HOW TO MAKE YOUR DATA MORE MEANINGFUL

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George Hoare and James Noble

On 23 June 2016, NPC held a seminar about how charities can make their data more meaningful. The event, chaired by **James Newell, Director of Kingston Smith Fundraising and Management**, was part of our seminar series designed to give charities an introduction to impact measurement.

At the event, **James Noble, Deputy Head of Measurement and Evaluation at NPC**, presented an overview of how charities can work with data to make it mean more and do more for their organisations. Delegates then heard from **Gracia McGrath, Chief Executive of Chance UK**, and **Kate Newman, Co-Head of Research, Evidence & Learning, and Sam Moody, Senior Programme Officer at Christian Aid**, who talked about how they have used their data to inform their work.

This brief report highlights the main themes discussed, summarises the advice speakers gave, and draws on the questions and experiences of those who attended. It provides practical advice about how charities can assess their use of data and take steps to make it more meaningful.

What do we mean by meaningful data?

Charities can collect a lot of data—data on their services, their users, and their outputs. This data is only really meaningful if we understand what it tells us about our activities, and can use it to improve our services. Charities can make their data more meaningful through:

- **Better data collection**
- **Better data analysis**
- **Better presentation and visualisation of data**
- **Better application of data**

In this briefing paper, we mainly focus on how charities can improve their data analysis. Data analysis involves comparing your data to other relevant data, adding context and allowing for a whole host of next steps, from further research to programme change. Making your data more meaningful also includes thinking about how data can be visualised and displayed to those within your organisation.

In this paper we focus on quantitative data (or numbers) rather than qualitative data.[1] We also mainly refer to data from service evaluations, although our advice here is equally applicable to other uses of data such as performance management or the analysis of fundraising data.

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[1] Our 2016 report, *Listen and learn: How charities can use qualitative research*, offers guidance on how charities can get the most out of qualitative data.

Why should charities strive for meaningful data?

It takes time, money, and expertise to collect and analyse data. Small charities in particular can find it a challenge to divide limited resources between data collection on the one hand and service delivery on the other hand. For all charities, regardless of their size, there is a trade-off between delivering core activities and checking that they are having the impact we think (or hope) they will. Making your data meaningful means getting the most out of it—and getting the most out of the scarce resources allocated to collecting and analysing it.

'Data analysis can be costly and very time-consuming.'

Gracia McGrath, Chief Executive, Chance UK

Meaningful data allows you to make evidence-informed judgements about what works and what does not. It helps you establish whether your programmes target who you want and have the impact you hope—and then to make decisions that are crucial to improving services.

'If you talk about improving it, you have to measure it.'

Gracia McGrath, Chief Executive, Chance UK

Getting started: Ways to make your data more meaningful

Start simple

Arguably, most insights from quantitative analysis come from the descriptive analysis—the most basic things you can do with data. Descriptive analysis is the process of describing, showing or summarising data in a way that allows important patterns to come through.

Focus on comparisons

Comparison is a key method for social scientists—and it is one of our most powerful tools for impact measurement. In studying how impact varies for different types of users and situations, we learn a lot about what is really going on. There are two basic types of comparisons: comparing your data with data that has been collected before the intervention is delivered (baselining) or with data from other examples or sources (benchmarking). The common method of 'before and after' comparison is a type of baseline comparison.

> **Baselining:** Analysis over time that compares your results to the same data at other time points
>
> **Benchmarking:** Comparing your results to similar data from other sources

… but be careful about using the word 'proof'

It is tempting to think that a before and after comparison that shows your intervention has increased a key variable might actually *prove* that it works. Unfortunately, the real world is very messy and the change you have observed could have been caused by a number of other factors. In other words, you cannot *attribute* the change to your intervention, unless you have removed absolutely all other factors through costly research designs such as randomised control trials. But few charities have the resources or expertise to conduct these types of studies.

A persuasive answer to the right question is a better test of whether your data is meaningful (for more advice on this, see our *Four pillars* paper).

'When talking about data, it's important that we present a persuasive case rather than offering "proof".'

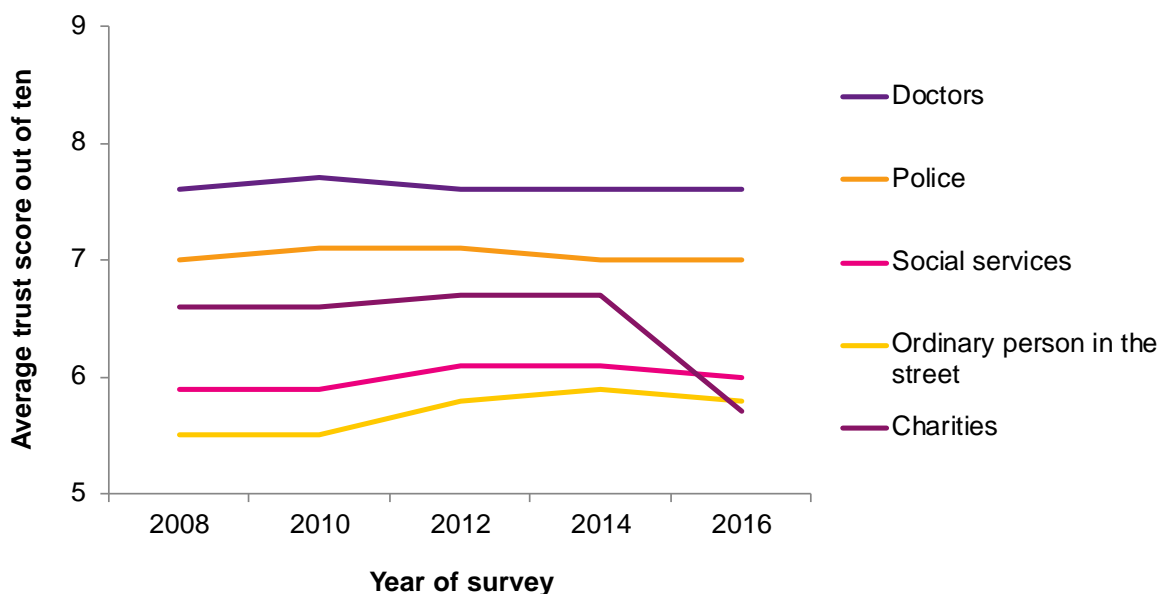**James Noble, NPC**

Begin with baselining

Baselining at its simplest is data analysis over time. It is crucial as it allows us to establish whether a result has increased or decreased, and whether it is stable or volatile. You can make your baselining more useful by:

1. **Ensuring your data collection is consistent**. For example, using validated scales developed and tested by researchers, which means you're measuring according to the same, validated criteria. Equally, checking that people who have taken part in the research at each time point are the same or similar. This reduces the amount of variables, and makes comparison cleaner and more reliable.

2. **Considering alternative explanations, and collecting supporting information to test those explanations if you can**. Could there be another activity or intervention that is causing the changes you see?

3. **Using as many time points as possible, which puts the information into its context.** Using time points from previous years when working with a group of people experiencing homelessness, for example, can help to see how things might have changed. It can help you frame both the context and the results of your intervention.

Consider benchmarking with external data sources

'External benchmarking' is the practice of comparing your data with relevant, similar data from other sources. For example, trust in charities can be placed in the context of trust in other institutions. We can see from the data below—which is from a survey that asked the public to rate groups of people by their trustworthiness—that charities are doing better than say, social services, but worse than doctors. We can also see the volatility of trust in different groups, and how it changes over time (as with the sharp drop off for charities between 2014 and 2015)

Figure 1: Trust in charities and other institutions

Source: Charity Commission (2016), *Public trust and confidence in charities*

The challenge in external benchmarking is often identifying the data available and the sources of information that can allow you to put your data in context. The UK Data Service is a valuable resource in locating external benchmark data.

Give internal benchmarking a go

Internal benchmarking allows you to compare different groups of users. 'Subgroup analysis' is the process of comparing different groups of users in the same dataset—and can reveal interesting and important results. For instance, do men or women have higher levels of trust in charities? What about different social grades or age groups? If we compare these groups we can start to paint a picture of who has particularly high—or particularly low—trust in charities. In the context of an intervention around, for example, engagement in school, this can be a meaningful and usable result: you can learn about and then target users with particularly low levels of engagement.

Case study: Chance UK

Who?

Chance UK was founded in Islington in 1995 to intervene early in the lives of primary school children with behavioural difficulties. It provides a weekly, goal-oriented year-long mentoring programme.

Why?

One challenge for the organisation was to find the right measure to collect baseline data. Chance UK needed a tool that was validated, specific, accessible, and age-appropriate. By using the right tool and comparing baseline and end data, it could provide pointers for programme improvement, give evidence to staff, funders, commissioners and researchers, and gain a depth of insight into its programme.

Key lessons

Use a validated measure: The organisation has been using the Goodman Strengths and Difficulties Questionnaire (SDQ) since 1999 to provide baseline and end data. The SDQ is designed to measure behavioural difficulties, and is free and easy to use. It contains 25 items divided among four 'difficulty' subscales (emotional symptoms, conduct problems, hyperactivity-inattention and peer problems) and one 'strengths' subscale (pro-social behaviour). The SDQ has been the key outcome measure for all Chance UK cases and all major evaluations.

Administer the measure to a range of respondents for a fuller picture: Chance UK administer the SDQ to referrers, parents, children and mentors. In part, this is to offset some possible biases, such as schools having an incentive to say that a pupil's behaviour was bad so that Chance UK would take them on, or parents saying that the behaviour was better than reality due to concerns that their children might be taken into care.

Use the baseline data when delivering the service: One strength of the SDQ is that Chance UK is able to use the subscale scores that the SDQ provides to help staff and mentors identify particular issues and tailor the intervention to accommodate them.

Top tips for meaningful data

Make sure a method is right for your work

External benchmarking against national averages is a useful approach, but is not suitable for all interventions. The method is based on the idea that you can compare the users of your services with another similar group. For instance by comparing GCSE results of young people accessing a tutoring scheme to the national GCSE average. However, many organisations' service users are likely to be significantly different from the data provided by official sources. For example, an organisation that works with students at risk of being excluded is likely to have an exclusion rate among its users that is much higher than the national average, even if it is very successful.

Subgroup analysis can raise important questions

Comparing different user subgroups can reveal areas where you can target your service in the future. However, it can also reveal where the service is running particularly successfully. By focusing on the individuals for whom things have gone well, you can then follow up with qualitative research that asks them what it is about your intervention or their situation that could explain the result.

Case study: Christian Aid

Who?

Christian Aid is a large international development charity that works in partnership with a number of international NGOs to deliver a range of development programmes. They were interested in how they could go from collecting data for other people to using it internally to help their organisation—they wanted to make their data more meaningful by thinking about how they could present and visualise it better.

Why?

Previously Christian Aid collected a lot of data about what programmes they were involved with and where those programmes were based, but did not feel they were getting the most out of it. Specifically, they felt that that their database's interface was too slow and confusing, and that this stopped people accessing the data.

Key lessons

Invest in a custom data visualisation interface: Presenting data in an exciting and accessible manner encourages people to use the data, and consequently to monitor and improve the quality of the data that is being inputted into the system. Christian Aid hired a developer to produce a bespoke system that was easy to use and fitted their requirements.

Investigate free solutions: For those without the resources to invest in this way, data visualisation tools such as Microsoft's Power BI are available. For many organisations, they may be powerful enough to offer a full solution—and even for those that require more customisability they can be a good first step in data visualisation.

Frame data display and visualisation as people-driven: Data analysis tools often do not answer questions but instead provide a way to ask questions or inform which questions an organisation could be asking. Christian Aid framed their overall data strategy as one that started from the difficulties and requirements of staff, ensuring buy-in and a higher rate of use.

Final thoughts

Data as a concept can be intimidating. However, there are some relatively straightforward steps that charities can take to make their data more usable and meaningful. Starting with what you've got, what already exists, and what's right for your organisation are great starting points. And we think the investment is worth it: taking the time to understand what, in your organisation, is working and what needs improving will help make hard work and resources go further, and fundamentally improve the lives of the people charities exist to help.

More in this series

This guide is part of a series developed from NPC seminars to give and introduction to carious aspects of impact measurement. Other topics in this series include:

From our 2016 series with Kingston Smith

Reporting when things don't go to plan

What does good economic analysis look like?

From our 2015 series

Stories and numbers: Collecting the right impact data

Keeping it in proportion: Impact measurement for small charities

Result! What good impact reporting looks like

Measuring your campaigning impact: An introduction

We will soon have new dates and topics for our measurement seminars in 2017, so check the **events section** of our website for the latest information

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Further resources

Kazimirski, A., Harrison-Evans, P. and McLeod, R. (2016) *Balancing act: A guide to proportionate evaluation*. New Philanthropy Capital.

Kazimirski, A. and Pritchard, D. (2014) *Building your measurement framework: NPC's four pillar approach*. New Philanthropy Capital.

McLeod, R. and Noble, J. (2016) *Listen and learn: How charities can use qualitative data*. New Philanthropy Capital.

Noble, J., 'Why charities should collect less impact data' *NPC blog*, 14 August 2015.

TRANSFORMING THE CHARITY SECTOR

NPC is a charity think tank and consultancy which occupies a unique position at the nexus between charities and funders, helping them achieve the greatest impact. We are driven by the values and mission of the charity sector, to which we bring the rigour, clarity and analysis needed to better achieve the outcomes we all seek. We also share the motivations and passion of funders, to which we bring our expertise, experience and track record of success.

Increasing the impact of charities: NPC exists to make charities and social enterprises more successful in achieving their missions. Through rigorous analysis, practical advice and innovative thinking, we make charities' money and energy go further, and help them to achieve the greatest impact.

Increasing the impact of funders: NPC's role is to make funders more successful too. We share the passion funders have for helping charities and changing people's lives. We understand their motivations and their objectives, and we know that giving is more rewarding if it achieves the greatest impact it can.

Strengthening the partnership between charities and funders: NPC's mission is also to bring the two sides of the funding equation together, improving understanding and enhancing their combined impact. We can help funders and those they fund to connect and transform the way they work together to achieve their vision.

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