



QI Top Tip: Using Run Charts – Why and how

By Heather Hurst

Edward Tufte said that the act of arranging information becomes an act of insight. By using run charts we are able to arrange information in a way that tells the story of our improvement efforts and teaches us something. It's a visual display of the objectives and success of our project. Its beauty is in its simplicity in telling this story. However, it isn't quite as simple as it appears. There are some key decisions that must be made early on in the project that will ensure your run charts tells the narrative of your story.

One of the first tasks for any project group is to identify your family of measures. This is the data which will tell you if you are ultimately achieving the outcome you want (outcome measure), how your changes are progressing (process measures) and if there are any unintended consequences to your work (balancing measures). Whilst it seems like a lot, all of this information is useful information and if done well supports your decision making. The difficulty here is deciding what is useful information. There aren't any hard and fast rules to this, so to a certain extent the project team has to decide what "feels" right.



When talking about data it is unusual to talk about "gut feelings" or indeed any feelings – however some of the decisions about your data collection will be from your project teams "feeling" about what will be useful. For the Reducing Restrictive Practice for example, we are collecting data on restraint, seclusion and blanket restrictions. We had a detailed discussions about the pro's and cons of collecting fortnightly or monthly data from eclipse. As a team we decided on fortnightly, but there were sound arguments for both. This discussion highlighted some key considerations around how you decide what data to collect to construct your run charts.

Frequency matters. There is a very fine line between not collecting frequently enough and collecting too frequently. Monthly data may be fine for ongoing monitoring, but there are only a few instances when monthly data gives you the close view that you need to read the data for trends and learning within QI. Remember we are using the data to aid decision making so it needs a fast enough turnaround. We may also find that smaller shifts and trends become subsumed within larger pots of data. However, if we collect data too frequently it can become an administrative burden. The numbers may also be so small that you end up with periods of time with little or no data points in them.

The key points to consider are

- 1) If you are putting in the effort to use data, then make sure it's the right data. Identify data that helps your project by illuminating something you are thinking about and tells you if your efforts are making a difference. It's tempting to focus on data that's freely available but may not quite answer your questions. In this instance you should have a data collection plan that balances collecting the data you need *and* is accessible and easy to collate.





- 2) Collect just enough data. When you are adding salt to food you are cooking, you don't need to eat the whole dish to know if you have added enough salt. Same principle applies.
- 3) Use operational definitions to ensure everyone is collecting the same data in the same way. Define the boundaries around who you are counting and who you aren't. For example, does bedroom seclusion count as a seclusion episode or do these need to be in a separate category? Depends on the topic of your project. Once agreed by the project team this needs to be recorded so that you can refer to it later on when your memory of the decision becomes a little fuzzy.

Whilst this may seem like it detracts from the seeming simplicity of run charts the golden thread throughout is the importance of using this information for learning not judgement. If we can collect the right data, it can provide a revelation that moves the project on. Tufte was 100% correct when he described it as an act of insight. You are creating a looking glass and when you look through and see improvement you can once again marvel at the beauty behind a simple run chart.

Remember, the BSMHFT QI team are always happy to support you with this. Just get in contact if you need to discuss your family of measures, or if you have any other queries at BSMHFT.QualityImprovementTeam@NHS.Net.

