What types of data are there?

Understanding the effects of their work should be standard practice for all charities, but many find the idea of ‘data’ daunting. Impact data is simply any information a charity can collect to help it understand the impact of its work on its beneficiaries, and on the cause it is trying to tackle.

Broadly, data can be split into two categories:

- **Quantitative data (numbers)** helps answer the questions what, who, where and how many? The results of quantitative data allow you to make numerical statements about the prevalence of views, attitudes and experiences, to measure difference between sample groups over time, and to establish patterns and causal links. Examples of quantitative data include monitoring data and survey data.

- **Qualitative data (stories)** seeks to understand in depth—and in service users’ or stakeholders’ own terms—why and how change happens. This allows you to understand a full range of answers and underpinning factors. Examples of qualitative methods include in-depth interviewing and observation.
Why should you collect different types of data?

‘I have always passionately believed that you need both quantitative and qualitative evidence to effectively test and develop social programmes.’

Ivana La Valle

Quantitative and qualitative methods of data collection are often pitted against each other, but they have different, complementary uses:

<table>
<thead>
<tr>
<th>Quantitative data (numbers)</th>
<th>Qualitative data (stories)</th>
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</thead>
<tbody>
<tr>
<td>• Provides a clear message which is quick and easy to understand.</td>
<td>• Captures complexities of social change—especially for beneficiaries.</td>
</tr>
<tr>
<td>• Helps organisations assign costs and benefits of certain results.</td>
<td>• Provides in-depth understanding of areas where services can be improved.</td>
</tr>
<tr>
<td>• Uncovers links between subgroups of data—for example, how Groups 1 or 2 benefitted from X or Y service.</td>
<td>• Resists reducing information down to its simplest form, offering a greater variety of data.</td>
</tr>
<tr>
<td>• Reduces bias in data through large number of people taking part.</td>
<td>• Produces highly detailed information from a range of stakeholders.</td>
</tr>
</tbody>
</table>

When it comes to charity evaluation, both qualitative and quantitative data should be used side by side, and ideally with equal importance. We think this is best reflected by a saying we have at NPC: ‘no numbers without stories, no stories without numbers’.

‘The relationship between quantitative and qualitative research is an iterative process.’

Matt Barnard, Anna Freud Centre

The process of data collection often necessarily involves both quantitative and qualitative research. When designing quantitative data analysis it is useful to conduct broad qualitative research to understand potential trends you would like to investigate. These categories can then feed into the structure of your quantitative research. Similarly, quantitative research may draw researchers attention to important but unexplained trends amongst service users—why this trend has taken place may only become clear through qualitative investigation.

Getting started: The essentials of data collection

Answering the question ‘how do you decide what types of data to collect?’ is rarely simple and often involves careful trade-offs, especially where resources are limited\(^1\). In order to make this decision easier, there are a few steps that can be followed.

Determine what data you could collect

Being clear on what you are trying to achieve through a programme, or through your work as a whole, is fundamental to helping you determine what to measure. A useful tool for this is to develop a theory of change\(^2\) or

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\(^1\) Another guide in this series, *Keeping it in proportion: Impact measurement for small charities*, gives advice about impact measurement for small charities with fewer resources.
logic model for your work. A theory of change helps you think about the inputs, outputs and outcomes necessary for your organisation to achieve success, and works as the basis for your approach to evaluation and performance management.

By selecting the most important intermediate outcomes in your theory of change, you can determine which part of your organisation’s impact you need to measure, what data you might collect, and how you could collect it.

It is important to remember that no single source of evidence or data collection is going to answer all of your questions. Instead, it is about bringing together all of the information you can to tell the most accurate or persuasive story possible.

**Establish what is already known**

Once you have determined what could be collected, it is important that you think about what evidence might exist elsewhere.

Your theory of change will rest on a series of assumptions. If these assumptions have been well researched by others then it is not necessary to collect the same data in the same way again. For example, if your counselling programme is very similar to other counselling programmes which are known to improve mental well-being then it might not be necessary to collect vast amounts of data on this. Instead, it might be better to collect data which proves that the counselling service your organisation provides is of a high standard and meets the needs of the service users.

**Consider what information you need to know**

At NPC, we believe that it is important that organisations prioritise their outcomes; measuring only the most important ones. There are two key questions you need to answer:

1. What is the evidence for the programme we are delivering?
2. Are we delivering it well enough?

Keeping focused on these questions will allow you make your data collection simpler and more effective.

It is also important to consider how to keep your data collection in proportion with the nature and scale of your work. The diagram below shows what types of data collection might be most relevant to your programme, based on how well established its practice is.³

<table>
<thead>
<tr>
<th>Practice level</th>
<th>Description</th>
<th>Use of data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Novel practice</td>
<td>There is no obvious relationship between your activities and their desired effects. It is not clear what beneficiaries want or need, or what might work.</td>
<td>Qualitative: To better understand the results of your practice and what might be working. Quantitative: To measure and understand the needs of beneficiaries.</td>
</tr>
<tr>
<td>Emerging practice</td>
<td>The relationship between your activities and their effects is theorised. You have a theory of change but it needs testing and refining.</td>
<td>Qualitative: To develop and refine your programme. Quantitative: To get beneficiary feedback and obtain an indication of impact.</td>
</tr>
</tbody>
</table>


³ Table adapted from the Cynefin Framework. See also Matt Barnard, 'Why do people resist evaluation?', *Research Matters*, Social Research Association, June 2014: p. 12
The relationship between your activities and their effects is broadly established. However, further investigation and analysis is required to understand for whom and in what circumstances it applies, and how best to deliver it.

Quantitative: To confirm your impact and explore effects on different subgroups of beneficiaries.
Qualitative: To explain your quantitative findings.

The relationship between cause and effect is accepted.
Quantitative: To check the programme is being delivered as planned.
Qualitative: To feed into continuous improvement.

Work out what is practical and affordable

*’If resources are tight, aim for small amounts of quantitative data from everyone, combined with in-depth qualitative research with smaller numbers of service users.’*

James Noble, NPC

Data collection is almost always limited by the time or money available to an organisation. As such, it is important that approaches to data collection are practical and affordable.

Quantitative data can be expensive and difficult to collect, especially in a lot of detail and on a large scale. Focus on simple questions and data that can be analysed easily. This might include data about attendance, take-up or retention, feedback on services, or short-term outcomes. Qualitative data can be collected in-house if the staff involved are appropriately trained. This might include gathering user stories or journeys, collecting feedback on service users’ experiences, and tracking long-term outcomes.

Most importantly, with both qualitative and quantitative data, keep it simple and **do not collect too much data**. It is better to have a small amount of high quality data which is easily analysed, than a large amount of useless data which wastes time and resources.

*’In general, existing qualitative and quantitative research can give us a good idea of what works—and why—already. Cost-effective evaluation seeks to show that what we know can be effective is being implemented in a way that will reproduce the well-established effects that someone else has taken the trouble to prove.’*

James Probert, City Year UK

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4 James Noble’s blog on this topic goes into detail: [Why charities should collect less impact data](https://npc.org.uk/blog/why-charities-should-collect-less-impact-data/), NPC Blog, 14 August 2015.
**Case study: James Probert, City Year UK**

**What?**

City Year UK is a youth and education charity which coordinates full-time volunteering opportunities for mentoring disadvantaged young people. City Year UK was founded relatively recently, following a very successful 25 year old model from the USA.

**Why?**

As a new organisation, City Year was keen to measure its impact and effectiveness in the UK setting.

**How?**

**Theory of change:** As a starting point City Year UK developed a number of theories of change: tackling educational inequality, but also focusing on the projected impact of volunteering on young people. The charity built its theories of change in partnership with some of their funders, reaching joint agreement on the intermediate outcomes to include. It also made sure to test its assumptions with existing academic literature relating to educational attainment amongst young people.

**Using existing research:** It was clear from their theory of change work that many of the connections between activities and immediate outcomes that City Year assumed and hoped for were already well established by existing research or educational toolkits, such as the EEF’s Teaching and Learning Toolkit. They ensured that the entire package of data collection techniques utilised the lessons learnt from City Year’s monitoring and evaluation team in the USA.

**Replicating models:** City Year in the USA is currently undertaking a $30 million, six-year randomised control trial (RCT). City Year’s UK office is not considering such an investment in a RCT but rather it intends to faithfully replicate the model used in the USA.

**Quantitative data:** City Year UK uses a Customer Relations Management (CRM) system to manage both its relationships with volunteers and with students. It encourages its volunteers to collect data on attendance, behaviour, and academic performance every half term. This is supplemented by school data, providing a very detailed impression of students’ progress over the year. At one point, City Year UK also ran mid-year surveys, however they felt this interfered with the relationship between students and volunteers so stepped back from this. The charity surveys its volunteers—to assess their performance against certain social outcomes. Rather than developing a new survey from scratch, the charity adopted questions from other sources including NPC’s Well-being Measure and the European Social Attitudes survey to avoid duplication of effort and to increase the robustness of its data.

**Qualitative research:** City Year UK conducts ongoing feedback sessions with its volunteers to learn how they can improve their programmes. Furthermore, to ensure schools are happy with their product they conduct service quality interviews with headmasters.

The charity has also undergone an external evaluation, which used qualitative interviews to evaluate City Year’s processes. The results of this research encouraged City Year UK to restructure their management in schools.

**Lessons**

City Year UK believes its impact upon character outcomes is considerable, however it is conscious that there are few widely trusted measures for character. As such, it is following keenly the work of Jubilee Centre for Character and Values at the University of Birmingham, and working with other interested organisations, to trial new approaches.
Understand the different methods of data collection

Different types of data require different skills, resources and other practical considerations. It is important that you bear these in mind when embarking on your data collection process.

<table>
<thead>
<tr>
<th>Type of data</th>
<th>Guidance and recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quantitative Data</strong></td>
<td></td>
</tr>
<tr>
<td>Secondary data</td>
<td>• Identify any secondary data that might exist and look for opportunities to access and analyse it.</td>
</tr>
<tr>
<td>Monitoring data</td>
<td>• Look at your theory of change and work out what consistent measures you need to implement.</td>
</tr>
<tr>
<td></td>
<td>• Use modern Customer Relationship Management systems to help you manage the data.</td>
</tr>
<tr>
<td>Surveys</td>
<td>• Think about whether the group you survey—which is likely to be a sample of your beneficiaries—accurately represent your wider service users.</td>
</tr>
<tr>
<td></td>
<td>• Consider commercial panels and omnibus surveys—these are regular surveys conducted by research companies that organisations can buy questions from.</td>
</tr>
<tr>
<td><strong>Qualitative Data</strong></td>
<td></td>
</tr>
<tr>
<td>Interviews</td>
<td>• Interview a range of service users to ensure your data is representative.</td>
</tr>
<tr>
<td></td>
<td>• Avoid cherry-picking the service users who have most benefited. You need to talk to failures as well as successes.</td>
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<tr>
<td></td>
<td>• Practice, or get training where possible—interviewing style is a skill which is often developed over time and involves careful listening.</td>
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<tr>
<td>Focus groups</td>
<td>• Involve a range of service users which is broadly representative of your wider beneficiaries.</td>
</tr>
<tr>
<td></td>
<td>• Be aware that focus groups can intimidate more hesitant service users, and are not appropriate when sensitive or personal issues are being discussed.</td>
</tr>
<tr>
<td>Ethnography</td>
<td>• Consider what training may be necessary for undertaking this type of data collection. The quality of data and analysis depends on the skills of the researcher.</td>
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5 This is often easiest to do locally, for example it might be possible to get hold of anonymised criminal justice information from your local police and crime commissioners. NPC is lobbying for this to take place at a national level through its Data Labs project: [http://www.thinknpc.org/our-work/projects/data-labs/](http://www.thinknpc.org/our-work/projects/data-labs/)
Final thoughts

Choosing the correct data to collect can often be a confusing hurdle for charities faced with the constraints of limited resources. Often this choice is framed as a decision between collecting either quantitative or qualitative data, but where possible charities should aim to use both these types of data to evaluate their programmes. The contrasting information that qualitative and quantitative data provides a fuller and more detailed understanding of whether and why programmes work for a charity’s beneficiaries.

More in this series

This guide is part of a series developed from NPC to give an introduction to various aspects of impact measurement. Others topics in this series include:

- 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 2016, so check the events section of our website for the latest information.

Further resources


Inspiring Impact www.inspiringimpact.org
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.