



Alliance  
for Useful  
Evidence

# USING EVIDENCE

## What works?

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### A discussion paper

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April 2016

An introduction to and discussion of the report *The Science of Using Science: Researching the Use of Research Evidence in Decision-Making*.<sup>1</sup>

## About this project

This project, The Science of Using Science, was set up by the Alliance for Useful Evidence in September 2015. The aim was to uncover the evidence on what works to enable research use. It was overseen by an advisory group of: **Jonathan Breckon** (Alliance for Useful Evidence); **David Carr** (Wellcome Trust); **Jane Dodson** (Alliance for Useful Evidence); and **Nancy Hey** (What Works Centre for Wellbeing). The research was undertaken by **Laurenz Langer**, **Janice Tripney**, and **David Gough** of the EPPI-Centre, University College London.

We are very grateful for the funding, support and insights from Wellcome Trust and the What Works Centre for Wellbeing.

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## A note on definitions

Researcher means anyone conducting research, not just those in official research positions. Evidence, in this context, means research findings and evidence use here means making a decision or policy informed by the best available research evidence (also referred to as evidence informed decision-making). The term 'intervention' refers to an active programme aiming to enable decision-makers' use of evidence.

The views and any unintended errors expressed in this discussion paper are the authors' own, and don't necessarily reflect the views of our funders or any of the Science of Using Science team.



The Alliance for Useful Evidence champions the use of evidence in social policy and practice. We are an open-access network of 2,500 individuals from across government, universities, charities, business and local authorities in the UK and internationally. The Alliance provides a focal point for advancing the evidence agenda, developing a collective voice, whilst aiding collaboration and knowledge sharing, through debate and discussion. We are funded by the Big Lottery Fund, the Economic and Social Research Council and Nesta. Membership is free. To sign up please visit: [www.alliance4usefulevidence.org](http://www.alliance4usefulevidence.org)

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## INTRODUCTION

**S**o what exactly are the best ways of getting research used by decision-makers? Evidence rarely speaks for itself. It can need an extra nudge, or a helping-hand to reach, say, the primary school classroom, or a Whitehall Departmental Board.

You may have witnessed some impressive ways for research to get noticed and used. Maybe a high-level policy seminar, mentoring programme or a journal club used by nurses. But do they really work? Our pet approaches to knowledge exchange may fail to deliver, and we need to evaluate if they really cause impact. There's a consensus, for instance, that it's a good thing to make researchers work side-by-side with decision-makers. Such joint working sounds like a noble cause. But, as we will see in this paper, there is no large body of high quality evidence to support the faith in interactions between researchers and users.

It's easy to feel bamboozled by all the methods to change people's motivation, capacity or opportunity to use research. We identified over 150 possible interventions from the research literature. It's an enormous range, including behavioural 'nudges', professional development, social marketing, and much more.

A whole industry has risen to help find more ways to link research to practice. We have journals studying the area, such as *Evidence and Policy* and *Implementation Science*. We have dedicated organisations like Research in Practice, the Public Coordinating Centre for Public Engagement, and Research to Action.<sup>2</sup> We have networks promoting the cause, such as the European Implementation Network, the Africa Evidence Network, and the Alliance for Useful Evidence. There has been a recent push for new organisations to synthesise actionable research for decision-makers, such as the What Works Centres<sup>3</sup> in the UK, and the What Works Cities<sup>4</sup> in the US.

For somebody new to the area and looking for pointers on what to focus on, there are toolkits, checklists and guides.

### SOME GUIDES ON COMMUNICATING RESEARCH TO POLICYMAKERS:

- **Research Uptake Guidance** Department for International Development (UK)
- **How to communicate research for policy influence** CIPPEC (Argentina)
- **Communicating research for evidence-based policymaking: A practical guide for researchers in socio-economic sciences and humanities** European Commission (EU)
- **Guide: Engaging with Policymakers** National Coordinating Centre for Public Engagement (UK)
- **Policy Impact Toolkit** International Initiative for Impact Evaluations (3ie)/Overseas Development Institute (UK, US, India)
- **Impact toolkit** Economic and Social Research Council (UK)
- **Helping researchers become policy entrepreneurs: How to develop engagement strategies for evidence-based policy-making** Overseas Development Institute (UK)
- **Introduction to... Research impact on policy** Primary Health Care Research & Information Service

But reading these guides, it's not always clear how much of it is based on evidence of what works. To rectify that, this paper sets out some of the most promising ways to help research be used, based not on our opinions, but systematic reviews of a large expanse of robust research.

## OUR APPROACH

The Alliance for Useful Evidence has joined forces with the Wellcome Trust, the What Works Centre for Wellbeing, and the EPPI-Centre at University College London (UCL) to uncover the evidence on what works to enable research use.

This discussion paper gives an introduction to, and discussion of, a project – The Science of Using Science – that reviewed the literature on effective strategies to increase the use of research evidence. The research was undertaken by the EPPI-Centre at UCL.<sup>5</sup> This paper provides over 30 examples and case studies of successful efforts to increase research uptake.

We took a comprehensive approach to reviewing the research. Essentially, it is a 'review of reviews', and involved two phases:

Firstly, a Systematic Review<sup>6</sup> of Systematic Reviews in the more specialist research on the efficacy of interventions to increase the use of research in decision-making. It included 36 systematic reviews that reported on 91 interventions.

Secondly, a Scoping Review of other social science interventions that might be relevant to the first study. For instance, media and communications; organisational learning and management; psychology and behavioural sciences; adult learning theory; development studies; political sciences; sociology; information design; and climate/environmental science.

Our main priority was whether research was being used, not whether using evidence made a difference on the ground, such as saving lives, or saving money. So, for example, we looked at whether changes like training or mentoring resulted in medics referencing more academic papers in their patient notes. In other words, we looked at more intermediate outcomes, not final outcomes – such as if the patient got better.

The overview of research also concentrated on reviews of primary studies that looked at causal attributions: could the study claim that the change was linked to using more evidence? In the jargon of research design, that may entail studies using Randomised Controlled Trials (RCTs), Quasi-Experimental Designs, or Before-and-After studies.

## A HEALTH WARNING

We must stress that this is based on research evidence and evaluations of what works. We focus on interventions that have evidence to back them up – and exclude studies that have mixed or no evidence – even if they do sound interesting. For a discussion of those interventions that didn't have evidence, we recommend you read the main report *The Science of Using Science*.

Also, we must flag up that most of the studies in our first review were from the health sector, as that is where most of the research is being done. There were very few from other areas, like policing or social work. The majority were from frontline practice, such as nursing or public health. Much less was on national government policy. But we still cast the net wide, including nurses, child and mental health workers, international development staff, social workers, fitness trainers, public health workers, medical trainees, school teachers, rehabilitation professionals, clinicians and business managers.

## THE FRAMEWORK: SIX CATEGORIES OF EVIDENCE-USE MECHANISMS

Briefly, six underlying mechanisms of enabling research use in decision-making were drawn from the literature,<sup>7</sup> and used to group the interventions studied. These are summarised below:

Evidence-use mechanisms	
1	<b>Awareness</b> – Building awareness and positive attitudes towards evidence use
2	<b>Agree</b> – Building mutual understanding and agreement on policy-relevant questions and the kind of evidence needed to answer them
3	<b>Access and Communication</b> – Providing communication of, and access to, evidence
4	<b>Interact</b> – Facilitating interactions between decision-makers and researchers
5	<b>Skills</b> – Supporting decision-makers to develop skills accessing and making sense of evidence
6	<b>Structure and Process</b> – Influencing decision-making structures and processes

In reality, these mechanisms are often combined and are used together. However, there were two exceptions: 'Skills' and 'Access and Communication' were applied by themselves in some of the interventions, so the study was also able to look at how both these worked in isolation.

The following section introduces key findings from each review on what works, what doesn't, and what's promising in terms of ways to enable the use of research.

Under each of the six sections, the findings from Review 1 and Review 2 are set out. Review 1 looked at the impact on enabling evidence use, and Review 2 looked at what we could learn from the wider social science literature.

# 1. AWARENESS - Building awareness and positive attitudes towards evidence use

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## Review 1

It's hard to find evidence to prove that awareness-building does any good. Encouraging civil servants, teachers and social workers to be more positive about evidence-use didn't, according to the evidence, seem to be all that effective.

But championing evidence is at the heart of what we do. Should alarm bells be ringing if there is no evidence that it works? Not just alarm bells for the Alliance for Useful Evidence, but our fellow travellers - Canada's Evidence and Democracy, the US Moneyball for Government, the Peruvian Alianza Peruana para el Uso de Evidencia, or the UK and US Sense about Science. Should we all be worried by this lack of evidence?

The answer is no. At least, not yet. The reason is this: the absence of evidence is not evidence of absence. In other words, just because we can't find the evidence, that doesn't necessarily mean it doesn't work. The UCL team's exhaustive review of research found only three Systematic Reviews<sup>8</sup> that covered so-called 'awareness' interventions. And when there was a relevant awareness-building intervention, it was never on its own, but merged with other changes - such as training policymakers, or getting researchers to collaborate more with professionals. So, we shouldn't be too negative, as it looks like awareness-raising has not really been studied yet - hence the lack of evidence.

## Review 2

But if the first research review had little evidence to get our teeth into, consolation can be found in the second review - a broad sweep of social science, looking at behavioural science, health research, management studies, or other disciplines. Although this second review didn't look at awareness-raising evidence-use per se - this review wasn't specific to any field - it did give some pointers towards what might work in our evidence world.

## MARKETING FOR GOOD

For instance, there was strong evidence for the value of social marketing for building positive attitudes. Social marketing aims to change behaviour, such as encouraging malaria-preventing mosquito nets in Tanzania.<sup>9</sup> It's about marketing for social good, not just for profit. And it's worked in areas such as health, management and social policy, according to our scoping review.

How would that work in our field of evidence? If your audience is clinical nurses, you may promote the value of evidence that's going

### SOCIAL MARKETING

A Centre for Social Marketing<sup>10</sup> was established in 2006 and the Institute for Social Marketing<sup>11</sup> is based at the University of Stirling. The Department of Health published its first social marketing strategy, *Changing Behaviour, Improving Outcomes* in 2011.<sup>12</sup> For anybody wanting to learn more about social marketing relating to health, there are a number of practical tools, training courses and case studies available.<sup>13</sup>

to make a difference at the hospital bedside – in language and formats that means something to nurses. It might involve tailored messaging: adapting your languages so that it makes sense to nurses, not just to policy wonks. The point is taking care over your audience, avoiding blanket-wide dissemination of newsletters, adverts or Tweets, that may fail to hit the mark. (Good communication is so important that it has its own section ‘Access and Communication’, set out below.)

### MAKING EVIDENCE THE NORM

Ideally, we want to create a social or professional norm, where evidence-use is the right thing to do. So it’s the new normal.

Once the social marketing has taken root amongst nurses, social workers and police officers, we can see it become a behavioural norm.<sup>14</sup> We have reached a state of play where thinking about research is part of day-to-day work. Hopefully it’s not just a norm for isolated individuals, but also in the wider work culture – there is a supportive pro-evidence work environment in the clinic, classroom, or boardroom. Then, we hope, evidence-use would be standard practice, an intrinsic part of being a member of your profession.

And once you have those norms, it would be good to encourage people to stick to them, by creating nudges, identity cues and priming.<sup>15</sup> For instance, reminding people that their professional identity is about being evidence-informed. To be a professional, you need to be on top of research – and, you could say in your nudge, look at all your colleagues who feel the same way. If you want to find out more about cues and priming, they are explored in more detail in the behavioural models of EAST<sup>16</sup> by the Behavioural Insights Team, for example.

### SINGING THEIR PRAISES: PRIZES AND PROFESSIONAL RECOGNITION

Rewarding professionals could bolster this evidence norm. Not financial rewards, like a salary bonus (welcome though that may be), but public recognition and rewards for using evidence - perhaps celebrations by your peers or professional bodies. There are annual prizes on data, impact measurement and evidence-use, such as Civil Service Awards, Society for Evidence Based Policing annual award, and *The Guardian* Public Service Awards. They reward evidence-use by staff delivering services, politicians or civil servants. In October 2016, the Alliance for Useful Evidence will join forces with the Political Studies Association to reward politicians who do smart things with evidence.

Prizes can help make evidence-use the norm. But we also need other visible methods of peer-recognition. Our research reviews showed that this had a lot of potential to encourage evidence-use, particularly if married to techniques like social marketing, as set out above. The two together: social incentives and social marketing, look like a promising route to travel.

### FOCUS ON WHAT PEOPLE CARE ABOUT

Finally, one bit of consolation regarding the evidence on awareness-building campaigns. You may recall that in the first review, we couldn’t find much evidence for promoting evidence. However, the review of the wider literature points to some lessons that could help us, from campaigns such as environmental protection, violence preventions or gender equality. There are, for instance, helpful tips on the best design of a good



awareness-campaign, a large body of 'grey' literature (i.e. not in peer-reviewed journals, but in other publications such as think-tank reports) and from two other systematic reviews.<sup>17</sup>

This research tells us that we must, for instance, focus on issues that people care about – such as helping children in schools, or addressing the tensions of immigration. If we are building awareness, let's not start off from the rather boring and technocratic 'evidence-based policy' – but focus on challenges that matter, challenges where we think evidence-use can make a difference.<sup>18</sup> Interestingly, campaigns benefit from being more emotive – using humour, surprise, concern – to increase an audience's attention. Avoiding a rather dull, geeky message, such as 'follow the evidence', but something that gets an emotional response. We need a good narrative that can win hearts and minds.

## 2. AGREE - Building mutual understanding and agreement on policy-relevant questions and the kind of evidence needed to answer them

### Review 1

What we are looking for here is building a consensus between decision-makers and researchers - to find out what the right questions are to suit them. And what evidence is needed to answer them? In other words, what sort of evidence is useful for the frontline - not for the researcher.

The hope is that there is a dialogue between researcher and professional on what might work best, not a top-down 'we know what research is best for you' approach.

The problem is, despite us finding plenty of discussion in the literature of evidence-informed decision-making, we couldn't find any evidence that these techniques had an impact on their own. We found two reviews,<sup>19</sup> but they didn't really have much on this intervention; they only looked at this consensus-building technique mixed with other interventions, such as developing skills.

Much more enlightening was our second review of the wider social science. This is set out in the next section.

#### ALZHEIMER'S SOCIETY

Alzheimer's Society has successfully involved people affected by dementia in shaping their research strategy, Care for Today and Cure for Tomorrow, such as through the identification of priority areas of research. Over the past 20 years the charity has involved people affected by dementia in the co-design and co-delivery of research and in recommending the most relevant research for the Society to fund.

### Review 2

When we scoped the wider social science literature, we found interventions that supported consensus-building, and thus could in theory help to define evidence. We focus on two here; Delphi panels and journal clubs.

#### A GOOD READ: USING JOURNAL CLUBS

To get up to speed on the latest evidence, you can club together to study scientific studies. By joining a journal club you can regularly catch up with like-minded colleagues to review a research paper. It can be at a place that works for you. Perhaps in a clinic, university, webinar, or even in a pub.

They have been around for a long time. One of earliest references to a journal club is by Sir James Paget who, in the mid-1800s, described a group at St Bartholomew's Hospital in London, as a "*kind of club . . . a small room over a baker's shop near the hospital-gate, where we could sit and read the journals.*"<sup>20</sup> Nowadays, there are clubs covering philosophy (e.g. The Philosopher's Eye), data science (e.g. Silicon Valley Data Science Journal Club), or biology (e.g. Harvard Phylogenetics Journal Club). Anybody can now join a Twitter journal club with hashtags on academic topics, most often on medical subjects, such as surgery, nephrology, or geriatric medicine.<sup>21</sup>

### THE NUTRITION JOURNAL CLUB AT PUBLIC HEALTH ENGLAND

A recent research article is presented to the club, critically discussed in small groups, and then brought back to a wider group to examine the broader implications of the paper. Discussions on the research around consumption of fruit and vegetables provided useful challenge and helped structure the practitioners' thinking and delivery.

Our evidence shows journal clubs can really help improve the ability to use research.<sup>22</sup>

But, you may rightly ask, aren't these clubs really about education and learning (which we cover below in our later section entitled 'Skills')? Yes, that is true. But they also have another key benefit: journal clubs can help professionals define the right sort of evidence to meet their needs. By interrogating research papers, staff can figure out how research could be matched-up to practice, their own practice – not some abstract 'evidence-informed decision-making'.

Journal clubs have other benefits too. Such as popularising research<sup>23</sup> (so would fall under our earlier section of this paper entitled 'Awareness'), or developing knowledge (see the section below 'Skills'), or embedding evidence in systems ('Structures and Processes'). From our research reviews, it looks like there may be widespread benefits of journal clubs.

### BUILDING CONSENSUS THROUGH DELPHI PANELS

The Delphi technique is a tried-and-tested way for groups to build a consensus. They use a series of questionnaires, to collect data from a selected panel. These go through a number of versions, and are analysed and refined, so that the group starts to converge on an agreed decision. This technique is often applied in a public policy setting.

The value for Delphi panels in our context of evidence-use is that they can create an agreed view on what is appropriate evidence. An agreement that is robust and transparent, not just an unstructured committee, prone to all sorts of social and cognitive biases. We can be more rigorous about agreeing good evidence by using structured methods, like Delphi models.

The National Institute for Health and Care Excellence (NICE) in the UK uses Citizen Councils. While these are not strictly Delphi panels, they have a similar ethos: creating advice and guidelines that reflect a real-world consensus, not just rigidly following the scientific evidence from the lab. NICE Citizen Councils are made up of a broad demographic mix of the public who serve three years as 'Councillors'. Members help add some social and ethical values to the science of NICE recommendations.<sup>24</sup>

### USING DELPHI PANELS TO PICK THE RIGHT EVIDENCE ON WELLBEING

The What Works Centre for Wellbeing has used Delphi methods to choose their evidence topics relating to culture and sport. The Centre's team working on this is looking at wellbeing benefits of different culture and sport practices. They are asking how enduring the wellbeing benefits are over time; the cost-effectiveness of these activities; and how these benefits are distributed between different groups and user communities, including people of different gender, socio-economic status, ethnicity, age, stage of life course and with or without long-term physical and mental health problems.

### 3. ACCESS AND COMMUNICATION - Providing communication of, and access to, evidence

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#### Review 1

We need to get more evidence-based about how we communicate evidence. Take a long, hard look at what works to reach audiences. It will almost certainly mean a step outside the PR comfort zone: blanket mail-outs; uber portals with repackaged research reviews;<sup>25</sup> or Tweets in 'broadcast-mode' (it's easy to forget that social media should be, well, social). You can't just expect to put out a summary of research and expect it to 'land'.

What's needed, according to the evidence, is to think more like a marketer. Look at audience segmentation, personalised and tailored messages, user-friendly design. Put yourself in your audience's shoes. What do they really need, right now, to help them make decisions in the office, classroom, or clinic?

#### TAILORING AND TARGETING - GIVE THEM WHAT THEY NEED

We need to adapt the message to what people need on the ground.<sup>26</sup> For example, if you send out weekly email alerts, make sure the content really talks to your audience – a focus on the concrete and topical, such as how police officers can prevent gang youth violence (perhaps responding to recent newspaper headlines, or new government guidance). And keep it local. For instance, a study of Canadian public health departments found communications worked best with local Canadian references that recognised the places where people worked.<sup>27</sup>

It may also be wise to ask your audience how they want their evidence packaged.<sup>28</sup> Do they want a simple email, hard-copy pamphlet, CD-Rom (remember those?), or audio file to listen to in the car?<sup>29</sup> And whatever format you use, it is worth presenting it in a user-friendly way, such as in plain language or with clear tables of findings.<sup>30</sup>

If you are using an online repository of research, do design the platform in a hassle-free way that matches what users want. Not with technical jargon, or academic categories that only make sense to other academics. A good example is the Education Endowment Foundation's *Teaching and Learning Toolkit*.<sup>31</sup> They use instantly-recognisable school-based language, such as the evidence for the benefits of 'homework', 'one-to-one tuition', or 'phonics'.

## Education Endowment Foundation's Teaching and Learning Toolkit

Intervention	Cost	Evidence Strength	Months Impact
Arts participation <small>Low impact for low cost, based on moderate evidence.</small>	£££££	🔒🔒🔒🔒🔒	+2
Aspiration interventions <small>Very low or no impact for moderate cost based on very limited evidence.</small>	£££££	🔒🔒🔒🔒🔒	0
Behaviour interventions <small>Moderate impact for moderate cost, based on extensive evidence.</small>	£££££	🔒🔒🔒🔒🔒	+4
Block scheduling <small>Very low or no impact for very low or no cost, based on limited evidence.</small>	£££££	🔒🔒🔒🔒🔒	0
Collaborative learning <small>Moderate impact for very low cost, based on extensive evidence.</small>	£££££	🔒🔒🔒🔒🔒	+5

### HOTLINES AND HELPDESKS

One way to really understand your audience is to offer them the chance to ask you questions – via a hotline or ‘on-demand’ help desk.<sup>32</sup> For example, the UK’s Department for International Development have a rapid evidence-on-demand help desk, provided through the Health and Education Advice Resource Team (HEART).<sup>33</sup> The help desk answers specific questions, and provides a brief literature review, including summaries and comments from subject experts. Even universities have set up help desks to help outsiders.

#### HELP DESK TO HELP THE PUBLIC NAVIGATE THE UNIVERSITY OF BRIGHTON DEPARTMENTS.

The National Coordinating Centre for Public Engagement points to the work of the CUPP team at the University of Brighton. CUPP manages a community facing helpdesk and a team of staff to help enquirers with the development of mutually beneficial partnerships between the University and the local community, enabling collaborative projects between researchers, students and community practitioners.

The help desk does not have to be a 24-hour turn-around 'hotline', but something a bit longer, such as the requests for evidence asked for by Welsh Government ministers.

### ON-DEMAND ADVICE FOR WELSH GOVERNMENT MINISTERS

The Public Policy Institute for Wales (PPIW) provides the Welsh Government with authoritative independent analysis and advice, drawing on the best available expertise to articulate and respond to the Welsh Government's evidence needs. It has a rolling work programme which is developed in consultation with Welsh Ministers and their advisors, in conjunction with an independent Board of Governors. Assignments are not expected to produce new data or evidence. Rather, the aim is to draw on the experts' existing knowledge of their fields, and bring this to bear on the issue at hand.<sup>34</sup>

## Review 2

### THE ART AND (SOCIAL) SCIENCE OF PERSUASION

Our second scoping review looked at other persuasive communication techniques, such as framing, branding, and narratives. There's a deep and rich seam of well-evidenced ways to change peoples' behaviours.

Although these techniques have been applied in other fields - such as nudging citizens to pay their taxes, give more to charity, or eat less junk food - we believe there is much we can apply to our area: helping people use evidence.

So this section gives a lot of attention to these communication techniques. However, we zero-in on approaches that have the strongest evidence.\*

### FRAMING YOUR EVIDENCE

The way you present information can have a dramatic effect on how it is understood.<sup>35</sup> To give a hypothetical example, if you claim a new education policy will 'improve performance in 90 out of 100 schools', it looks a lot better than 'ten out of 100 schools will not improve'. It's the same information, just set out differently.

The most common form of framing is around gain or loss. So, if it's framed as a gain, we might stress the positives of an evidence-informed policy: show how countless lives will be improved by better health, education, transport. Or, if it's a loss, we could focus on the negative: the cost to taxpayers of 'business as usual', and all that waste created by ploughing on with failed policies.

\*We also completely skip discussing some areas where surprisingly, no evidence could be found - such as science communication, or the use of evidence apps. They may be still useful tools for communication, but we are just not covering them, as we couldn't find any suitable research reviews. For more discussion of these areas, look at the main research report. We also skip topics we have already covered, such as tailoring and targeting your communication, and audience segmentation (discussed earlier on in this 'Access and Communication' section), social marketing or campaigns (see in the 'Awareness' section).

What's important is not taking your framing for granted. It can have such an important impact on how your audience responds to your message. Some people may be open to more positive or negative messages. For example, international development workers prefer avoiding losses, rather than acquiring gain, according to a World Bank report on behavioural insights.<sup>36</sup> Psychologically, losses loom larger than gains. So if your target audiences are people working in international development, think about framing your research as a way to prevent bad things: such as stopping anti-poverty projects that fail to deliver.

Indeed, this sort of framing might work for selling the whole evidence-use mission. Instead of promoting 'What Works', our cause could be re-framed as avoiding 'What Doesn't Work'. That might be a good message for some audiences, although it's not very catchy.

## 2,845 SHADES OF GREY - HOW TO COMMUNICATE UNCERTAINTY

Anybody communicating research will need to make difficult choices around how to convey uncertainty. Rarely is research black or white. Usually shades of grey. Uncertainty is often cited as a major reason for decision-makers' distaste of evidence.<sup>37</sup> If uncertainty is a fact of research life, what is the best way to communicate it? We can't distort findings to make them overly neat. But, on the other hand, we don't want to turn off our audiences with too much vagueness.

There are a staggering 2,845 ways to talk about a risk, according to an animation on Cambridge University Statistical Lab's Understanding Uncertainty website.<sup>38</sup> Visual aids, for instance, work well to communicate probabilistic information - such as icon arrays and bar graphs. It also helps to set out probabilistic information in formats that shows 'absolute risk' (e.g. the entire population has X per cent chance of lung disease), instead of relative numbers (e.g. X per cent risk of smokers getting lung disease, compared to non-smokers).<sup>39</sup> We need to think about all the ways that risk is framed. For instance, it may be helpful to use both words and numbers, rather than relying on just one alone.

### USING WORDS AND NUMBERS TO COMMUNICATE RISK

The public consistently misinterprets the probabilistic statements made by the Intergovernmental Panel on Climate Change (IPCC), according to the psychologist David Budescu at Fordham University in New York. An experiment has found that using words and numbers together is a more effective way to communicate the risks of climate change.<sup>40</sup>

The problem is that using numbers in IPCC predictions could mislead: they imply too high a level of precision and consensus about climate change estimates. So, in recent assessments the IPCC has used more language than numbers; it has used seven verbal descriptions, such as 'very unlikely' and 'likely'.

But dropping numbers created new problems. The public saw the verbal predictions on global climate change as less extreme than intended by the authors of the IPCC reports. A solution proposed by David Budescu and his colleagues is to use a scale that merges numbers and words. The public is then in a better position to understand the predictions of the IPCC.

## TELLING STORIES TO COMMUNICATE RESEARCH

Rather than dry numbers, use narratives and metaphors as a powerful way to get your message across.<sup>41</sup> It creates emotional connections with the audience. For instance, the UK Government's Department of Energy and Climate Change's (DECC) Project ASPECT commissioned researchers to look at digital storytelling to improve the public conversation on climate change.<sup>42</sup> The science wasn't enough. Stories were needed to help the public understand the meaning of the science.

### USING NARRATIVES TO SELL THE MANCHESTER INDEPENDENT ECONOMIC REVIEW.

The What Works Centre for Local Economic Growth acknowledge the importance of building a compelling narrative in their case study of Greater Manchester:

*“The right presentation is central to ensuring that evidence moves from the page and into live political discourse. Central to this is the establishment of a narrative that effectively conveys the thrust of the evidence base in a way that is accessible and engaging to as wide an audience as possible. The creation of compelling narratives, built on a foundation of robust evidence have been at the heart of Greater Manchester's most significant achievements in the use of evidence from the Manchester Independent Economic Review to the recent devolution deal.”<sup>43</sup>*

Metaphors can help an audience grasp difficult or puzzling ideas. To help understand the convoluted evidence ecosystem, for instance, we have Professor Jonathan Shepherd's analogy of the petrochemical industry, complete with oil wells, leaks, pumps, and motorists.<sup>44</sup>

## FOLLOW THE SOCIAL MEDIA CROWD

Our research found reliable evidence from a large number of reviews that using social and online media was an effective communication tool.<sup>45</sup> Social network sites such as Facebook, Twitter, and LinkedIn have hundreds of millions of users, so it has the potential to reach very wide audiences. It takes less than ten minutes for a researcher to set up a blog and have their first article online, using platforms like WordPress. World Bank economists, David McKenzie and Berk Özler, have collected data showing that academic blogging can lead to hundreds of new readers, when before there were only a handful.<sup>46</sup> And of course, they presented this data via their own blog.

As well as the big numbers, it's also a convenient way of accessing evidence, anywhere, anytime. For instance, practitioners can find rapid and trustworthy research updates by following Twitter handles like '@DFID\_Evidence', '@EvidenceAction', '@cochranecollab'. The formats are also social media, and offer the chance for back-and-forth engagement, not just passive dissemination. The evidence champion and 'nerd cheerleader' Ben Goldacre has 455,000 followers on Twitter. Dr Goldacre gets stuck into frequent social media 'conversations' (and some spats, such as with representatives of Big Pharma) to further his fight against Bad Science.



If you had to choose which social media channel to use, the evidence doesn't, alas, give you any helpful pointers.<sup>47</sup> But as social media becomes an indispensable part of professional and personal life, it may well be an indispensable tool for research communication.

### CREATE A RECOGNISABLE AND RESPECTED BRAND

A positive image is a potent tool for evidence-communication.<sup>48</sup> Branding can, for example, be incorporated into dissemination through the design of recognisable logos, slogans and identity.<sup>49</sup>

Branding is not just for the likes of Apple, the BBC or Coca Cola. It's also useful for evidence organisations - to trust the provenance of the evidence, or the evidence-based advice. For instance, organisations such as the international Cochrane Collaboration, NICE in the UK, Bureau for Economic Policy Analysis in the Netherlands and Washington State Institute for Public Policy in the US. In a crowded market of multiple evidence players, it may also be important to distinguish yourself from the crowd. You may need to create a clearer brand to give you the edge over other organisations.

Your audience needs to have faith in your sources of evidence. For busy professionals who haven't the time to dig up peer-reviewed research, it can be immensely helpful to find a seal of approval, from a well-known go-to organisation or 'clearing house' of research. The brand may even be specific to an evidence-based initiative, rather than organisation, such as Nurse-Family Partnership®<sup>50</sup> (note the registered trademark symbol at the end of the name). Although there have been some recent questions around this programme's evidence.<sup>51</sup>

### DON'T FORGET TO SEND REMINDERS

It's a simple tool, but easy to forget: remind people of something said or done before. You might do it by email, Tweet or pamphlet - flag up your snappy evidence-summary, advice or campaign. As well as being commonly used in marketing, management and health, the simple technique of reminders is backed up by many reviews of research.<sup>52</sup>

For instance, sending weekly reminders to Canadian healthcare departments had a positive impact in a randomised controlled trial.<sup>53</sup> The reminders alerted the health workers about new, relevant evidence that had been added to an online repository. Another benefit of sending reminders is they are relatively cheap. Compared to starting afresh with brand new content, a reminder is good value for money.<sup>54</sup>

### SOME OTHER PROMISING AREAS OF COMMUNICATION

Our review of the wider social science found evidence for a whole raft of other ways to communicate, such as online repositories, science communication, audience segmentation, or evidence apps. But we couldn't identify any evidence to back them up. Or if we did so, it was unclear. So these areas are not included here.

Nevertheless, we want to give honourable mention to three areas - firstly, using good timing; secondly, applying information design; and, finally, combining a mix of communication strategies. None of these three could be backed up by strong evidence. But these approaches may still be promising.

### GETTING THE TIMING RIGHT

Seize windows of opportunity when your audience may be more open to your messages.<sup>55</sup> Politicians, for example, may be more receptive to evidence during early days of policy formulation - when policies are not set in stone and grinding through the legislative sausage-making machine.<sup>56</sup> Or your timing could be more mundane - capture your audience mid-morning or after lunch, when some office workers are active on social networks. The point is that you need to get your timing right, and your message might fall on deaf ears if you get it wrong.

### MEANING AND BEAUTY: THE ROLE OF GOOD DESIGN

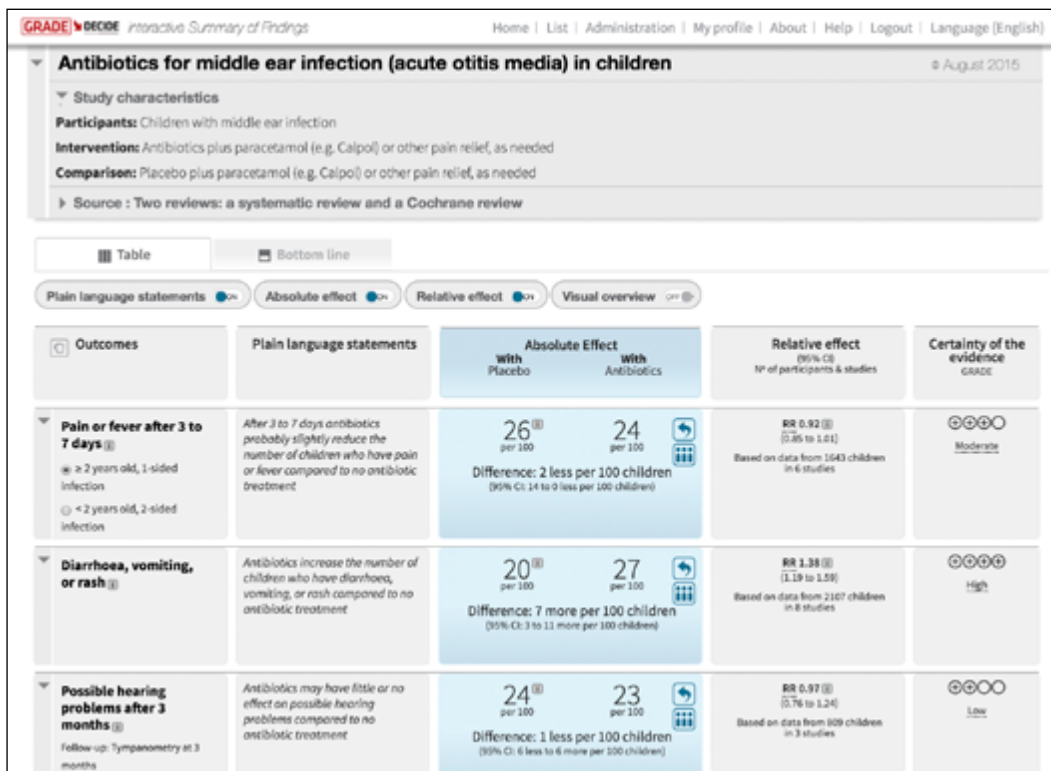
Use design principles to present scientific information. It can help turn complex data into 'meaningful narratives, beautiful visions and understandable messages'.<sup>57</sup>

Taking more care of the user experience could do wonders for some of the rather turgid evidence websites out there.<sup>58</sup> Too often we see Portal Proliferation Syndrome.<sup>59</sup> You may find the symptoms familiar: the desire to shove research onto yet another knowledge platform, without really thinking through how people will use it, or even if they need it.

One way forward has been shown by the clever use of design by the Norwegian Knowledge Centre for Health Services. They have designed user-friendly Cochrane health research reviews.<sup>60</sup>

### DESIGNING BETTER ONLINE REVIEWS OF RESEARCH

The Norwegian Knowledge Centre for Health Services works with information designers to design more appealing and user friendly summaries of findings tables in Cochrane reviews, and visual campaigns on issues from architecture in society and food waste.<sup>61</sup>



Good design includes data visualisation, sometimes called data viz. The Alliance for Useful Evidence fleshed out some good examples of data viz in some previous work we did with the Reuters Institute for the Study of Journalism.<sup>62</sup> But we struggled to find evidence of impact, just lots of good theory, ideas and interest. However, if you do want to dig deeper on data viz, we have found a fascinating research review showing the performance of different visualisation tools in the *Journal of the American Medical Informatics Association*.<sup>63</sup>

### MIXING A COCKTAIL OF COMMUNICATION STRATEGIES

We have already seen in the first review that it would be canny to blend a range of communication approaches. For instance, packaging up a mix of online evidence portals, with email reminders, social marketing etc. A mix might work better than putting all your eggs in a single communication basket, like one evidence portal. Looking at the wider social science literature, we found a trustworthy systematic review that also showed the strength of doing a mix.<sup>64</sup> However, this was not a finding unique to communication. The value of creating a mix was a common finding across this entire piece of research. The interventions usually came as package, a medley of, say, developing the skills of policymakers, good communication, and organisational structural changes – we will cover these other areas in our next sections.

## 4. INTERACT - Facilitating interactions between decision-makers and researchers

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### Review 1

Collaboration, co-production, co-operative inquiry. Whatever you call it, it must surely be a good thing to bring researchers closer to their audiences.<sup>65</sup> Who could possibly take issue with partnership working?

Well, we do. The reason being is that we couldn't find much evidence that interactions worked. It was almost impossible to see it as a stand-alone element of promoting evidence – it was always part of a mix of other things, such as learning or communication. In four reviews we looked at, it failed to achieve impact on evidence use.<sup>66</sup> For instance, one review<sup>67</sup> found a failure to encourage evidence-use amongst 'communities of practice', where professionals can rub shoulders with colleagues and researchers, usually in a virtual forum.

Our problem may be that the concept of 'interactions' is just too vague. What exactly are these interactions and relationships? Don't researchers do this all the time, whenever they step out of the door for face-to-face meetings, or virtual engagement via the internet. Maybe the problem is the types of things we added to this category: joint seminars, communities of practice, mentoring, knowledge brokering. Can they be tightly defined as 'interactions'? They could just as easily be found in our other categories – such as skills? Interactions need a sharper definition, a stronger Theory of Change that is explicit about what exactly they're trying to achieve. It's highly likely that some interactions do make a difference, we just need to get better evidence to support it.

### Review 2

There weren't many more lessons to be found in the broader scoping review. Much of the evidence was unclear, mixed or non-existent. In areas such as fostering collaboration, or building relationships and trust, we couldn't find evidence of impact. However, there was something that did stand out: social influence.

### PEOPLE OF INFLUENCE

When it comes to changing behaviour, personal ties and social influence matter.<sup>68</sup> The importance of social influence has been convincingly described in the book *Using Evidence* by Sandra Nutley and colleagues.<sup>69</sup>

The power of social influence may not be a new idea. It's been well-evidenced elsewhere.<sup>70</sup> But it's important to include here, as it underlines that we need leaders to make a difference. We need evidence champions, opinion leaders, messengers, role models and 'change agents'<sup>71</sup> (a term that sounds more cloak-and-dagger than it actually is, think of an entrepreneurial type). It might be about personalities and types of people. For instance, younger nurses have been shown to influence higher levels of research use amongst their peers.<sup>72</sup>

Admittedly, we found little evidence of impact in our first review. But, there was much stronger evidence in the wide second scoping study.<sup>73</sup> For instance, one review<sup>74</sup> looked at how ‘local opinion leaders’ single-handedly championed evidence-based medicine in over 600 hospitals and primary care practices. The research review found these leaders made a clear difference, after examining 18 different randomised controlled trials. Opinion leaders are people seen as likeable, trustworthy and influential. They help to persuade other healthcare providers to use evidence, when treating and managing patients.

In the evidence world, we have leaders influencing the entire movement, people who are adept at persuading their peers of the value of evidence. These individuals can make a difference, not just in the clinic or school, but in wider government and policy. They will be embarrassed to be name-checked here, so we won’t do it (you can find them on our website – they are the most prolific bloggers on the Alliance for Useful Evidence). But we need more people like this. Other bodies already support their ‘change agents’, such as the Results for America Moneyball All-Stars,<sup>75</sup> the Evidence Champions at the London-based Project Oracle evidence hub,<sup>76</sup> or the Evidence-Based Practice Champions at the Society for Implementation Research Collaboration. The Alliance is looking at setting up more formal support for individuals. We could, and frankly should, do more to celebrate and support evidence leaders.

## 5. SKILLS - Supporting decision-makers to develop skills in accessing and making sense of evidence

### Review 1

For evidence to be used, you need to understand what you are dealing with. Even if you package up your evidence in easy-to-use summaries, your policymaker or professional is still going to need to understand what is behind it. Online research summaries may talk about 'strength of evidence', but what exactly does this mean? It would be wrong to assume that your audience will grasp such terms straight away (and even advance methodologists struggle to agree what they mean). Support is needed. For instance, the College of Policing, the professional body for police officers, runs 'evidence base camps' for police officers to get to grips with the research summaries in the Crime Reduction Toolkit.<sup>77</sup>

Our research synthesis found that skills and training initiatives were effective. Critical appraisal training in particular worked well, as did university courses and continuing professional development.

#### EVIDENCE SKILLS AND KNOWLEDGE AT CIVIL SERVICE TRAINING CENTRE IN GHANA

A consortium of non-government and government bodies called VakaYiko<sup>78</sup> is working with the Civil Service Training Centre (CSTC) in Ghana under the Office of the Head of Civil Service, to develop and embed a course in evidence-informed policymaking. This has included capacity development for CSTC trainers both in the skills and in the concept of EIPM, and a series of pilot workshops and feedback sessions to refine the content and approach. By the end of this programme the pilot workshops will have trained over 200 civil servants from dozens of departments and agencies; permanently embedding the course at CSTC will ensure it continues to be available for the whole Civil Service in future.

Training is even more effective if it is combined with a push to motivate learners to use it. In other words, not just showing the nuts-and-bolts of research design, but also inspiring your students. The results of the synthesis, however, did not provide insights into which type of educational programme or pedagogy might be best to retain knowledge and acquired behaviour. We thus looked at the wider social science literature to see if we could learn more about the best approaches to sustain learning.

#### ACADEMY OF GOVERNMENT

The Edinburgh-based Academy of Government provides a range of executive courses and a Masters in Public Policy, all of which have a focus on appraisal and analytical skills in the context of policymaking for government.

## Review 2

For our scoping of the social science literature we searched widely for research on adult education using key words such as ‘capacity-building’, ‘andragogy’ ‘professional development’. Because we found such good evidence for learning in our first review, we were particularly interested in how educational effects might be sustained - not just have a short-term benefit.

### ANDRAGOGY: UNDERSTANDING HOW ADULTS LEARN

Trainers of evidence can learn a lot from social science on the value of ‘andragogy’, a teaching method focused on adult learning (andr- meaning ‘man’), in contrast to the child-focused ‘pedagogy’ (ped- meaning ‘child’, and agogos meaning ‘leading’).

We need to be aware that adults bring lots of experience to their training sessions. They bring a maturity, internal motivation, and a desire to apply learning to problems in the here-and-now, not some far off future.

Andragogy can, for instance, stress the interactive and equal relationship between teacher and learner.<sup>79</sup> For instance, in the Alliance for Useful Evidence’s Evidence Masterclasses, it’s an equitable relationship amongst the group. Indeed we learn just as much from the ‘students’, as they do from us.

### GROWING ‘SMART DEMAND’ FOR EVIDENCE IN LOCAL AUTHORITIES, CHARITIES AND THE CIVIL SERVICE

The Alliance for Useful Evidence runs Evidence Masterclasses for Grade 7s in the Civil Service Policy Profession, leaders of local authorities, and charity chief executives – to help them grow their confidence in using evidence.<sup>80</sup> They are small workshops, and we emphasise learning from each other – not just ‘talking at’ an audience. The ‘facilitator’ is a peer of the audience Dr Tony Munton – a former senior civil servant, and Chair of a charity. The courses have had positive feedback, averaging a score of 8.2 out of ten in feedback, but they are time-consuming and take at least a whole day. The importance of follow-up has been shown in these masterclasses, as confirmed by this review of research.

Our wider scoping study found a large body of reviews on the best ways to design adult learning.<sup>81</sup> For instance, one meta-analysis found strengths in accelerated learning, coaching, guided design, and just-in-time training.<sup>82</sup> The authors of the research even found the ideal amount of time and number of participants: avoid doing anything less than 20 hours of training; and don’t run a class with more than 40 people.<sup>83</sup>

The meta-analysis also found that it was good to do the training in the office, not far away in a classroom. Training participants in their work settings had effect sizes twice as large as using external settings, such as universities. The success of learning in the workplaces is, perhaps, because learners can immediately apply their learning to current challenges at work.

## GETTING HELP FROM OTHERS: MENTORING AND SUPERVISION

Learning via a mentor or supervisor fits well into the principles of andragogy. Mentors are workplace colleagues that are there to help you. They allow a more adult peer-to-peer support, allowing you to apply what you have learnt in the work place, and be self-directed in your learning, rather than following the agenda and dictates of a 'teacher'. While the evidence for mentoring in our first review was limited, we found more in the wider social science literature.<sup>84</sup> Supervisors can also play a role – not just in sharing the basics of evidence, but helping their charges get motivated. To reassure them, and open their eyes to all the good research out there.<sup>85</sup>

## NOT JUST FACE-TO-FACE: ONLINE LEARNING

Online learning may be good for the time-poor civil servant or professional. You can find a vast amount of knowledge online, anytime, anywhere, and at your own convenience.<sup>86</sup>

What we learnt from the wider social science literature is that online learning delivers results. A large and strong body of review evidence shows that it's at least as effective as traditional educational 'classroom-based' tools.<sup>87</sup>

### HARVARD'S ONLINE EVIDENCE TRAINING FOR INDIAN CIVIL SERVANTS

The Evidence for Policy Design<sup>88</sup> team at Harvard Kennedy School provide a range of training opportunities targeted at policymakers and executives, teaching skills for using evidence in the design of public policies and programmes. You can ask questions of Professors, use some of their tools, such as a 'decision-trees' and apply your learning to real problems.

Their training seeks to give decision-makers the tools they need to be critical consumers of evidence – knowing what questions to ask, where and when to seek data, and how to weigh the merits and disadvantages of different methods. They are running an online course for over 500 policymakers in different provinces in India, at the same time, who can access the training whenever most convenient to them.

Digital learning also allows tracking of results. This can inform the progress of lessons and exercises. One step on from this, learning analytics, or educational data mining is where online and mobile technology is used to gather feedback on learners' performance, so that learning can be tailored, and special support given for more challenging areas.<sup>89</sup>

The strength of evidence means we should consider more online training. We should also consider being more ambitious, perhaps designing a Massive Open Online Course, or MOOC, on evidence use. There must also be place for evidence apps. But we just couldn't find any review evidence to support apps. However, we may eventually see more evidence of impact as their use continues to grow. The Centre for Evidence Based Management has launched a 'CAT (Critically Appraised Topic) Manager App'. The App takes you through a series of questions to critically appraise the trustworthiness of scientific studies, and is available on iPhone or android.<sup>90</sup> We need original research on these sorts of apps to see if they make a difference.



## 6. STRUCTURES AND PROCESSES - Influencing decision-making structures and processes.

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**W**e need to hardwire evidence into everyday decisions. Otherwise it's always going to be a struggle, constantly working against the grain.

To do this, we may need to set up some better systems. For instance, making all new policies list all the evidence behind it, as advocated by Nesta's recommendation for a *Red Book for Evidence*.<sup>91</sup> Policymakers would be obliged to reveal the evidence that supported the policy decisions, across social care, education, health, and beyond.

### 'SHOW YOUR WORKINGS' AN EVIDENCE TRANSPARENCY FRAMEWORK

The Evidence Transparency Framework in the UK shows – on a zero to three scale – how easy it is to find the evidence behind policies. Is evidence on policies listed on the government's .GOV.UK impossible to find? Or, is the evidence clearly laid out and only a few clicks away. If there is no evidence, then is there a commitment to do more evaluations on new policies?

The Framework was developed in October 2015 by the Institute for Government, in partnership with the Alliance for Useful Evidence and Sense about Science, with support from the Cabinet Office. The framework is the basis of an exercise to benchmark government departments in Spring 2016.<sup>92</sup> The UK Department for International Development is trialling the framework to check the transparency of evidence behind business cases. The House of Commons Science and Technology Select Committee is using the model for their 'Evidence Checks' on Government Departments.

As well as support for policymakers, we need systems in place to help the frontline of public services. For instance, a six-stage protocol for nurses to use evidence to help pain management.<sup>93</sup>

### Review 1

However, our first research review found that 'structures and processes' were always combined with other things, such as training, or awareness-raising. It was never done in isolation. So it's hard to say with certainty if it worked. But, while not clear-cut, the majority of evidence supports the idea that 'structures and processes' can help evidence use. It may just be that this work is still in its infancy, and thus untested. It's also good to see if we can find anything out from the rest of social science. We discuss this next.

### Review 2

Evidence from our second review of research backs-up the value of providing practical resources to incorporate research use, such as using reducing cognitive biases and setting up 'nudges' to use evidence. For instance, setting a research database as a default landing page on your PC; or applying behavioural insight frameworks such as EAST,<sup>94</sup> (making evidence use Easy, Attractive, Social and Timely).

Below we discuss facilitating organisational change as the area with the strongest evidence. We also discuss creating national evidence institutions as an area worth considering.

### SUPPORT ORGANISATIONAL CHANGE

We need practical assistance across organisations to help get evidence used. This could be about an organisation providing practical tools, or protocols or committees charged with thinking about evidence. To make sure evidence is not just an ‘added bonus’, but plays its proper part in your company, charity, clinic or government agency.

For instance, we found a large number of reviews on the effects of providing IT systems on behaviour change outcomes. Such as using IT to change the behaviour of medical practitioners.<sup>95</sup> Another promising area is simulating policies digitally (although we didn’t find evidence of impact). Software is being piloted in New Zealand that models the likely effects of different policy options on a population.<sup>96</sup>

#### MODELLING THE EARLY LIFE-COURSE IN NEW ZEALAND - A TOOL TO BRIDGE POLICY AND RESEARCH

A ‘decision support software tool’ has been developed in New Zealand to bridge the research-policy gap. This tool assesses the impact of policies affecting children, and is the result of collaboration between researchers and policymakers. The tool runs a micro-simulation called Modelling the Early Life-course (MEL-C), which uses the results of longitudinal analyses to determine both the normal expected transition of children through the life course, and also the impact of policy interventions on determining outcomes for children. The tool includes a graphic user interface and allows policymakers a ‘window’ into research in a way that allows an easy translation to policy.<sup>97</sup>

We found evidence that decision-aid tools help you consider all the available options. And help you consider the right research, and think about how your decision fits with your own personal values.<sup>98</sup>

#### HELPING SOCIAL WORKERS USE EVIDENCE THROUGH STANDARDISED TOOLS

Checklists and decision-making aids like fast and frugal trees can help social workers: when standing on a doorstep, perhaps in front of angry parents, social workers<sup>99</sup> may need to make snap judgements on whether a child is at risk of abuse.<sup>100</sup> This could be a life or death call for the social worker. A digital checklist and standardised tools can aid professional judgement, by flagging up relevant research and risk analysis. It would help avoid the very human error ‘cognitive overload’ and ‘decision-fatigue’. Even more important if they are tired, overworked and stressed, when the last thing on their minds will be risk-analysis, research and data.

Any organisation should also think about how they reward their staff. There is a vast body of evidence on the effectiveness of financial incentives to change professional behaviour.<sup>101</sup> And, providing audit and feedback was consistently found to lead to small but significant changes in professional behaviour.

These changes are important as they are about hard-wiring action (e.g. audit and feedback, decision-making tools), rather than relying on persuasion (e.g. the social influence of opinion leaders). It may even be a more effective approach: one highly-trustworthy overview of systematic reviews found that actions were more effective than persuasion.<sup>102</sup>

### MAKING EVIDENCE AN INSTITUTION

As well as improving existing organisations, we also need standalone evidence ones. Bodies that can help fight the corner for evidence – in policies, management and budgeting, such as the Office for Budget Responsibility in the UK, the Plan Bureaus in the Netherlands, What Works Network in the UK’s Cabinet Office, or the Office of Management and Budget in the US.

#### THE WHITE HOUSE MEMO REQUESTING GOVERNMENT USE EVIDENCE

During the Obama administration, the Office of Management and Budget in the Executive Office of the President, requested, in a Memorandum to all US government departments and agencies that they ‘apply existing evidence of what works’ – or commission new evaluations and experiments, like low-cost Randomised Controlled Trials – when preparing for the 2015 Budget submissions.<sup>103</sup>

Institutions can change the way policy is made so that evidence is not ignored. In South Africa, the Department of Planning, Monitoring and Evaluation has significant power to ensure evidence is used in policy.

#### MAKING EVIDENCE OBLIGATORY IN SOUTH AFRICAN WHITE PAPERS

The South African Department of Planning, Monitoring and Evaluation has established systems that both encourage, and enforce the use of evidence. They offer technical and financial support to other departments wanting to conduct or commission an evaluation of their policies, whilst also enforcing research use, as all new White Papers tabled to cabinet require a review of evidence related to the proposed policy.<sup>104</sup>

One body that has inspired others is the National Institute for Health and Care Excellence (NICE). It has considerable sway in making science and health economic evidence integral to the practice and commissioning of English health services. For instance, their clinical care guidelines and technology appraisals are informed by evidence – as well as the views of patients through Citizen Councils, and health experts. NICE don’t ‘make policy’ – they are independent of government and do not have power to enforce the use of their guidelines. However, in reality their advisory guidance to clinicians has considerable de facto power.<sup>105</sup>

Such models could be enhanced and widely applied. It’s a model that is being replicated in other countries, particularly in Latin America.<sup>106</sup> NICE has been an inspiration as well for the UK’s nine What Works Centres, covering areas such as policing, wellbeing, local economic growth and education.

## 7. CONCLUSION

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What's been extraordinary is the sheer diversity of ways to encourage research to take a greater role in decision-making. There were over 150 different types of interventions we looked at. They cover the well-known, such as training courses or journal clubs, to the less well-known, such as Delphi panels, redteaming or dogfooding.<sup>107</sup> With the constant growth in digital technology, there are many innovations on the horizon. We only touched on some of them. We had to be choosy, because we wanted to zero-in only on interventions that had a good evidence base.

### OUR RESEARCH SAYS...WE NEED MORE RESEARCH

If there is one key conclusion from our review of research, it is this: we need more impact evaluations on interventions to increase evidence-use. It may be hard in practice to measure impact, particularly over shorter time periods, and it's hard to isolate the influence of particular initiatives, as testified by a recent survey of the 'knowledge mobilisation' sector by Huw Davies, Alison Powell, and Sandra Nutley, for The National Institute for Health Research.<sup>108</sup>

But at the very least, we need more clarity on interventions. For instance, what exactly is meant by 'interactions' between researchers and users? A Theory of Change setting out explicitly the goals and mechanisms would be helpful. And, if we can isolate an intervention, then let's have more evaluations looking at comparison groups (did that audience really benefit from your seminar, network or training course – compared to a control group?).

If the interventions do work, was it money well spent, according to cost-benefit economic analysis? Throwing lots of money at changing behaviour may help. But was, say, investing in a big new marketing campaign or intensive training programme worth the expense? And did the benefit continue, or did it fizzle away after a few months?

These are important questions. And testable questions that we can explore through social science and evaluation. Yes, of course it's hard in practice. The local context in all these interventions can be so powerful that it feels hard to generalise. What worked in a Sheffield hospital may be worlds apart from a Dunfermline clinic. But it's still possible and open to research.

Too many of the reviews covered here are from the health sector. We need more primary studies from teaching, policing, social work and other areas of social policy. Evaluations also need to be clear about the sort of research being used. Unfortunately, only five of the reviews in our study explicitly stated what type of evidence decision-makers were being prompted to draw from. In each of these cases, they cited Systematic Reviews as the most reliable source of knowledge.

*“In general, there was surprisingly little information on what presents reliable and relevant evidence, in reviews of interventions aiming to increase the use of such evidence.”<sup>109</sup>*

Future research should also take a look at the discipline of economics – distinct from the rest of social science. For instance, economists are good at getting the attention of policymakers – some would say too good. Is there anything we can learn from them to apply to the rest of the social science sector? Or is economics a breed apart?

### MEASURING IMPACT

There was a tendency in the first review to report on intermediate outcomes as a proxy for evidence use, such as increased critical appraisal skills as an indicator for evidence use. However, having the skill or intention to use evidence, cannot, in itself, be regarded as a reliable indicator of behaviour change in practice.<sup>110</sup>

### FINALLY....

Some readers will be surprised by the things we have left out, or given cursory coverage, such as co-production of research, or traditional knowledge exchange events, like seminars, conferences, or webinars. It's not that we don't care about these approaches. We do. These approaches make up a lot of the daily work of the Alliance for Useful Evidence. But they are given less coverage in this paper because we focused on the areas with stronger evidence. If, however, you want to read more about the whole range of interventions, we do recommend reading the treasure trove of the project report and its associated, even more detailed technical report.

The aim of this paper was to focus on the positive. On what works to increase the use of research. Not on the barriers to evidence-use which is well covered elsewhere.<sup>111</sup> We believe that this study is groundbreaking in its breadth: our 'review of reviews' broke out of the traditional research on 'evidence-informed decision-making', and has cast the net widely, to include insights from psychology, management studies, marketing and much more. We hope that anybody setting up a new What Works-type centre, or who wants a more robust evidence-based approach to promoting research, will make this evidence their first port of call.

**Jonathan Breckon and Jane Dodson**

April 2016

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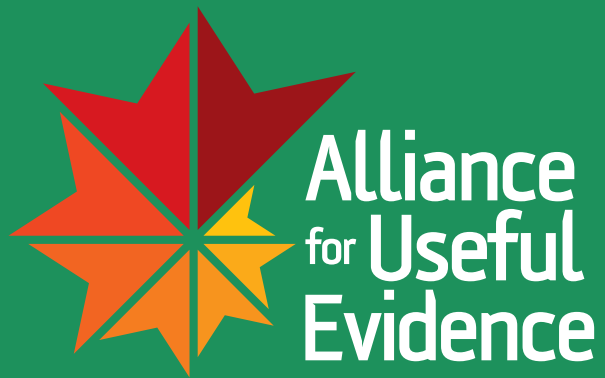


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105. Nesta (2014) 'The NICE Way: Lessons for social policy and practice from the national institute for health and care excellence.' London: Alliance for Useful Evidence/NICE International. p.10.
106. See: <http://www.alliance4usefulevidence.org/publication/the-nice-way-lessons-for-social-policy-and-practices-from-the-national-institute-for-health-and-care-excellence/>
107. See full technical report - Langer, L., Tripney, J. and Gough, D. (2016) 'The Science of Using Science: Researching the Use of Research Evidence in Decision-Making; Technical Report.' p83.
108. Davies, H.T.O., Powell, A.E. and Nutley, S.M. (2015) Mobilising knowledge to improve UK health care: learning from other countries and other sectors. 'Health Services and Delivery Research.' No. 3.27.
109. Langer et al., (2016)
110. Further, there is a lack of agreed and tested indicators to measure evidence informed decision-making outcomes effectively. Examples of reliable and objective indicators were: cited evidence in policy and practice documents; the evidence base determining programme funding; assessment tests for those on skills programmes; the Global EIDM index. However, less tangible outcomes, such as access to evidence, were assessed using more subjective measures such as self-reporting or future intentions.
111. See for example, Oliver et al., 2014.





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