

## Making sense: Analysing quantitative information

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*This document gives supplementary information to [Evaluation Support Scotland Support Guide 3a: Analysing information for evaluation](#).*

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**Quantitative information** tells us about numbers. For example

- The overall numbers: how many people are referred and supported
- Demographic information: who those people are (age/role/location etc)
- Activities: how many times you have helped or supported others in different ways
- Outcomes: how many people you have made a difference to or achieved a particular outcome
- Scaled questionnaires that put numbers on softer outcomes. For example how confident people are with a particular task on a scale of 1 to 5.

**How to analyse quantitative information:**

- 1. Identify the broad numbers**
- 2. Look for groupings and diversity**
- 3. Look for factors that affect the numbers**

### 1. Identify the broad numbers

You might do this by looking for:

- **Absolute numbers:** for example, '9 out of 9 people lost weight, 5 out of 9 achieved their weight loss goal.'
- **Percentages:** for example, '55% of participants achieved their weight loss goal'. Avoid using percentages with small numbers.

### 2. Look for groupings and diversity

You might look for:

- **Average:** For example, 'the average weight loss for men on a health and fitness programme was 8.4 kg'. Watch out for figures that don't make sense, such as '3.6 people'. You should also be aware of how extremes can skew the average; if some people lose a lot of weight but most do not, then an average may be misleading.
- **Range:** For example, the weight lost by participants varied from 1kg to 15 kg.
- **Mode:** The most frequent occurrences. For example, those losing weight fell into two groups, those who lost just a few kilos (4 people) and those who lost more than 12 kilos (5 people).

- **Median:** the mid-point of a range of numbers. For example, in the list of numbers about kilos of weight lost 1, 1.5, 2, 4, **12**, 13, 13, 14, 15, the median is 12 kg. This might give you a better picture of what's typical than the average (which in this case is 8.4 kg).

### 3. Look for factors that affect the numbers

For example:

- People who have used your support more might have had a bigger change
- Age, gender, geographical location or some other personal characteristic might have affected type and level of outcomes.

#### Example

*Fruitfield* grows and sells organic fruit and vegetables in a community centre two mornings a week. A Trust may award a grant if they can show their impact on the health of local people. To establish a baseline, *Fruitfield* asks local people to complete a survey that asks about the number of times a week they eat fresh fruit and veg:

<b>14 people - 7 times a week</b>	<b>1 person - once a week</b>
<b>1 person - 10</b>	<b>3 people left it blank</b>
<b>1 person - 16</b>	<b>2 answered 'don't know'</b>
<b>1 person - 5</b>	<b>2 people - 12 times a week</b>

This means:

22 out of 25 people responded (although two didn't know).

- The average number of times people eat fresh fruit and vegetable per week is 5 (total number of times fresh fruit is eaten divided by the number of people answering, 110/22).
- The range varies from 1 to 16 times a week.
- 90% of the people eat fresh fruit or veg 7 times a week (18 people).
- The largest group (70%) eat fresh fruit or vegetable 7 times a week (14 people).
- A small group (20%) eat fresh fruit and vegetables less than daily (2 people).

In doing the analysis, *Fruitfield* found themselves asking more questions:

- Was this a typical week?
- Was this a typical sample of local people?
- What factors affect diet? (use of frozen vegetables, cost, availability, taste, cooking skills, lack of awareness).

They resolved to ask more questions next time.

### Top tips

- Ideally you want a sense of the situation for people at the start of your work with them (baseline) so you can identify what's different now. If you have used a scale, what were the numbers before and after?
- Your job is to paint a picture; look for the numbers that explain that picture best.
- For small numbers, use absolute numbers rather than percentages.
- To recognise diversity, don't just rely on the average, use things like mode, median and range to paint a clearer picture.
- Don't just use stats; look for the stories behind the stats. This might mean collecting more qualitative evidence. For example, include a comments box with your scale, or capture some quotes/observations as you go.

### Related resources:

[Making sense sheet: analysing qualitative information](#)

[Making sense sheet: analysing as you go](#)

[Evaluation Support Scotland Support Guide 3a: Analysing information for evaluation](#)

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