

Will the policy work and is it worth it?

Matrix future policy assessment

This briefing is designed for senior policy makers in government departments and Directors of Policy in large NGOs. Our approach will help them maximise the existing evidence on the likely impact and cost effectiveness of a policy before investing in an expensive process of piloting, implementation and evaluation

When policy makers are considering implementing a new policy, their decisions about implementation will normally be made by answering questions such as:

- For every pound spent on the policy, what is the saving to society as a whole, the public purse or a specific government department or public service?
- What is the economic benefit of a pound spent on one policy option, compared to a pound spent on a different policy option?
- Which groups of recipients should the policy target to provide the largest return on the investment?

Our approach can give answers to these questions at an early stage in the policy making process to minimise the risk of future investment.

Matrix future policy assessment:

- Builds on the existing policy making process;
- Is less costly;
- Provides results quickly;
- Generates robust estimates of long term effect; and
- Allows different impacts to be compared.

How does this benefit me?

Matrix has developed future policy assessment, an approach that combines economic methods, evidence from existing research and stakeholder consultation to model the likely impact and financial benefits of policy. This can provide results in a short time frame and for relatively little cost.

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What are the disadvantages of conventional approaches?

Normally policy makers have to go through a number of stages to answer key policy questions. These stages are set out in Figure 1.

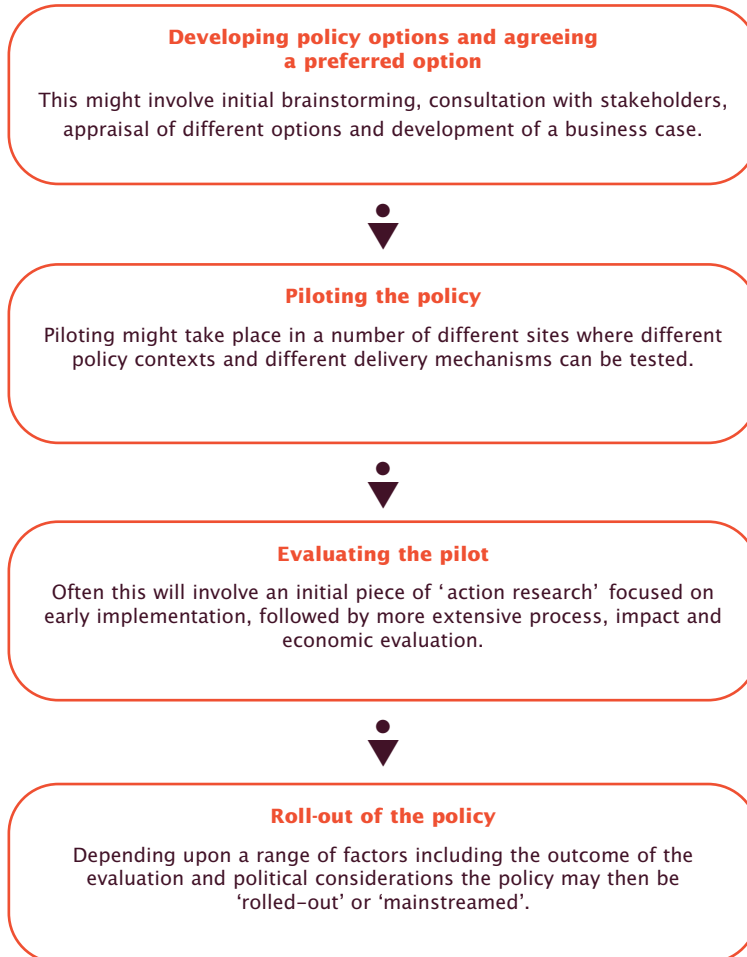


Figure 1: The policy making process

This process poses two main challenges:

- **It is time-consuming.** This is particularly the case where the policy is being piloted and then evaluated. This process might take several years, particularly where the evaluation is trying to identify long term changes in behaviour such as improved health, better access to services or reductions in offending.
- **It is resource intensive.** Running pilots and then undertaking evaluations is expensive, particularly where a robust outcome evaluation based on an experimental or quasi-experimental approach is used.

Matrix future policy assessment

The key stages in the Matrix approach are described in Figure 2.

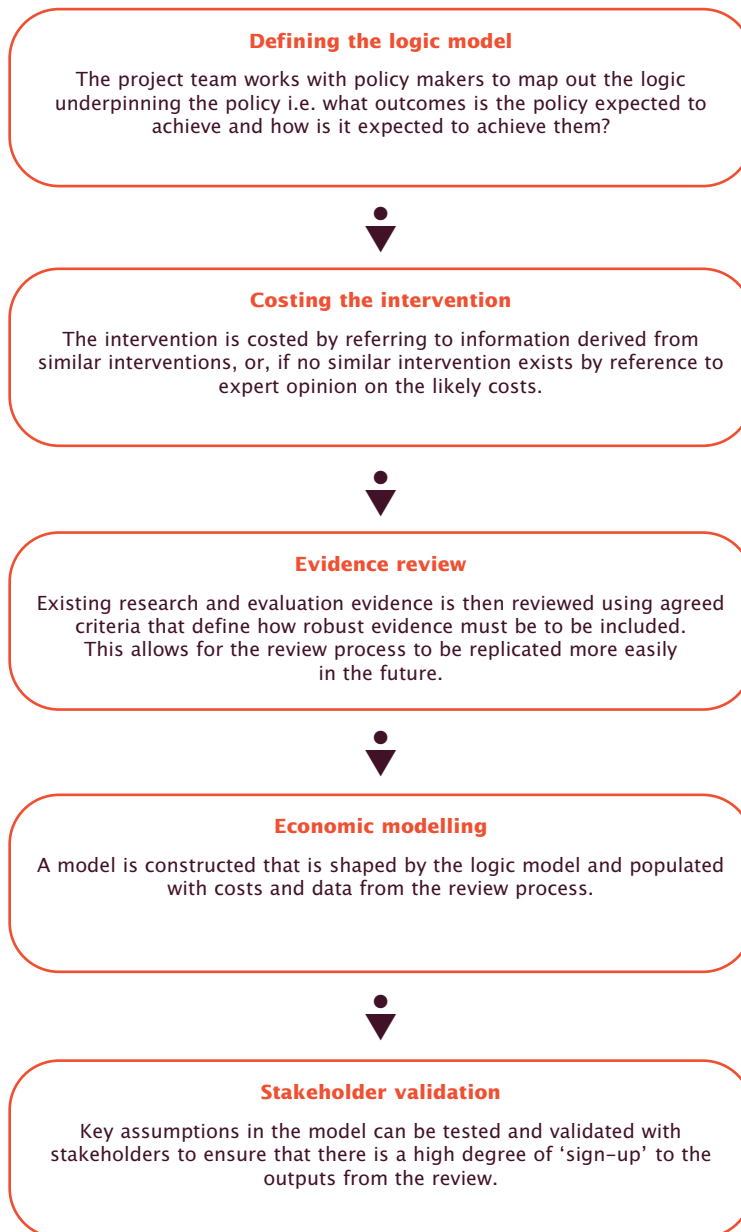


Figure 2: The Matrix approach

Why undertake a Matrix future policy assessment of impact and financial benefits? There are a number of advantages for policy makers:

- **It builds on the existing policy making process.** Generally, policy makers will already produce a business case at an early stage in the policy making process. A rigorous future policy assessment at this stage can be used to advance the policy making process further and faster.
- **It is less costly.** Future policy assessment provides a lot of the insight a retrospective economic evaluation provides, but for a fraction of the cost. It does this by bringing together existing evidence, ranging from research to expert opinion, in a model.

- **It provides results quickly.** Because it does not involve extensive primary data collection a future policy assessment can be completed in a few weeks or months.
- **It generates robust estimates of long term effect,** where this is relevant to the policy.
- **Different impacts can be compared.** Where the effects of a policy are many, economic modelling provides a means to express effects in comparable units.

Developing a logic model

When developing a logic model it is important to understand both the short and long term outcomes that the policy is designed to achieve. These then need to be linked back to specific policy inputs and outputs. As an example, Figure 3 illustrates the causal mechanism underlying the long term impact of a programme of school-based skills training. It is thought that by stopping young people using cannabis, the programme will reduce the number of young people who go on to become problematic substance users. In turn, this will reduce the crime and health problems that are associated with problematic substance use. In reality there would also be shorter-term impacts that we would want to consider, however, for purposes of this example we will focus on the long term ones.

Costing the intervention

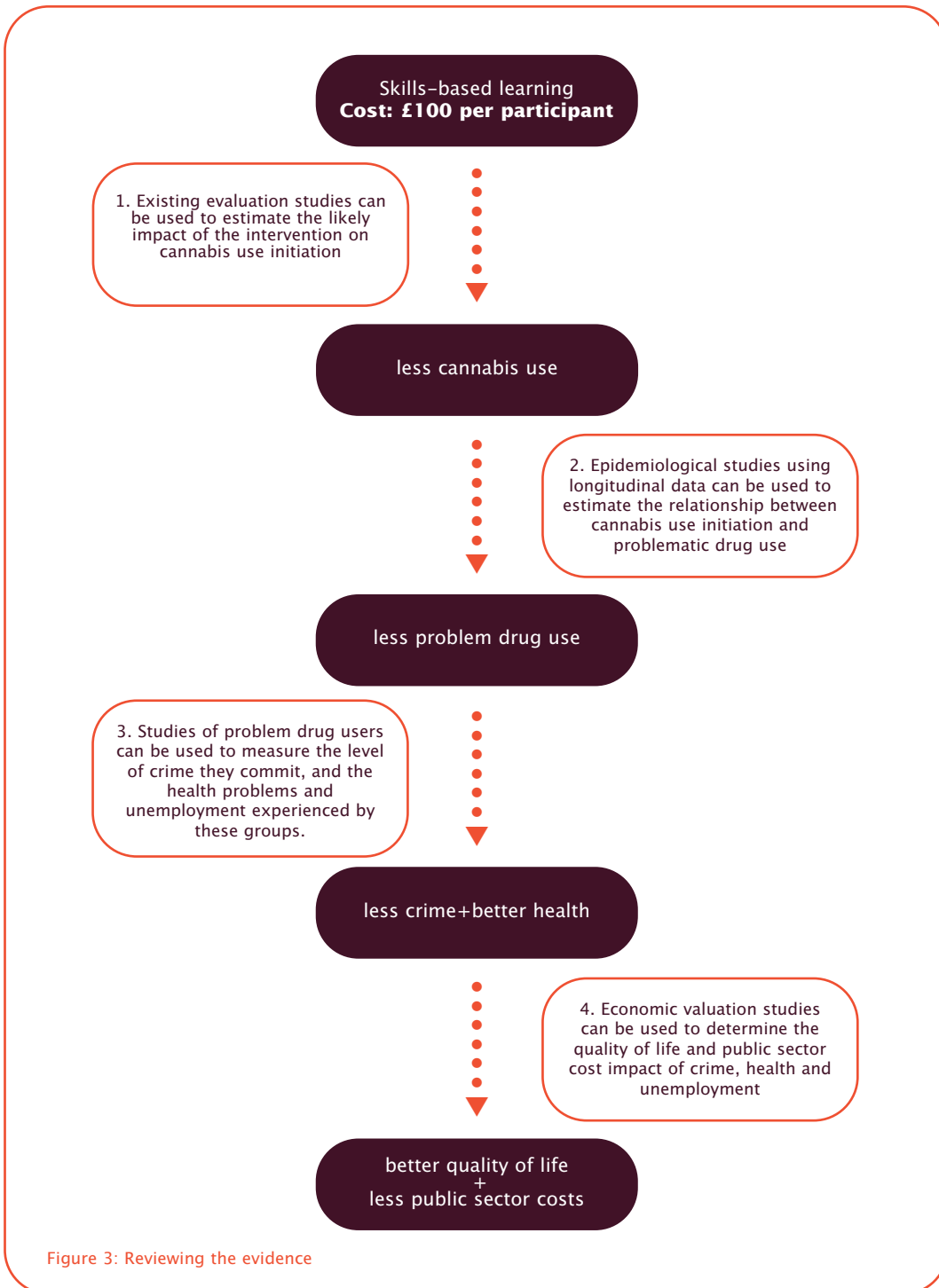
To build a model of the economic costs and benefits of the intervention it is necessary to estimate the economic cost of the intervention. This might be done by looking at the costs of similar interventions or by reference to expert opinion. Expert opinion might be accessed through a range of mechanisms including seminars, questionnaires or the use of a process mapping workshop where the processes required to deliver the intervention would be identified and valued.

Reviewing the evidence

Once we understand the conceptual model that we are testing, the next stage is to review existing evidence. For some types of interventions it will be possible to identify a number of previous, methodologically robust, impact and economic evaluations that cover the range of short and long term outcomes identified in the logic model. This is most likely to be the case for medical interventions, particularly pharmaceutical ones, where many evaluations have been undertaken previously, the intervention, the target group and the short and long term impacts are clearly defined, and there were no contextual factors that prevent the direct application of the findings to the intervention under consideration. However, this is relatively unlikely in social policy where:

- Relatively few previous evaluations may have been undertaken;
- Although broadly similar, the interventions evaluated previously might have been configured slightly differently, worked with a slightly different target audience or taken place in a particular context that means findings are not directly transferable; or
- Although the intervention was the same, the short and long term impacts evaluated were not the same as those of interest in the current policy making process.

For this reason it will normally be necessary to collect a range of evidence that relates to each stage of the logic model. For our example a range of evidence is available (see Figure 3). This can then form the basis of a modelling exercise (described below).



It is important that the review of evidence uses transparent criteria that clearly define how robust the evidence must be before it is included in the review. Various strategies can be used including a Systematic Review and a Rapid Evidence Assessment (REA). A Systematic Review is extremely time-consuming and it is more likely that an REA will be undertaken. The Government Social Research website describes an REA as:

“ . . . a tool for getting on top of the available research evidence on a policy issue, as comprehensively as possible, within the constraints of a given timetable. . . . REAs provide a balanced assessment of what is already known about a policy or practice issue, by using systematic review methods to search and critically appraise the academic research literature and other sources of information.”

(http://www.gsr.gov.uk/new_research/archive/rae.aspx)

An important part of this process is defining how robust evidence needs to be before it is included in the review of evidence. The Magenta Book (a guide to policy evaluation published by the Government Social Research Unit) says that:

“ Experimental and quasi-experimental research methods provide valid and reliable evidence about the relative effectiveness of a policy intervention compared with other policy interventions, or doing nothing at all... The purest form of experimental method is the randomised controlled trial... Quasi-experimental methods refer to those research designs that compare the outcomes of experimental and control groups by methods other than randomisation.”

(http://www.policyhub.gov.uk/evaluating_policy/magenta_book/chapter1.asp)

The Matrix approach is informed by guidance like this to help develop criteria for assessing the rigour of research studies. This strengthens the validity of the final assessments.

Constructing the model

Drawing on a number of sources of existing data a model can be constructed to predict the long-run improvements in quality of life and public sector cost savings resulting from interventions such as skills-based learning in schools (see Figure 4 for an example). These secondary datasets can be used to demonstrate the benefits of the intervention. The way the datasets are combined in order to do so for some of the longer-term impacts on the schools intervention is demonstrated below (the example uses hypothetical data).

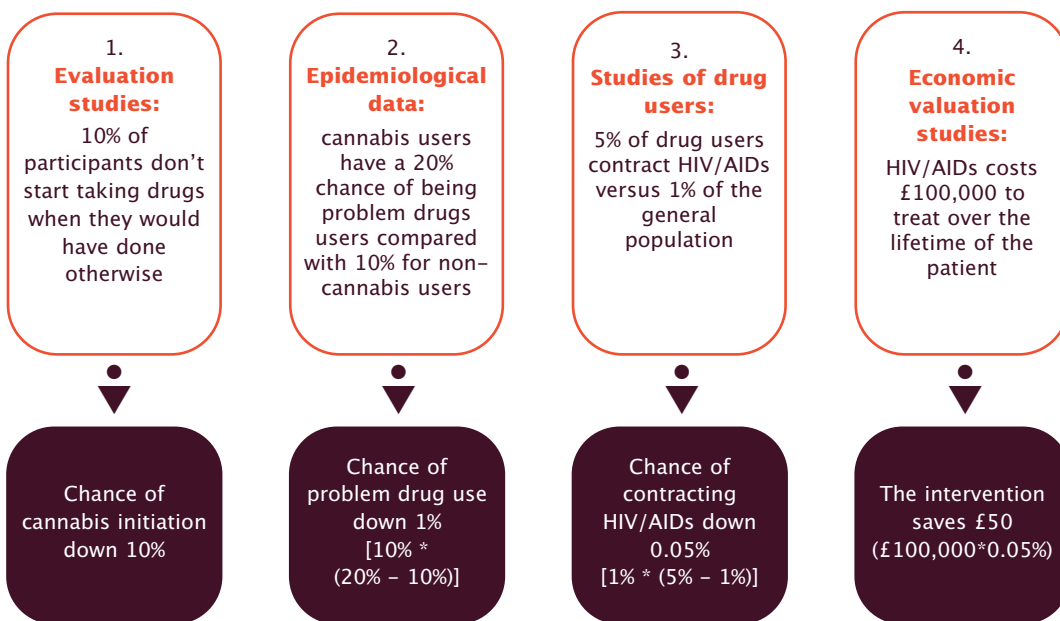


Figure 4: Constructing the economic model

Dealing with uncertainty

Uncertainty is a challenge inherent in any modelling exercise¹. For instance, in the above example, we may not be able to identify any evaluation studies and therefore cannot estimate the impact of the intervention on cannabis use initiation. One way to deal with the uncertainty that missing data causes is to use break-even analysis (BEA). This demonstrates how the public sector costs saved as a result of the intervention vary depending upon the impact the intervention. This can be used to determine the minimum effect required for the savings to outweigh the cost of the intervention.

¹It is worth noting that there is also uncertainty in traditional evaluations. Outcome evaluations are difficult to design and even when well designed there will be a degree of uncertainty that remains. This will be due to factors such as small sample sizes or being unable to infer beyond a specific context and population.

Testing the model with stakeholders

The model uses assumptions to fill gaps where evidence is limited. These assumptions are more likely to be reasonable and have much greater validity because we test them with relevant stakeholders.

Assumptions can be tested in a number of ways including:

- Stakeholder workshops;
- Delphi studies (a series of iterative questionnaires with a group of experts); or
- Consultation exercises.

The approach is consistent with published guidance

The approach described in this briefing is consistent with guidance from the British Government and European Commission:

- The economic elements of the approach are consistent with The Green Book published by the Treasuryⁱ;
- As part of the approach, a review of evidence is undertaken, that is consistent with guidance on Rapid Evidence Assessments published by the Government Social Research Unitⁱⁱ;
- Although it has been developed primarily for non-regulatory policy-making, the approach is consistent with guidance on undertaking Regulatory Impact Assessments published by the Better Regulation Executive in the Cabinet Officeⁱⁱⁱ;
- The approach is consistent with the European Commission guidance on Ex Ante Evaluation^{iv}.

Examples of the approach in practice

This approach has been developed by Matrix and has been tested in a number of settings. Its most complete use has been in a project completed recently for the National Institute for Health and Clinical Excellence^v. The aim was to determine the cost effectiveness of types of intervention aimed at increasing physical activity levels. Using the methodology described above it concluded that general practitioners should promote physical activity and that the most efficient way for them to improve physical activity levels is through motivational interviews and exercise vouchers.

References

- ⁱ <http://greenbook.treasury.gov.uk/>
 - ⁱⁱ http://www.gsr.gov.uk/new_research/archive/rae.asp
 - ⁱⁱⁱ <http://www.cabinetoffice.gov.uk/regulation/ria/>
 - ^{iv} European Commission (2001) Ex ante evaluation : a practical guide for preparing proposals for expenditure programmes, Brussels, EC
 - ^v <http://www.publichealth.nice.org.uk/page.aspx?o=528521>
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Matrix specialises in providing independent, evidence-based solutions that form the cutting edge of the policy-making agenda.

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