



## Overview Paper



# What is Evidence-Based Policy-Making and Implementation?

## 1 Evidence-Based Policy

Evidence-based policy-making (EBPM) helps policy makers and providers of services make better decisions, and achieve better outcomes, by drawing upon the best available evidence from research and evaluation and other sources. This includes decisions about:

- the nature, size and dynamics of the problem at hand
- policy options that might be considered to address the problem
- effective and ineffective interventions to solve the problem
- the likely positive and negative consequences of the proposed policy option
- the intended and unintended consequences of the proposed policy option
- effective and ineffective modes of delivery and implementation
- how long the policy will have to run before positive results will be achieved
- the resources that will be required to implement the policy
- the costs and benefits of the proposed policy, and on whom will these costs and benefits fall
- the sustainability of the policy economically, socially, and environmentally

Evidence-Based Policy-Making, then, is about making decisions based on knowing with an estimated degree of certainty what works, at achieving which outcomes, for which groups of people, under what conditions, over what time span, and at what costs?

## 2 Opinion-Based Policy

EBPM differs from policy-making based solely on what people believe to be the best way to achieve better outcomes, and from decision-making based on ideology and political conviction alone. This is sometimes referred to as opinion-based policy-making.

Most policies and policy options start life in the planning meetings of political parties and opinion formers. In open democratic societies, such policies get their legitimacy through the democratic processes of elections and parliamentary debate. These may or may not be evidence-based. So, evidence-based policy has to work with people's beliefs, opinion and values and provide the best available evidence for how to refine and implement the political mandate.

### 3 What is Evidence?

There is often considerable disagreement amongst academics, policy advisers, policy makers and service providers as to what constitutes evidence. Those people who work with statistical notions of evidence generally use information or data that supports, or rejects, a conclusion. For policy-making and implementation purposes it is as important to establish that an intervention does *not* work, as it is to know that it *does* work. Hence, we need information and data that can confirm, or reject, our assumptions about a policy's anticipated effectiveness and how it is best achieved.

Such evidence, however, is seldom definitive. Even when evidence is based upon statistical sampling and comparative analysis of policy options, it at best allows us to *estimate the probability* that a desired outcome will be achieved. This is normally estimated at the 95 per cent confidence level, which means that there is a five per cent chance that our predictions about outcomes may be wrong.

Statistical evidence, however, is only one type of evidence. Other types of evidence are more qualitative and seek to establish *what counts as evidence* for different social groups, and to understand *why, how, and under what conditions* a policy intervention will be effective. Whereas statistical evidence seeks to establish what is generalisable, qualitative approaches to evidence are usually more interested in what is particular and context-specific. Both approaches are necessary to establish a sound evidence base for good decision-making.

Another important feature of evidence is that the message from the evidence is rarely self-evident, and it cannot tell its user what to do or how to proceed. Evidence merely provides its user with information on what is likely to happen if certain actions are undertaken. The users of evidence have to use their judgement as to the meaning, significance and relevance of the available evidence for the problem in hand given the priorities of the government of the day. These judgements will be informed by factors other than the available evidence, including the experience and expertise of the decision maker, the resources that are available, and the beliefs, values and priorities that influence the political environments within which decisions are being taken.

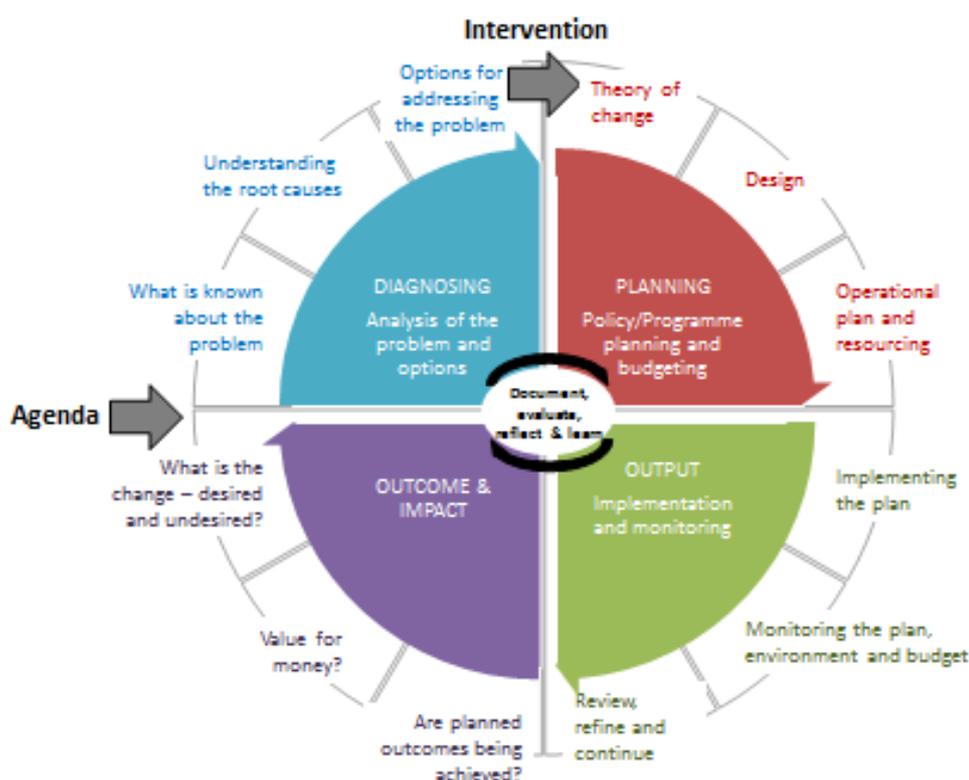
Lastly, not all evidence is of equal value. Some evidence has more credibility, validity and reliability than others. Even evidence from scientific and research-based sources is of variable validity and quality, some of which falls below accepted scientific standards. This means that someone, or some agency, has to separate high quality evidence (the 'wheat') from lower quality evidence (the 'chaff'). Fortunately, agencies and organisations exist to assist users of evidence when making decisions about the quality of the available evidence. Some of these organisations are listed in Table 1 at the end of this paper.

### 4 The evidence based policy and implementation process

Evidence-based policy and implementation processes typically go through 4 stages – a diagnostic to determine what the problem really is, the size and scale of the problem, and why it is happening; planning to determine what is needed to address the problem (or opportunity), an implementation or output stage where the work is rolled out and an outcome or evaluation stage where the impact of the policy and

programme is evaluated<sup>1</sup>. Ideally a policy and programme goes through this cycle a few times and is constantly improved and refined. The diagram below captures the cycle and four stages. Feedback, reflection and learning is needed at all stages.

**Figure 1: Evidence-based policy-making and implementation cycle**



## 5 Types of evidence

### *Quantitative and Qualitative Evidence*

Evidence comes in different forms, and from a variety of sources. It can consist of statistical data from surveys, censuses, and the administrative data that are used to run government departments and other agencies. Evidence can also be qualitative information or data that comes from consultation with key stakeholders, delivery partners and localised sources. These consultations may use in-depth interviews, focus groups, and direct observations of the problem at hand and the work of the agencies that seek to solve these problems.

### *Experimental Evidence*

Evidence can also be experimental in the sense that proposed policies can be *tested* or *piloted* before they are rolled out across the entire population. Policy pilots tend to be relatively short-term and restricted to a few geographical areas or jurisdictions,

<sup>1</sup> Note the evaluation types in South Africa include a diagnostic evaluation, to address the diagnosis phase; an implementation evaluation to understand how the policy or programme is working, an impact evaluation to assess final outcomes and why these are happening; and an economic evaluation to understand cost-effectiveness/cost-benefit.

often where there is a particular problem or constituency. Some policies are tested over a longer period of time (one or two years) and a wider geographical area. Such tests of a policy's effectiveness, and of different ways of implementation, use experimental methods, such as randomisation – who receives the policy and who does not, determined by random allocation – or quasi-experimental methods, such as matching and controlled comparisons. Such tests are one type of *impact evaluation*.

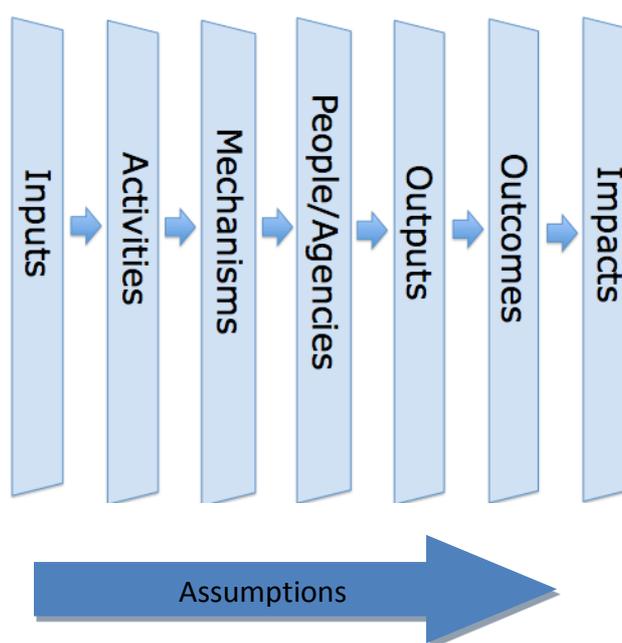
Given that experimental evidence takes a long time to gather, it is often necessary for day-to-day decision-making to find out what has already been shown to be effective by experimental and quasi-experimental evidence in other countries and jurisdictions. This can be done by looking for existing *systematic reviews of evidence* and other evidence synthesis products such as rapid evidence assessments, evidence maps, gap maps, and evidence summaries. These sources of evidence are considered further below. It is particularly important to look for a body of evidence (such as systematic reviews) rather than single studies which may be difficult to generalise from.

### Process Evidence

Good decision-making usually requires evidence about the *processes* by which a policy, project or programme is going to be implemented. This includes having a clear *logic model, or theory of change*, that makes explicit from the outset of policy development *how the policy is supposed to work*. That is, what activities have to be undertaken, by which people or agencies, using which mechanisms (market forces, state provision, regulation, voluntarism etc.), with what resources (financial, human and social), to achieve the outputs, outcomes and impacts that are desired. Another important element is *the assumptions* in this theory of change, which need to be tested.

This is summarised in the Figure 2 below:

**Figure 2: Stages in a Logic Model/Theory of Change**



Evidence to develop and test a logic model/theory of change can be qualitative or quantitative, using experimental/comparative designs or naturally occurring data.

### *Implementation Evidence*

Effective policy-making and implementation requires evidence of successful and unsuccessful methods of implementation and delivery, i.e. theories of change which are likely to work and those which are not likely to work. This can often be established from the existing evidence based on implementation studies from around the world, and especially in countries that are geographically, socially and economically similar to South Africa. It includes process evaluation but may well include quantitative elements, e.g. on targets achieved, or resources used.

It is also possible to gather evidence on successful and unsuccessful implementation in a particular country or jurisdiction by monitoring administrative and survey data. This can identify where desired outputs and outcomes have been achieved and where they have not. Focus can then be given to why, how and under what conditions successful and unsuccessful implementation and delivery has been achieved. Administrative and management data, if collected regularly and analysed properly, provides an excellent source of data. Another source of evidence around implementation is specifically testing the initial logic model/theory of change, using implementation evaluations.

### *Economic Appraisal Evidence*

An essential part of good policy-making and implementation is establishing as rigorously as possible the *costs and benefits* of both proposed and enacted policies. This type of evidence comes from economic appraisal methods such as *cost-benefit, cost-effectiveness and cost-utility analysis* (one type of evaluation). These are well established and structured methods by which economists and finance officials determine the best value for money from existing resources. Whilst such methods can be quite technical, it is important that all civil servants and public officials understand the principles of economic appraisal evidence. A challenge for this in South Africa is that there is rarely a good understanding of expenditure across the three spheres of government around a specific programme or policy. National Treasury and DPME are doing expenditure reviews to address this.

## **6 Sources of Evidence**

In addition to these different *types* of evidence there are different *sources* of evidence. Policy makers and service providers are often bombarded with evidence from political parties, think tanks, professional associations, civil society organisations, pressure groups, lobbyists, the media and the general public. The development of the internet and digital technologies has generated many sources of evidence of varying origins, quality and validity. It is not that evidence from these various sources is without merit or value. Rather, the problem is that such evidence is often, if not usually, *selective* and either politically or statistically *biased*, or both. Indeed, any of the sources of evidence mentioned above would not be doing their job properly if they were not presenting evidence in a way that supported their beliefs, values or mission – or those of their clients. Another source of evidence, often forgotten or ignored, is management and administrative data which should be collected and analysed regularly.

### *Evaluation Evidence and Academic Research*

The advantage of evidence from policy and programme evaluations and academic research is that it is usually undertaken with a greater degree of rigour and objectivity, and that it seeks to establish the *balance of evidence*. Hence, such evidence is likely to be more reliable, precise and with a known degree of bias. By balance of evidence we mean that it is important to establish the *positive and negative* evidence on the effectiveness of an intervention, as well as its *intended and unintended consequences*. Also, it is important that this is done by gathering and appraising the *totality of evidence* on a topic from as wide a range of countries and jurisdictions as possible. This is what is provided by systematic reviews of evidence and other synthesis products.

### *Systematic Reviews of Evidence*

Systematic reviews of evidence explicitly seek to establish the balance of evidence on a topic or issue by searching for *all* of the evidence from academic and scientific sources, as well as other sources. This total body of evidence is then *critically appraised* by establishing those studies and reports that meet explicit and transparent standards of quality, and those that do not. In this way, higher quality evidence (the 'wheat') is separated from lower quality evidence (the 'chaff').

Having established high quality evidence, systematic reviewers then go about extracting key data and information from the studies and reports that are included. These data are then analysed rigorously to establish what is the *general and overall* evidence from these studies, and what is particular and applicable only to certain contexts. Normally, each stage of a systematic review is undertaken by two or more researchers working independently, and their analyses are checked and adjudicated by a third party and by independent external peer reviewers. This is to ensure objectivity and scientific validity.

### *Other Evidence Synthesis Products*

In addition to systematic reviews, evidence synthesis includes rapid evidence assessments, evidence maps, evidence gap maps and policy summaries and briefs.

*Rapid Evidence Assessments* (REAs) are similar in structure and procedure to systematic reviews, but are undertaken in a shorter time period (usually 3-6 months) to coincide with policy and political timetables. Consequently REAs are normally not as rigorous or reliable as full systematic reviews, but they do provide a good guide to the status of the existing evidence on a topic.

*Evidence maps* do what their title implies – they map the available evidence in a way that indicates what types of evidence are available, using which types of evidence gathering and evaluation, covering which aspects of a policy issue, and with what degree of scientific rigour.

*Evidence gap maps* use the information gathered by evidence maps to indicate where there are gaps in the evidence base of a topic or policy issue. This indicates where policy makers need to proceed with greater caution, and where research funders need to prioritise spending on research and evaluation.

*Policy summaries* and *policy briefs* are shortened versions of full research and evaluation reports, and are written to identify key policy messages and possible directions for policy and service development. They are also written in non-technical language for people who may not be familiar with scientific writing and jargon. Policy summaries are typically between fifteen and twenty pages long, and policy briefs are normally about three to five pages in length.

The one-page of action points for Ministers or Chief Executives is another evidence synthesis product, as are the one-page plain language summaries. Note in South Africa evaluators are asked to produce 1/5/25 reports made up of one page summaries for policy makers, 5 page executive summaries and 25 page main reports.

## **7 Resources for Evidence-Based Policy Making and Implementation**

There are a number of resources for policy makers and service providers to draw upon to help them find and use high quality evidence. An important source of information and guidance for South African civil servants is the Resource Centre of the Department of Planning, Monitoring and Evaluation (DPME) in the Presidency. This is accessible electronically at [www.thePresidency-dpme.gov.za/publications/default.aspx](http://www.thePresidency-dpme.gov.za/publications/default.aspx).

Table 1 presents a list of repositories of quality assured evidence for policy making and implementation from evaluations and systematic reviews of evidence.

In addition, DPME has a set of guidelines on different types of evaluations such as diagnostic, implementation, impact and economic. In addition there is a guideline on planning new implementation programmes, including for the theory of change. These are available at [www.thepresidency-dpme.gov.za/keyfocusareas/evaluationsSite/Pages/Guidelines.aspx](http://www.thepresidency-dpme.gov.za/keyfocusareas/evaluationsSite/Pages/Guidelines.aspx).

**Table 1: Sources of Sound Evidence for Evidence-Based Policy Making and Implementation**

Source of Sound Evidence	Sector Coverage
3ie Systematic Reviews Database: <a href="http://www.3ieimpact.org/en/evidence/systematic-reviews/">http://www.3ieimpact.org/en/evidence/systematic-reviews/</a> 3ie Impact Evaluation Database: <a href="http://www.3ieimpact.org/en/evidence/impact-evaluations/">http://www.3ieimpact.org/en/evidence/impact-evaluations/</a>	<ul style="list-style-type: none"> <li>• Agriculture</li> <li>• Crime and justice</li> <li>• Economic development</li> <li>• Education</li> <li>• Employment</li> <li>• Environment and climate change</li> <li>• Gender and empowerment</li> <li>• Governance</li> <li>• Health and health care</li> <li>• Rural development</li> <li>• Slum clearance and urban development</li> <li>• Social cohesion</li> <li>• Social protection</li> <li>• Water, sanitation and hygiene</li> </ul>
DPME's evaluation repository <a href="http://evaluations.dpme.gov.za/sites/EvaluationsHome/SitePages/Home.aspx">http://evaluations.dpme.gov.za/sites/EvaluationsHome/SitePages/Home.aspx</a>	<ul style="list-style-type: none"> <li>• Most sectors</li> </ul>
Campbell Collaboration: <a href="http://www.campbellcollaboration.org">http://www.campbellcollaboration.org</a>	<ul style="list-style-type: none"> <li>• Crime and justice</li> <li>• Education</li> <li>• International development</li> <li>• Social welfare</li> </ul>
Cochrane Collaboration: <a href="http://www.cochrane.org/">http://www.cochrane.org/</a>	<ul style="list-style-type: none"> <li>• Health and health care</li> <li>• Medicine</li> <li>• Public health</li> <li>• Psychiatry and psychology</li> </ul>
DFID Systematic Reviews Database: <a href="http://r4d.dfid.gov.uk/SystematicReviews.aspx">http://r4d.dfid.gov.uk/SystematicReviews.aspx</a>	<ul style="list-style-type: none"> <li>• Agriculture and rural development</li> <li>• Aid delivery and effectiveness</li> <li>• Economic development</li> <li>• Education</li> <li>• Environment</li> <li>• Gender</li> <li>• Health and nutrition</li> <li>• Infrastructure and technology</li> <li>• Social protection and social inclusion</li> <li>• Governance and fragile states</li> </ul>

<p>EPPI-Centre Evidence Library:  <a href="http://eppi.ioe.ac.uk/cms/Default.aspx?tabid=56">http://eppi.ioe.ac.uk/cms/Default.aspx?tabid=56</a></p>	<ul style="list-style-type: none"> <li>• Economics</li> <li>• Education</li> <li>• Employment</li> <li>• Ethnic minority groups</li> <li>• Community cohesion</li> <li>• Corruption</li> <li>• Crime and offending</li> <li>• Health and health care</li> <li>• ICT</li> <li>• Infrastructure</li> <li>• Poverty</li> <li>• Social care</li> <li>• Social exclusion</li> <li>• Teacher education and development</li> </ul>
<p>National Institute for Health and Clinical Excellence (<a href="http://www.nice.org.uk/">http://www.nice.org.uk/</a>)</p>	<ul style="list-style-type: none"> <li>• Health and health care</li> <li>• Value for money in health care</li> <li>• Public health</li> <li>• Psychiatry and mental health</li> </ul>
<p>Social Care Institute of Excellence:  <a href="http://www.scie.org.uk/">http://www.scie.org.uk/</a></p>	<ul style="list-style-type: none"> <li>• Care reform</li> <li>• Co-production</li> <li>• Dementia care</li> <li>• Dignity in care</li> <li>• End of life care</li> <li>• Mental capacity and mental health</li> <li>• Safeguarding</li> </ul>
<p>Social Programs That Work:  <a href="http://evidencebasedprograms.org/">http://evidencebasedprograms.org/</a></p>	<ul style="list-style-type: none"> <li>• Early childhood development</li> <li>• Education</li> <li>• Teenage pregnancy</li> <li>• Crime and violence</li> <li>• Housing and homelessness</li> <li>• Employment and welfare</li> <li>• Substance abuse</li> <li>• Obesity and disease prevention</li> <li>• Mental health</li> <li>• Health care financing and delivery</li> <li>• International development</li> </ul>
<p>World Bank, Independent Evaluation Group: <a href="http://ieg.worldbankgroup.org/">http://ieg.worldbankgroup.org/</a></p>	<ul style="list-style-type: none"> <li>• Agriculture and agribusiness</li> <li>• Anti-corruption</li> <li>• Climate change</li> <li>• Crisis response</li> <li>• Environment and natural resources</li> <li>• Gender</li> <li>• Information and communication technologies</li> <li>• Poverty reduction</li> <li>• Transportation</li> </ul>