Run Chart

What is a Run Chart?

A run chart is used to study collected data for trends or patterns over a specific period of time. A run chart will help you:

- Monitor data over time to detect trends, shift, or cycles
- Compare a measure before and after the implementation of solution to measure impact
- Focus attention on vital changes, not normal variation
- Track useful information for predicting trends

The run chart is a running record of a process over time:

- The vertical axis represents the process being measured
- The horizontal axis represents the units of time by which the measurements are made
- The centerline of the chart is the mean or average

A run is defined as one or more consecutive data points on the same idea of the mean line.

How to create a Run Chart

1. Choose which data you will measure and track

2. Gather data: Generally, collect 20-25 data points, with which you can detect meaningful patterns over time

3. Create a graph on which you can plot your data (Y axis, or vertical line) over time (X axis, or horizontal line)

4. Plot the data

5. Interpret the chart: Focus on the vital changes or meaningful trends/patterns, rather than each and every data variation; keep reading for interpretation tips
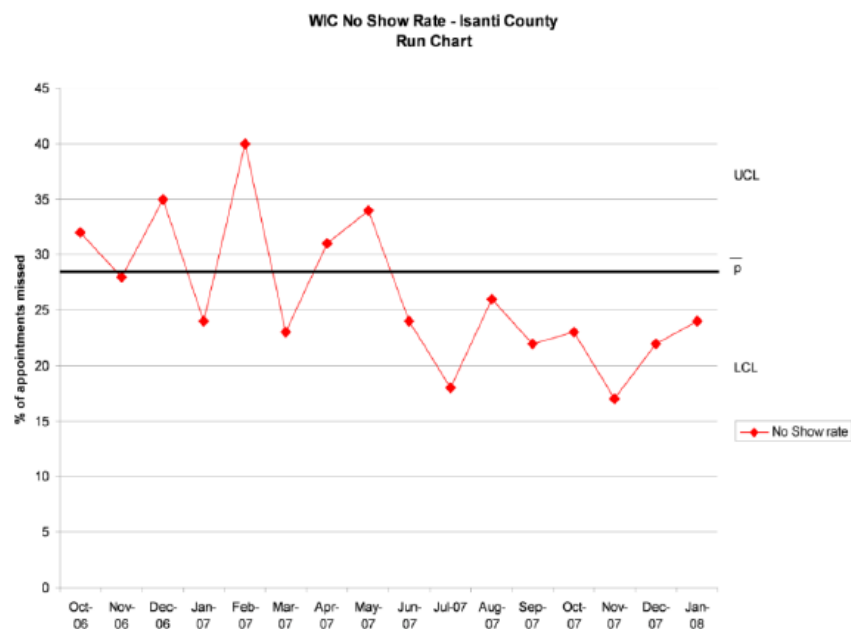
Using a Run Chart to Test for Special Causes

Test #1: The presence of too much or too little variability
Use when there are too few or too many runs.

Test #2: The presence of a shift in the process
A special cause exists if a run contains too many data points (i.e., with 20 or more data points, a run of 8 or more data points is considered "too long"; with less than 20 data points, a run of 7 might also be considered "too long").

Test #3: The presence of a trend
A trend is defined as an unusually long series of consecutive increases or decreases in the data, (usually at least 6 or 7).