WHY researchers should spend time on this

Summary

This chapter starts with a brief overview of where we are in the history of understanding how health and social care research moves into practice (or not) and why it matters, including the time taken for research to have traction. I consider the mismatch between research which is produced and information which decision-makers want. Increasing volumes of information of all kinds now make it harder for research to be seen. There is a short account of scholarly debates on the way in which research influences practice and how our thinking has changed, from researchers broadcasting findings to more nuanced understanding of the complex interactions between researcher and user working in dynamic systems. This matters because it informs the practical steps and tactics needed to get your research noticed and understood. The chapter ends with five general steps for better engagement, which are tailored for different audiences in later chapters. There are also pointers to broader bodies of work on impact and implementation, which overlap but extend further than the scope of this book.

Making sense of research findings

I was at a meeting discussing recent research we had summarised for ambulance staff and services on emergency care. The
showpiece was a large randomised trial, one of the largest of its kind in an out-of-hospital setting, comparing mechanical devices with manual compressions in treating cardiac arrests (Gates et al 2017). The high-quality trial showed no real difference in survival rates between the two. Given the high costs of the automated devices, it suggested potential cost savings for the service. But discussion at this event became heated. Many of the ambulance trusts had already invested in the mechanical Lucas devices. Staff liked using them, feeling reassured by the equipment and – no small thing – feeling safer, as they could stay seated with seatbelts on instead of attempting resuscitation in the back of a jolting ambulance at speed. So the conclusion of many paramedics and managers in the audience was that, if outcomes were similar, they wanted to go on using the mechanical devices.

This was a valid interpretation of the research. But it came as a surprise to me, already drafting headlines for policymakers on potential cost savings and efficiencies. I had not realised that other factors, like acceptability to staff and use in the real world, might affect the way the research findings landed. It reinforced for me the need to understand what matters to different audiences. Without a knowledge of audiences and context, research will not matter to those making decisions on the ground. The same research findings can be framed and understood in many different ways. There is an art and science to presenting research well.

Understanding the different ways that research can be interpreted is important. And the role of the researcher guiding the process by which different audiences make sense of research findings and shape the outputs is a critical but often neglected aspect of academic life. Dissemination and promotion of research findings often comes at the end of a project when the team is dispersed and the contract funding has stopped. But thinking about who might be interested in the research or parts of the research and engaging that community should happen much earlier at the point of designing and delivering the study. Research which influences policy and practice usually has meaningful engagement with stakeholders throughout the study. It may take time to do this well, but is likely to maximise the relevance and usefulness of research.
At the same time, researchers need to contend with developments in information, technology and research production which make it harder (in some ways) for their work to be noticed. This chapter explains why researchers should spend time thinking about how best to present their findings. This includes an account of the competing demands for readers’ attention and how in the past research has often seemed remote from the urgent demands of those making decisions. We know more from theory and research about the journey from research to practice and what strategies may help to connect findings with particular audiences. The recent turn in research policy and funding to give greater attention to external impact has intensified the need for researchers to invest more effort in getting their findings used by the right people in the right way. The chapter ends with general principles of effective engagement summarised in five steps which are worked up for particular audiences in Chapters 4–6.

What is the problem? Time lags, information overload, research waste

Researchers want their work to make a difference. Policymakers or service leaders want to draw on best evidence when making difficult decisions. And yet it is still very difficult for the right research to reach the right people in the right way at the right time.

Let’s start with some numbers. It is estimated that only about 60 per cent of healthcare treatments are based on best evidence (Braithwaite et al 2020). Despite the machinery of clinical guidelines and other useful ways of structuring evidence for practitioners, there is still a large gap between research and practice. It is often said that it takes 17 years for research to embed itself in practice – a figure which is contested (Morris et al 2011), but still widely cited. There are varying accounts of different types of time lags, from drug discovery to commercialisation, from research publication to clinical guideline recommendation (Hanney et al 2015). But by any measure, it still it takes far too long. And adoption is uneven – there is now a whole evidence base on variation in proven treatments, with one study showing four-fold variation in different parts of the country for people
getting effective treatments like hip replacements and cataract surgery, having adjusted for need (Appleby et al 2011).

There is much to be proud of in the UK, with pioneers like Archie Cochrane, showing the importance of systematically testing and synthesising evidence to drive best practice, leading to the development of institutions like NICE (Timmins et al 2017). The movement of evidence-based medicine, which in the 1970s was seen as disruptive and radical, has now become embedded in the NHS mainstream with high-quality pragmatic trials commissioned to address important clinical knowledge gaps feeding into national guidelines and standards. We are lucky to have a national needs-led research system and infrastructure in the form of the NIHR which delivered a world-leading pragmatic trial on COVID-19 treatments in a matter of weeks. This identified a low-cost, widely available steroid treatment as an effective option, now taken up across the globe (RECOVERY Collaborative Group 2021).

For clinical and biomedical research, particularly trials looking at the comparative effectiveness of treatments, there are now well-established mechanisms for evidence to reach practice. High-quality trials, synthesised in systematic reviews, provide a foundation for clinical guidelines in many areas, from the management of people with stroke (Rudd et al 2017) to early intervention for young people with psychosis (NICE 2016). Other large-scale studies have had direct influence, such as the national prospective cohort study of outcomes by place of birth informing guidelines on intra-partum care (NICE 2017). For other kinds of research, such as studies looking at health service delivery, quality of care, patient and staff experience there are fewer systematic or nationally recognised channels for research to reach decision-makers. This means that researchers need to make more active efforts to package and promote their research for particular audiences in partnership with others.

Another problem is the sheer volume of information and research which is produced and increasing year on year. One analyst estimated that 40 years ago a mental health nurse or doctor might have needed to read three papers a day to keep on top of their field. Now it would be over 200 (Badenoch and Tomlin 2015). In the broader field of biomedical sciences, over
two million articles a year are indexed in PubMed database every year, landing at a rate of around two papers a minute (Landhuis 2016). And much of this is of questionable quality. Alvesson et al (2017) in a lively polemic give examples of how current incentives in the academic system are leading to overproduction of research which is ‘meaningless’.

Although contested as a measure of value, one crude measure relates to the number of times a paper is referenced in scholarly work. It is estimated that about a third of social science papers never get cited even once by other researchers (Larivière et al 2009). Such measures may be flawed – for instance, another analysis of ‘never cited’ organisational research using standard databases found they overlooked references in books, online journals and repositories (Prichard 2013). And a more important limitation is that the number of times a paper is cited and used in scholarly work should not be equated with its usefulness or worth. Indeed, over-reliance on bibliometrics is now giving way to a turn towards more responsible research metrics (Wilsdon 2017).

However, such figures still raise questions for the research community. Perhaps the most startling statistic of all was an estimate ten years ago by scholars that 85 per cent of all published health research may be flawed, due to problems of incomplete reporting, poor study design or execution (Chalmers and Glasziou 2009). We will never know an exact figure for the quality and value of all health and social care research. But we do know that too much research in the past was answering the wrong questions in the wrong way, took too long or never reached practice.

It has also become more difficult for readers to find relevant, high-quality research in an avalanche of information. The next chapter, looking at what counts as evidence, considers in more detail how research outputs sit in a world of expanding information, channels and journals. There are many positives to the opening up of data, with new kinds of information more accessible to many. But it also makes it more difficult for research to compete with other kinds of information, some of which may be flawed or misleading. This problem has become amplified in times of emergency, such as the COVID-19 pandemic, where
we are hungry for immediate information and it becomes more
difficult to tell what is reliable.

The problems with research information – too much, too little,
too late – are now well recognised. A series of influential papers
on research waste, recently updated, highlighted powerfully the
ways in which much research is of low-quality or addresses the
wrong questions and what can be done to improve the rigour
and relevance of what gets funded and published (Glasziou
and Chalmers 2018). But the research itself is only part of
the problem. We also need to look at other features of how research
makes the journey to reach people who might find it useful.

From dissemination to engagement – how our thinking
has changed

We can see development in our understanding over the last 20
to 30 years in how research is used (or not) by policymakers
and practitioners. Some of this evolution is described well in a
paper by Best and Holmes in 2010, with further refinements in
a paper by Holmes et al in 2017. Although there are different
ways of conceptualising the journey of research into practice,
Best and Holmes (2010) describe a progression from linear
models, to relational approaches to systems thinking. Different
approaches may be appropriate for different kinds of research
or circumstances, but we can also see these as evolutionary
stages in our understanding of how evidence influences policy
and practice.

Early work assumed a rational, linear model in which research
is seen as a ‘product’ which stays the same whatever the audience
or context, which can be pushed or promoted to end users
in a one-way direction. These users were in essence passive
consumers of research they received. This model also assumes
direct and immediate impacts from the moment of publication,
with influence through a chain of predictable steps. The focus for
researchers was on effective communication and dissemination
of their work.

In the next relational stage of thinking, evidence use depends
on good relationships and processes. This involves understanding
by researchers of the networks and communities of practice of
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people they are trying to reach. It often links to the work of individuals who can span or mediate the different worlds of research and practice, acting as knowledge brokers. Many research bodies or collaborations now employ individuals who combine research understanding with backgrounds as clinicians or professionals to better promote research and frame it in ways that are useful to services and decision-makers.

The final systems model described by Best and Holmes (2010) draws on wider thinking which recognises that we live in complex and unstable environments, with different parts of the system interacting with each other in complicated and unpredictable ways. Systems thinking has become a useful paradigm in public health in thinking more holistically about wicked problems, from knife crime to child obesity (Rutter et al. 2017). For knowledge to influence individuals or organisations, researchers need to understand the complex mechanisms, culture and context of the dynamic system. This involves understanding the roles, actions and drivers of different stakeholders and how they interact. In this model, researchers might need to look for ‘occasions of influence’ in a complex web of relationships and institutions, a theme I pick up later in chapters on policymakers and timing of research.

This useful evolutionary model has some overlap with earlier thinking, such as influential work by Jonathan Lomas (Lomas 2000) among others on differences between models of push (in which researchers produce research and broadcast to the world), pull (where researchers respond to the needs of decision-makers and create a demand for their work), to linkage and exchange (the approach of collaboration and shared learning between researchers and end users). Graham and Tetroe (2007) conceptualised a circular model, showing the need for feedback loops and interaction between researchers and users in dynamic ways.

This wider lens extends to discussion about what constitutes an effective ‘evidence eco-system’ (Boaz and Nutley 2019), looking at interconnected elements which may include research funders, institutions, journals, clearing houses and intermediary bodies as well as the individuals and organisations using evidence. This acknowledges the complexity and interactions in a system
of research generation and use – a long way from traditional notions of research pipelines.

In the many conceptual frameworks and debates on evidence use, I find perhaps the most helpful is one developed recently by Mark Rickinson and colleagues for schools and education, based on a wide survey of relevant literature from different settings on effective evidence use. This has as its centre two organising principles of appropriate evidence coupled with thoughtful engagement and implementation. These depend on different enablers for individuals (skillsets, mindsets and relationships), organisations (leadership, culture and infrastructure); and broader system-level influences (Rickinson et al 2020). This acknowledgement of the complex, multiple levels of activity and influences, together with the core principles of finding evidence which is relevant and developing careful strategies to reach audiences, resonates with my experience of what works in effective evidence use.

Let’s talk about impact

Since 2014, impact on wider society has formed a substantive part of the way in which the value of research is assessed by the four UK higher education funding bodies. This marks a shift from a model in which the main measures of success centred on academic recognition, from awarding of grants to how many times papers were cited or appeared in a handful of high-status journals. The Research Excellence Framework (REF) in 2014 marked a departure in the way quality was assessed in universities. Researchers put forward case studies for review by expert panels which demonstrate impact. This is defined as ‘an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia’ (REF2021 2019). These impact case studies or stories are important. In 2021, the assessment of external impact makes up a quarter (previously a fifth) of the score on which decisions are made about allocating funding of the block grant between universities.

But although these system incentives have fuelled greater interest in the real-world difference that research makes, the
practical steps which researchers can take to maximise the influence of their findings are often not clear. An analysis of 162 health-related impact case studies in an earlier round in 2014 (Greenhalgh and Fahy 2015) showed that most submitted evidence focused on linear accounts of how research reached practice, relying heavily on trials with clear pathways to practice influence through mechanisms like clinical guidelines. The more sophisticated understanding of the diffuse and complex ways in which research informs practice, outlined earlier in recent scholarly debate about systems thinking in research journeys, was not evident in the majority of these case studies. The authors in this study noted ‘researchers’ relatively low emphasis on the processes and interactions through which indirect impacts may occur’. Less than a quarter of the case studies described targeted knowledge mobilisation activities in any detail or the active steps to achieve influence.

Given the interest in impact by researchers and universities, an important new body of evidence has emerged investigating research impact itself. A good starting point to understand some of this scholarly debate is the overview by Katherine Smith and colleagues on how impact is measured and (ironically) the impact of this shift in focus on research and researchers (Smith et al 2020), a theme also taken up by Tina Haux looking at different dimensions of impact in social policy research (Haux 2019). This is a growing field of inquiry – a quick scan of Google Scholar shows over 1,400 published academic articles on research impact in the last six years. Contributions range from practical tips on preparing impact case studies, such as Mark Reed’s handbook drawing on his own examples of agrifood research (Reed 2018) or the comprehensive guide by Patrick Dunleavy and Jane Tinkler (Dunleavy and Tinkler 2020) on maximising academic input and profile, which includes an introduction to the new sciences of tracking reach and use including social media, a field known as altmetrics. This goes beyond traditional citations in academic journals to include a portfolio of web-based measures including mentions in newspapers, blogs, Twitter and feeds into policy and discussion. This is still an emerging science, with a recent review noting that ‘initial studies suggest that social media has rather opened a new channel for informal
discussions among researchers, rather than a bridge between the research community and society at large’ (Sugimoto et al 2017). However, becoming fluent in the new language of social media and understanding how to craft online professional and personal identities, are likely to be increasingly important skills for researchers and are discussed in more detail later in this book.

As well as a growing body of work on measuring research impact and reach, there is also a large and complex base of research from different disciplines on how knowledge is translated or implemented into practice. This is described in different terms, from knowledge mobilisation to implementation science. Trish Greenhalgh provides an overview on this growing field looking at frameworks, tools and techniques for successful implementation and behaviour change, drawing on her own seminal work on diffusion of innovations (Greenhalgh 2018). Sharon Straus and colleagues (2013) provide a comprehensive academic guide to theoretical and empirical evidence in the field of knowledge mobilisation. The Further reading section provides a shortlist of books and articles I have found particularly helpful, for those who want to dig deeper or scan broader in related fields on impact and knowledge mobilisation.

Your strategy for engaging audiences

This book draws on some of these helpful wider scholarly debates on impact and implementation, but my aims are more modest and practical. I hope that this book will help researchers to decide how best to frame their findings so they are more likely to be read and discussed and used by particular audiences. It matters because public debate and understanding needs more than ever to be supported by reliable research. In today’s busy world it is increasingly difficult for people to discriminate between different kinds of information and assess what is credible and sound. As a researcher, you therefore have a moral responsibility (Van de Ven 2007) to promote your work in thoughtful ways which will support better public understanding and informed discussion.

This book provides examples of research in health and social care which have made a difference, with insights from
informants who are skilled communicators or influencers and understand the world of research. I have divided the material into chapters on what counts as evidence; who you want to reach – from practitioners to the general public to policymakers; how to maximise uptake by the right form and language; and how to anticipate times when your findings will have most impact. But cutting across these different audiences, formats and channels are some common principles I have identified for good engagement and communication strategies (Box 2.1).

**Box 2.1: Five steps for better engagement**

- ask the right research questions;
- understand the context in which your research lands;
- involve the right people throughout the study;
- partner with organisations, networks and champions;
- present content which is engaging and accessible.

**Step one: ask the right research questions**

For research to make a difference, it has to address issues which are important and relevant to target audiences. It also has to be designed in the right way to answer the question – a trial will not address questions of how services were implemented, and ethnography will not guide decisions about cost-effectiveness. Studies should build on what is already known in published evidence and address an important gap in knowledge. Research without appropriate or robust study design on a topic of little interest or importance to policy or practice will be of limited value. So the first principle of good engagement starts long before the study even begins. Stakeholders need to be involved in identifying important gaps and uncertainties. And when you communicate your findings, you need to underline why this area is important to particular audiences and what knowledge gap this fills.
Step two: understand the context in which your research lands

To make a difference, your research needs to be aware of the world in which your audience lives or works. A study on foetal monitoring would need to take into account the day-to-day working lives of midwives and recent maternal enquiries on avoidable deaths which may influence professional behaviours and system pressures. A project on recognising girls with autism would need to understand the range of professionals and pathways in schools, social work, healthcare and families who may affect timely diagnosis. Studies of homecare services and support for frail older people across the UK would need to understand differences across the four countries in funding and systems for personal care. To promote and implement your research findings, it is important to understand the drivers, incentives, culture and systems for audiences you want to reach.

Step three: involve the right people throughout the study

As a researcher, you may not be steeped in the world that you are studying. But you do need people with lived experience – as professionals or service users – engaged with the study as advisers or as part of the core research team. This is important to recruit and engage participants for the research but also to design the study which meets the core aims. Working with patients and carers on a hospice at home evaluation may highlight the importance of managing breathlessness as a tracer condition to be measured. Stakeholders can also help researchers to interpret findings, thinking about different cultural lenses and perspectives. Working together on research outputs will add to their relevance and appeal. You will also find out about where the people you want to reach go for information and the channels they use.

Step four: partner with organisations, networks and champions

It takes time to understand how practice and policy is shaped in particular contexts. You may not be immersed in these worlds. But you can make links with organisations or networks, from
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patient charities or advocacy groups to professional bodies, who have a deep understanding of your audience. Working with the right partner organisation can help you use the right language and find hooks which resonate with particular communities. They can also anticipate important policy or service initiatives and windows of opportunity when research can make a difference. Individual champions who have influence with a community can be important in reaching certain audiences and in successful social media engagement. Finding the right organisations and individuals to interpret and promote your research is critical.

Step five: present content which is engaging and accessible

In an age of information overload, the research outputs you develop for non-academic audiences have to compete with entertainment features and channels. This does not mean compromising the science or integrity of your project, but you do need to think carefully about how you tell the story of your research in different ways. Not everyone needs the full monograph or detailed information on methods and study design. Find examples and personal cases which bring to life your main line of argument. Work out how to summarise your findings in a headline or a tweet. If your resources allow, experiment with new formats from animations to podcasts. Write a feature article with influential leaders in a service-facing journal. Then use analytics and reflect with others on what approaches worked best to reach the right people, start a conversation and change practice.

These five steps are fleshed out for each of the particular audiences in Chapters 4–6. For instance, there are sections in each of these chapters on products which may be particularly appropriate to that audience. This includes feature articles in practice journals to reach frontline staff; plain language summaries for general public, patients and service users; and the policy brief for policymakers and managers. Although these formats may also be useful to others, they illustrate the need to tailor content and form for particular audiences. These chapters are followed by more detailed advice on telling the story of your research, finding hooks to engage people and using general and
social media. There is also guidance on using language effectively and developing your own style. First though we need to consider the research findings themselves – or what it is that is being promoted and implemented. The next chapter considers how research sits with other sources of information that influence decisions and decision-makers of all kinds.