Run Chart

Improvement takes place over time. Determining if improvement has really happened and if it is lasting requires observing patterns over time. Run charts are graphs of data over time and are one of the single most important tools in performance improvement.

Using run charts has a variety of benefits:

- They help improvement teams formulate aims by depicting how well (or poorly) a process is performing.
- They help in determining when changes are truly improvements by displaying a pattern of data that you can observe as you make changes.
- They give direction as you work on improvement and information about the value of particular changes.

This tool contains:

- Directions for Creating Run Charts
- Sample Run Chart: Cesarean Section Rate

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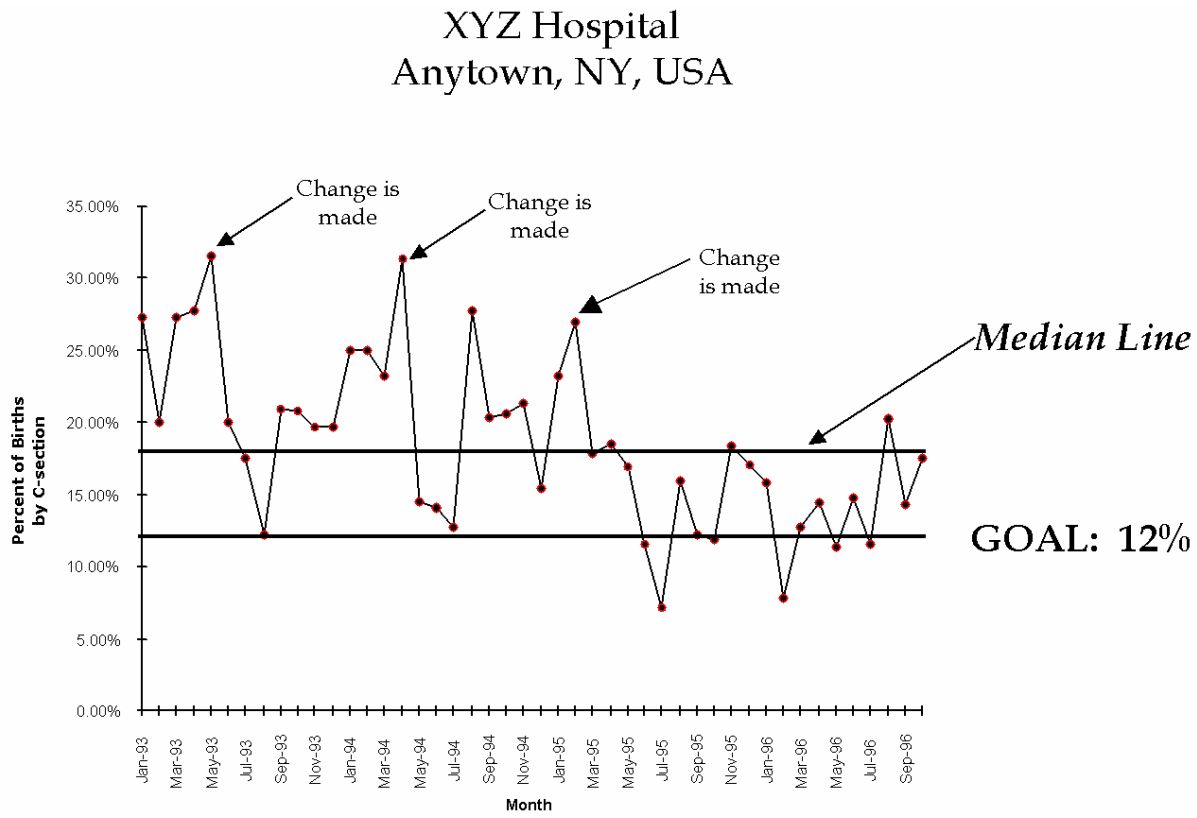
Directions

1. Obtain a set of 15 or more data points in their natural time sequence and plot them in a line graph.
2. Draw the vertical and horizontal axes, leaving room on all sides to title and label the graph.
3. Label the vertical (Y) axis with the name of the number being measured (e.g., Percent of Births by C-section, Number of Days to Third Next Available Appointment, etc.).
4. Label the horizontal (X) axis with the unit of time or sequence in which the numbers were collected (e.g., April, May, June, etc., or Quarter 1, Quarter 2, etc.).
5. Determine the scale of the vertical axis. The scale should extend from a number 20 percent larger than the largest value to a number 20 percent smaller than the smallest value. Label the axis in equal intervals between these two numbers.
6. Plot the data values in the sequence in which they occurred.
7. Draw lines to connect the points on the graph.
8. Calculate the mean (the average) or the median (the data point half way between the highest and the lowest data point) of the plotted numbers and draw the line on the graph. In cases where it is suspected that the data are asymmetrical, the median may be a more appropriate measure of the true middle of the data because the median is less sensitive to extreme values and skewed distributions.
9. Title the chart, and note the goal line and the sample size.
10. Annotate the chart, indicating when tests of change were inititated, so that it is easy to see the effect of changes on the measure. Also indicate any external events that may have affected the performance of the process.

Sample Run Chart: Cesarean Section Rate



Deliveries per month = 350-450