Local Government advice
MASTERCLASS

Paper 8

Presenting evidence

Given we're now witnessing the world of alternative facts, it's worth commenting on how evidence is presented in advice papers, so we can avoid descending to these lows.

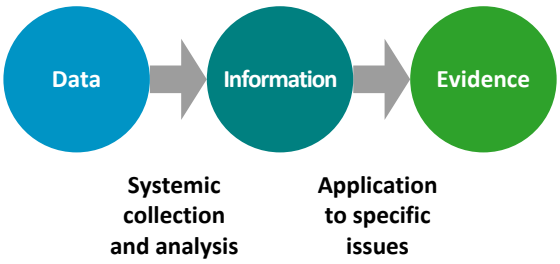
Of course, this has been a subject of debate for some time. It was Mark Twain who popularised the saying "lies, damn lies and statistics" in the early 1900s – attributing this to the British Prime Minister Benjamin Disraeli. This, of course, focused on the selective use of statistics to help boost an argument. A tactic we've all no doubt seen, but hopefully not contributed to!

In this Masterclass, we focus not so much on the theoretical underpinnings of the science of knowledge (or epistemology), but on how to assess and present evidence in your advice papers. The trick is to fairly present the evidence, in a way which is easy to understand, but also to identify the short comings associated with that research.

Data, information and evidence…

These terms, and others, seem to be used interchangeably. So it's worth a description.

Figure 1 What is evidence?



Source: NZIER

The push for "evidence-based policy" has gained considerable currency

The need for evidence based policy has been a key discussion point in New Zealand for a number of years now. Sir Peter Gluckman, in his role as the Prime Minister's Chief Science Advisor, has written and spoken on this topic in considerable depth (Gluckman 2011 and 2013). In these reports, he builds on the work of the UK Cabinet office in the 1990s.

This concept has also been picked up under the "Social Investment" banner. This has included a push to evaluate programmes, and fund only those ones which have been proven to be effective.

Gluckman (2011) cites a number of examples in which policy decisions were made on the basis of little or poor evidence, and the adverse consequences of such decisions.

The need for better information to assess regulatory options, and the effectiveness of regulations was also noted in the Productivity Commission's (2013) report on improving local regulation.

As well as just not fixing the problem, decisions based on poor evidence may cause more harm, and often more costs.

But it's not that simple…

Of course, this is a huge challenge. Uncertainties abound. Evidence is not available on all issues; it may be conflicting; the quality is mixed; and the problems we are being asked to provide advice on can be complex and unique.

But, if there is a pressing problem, decisions still must be made. And decision-makers may well make a move with limited evidence.

Amassing robust evidence can be expensive. This is magnified in a small country in which research budgets may be broadly proportional to overall wealth, but certainly never enough to fully investigate issues in the New Zealand content.

As well as these challenges, decisions made by politicians have an element of the political (as discussed in our first masterclass "Communicating with aliens"). This means that various judgements may be made based on values or common sense, rather than strictly relying on the evidence itself.

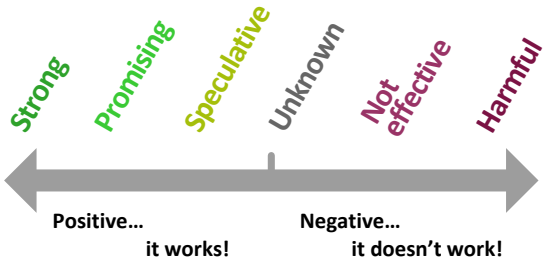
The quality of the evidence may vary

A way of addressing this problem is to be clear about the quality and reliability of the evidence used.

One of the early adopters of standards for evidence was Pharmac (see Pharmac 2016 for the latest guidelines) which developed standards for evidence needed to support applications for medicines to be made available. This sort of approach is common in the field of pharmecoeconomics. Treasury (2015) look for a similar consideration of the strength of evidence in their guidelines on cost benefit analysis, and on Regulatory Impact Statements (2013).

Both the Ministry of Justice and the Ministry of Social Development (MSD) have developed a methodology for categorising evidence (cited in Superu 2016). This is based on a set of criteria for assessing the strength of evidence in support of a proposal – from very strong to dubious. MSD's categorisation also includes identifying evidence which does not support the proposal or is harmful.

Figure 2 Evidence continuum



Source: NZIER, adapted from MSD and MoJ work (Superu 2016)

Both appear to rely on fairly high standards of evidence – MSD looks to Randomised Controlled Trials (which are often considered the gold standard in research. They underpin medical research e.g. the Pharmac guidelines).

However, that can be near impossible to achieve. It's costly. Also it can be technically unfeasible in some situations. One example is where it is difficult to maintain a control group. e.g. in public health where programmes (and can be accessed by all e.g. TV advertising campaigns; air quality improvement measures, fresh water; etc. That is, they are non-excludable.

Of course, there are some situations where robust data and evidence is available, and it should be used. This is more common in areas where physical or biological sciences are employed as part of the tool kit.

Well-designed monitoring and evaluation programmes should accompany the implementation of major policy initiatives, and form the backbone of the feedback mechanism within the traditional policy development cycle.

Many of the processes in local government are grounded in a public consultation and submissions process. This will often form a part of the evidence base for decision-making. While some of the information contained in submissions is undoubtedly opinion, some of it is based on evidence provided or cited by submitters. The same principles about being careful about the strength of evidence also apply here. For example, it's important to acknowledge sample sizes, whether submissions represent an individual, a group of individuals or an expert body; or balancing submissions against survey results. However, it is not the only evidence. It should be supplemented by evidence from other sources, and balanced accordingly.

Much of the evidence we see in policy analysis is based on:

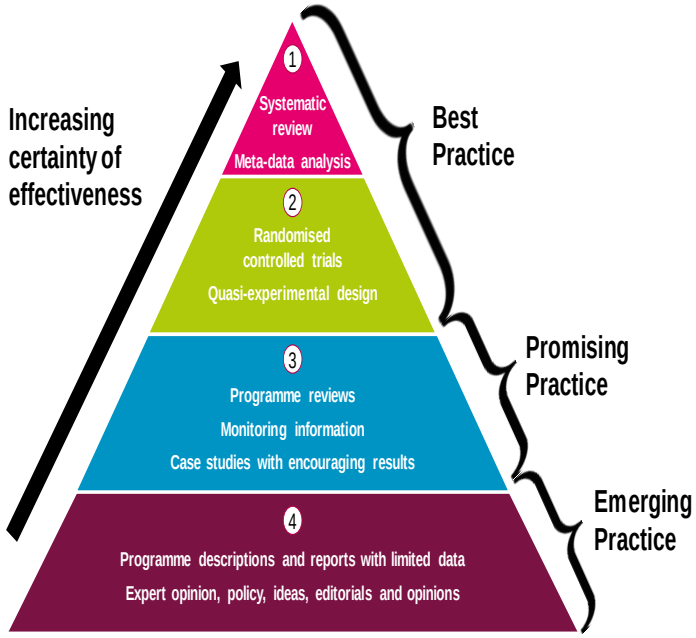
- Official statistics[1] – including newer data sets like the IDI (Integrated Data Infrastructure).
- International comparative statistics – for example from the OECD or other international organisations.
- Information from the agencies own data collection systems (and when matched with that of others) – including trends over time.
- Literature reviews.

[1] Official statistics published by Statistics NZ are always accompanied by a discussion of the research methods and associated risks with the data.

- Market research techniques – including focus groups, surveys of service users.
- Co-design processes with service users.
- Expert advice – e.g. from engineers, or scientists. This also includes using expert panels to assess all the evidence and draw conclusions.
- International comparisons of policy approaches.
- Comparisons with approaches adopted in other areas within New Zealand.
- Modelling.

Figure 3 below shows a simpler approach to categorising the standard of evidence. It can be used to help categorise and then explain the weight of evidence in support of a proposal (or otherwise).

Figure 3 Levels of evidence



Source: NZIER, based on material from the Oxford Centre for Evidence-based Medicine 2009

Ensure that there are no surprises from the evidence

Explaining to decision-makers the uncertainties associated with the evidence you are presenting is an important part of advising.

As well as the quality or robustness of the evidence, you should highlight gaps in the data, and applicability to New Zealand or to your local area. It's a core part of providing free and frank advice.

Not being clear about the strength of evidence can quickly get officers into the "damn lies and statistics" territory.

This sort of commentary is like "informed consent" in the medical system. It identifies the risk associated with the evidence and allows decision-makers to weigh those risks (and others) against the benefits they are hoping to achieve.

This can be woven into a risk assessment of the options (covered in our earlier Masterclass No 5).

You don't need to go into detail in the advice paper itself. It is always worth indicating where any data used came from through a quick explanation or standard referencing. But, you should do your own assessment of the quality of the evidence and associated risks, and make sure this is summarised in your paper. Depending on the quantity of evidence included a sentence or a paragraph will do the job.

Support is at hand...

There will be a range of people within your organisation who can provide expert advice on these matters, for example:

- Some organisations have appointed Chief Science Advisors e.g. ECan
- Those in specialist research and evaluation units
- Colleagues with science or research backgrounds.

However, it's useful for all analysts to have a little bit of knowledge about these sorts of issues as part of their wider tool kit.

Most public policy programmes contain a relevant course; and some short courses are offered to brush up on your skills.

References and further reading

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Treasury (2015) Guide to Social Cost Benefit Analysis http://www.treasury.govt.nz/publications/guidance/planning/costbenefitanalysis/guide

This paper was written at NZIER, June 2017.

For further information please contact anyone from our policy advice team:

John Ballingall at john.ballingall@nzier.org.nz

Cathy Scott at cathy.scott@nzier.org.nz

John Yeabsley at john.yeabsley@nzier.org.nz

Todd Krieble at todd.krieble@nzier.org.nz

NZIER (04) 472 1880