress toward goals. A dashboard indicator is like an automobile’s dials and gauges that provide information including speed, engine temperature and amount of available gasoline. Each element of a benchmarking dashboard can use a color-coded indicator to tell the status of the factor being measured. Red indicates a trend that is out of the boundaries of acceptable limits for the element being measured. Yellow and green can indicate that data reveals the element is closer to the desired outcome but still out of compliance. Blue can represent a perfect or the desired outcome.

Dashboard data is normally presented in one of three different formats: an Excel spreadsheet/score card (Figure 1), a graph (Figure 2), or in a pictogram (Figure 3). Note: each format shows the output of trays without error, and this benchmarking example (trays without labeling errors) will be used in this lesson.

Regardless of the dashboard format used, the total number of trays with errors each month is tracked against the total number of trays processed. CSSD team members input information about the number of trays produced and from error reports provided by Operating Room (OR) personnel. Corrective actions are taken, and the data will continue to be collected to determine if changes produce the desired effect of a 100% accuracy rate based on factual historical and present data.

Benchmarking results may help justify additional resources. For example, if another dashboard indicator continually shows decreased availability of instrument trays due to insufficient staffing or processing capability during certain times, the CSSD manager could integrate this critical data into a proposal to justify additional staff and/or equipment. This would increase the request’s credibility because it would be based on facts generated over time, rather than just reflect reaction to isolated events.

**OBJECTIVE 2: REVIEW PROCEDURES TO DEVELOP CSSD BENCHMARK DEVELOPMENT PLANS**

How is dashboard data developed? Let’s find out by continuing with the example of measuring and reporting tray accuracy rates. A benchmark development plan should address: (1) the objective (identified problem), including definitions of trays that are “accurate,” (2) the measurements to be collected, (3) the process for data collection, (4) the formula to be used, (5) how and when the data will be shared, and (6) interventions to attain objectives (correct identified problems).

Here is a sample benchmark development plan for tray errors:

1. Objective (identified problem) – Some trays processed by technicians are not “accurate,” and the CSSD team and its stakeholders agree that the goal will be 100% accurate trays.

2. Measurements – A cross-functional brainstorming team has identified several reasons why trays may not be accurate. One reason is because they are mislabeled, and customers then open incorrect trays. The team decides to measure the number of mislabeled trays along with other possible reasons for errors.

3. Process for data collection – CSSD and OR staff will report all trays “in error” because of improper labeling in a centrally-located tray error log book. The time period for data collection should be determined for the specific project. Let’s assume it will be monthly in our example. At the end of each month, the number of mislabeled trays will be measured against the total number of trays produced, and the percentage of accurate trays will be measured, reported and shared monthly.

4. Formula to calculate accurate trays compared to trays that are in error: Number of mislabeled trays produced + total number of trays produced = % of accurate trays for the month.

5. Information sharing – The results will be included in a dashboard and posted in the CSSD and in its newsletter, and will be shared with the process improvement team, including OR personnel.

6. Proposed interventions to reduce tray labeling errors – Mislabeled trays will be identified and addressed after measurements are taken:
   - Take pictures of trays and place them on inventory sheets to help with tray identification when reprocessing sets.
   - Work with stakeholders to check accuracy of tray labels to match containers, lids and case cart pick
lists. Also check accuracy of labeling of shelving and locator for end user to find correct set.

- Staff education and in-services will be conducted for trays with the greatest number of errors (to include a hands-on “lab” with return demonstration).
- Identify individuals with high error rates and discuss problems during performance counseling meetings to develop correction and improvement plans.

**OBJECTIVE THREE: REVIEW HOW TREND AND PRESENT STATUS INFORMATION CAN BE PRESENTED ON A BENCHMARKING DASHBOARD**

In the example we are reviewing, the CSSD and OR staff have been tracking tray accuracy, as it has been impacted by labeling, for several months. The first measurement was made before implementation of proposed interventions. When reviewing Figure 1, note that January and February fell below the objective of 100% accurately labeled trays, and the dashboard indicator cells for those months are shown in green and red. When the 100% accuracy goal was reached (see June), the cell is blue. Note: data was also collected about tray productivity, trays with missing instruments, trays processed “just-in-time,” and for other factors. Dashboards representing actual results for these were also developed and shared with CSSD, OR and other interested parties.

**OBJECTIVE FOUR: EXPLAIN HOW TO USE BENCHMARKING DASHBOARDS FOR PROCESS IMPROVEMENT**

Based upon the data in Figure 1 that reports mislabeled trays for January and February, interventions proposed by the team were started on March 1, with the goal of 100% accurately labeled trays. The entire team assisted in data collection and the identification of trays with incorrect labels. According to the data for March, the following calculation for accurately labeled trays was shown on the scorecard:

**Calculation:**

\[
\begin{align*}
\text{Label Error} & = \frac{26}{2658} = 0.01 \\
\text{Accuracy} & = 100% \\
\text{Trays Produced} & = 0 \\
\text{Percentage} & = 0%
\end{align*}
\]

Error trays identified: Titanium Small Fragment trays mislabeled as Stainless Steel Small Fragment trays.

Action plan: Schedule a CSSD staff in-service. Show pictures of error trays and compare with correct trays and identify the differences between them. Also, separate the trays on the shelf from side-by-side locations to different shelves to prevent case cart staff from picking the wrong tray.

The interventions begun in March were effective because tray label errors have been reduced to 0.00 (100% accuracy) by June. The information is shared with the team and reported as part of the CSSD’s continuous process improvement efforts. Note: even though accuracy has improved to 100%, measurements will continue because it is important to sustain the improvement by focusing attention on it.

The observation, “if you want to change it, you need to measure it” is a key in the benchmarking process. The data can be collected for several years and compared to the facility’s historical data. If available, the use of “Industry Best Practice” can be included to compare the system results to system data reported. Note: the term “Best Practice” refers to a process that consistently produces better results than are achieved by other means.

**IN CONCLUSION**

Benchmarking, including the use of dashboards, is a useful tool to measure the most important elements that are critical to the team’s success that have been targeted as areas where improvement is needed. Many methods can be used to collect data by facilities, regardless of the level of resources available. Factual data that is easy to understand is a key to decision-making, and the use of dashboards facilitates communication with and the understanding by all CSSD stakeholders.

**ADDITIONAL READING**


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