# Classic Safety Thermometer Ward Level Dashboard Brief Overview

Run Charts

A run chart is a basic line chart displayed over time. Events and results are graphed on the Y axis **(1)** against a time series on the X axis **(2)**. The centre line **(3)** is a median of all the points on the chart.

The power of run charts lies in the ability to use them to understand the variation in the data you collect. It is not only important to understand the variation between data points, it is also essential that we have a method by which to determine whether the changes we see are out of the ordinary and require further investigation. This is where the median line of the run chart is important. This centre line aids interpretation of the variation we see in the data and clarifies movement of the data away from the central tendency. It also provides us with a sense of where the next data point should fall – somewhere close to the median value.
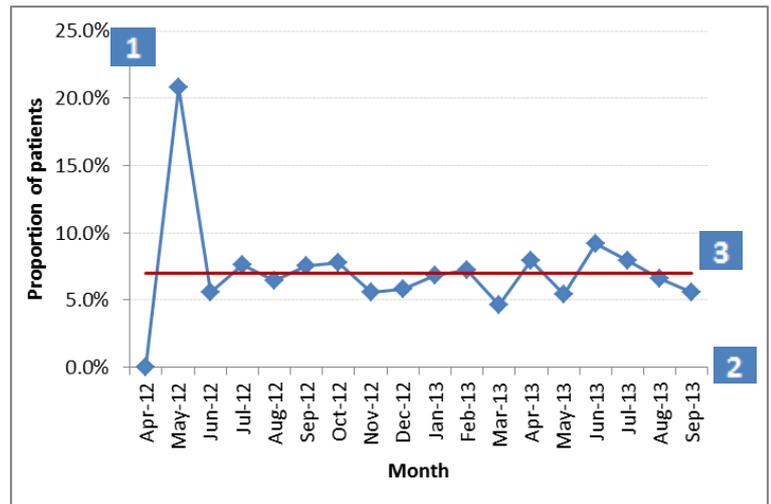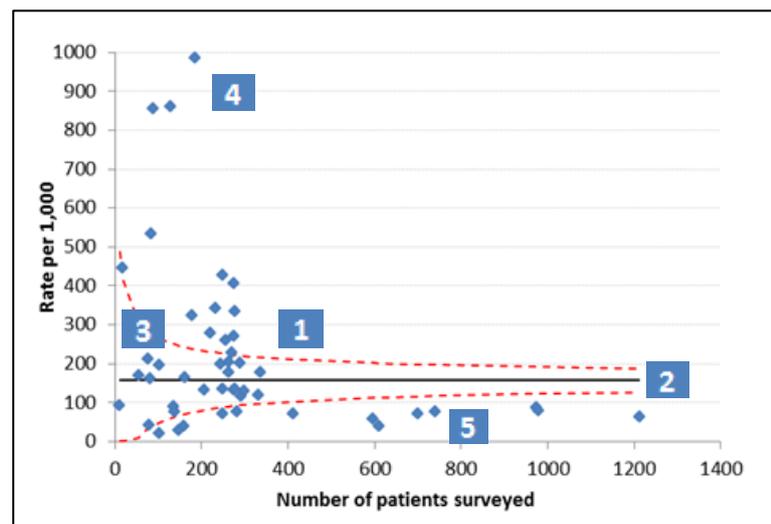

An example of a run chart

Funnel Plots

Funnel plots allow us to view data from multiple sites. They can enable trusts to see their performance relative to other organisations in the NHS. Funnel plots measure the system at a single point in time using data aggregated over time. Funnel plots should not be used for direct comparison between organisations.

Funnel plots show control limits, in a distinctive funnel shape **(1)** and the centre line **(2)**, which is the average. If an organisation lies within the funnel **(3)**, this means it is statistically indistinguishable from the other organisations within the funnel. Points outside the funnel are statistically different and are examples of special cause variation; they are unlikely to be different by chance. Organisations or teams that have a corresponding data point outside the funnel are considered to be outliers; they may be positive **(4)** or negative outliers **(5)**, depending on which direction is desirable. Data points inside the funnel are not considered to be different to the rest of the data points within the funnel and are thus not outliers. Being an outlier isn't necessarily a bad thing, being an outlier (i.e. subject to special cause variation) is context dependent.

An example of a funnel plot

Pareto Analysis Chart

A pareto chart is a bar chart which shows the number of each individual harm alongside a cumulative percentage. Each bar **(1)** represents a harm, the number of harms can be read from the left hand vertical axis **(2)**. The line **(3)** shows cumulative percentage and can read from the right hand side vertical axis **(4)**. This shows the cumulative proportion of the total burden of harm that is accounted by each individual harm that is shown on the X axis **(5)**.

A pareto analysis chart can be used to find out how many harms make up a certain percentage of total harms at your organisation. For example in the pareto chart to the left, the black arrows show that approximately 90% of the total harm burden are accounted by old and new pressure ulcers.