Pareto Chart – Steps for Displaying Data

A Pareto Chart is a bar graph used to arrange information in such a way that priorities for process improvement can be established.

The purposes are to display the relative importance of data elements in a set of data and to direct efforts to the biggest improvement opportunity by highlighting the vital few in contrast to the useful many.

1. **Record the new data –** list each category and its associated data count.
2. **Order the data –** prepare an analysis sheet by putting the categories in order and placing the one with the largest count first.

Category	Frequency	Percent of total	Cumulative %
Wrong dose	100	50	50
Wrong time	70	35	85
Wrong medicine	15	7.5	92.5
Wrong patient	8	4	96.5
Medicine dc'd	4	2	98.5
Missed dose	3	1.5	100
Grand Total	200	100%	100%

3. **Label the left hand vertical axis –** make sure the labels are spaced in equal intervals from zero to a round number equal to or just larger than the total of all counts.
4. **Label the horizontal axis –** make the widths of all the bars the same and label the categories from largest to smallest. An "other" category can be used last to capture several smaller sets of data. Provide a caption to describe them. If the contributor names are long, label the axis A, B, C, etc. and provide a key.
5. **Plot a bar for each category –** the height of each bar should equal the count for that category. The widths of the bars should be identical.
6. **Find the cumulative counts –** each category's cumulative count is the count for that category added to the counts for all larger categories.
7. **Add a cumulative line –** this is optional. Label the right axis from zero to 100% and line up the 100% with the grand total on the left axis. For each category, put a dot as high as the cumulative total and in line with the right edge of that category's bar. Connect all the dots with straight lines.
8. **Add title, legend and date**
9. **Analyze the diagram –** look for the break point on the cumulative percent graph. It can be identified by a marked change in the slope of the graph. This separates the vital few from the trivial many.