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SPECIAL ISSUE • Evidence and meaning in policy making

sources and resources

This issue of *Sources and Resources* gives brief details of two journal special issues related to the use of evidence in policy making, followed by a report on the outcomes of the Scottish Open Data Consultancy. A book review considers *Beyond evidence-based policy in public health: The interplay of ideas*, by Katherine Smith, and we have a report on the first UK Knowledge Mobilisation Forum. The section concludes with Lessons from the Literature.

Qualitative research in evidence-based policy making

Innovation: The European Journal of Social Science Research 27, 1 is devoted to the contribution that qualitative research can make to policy making. Articles cover gender and welfare reform, issues of consensus and working together, policy on marginalised groups and the inclusion of qualitative research in systematic reviews.

Veltri, GA, Lim, J, Miller, R, *More than meets the eye: The contribution of qualitative research to evidence-based policy-making*, 1–4

Bennett, F, Sung, S, *Money matters: Using qualitative research for policy influencing on gender and welfare reform*, 5–19

Birrell, D, *Qualitative research and policy-making in Northern Ireland: Barriers arising from the lack of consensus, capacity and conceptualization*, 20–30

Thomas, W, Hollinrake, S, *Policy-makers, researchers and service users: Resolving the tensions and dilemmas of working together*, 31–45

Jabareen, YT, Vilkomerson, R, *Public policy in divided societies: The role of policy institutes in advancing marginalized groups*, 46–66

Garside, R, *Should we appraise the quality of qualitative research reports for systematic reviews, and if so, how?*, 67–79

Evidence-based knowledge

The Scandinavian Journal of Public Health 42, 13 has a supplement on evidence-based knowledge looking at the way evidence is created and used in public health policy.

Järvholm, B, Bohlin, I, *Evidence-based evaluation of information: The centrality and limitations of systematic reviews*, editorial, 3–10

Hansson, SO, *Why and for what are clinical trials the gold standard?*, 41–48

Punnett, L, *Musculoskeletal disorders and occupational exposures: How should we judge the evidence concerning the causal association?*, 49–58

Mullen, EJ, *Evidence-based knowledge in the context of social practice*, 59–73

Linked open data in the Scottish Government

A new report presents the outcomes of the Open Data Consultancy study carried out in 2013. 'Open Data' is data that is accessible to anyone (usually via the internet), in a machine readable form, free of restriction on use. Adoption of this approach to information sharing is growing in the public sector, with anticipated benefits for transparency, efficiency of government and economic growth. The study incorporated three main components: understanding the needs of the Scottish Government regarding data publishing and internal data management and advising how the open data approach could be applied in this context; holding a series of three workshops to raise awareness and explain the details of open data to staff from the Scottish Government; and creating a pilot website to illustrate how open data, and in particular linked open data, could be applied in practice to improve access to Scottish Government statistical data.

This report describes the findings and suggestions arising from the study and aims to provide useful reference information and discussion points, to assist the Scottish Government in developing a plan for how it makes use of open data in future. See www.scotland.gov.uk/Resource/0044/00441070.pdf.

Book review

Smith, K, 2013, *Beyond evidence-based policy in public health: The interplay of ideas*, Houndmills: Palgrave Macmillan

Justin O Parkhurst

Katherine Smith's book presents a clearly written and insightful look at the role of evidence in health policy making, providing a theoretically rigorous, yet widely readable, analysis of the ways that key ideas shape the roles that evidence can play in influencing policy. Health policy analysis, as a field of work, has been somewhat limited in the use of theoretical approaches from the policy sciences, and Smith's book therefore represents a welcome addition to the subject area.

The book is structured into eight chapters. The first chapter is a broad introduction to current issues in evidence and policy, while the remaining chapters are based around her two empirical analyses of health inequalities and tobacco control in the UK. Chapter 2 maps out the history of these cases (and other necessary background information), before subsequent chapters present the core of her analysis, applying a set of ideational (and, to a lesser extent, institutional) theories to explore her case studies.

There is a risk that some readers might be turned off by the UK focus of much of the book. This would be unfortunate. The introduction does set out some of the discussion by reflecting on New Labour's embrace of 'evidence-based policy' in the 1990s, but this is merely preface to an introductory chapter that provides an

incredibly clear and comprehensive discussion of the key issues in scholarly thinking on evidence and policy today. The first chapter would be highly recommended to any individuals working on this area, providing one of the best summaries of the issues I have seen to date.

The introductory chapter would therefore be particularly useful for students of public health – particularly any who (still) subscribe to ideas of 'evidence-based policy making' as an ideal. Smith does remarkably well in her first chapter to explain the limitations of that terminology, and to further provide a brief yet insightful review of the current state of thinking in the field of knowledge transfer for evidence uptake. Indeed, in the final section of the introductory chapter, Smith summarises a diverse body of policy theory in a way that is both comprehensible to non-political scientists, while still providing indication of the depth and usefulness of this discipline to the field of health policy analysis.

Subsequent chapters may be of greater interest to either policy scholars interested in ideational approaches, or to individuals particularly interested in her two case studies. Smith's principal argument is that to better understand the role of evidence in policy, we need to shift the unit of analysis from pieces of evidence to what she terms 'evidence-informed ideas'. As a whole, she is convincing in her argument, showing numerous ways that a shift in focus to this unit of analysis provides helpful insights to explain the development (or non-development) of particular pieces of policy, and developing a number of frameworks or concepts to undertake this analysis of evidence-informed ideas.

Chapter 3 lays out six 'journey-types' for research to get into policy that she identifies in her analysis: successful, partial, re-contextualised, fractured, weak, and non-journeys. These do provide useful descriptors to explain many of the processes seen in research uptake. However, her analysis in this chapter does raise some questions around when there needs to be 'enough' evidence behind an idea for it to be seen as an 'evidence-informed idea'. When studying these six journey types, for instance, some of these evidence-informed ideas are said to be 'strongly supported' by research evidence (or by researchers), while others are judged to be 'moderately' or only 'minimally' supported. In some ways, the shift to analyse ideas from a more constructivist position precludes the need for identification of a definitive evidentiary truth, yet the book's approach is not purely constructivist (or interpretivist), and there remains appeals to, and grounding in, rigorous epidemiological and social policy evidence of effect in some sections (perhaps because public health practitioners remain a target audience). The ideational analysis still works, but at times there appears to be some tension between these two positions.

Chapters 4 to 6 continue the ideational analysis by exploring four different types of ideas in terms of their policy function: institutionalised, critical, charismatic, and chameleonic ideas. Again, her analysis provides a great deal of insight into the ways that evidence-informed ideas function in policy change, helping the field move beyond naive ideas that evidence itself shapes or changes policy in de-contextualised ways. The details of the analysis, highly focused at times on UK academics involved in her two case studies, again may not be of interest to all audiences, but the theoretical approach speaks to a much larger audience who may wish to debate or refine these four key idea types in other contexts or case studies.

The penultimate Chapter 7 is a reflection on the institutional amnesia of public health bureaucracies, illustrating how policy influencing ideas may be recycled or

reused, often without knowing that this keeps happening. The chapter also briefly identifies new organisations tasked with knowledge brokering for health policy in the UK. Finally, Chapter 8 presents a brief overview and summary of the main points, as well as a set of key 'lessons' to take away.

Ultimately the book aims to speak to multiple audiences, as is evidenced in the final chapter's four lessons. The first appears aimed at public health researchers and knowledge brokers, noting that research can contribute to policy development in multiple ways, with research impact likely to vary based on the desired policy impact. The second lesson appears to be more for students of public health, or politically naive public health practitioners, simply stating that 'politics ought to be understood as a central component of public health, rather than a barrier to the use of research in policy (217) – a lesson that most readers of this journal would not need to learn. The third lesson appears more geared towards policy scholars, noting the need to consider the four idea types covered in Chapters 4 to 6. The final lesson appears to be aimed at funders or managers of knowledge brokering agencies, noting that policy learning is limited by current institutional arrangements (drawing on her Chapter 7).

Attempting to address such a range of audiences no doubt provides challenges as well as opportunities. While public health actors would find her first chapter insightful, they may struggle with the application of her idea that it is 'evidence-informed ideas' that should be the unit of analysis. Public health actors typically worry about evidence being 'misused' and 'co-opted' for policy ends, and they may left struggling with how to bring their concern for appropriate evidence back to the fore when being told that ideas can be 'chameleonic' (giving different conclusions to different groups), or when presented with analyses showing that the use of evidence for political ends is fundamental to the system. Diehard constructivists might equally question whether there is such a thing as a 'successful' policy journey in the first place – or at least ask why one is judged successful while another is not, especially when there are different evidentiary bases for each idea.

Such challenges are to be expected however in any multidisciplinary work that attempts to push forward a field of analysis for one audience (that is, public health and health policy analysts) by applying and adapting a body of theory from another field (political science and policy studies). Disagreements or remaining questions should be expected. These points should not take away from the vastly greater merits the book has to offer. It serves as both a very useful text to highlight the current issues and needs in the analysis of evidence and policy, while also presenting a theoretically rigorous and comprehensive application of ideational theory to public health case studies, and to the use of evidence specifically. The field of health policy analysis has stagnated somewhat in its ability to draw on theories and methods from the policy sciences, and Smith's book provides a much needed addition to the literature as such.

Report

A cat, an elf-lord and a spaceman walked into a room … the first UK Knowledge Mobilisation Forum had begun

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This paper reports on the first UK Knowledge Mobilisation Forum, held in mixed reality on 3–4 February 2014. This forum brought together 70 delegates from 15 sectors under the theme of 'making connections matter'. Highly participatory and academically credible, the forum combined a form of 'open space' participation with presentations from respected speakers on topics as diverse as design, fiction writing and community-university coproduction. The forum has been described as 'a hallmark event'. It was rated as excellent or good by 85% of attendees, and there is demand for it to become an annual event. It will be held next in Edinburgh in 2015.

key words knowledge mobilisation • forum • evidence into policy • evidence into practice • cross-sector

Background

The idea that science should benefit society, and that evidence should be useful is long established. But evidence is only useful if it is available, adoptable and actually used. Despite readily developing since the 1940s (Estabrooks et al, 2008), the academic field of knowledge mobilisation (or translation, utilisation, management, and so on) is fragmented and lacks consensus (Crilly et al, 2010). In practice, we still have a long way to go.

In healthcare in the UK there is an established and extensive literature on the translation of clinical evidence into practice, and bodies such as the National Institute for Health and Care Excellence (NICE) generate reviews, syntheses and guidelines to support the practical delivery of evidence-based care. Despite the benefits these provide, it is now accepted that this is not sufficient to secure the delivery of new good practice into everyday practice with the speed, efficiency and consistency that is required to meet the demands of the NHS constitution. According to Lomas (2007) the 'general picture is one of poorly connected worlds lacking knowledge of (and often respect for) each other'.

To solve the knowledge translation problems in healthcare we now need to look not only beyond the medicine (Ferlie et al, 2012), but beyond the sector. This is not because others have 'solved' the problem – delegates at the cross-sectoral Canadian Knowledge Mobilization Forum in June 2013 in Missisauga, Ontario described the same issues, challenges and frustrations in healthcare, education, energy, workplace safety, road use, and more. We need to work across sectors because there is an enormous appetite for work or energy to identify and address the issues (as demonstrated in any Sources and Resources section of *Evidence & Policy*) and we need to harness this for collective benefit.

Creating a cross-sectoral UK Forum

When I contacted people around the UK to test whether there was an appetite for a UK cross-sectoral forum as a sister event to the Canadian Knowledge Mobilization Forum most answers were 'maybe, so long as it achieves something'. That was encouragement enough, so, with the backing of Professor Derek Bell at the Centre for Healthcare Improvement and Research, the UK Knowledge Mobilisation Forum (UKKMbF) was born.

This first event's theme was 'Making Connections Matter' and targeted people who are 'passionate about finding better ways of mobilising, exchanging, utilising or transferring knowledge, evidence, research or ideas, and 'want to make a difference by working with colleagues from different sectors'.

It was held in mixed reality 3–4 February at Nesta (National Endowment for Science, Technology and the Arts), London. Fifty delegates attended in person and twenty as a fantasy avatar (including a cat, an elf-lord and a space man) in an online virtual world called SecondLife (SL) on Healthlands Island, hosted by Imperial College.

In terms of diversity, roles represented ranged from policy advisors, researchers and knowledge exchange professionals to educators, writers and clinicians; sectors included healthcare, design, national and international charities, universities and research bodies, international development agencies, organisational development and evaluation, children, youth, adults, criminal justice, environment, government and civil service. Most delegates were from the UK (Wales, Scotland and England) with people from Canada and the Netherlands, and from the UK, Germany, Japan, Saudi Arabia and Australia via SL.

Making it participatory

We wanted the UKKMbF to be academically credible, participatory and productive, and created a mixed agenda of networking, interactive group work and formal presentations.

To ensure the interactive work felt relevant we adapted a form of Open Space Technology (Owen, 2008). This approach gives everyone an opportunity – literally an 'open-mic' – to identify any issue they feel is important. These issues are recorded on post-it notes and then all delegates 'vote with their feet' on which topics they want to get involved with – the 'horizontal conversations' Peter Levesque (President of the Institute for Knowledge Mobilization) described in his opening remarks.

Almost thirty delegates braved the silence and the walk to the microphone. The issues, ideas and priorities included the need for accessible and shared language, the limitations of pre-packaged evidence, knowing what 'good' looks like and measures of success, how academic and practice research can best connect with the agendas of government commissioners, how we can de-politicise knowledge mobilisation, the difference between knowledge mobilisation and communication, institutional infrastructure, and even the fundamental question 'why bother?'. Many topics were revisited over the rest of the two days by self-selecting groups of interested delegates.

Having established active participation, delegates were thrown into a speed networking session chaired by David Phipps (Executive Director, Research and Innovation Services, York University, Canada). Standing in two lines, facing pairs had three minutes – one each to tell the person in front of them what they do and why

they are at the forum, and one to discuss together what they have in common. After three minutes, the 'tinkerbell' rang and one person danced their way to the other end of the room; the line shuffled one place left, and the next pair had three minutes to meet. The buzz was instant. The British reserve was broken…

By lunchtime on Day 1 the delegates had connected with at least 10 people from various professions and sectors, and shared almost 30 issues of importance. 50% of real life delegate and 15% of SL delegates completed the evaluation form. Everyone rated these opening sessions as useful or very useful.

From the stage

Five formal 20-minute 'Knowledge in Motion' presentations with Q&A spread over the two days gave delegates time to reflect and digest topics that might be familiar or quite new.

Mel Woods (Reader, Visual Research Centre, University of Dundee) considered how to design spaces for knowledge mobilisation, as spaces can influence our communications and connections. She described the value of serendipity 'as a space where something might happen' in knowledge exchange. Building on the idea that the internet might be overly focusing us, Mel outlined seven strategies for seeking serendipity: vary your routine, be observant, make mental space, relax your boundaries, draw on previous experiences, look for patterns, and seize opportunities.

Dave Wolff and Paul Bramwell (University of Brighton Community University Partnership Programme (CUPP Brighton)) described their experience and opportunities for mobilising knowledge through coproduction. They identified universities as one of the main untapped resources for social benefit in the UK: they can use research to impact on inequalities in local communities. Building on the long history of community engagement they encouraged us to 'not fetishise the new'. To achieve engagement we can do worse than ask why people are round the table. Successful engagement only works if there's mutual benefit.

Suzanne Hunton (freelance writer and lecturer) picked up themes of narrative and identity – she always wanted her storybook princess to be the one saving the prince. She stressed 'the impact of one'. Individuals can influence if they have the courage to get their ideas out there. Stories have the power to break down boundaries. She also reflected on the need to focus. Just because it's fascinating it doesn't *need* to be in the story. We should never forget what we're trying to achieve.

Jonathan Breckon heads the Alliance for Useful Evidence, an open network of 1,600 individuals from government, charities, academia and practice. Jonathan talked about Heroes of Knowledge Mobilisation, including Semmelweiss who identified that antiseptic practice could radically reduce the rate of maternal deaths due to 'childbed fever'. Semmelweiss went against the current beliefs of his peers to break new ground, and he was not lauded. We need to 'think bold and ambitiously… sometimes "maverick" knowledge can lead to great change'.

Trisha Greenhalgh (Professor of Primary Health Care and Dean for Research Impact at Barts and the London School of Medicine) took us to 'Back to the Rough Ground' and identified an emerging literature on new theoretical approaches to knowledge translation. Going back to Aristotle, Trisha reminded us that knowledge is facts, and also skills and tacit or unconscious knowledge. Knowledge is personal and collective (Tsoukas); it is culturally produced and reproduced (Bourdieu); knowledge

is embodied – it becomes part of ourselves and we are not aware of it; we interpret it using our communities of practice (Wenger) and 'mindlines' (Gabbay), and we apply it within practical, ethical judgements. Knowledge is a multilayered, contextualised journey (Ward). Knowledge is power (Foucault). Knowledge is a combination of what we know, what we do and who we are.

All of these sessions were rated as useful or very useful by between 66% and 100% of delegates. Interestingly, one commenter suggested these topics were rather too specific, another that they were too vague. The Forum seems to have successfully pushed the boundaries of people's thinking whilst keeping the majority highly engaged.

From the delegates

Eighteen posters were presented in three poster walks. These were ably chaired by Professors Derek Bell and Ruth Boaden from NIHR Collaborations for Leadership in Applied Health Research and Care (CLAHRC) in North West London and Greater Manchester, and by Professor Ewan Ferlie from Kings College. To make sure people were paying attention to the brief presentations on each poster, everyone voted for their two favourites. On Day 2 these winners presented to the whole forum.

Meerat Kaur (Associate Lead for Patient and Public Involvement, CLAHRC North West London) described her action research on the use of quality improvement approaches to improve the implementation of Patient and Public Involvement (PPI) in healthcare. She outlined how using Plan-Do-Study-Act cycles of reflective learning has been a successful approach to finding what works and ensure that patient involvement is meaningful rather than tokenistic.

Sarah Morton (Co-Director, Knowledge Exchange, Centre for Research on Families and Relationships (CRFR) and Knowledge Exchange Specialist, Scottish School for Public Health Research (SSPHR), University of Edinburgh) presented about families: gathering evidence and informing action. She highlighted that evaluation is important for knowledge mobilisation, but we need both rigour regarding the evidence base and good reporting.

Jenny Oliver (Affiliate Researcher, School of Engineering and Digital Arts, University of Kent)

presented from SL on the use of virtual worlds for collaborative problem solving. Her presentation demonstrated both the remarkable designs that had been developed, but also the power of the medium. Some of the designs were contributed by people who would not have been able to participate in person. The conference room was as enthralled by this virtual presentation as by the real life presenters.

The chaired poster walks were rated as useful or very useful by all delegates, and these winning presentations by at least 75%.

Keeping the space open

The 'open space' agenda progressed over the two days. Those who only attended for one of the days did not get the full benefit and not all participants wanted to continue the conversation on Day 2. Overall however, the opportunity to shape the agenda was highly valued.

The wide range of issues discussed included:

- How to effectively motivate people to change and the need for safe spaces to take risks. This reflects a pattern of interest in failure, and to recognise and value what doesn't work as well as what does.
- The connections (or not) between individuals and organisations, and what behaviours are encouraged and valued by the current culture(s).
- The difference between communities of practice, interest and influence, and where these can or should overlap for the most benefit to practice.
- The need to generate and embed knowledge and skills into the knowledge mobilisation community, but also whether all researchers should be good or active knowledge mobilisers.
- The wish to 'break the power of the academy' to create more accessible and flexible pathways and models of coproduction.
- That evidence should empower professionals, practitioners and the public, and how to recognise and create demand for evidence.

There were lots of practical ideas for what could become next steps into action, so the plan is to enable this work to continue. Almost half of the delegates said they might be interested in continuing to engage in working groups via SL. Over 85% said they want to stay in touch via mailing list, twitter and blogs.

Developing the professionals

Finally, a professional development hour gave delegates an opportunity to spend time in a group discussing a topic that matters to their working lives. Options included Knowledge Mobilisation (KMb) careers, a social networking surgery, networks for KMb, dealing with the media and monitoring, measuring and evaluating research impact. 90% of delegates rated these sessions as useful or very useful.

Overviews and next steps

Overall, the Forum created a great buzz and was rated above average by 85% of delegates and excellent by 50% of delegates. There was overwhelming demand that the UKKMbF should become an annual event, and for the next Forum to be held in Edinburgh in 2015.

Peter Levesque reflected "The United Kingdom Knowledge Mobilisation Forum took the Canadian experience and successfully adapted it to the UK context and culture. What I experienced was a great model for other leaders to emulate. Fundamentally we are trying to build diverse conversations across multiple sectors. I look forward to a long term cooperation, collaboration and sustained learning and engagement".

David Phipps described it as "a hallmark event for the evidence, impact, knowledge mobilisation etc community". Charlotte Bozic (University of Edinburgh) blogged that it "exceeded expectations during two lively, inspirational and thought-provoking days". Ruth Boaden tweeted "knowledge mobilisation should create value for all who are involved – need to have conversations such as at #UKKMbF14 to start this".

The 2014 Canadian Knowledge Mobilization Forum is already creeping up on us on 9–10 June in Saskatoon, and we'll be keeping an open dialogue between the events. Early conversations are beginning to buzz around an Australian event…

Here in the UK I'll be looking for support to make next year's Forum bigger and better, and to ensure the practitioner voice is easier to hear. I'll be seeking engagement from people around the UK between now and then, and to create an online space for connections and useful information.

I see this as the beginning of the formation of an (inter-)national network, a community of interest, and a source of resources and support for those who are involved in any aspect of the work of getting knowledge in the right format to where it needs to be. Together we can change society, organisations and individual lives for the better.

References

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Estabrooks, CA, Derksen, L, Winther, C, Lavis, JN, Scott, SD, Wallin, L, Profetto-McGrath, J, 2008, The intellectual structure and substance of the knowledge utilization field: A longitudinal author co-citation analysis, 1945 to 2004, *Implementation Science* 3, 49

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Lessons from the literature

Research techniques

Gough, D, Oliver, S, Thomas, J, 2013, *Learning from research: Systematic reviews for informing policy decisions: A quick guide*, London: Nesta, www.alliance4usefulevidence.org/assets/Alliance-FUE-reviews-booklet-3.pdf
Systematic reviews are not just technical and statistical exercises appropriate for medicine and health. They include qualitative research and are highly relevant across a wide range of social policy areas. This guide succinctly outlines all these different approaches and will support those thinking of commissioning a review of research to take the best course of action. It is a short introduction for decision makers and researchers or anyone else considering whether a systematic review may be appropriate to fill a gap in knowledge or to use as a resource.

Kriston, L, Meister, R, 2014, Incorporating uncertainty regarding applicability of evidence from meta-analyses into clinical decision making, *Journal of Clinical Epidemiology* 6, 3, 325–34
This paper offers an evidence synthesis method that accounts for uncertainty of the applicability of the findings of trials included in a meta-analysis to specific clinical situations. It suggests options to elicit trial inclusion probabilities and perform the calculations, thus providing individually tailored information.

Mathiesen, SG, Hohman, M, 2013, Revalidation of an evidence-based practice scale for social work, *Journal of Social Work Education* 4, 3, 451–60
This study revalidated the Knowledge, Attitudes, Behavior Scale questionnaire on evidence-based practice (EBP), developed for medical students, to assess its validity for social work students. It showed good reliability and is a useful tool. Postgraduate social work students rated their knowledge and use of EBP significantly higher than undergraduate students and field instructors.

Palinkas, LA, Holloway, IW, Rice, E, Brown, CH, Valente, T, Chamberlain, P, 2013, Influence network linkages across implementation strategy conditions in a randomised controlled trial of two strategies for scaling up evidence-based practices in public youth-serving systems, *Implementation Science 8*, 133, www.implementationscience.com/content/8/1/133
Influence networks are important in the implementation of evidence-based practices and interventions, but it is unclear whether such networks continue to operate as sources of information and advice when they are segmented and disrupted by randomisation to different implementation strategy conditions. The present qualitative and quantitative study examines the linkages across implementation strategy conditions of social influence networks of leaders of youth-serving systems in 12 California counties participating in a randomised controlled trial of community development teams to scale up use of an evidence-based practice. Network members in different randomisation streams were found to be directly or indirectly connected to members in different streams; this should be borne in mind when designing randomisation studies.

Rauch, A, van Doorn, R, Hulsink, W, 2014, A qualitative approach to evidence-based entrepreneurship: Theoretical considerations and an example involving business clusters, *Entrepreneurship Theory and Practice*, Online first
The authors argue for the value of qualitative studies in evidence-based entrepreneurship and propose using a systematic synthesis of case studies to aggregate the findings of qualitative research. To demonstrate this, they synthesised 13 cases examining how business clusters increase the performance of firms within those clusters.

Snilstveit, B, Vojtkova, M, Bhavsar, A, Gaarder, M, 2013, *Evidence gap maps: A tool for promoting evidence-informed policy and prioritizing future research*, Washington, DC: World Bank, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2367606
Evidence-gap maps are thematic evidence collections covering a range of issues such as maternal health, HIV/AIDS and agriculture. They present a visual overview of existing systematic reviews or impact evaluations in a sector or subsector, schematically representing the types of interventions evaluated and outcomes reported. Gap maps enable policy makers and practitioners to explore the findings and quality of the existing evidence and facilitate informed judgement and evidence-based decision making. They also identify key 'gaps' where little or no evidence from impact evaluations and systematic reviews is available and where future research should be focused, and can thus be a useful tool for developing a strategic approach to building the evidence base in a particular sector. This paper provides an introduction to evidence-gap maps, outlines the gap-map methodology, and presents some examples.

Sutherland, KS, McLeod, BD, Conroy, MA, Cox, JR, 2013, Measuring implementation of evidence-based programs targeting young children at risk for emotional/behavioral disorders: Conceptual issues and recommendations, *Journal of Early Intervention*, Online first
In order to support researchers in assessing the integrity of implementation of evidence-based practices in early childhood settings, the authors have developed a conceptual model of implementation of evidence-based programmes designed to prevent emotional and behavioural disorders. They then describe steps for developing treatment integrity measures, and discuss factors to consider while doing so in order to achieve the most effective implementation research.

Upton, D, Upton, P, Scurlock-Evans, L, 2014, The reach, transferability, and impact of the evidence-based practice questionnaire: A methodological and narrative literature review, *Worldviews on Evidence-Based Nursing*, Online first
The Evidence-Based Practice Questionnaire (EBPQ), published in 2006, measures nurses' practice of, attitudes to and knowledge of EBP. This study investigates the reach, transferability and impact of the questionnaire. In the 27 studies reviewed, the EBPQ demonstrated convergent and discriminant validity and good internal reliability.

Education

Fernandez, RS, Tran, DT, Ramjan, L, Ho, C, Gill, B, 2014, Comparison of four teaching methods on evidence-based practice skills of postgraduate nursing students, *Nurse Education Today* 3, 1, 61–6
A comparison of teaching methods on evidence-based practice for postgraduate students in Australia and Hong Kong looked at four strategies: standard distance teaching; computer laboratory teaching; an evidence-based practice DVD; and didactic classroom teaching. The standard distance teaching method plus the DVD produced the best results.

Foster, MJ, Shurtz, S, Pepper, C, 2014, Evaluation of best practices in the design of online evidence-based practice instructional modules, *Journal of the Medical Library Association* 10, 1, 31–40
The paper reports on research which aimed to determine the extent to which best practices were being followed by freely available online modules for teaching critical thinking and evidence-based practices in health sciences fields. An evaluation rubric was created, which was found to be effective and reliable. Most of the modules evaluated followed best practices for content and usability but not for design and interactivity.

Fruth, SJ, Havertape, L, Jones, J, Newbury, C, Conn, L, 2013, Can onsite presentations led by physical therapist students increase clinicians' confidence in aspects of evidence-based practice? A pilot study, *Journal of Physical Therapy Education* 2, 3, 49–62
This study investigated the effects of three different types of student-led presentations on physical therapists' reported confidence in various skills related to evidence-based practice (EBP); these were topic-specific presentations, EBP interactive education sessions and EBP education handouts. Nearly all participants agreed that EBP was essential, and lack of time was the most frequently identified barrier. No differences were found in the recipients of topic-specific presentations, but the education session group demonstrated more confidence in understanding published research and the hand-out group showed improved confidence in their ability to locate published research.

Gorgon, EJR, Basco, MDS, Manuel, AT, 2013, Teaching evidence based practice in physical therapy in a developing country: A national survey of Philippine schools, *BMC Medical Education* 13, 154, www.biomedcentral.com/content/pdf/1472-6920-13-154.pdf
This survey sought to describe evidence-based practice (EBP) education in Philippine physical therapy schools offering an undergraduate degree programme, including the challenges encountered by educators in teaching EBP. Most respondents reported that they incorporated EBP content into the professional courses; those that did not indicated that inadequate educator competence was the leading barrier. Statistical concepts were more frequently taught than critical EBP content. Students' inadequate knowledge of statistics and lack of curricular structure for EBP were identified as leading challenges to teaching. These findings suggest the need to design appropriate

entry-level educational programmes on EBP and effective 'educating the educators' strategies.

Ilic, D, Maloney, S, 2014, Methods of teaching medical trainees evidence-based medicine: A systematic review, *Medical Education* 4, 2, 124–35
A systematic review of randomised controlled trials was undertaken to determine the educational methods that are most effective in increasing the competency of medical trainees in evidence-based medicine. Techniques found included lectures, small-group learning and online study; directed and self-directed study; and multidisciplinary and discipline-specific groups. However, although all the interventions reported produced positive results, no differences in learner outcomes were identified between different methods.

Jaynes, S, 2014, Using principles of practice-based research to teach evidence-based practice in social work, *Journal of Evidence-Based Social Work* 1, 1–2, 222–35
The author argues that evidence-based practice is only being taken up slowly in the social work profession because of confusion about its definition and scope.

McCulley, C, Jones, M, 2014 , Fostering RN-to-BSN students' confidence in searching online for scholarly information on evidence-based practice, *Journal of Continuing Education* in Nursing 4, 1, 22–7
This article focuses on five strategies for teaching information literacy to students progressing from registered nurse to Bachelor of Science in Nursing in an online continuing education environment. These strategies include the addition of an embedded librarian to the online courses, collaboration between the librarian and nursing faculty, a subject guide with access to resources and tutorials at the point of need, student-centred learning with authentic assignments, and reflection on the learning process. Student reflections suggest that these strategies result in increased confidence in searching for and finding evidence-based scholarship.

Pettman, TL, Armstrong, R, Jones, K, Waters, E, Doyle, J, 2013, Cochrane update: Building capacity in evidence-informed decision-making to improve public health, *Journal of Public Health* 3, 4, 624–7
The Cochrane Public Health Group provides training to support the use of systematic reviews in public health decision making. This paper describes the methods of implementation and evaluation of these courses, and their impacts.

Slater, H, Briggs, AM, Smith, AJ, Bunzli, S, Davies, SJ, Quintner, JL, 2014, Implementing evidence-informed policy into practice for health care professionals managing people with low back pain in Australian rural settings: A preliminary prospective single-cohort study, *Pain Medicine*, Online first
Using as a case study the implementation of an interprofessional, health care provider pain education programme for management of non-specific low back pain in rural Western Australia, the authors conclude that this type of policy-into-practice education programme is feasible.

Wike, TL, Bledsoe, SE, Bellamy, JL, Grady, MD, 2013, Examining inclusion of evidence-based practice on social work training program websites, *Journal of Social Work Education* 4, 3, 439–50

An exploratory study investigated whether training, implementation, dissemination and research related to evidence-based practice were represented on the websites of US schools of social work. EBP-related efforts were categorised as: teaching content on bridging research and practice; faculty scholarship to bridge research and practice; and collaborative projects between schools and organisations to use research in practice. The study found that the websites revealed little content related to EBP and even less evidence of partnerships between schools of social work and community agencies designed to advance the use of EBP in social work practice. A recent national survey indicates that substantial numbers of activities and partnerships are taking place; however, this is not represented on the websites.

Young, T, Rohwer, A, Volmink, J, Clarke, M, 2014, What are the effects of teaching evidence-based health care (EBHC)? Overview of systematic reviews, *PLoS One 1*, e86706, www.plosone.org/article/fetchObject.action?uri=info%3Adoi%2F10.1371%2Fjournal.pone.0086706&representation=PDF

This overview systematically evaluated and organised evidence from systematic reviews on teaching evidence-based health care (EBHC). The evidence in the reviews showed that multifaceted, clinically integrated interventions, with assessment, led to improvements in knowledge, skills and attitudes. Interventions improved critical appraisal skills and

integration of results into decisions, and improved knowledge, skills, attitudes and behaviour amongst practising health professionals. In single interventions, EBHC knowledge and attitude were similar for lecture-based versus online teaching. Journal clubs appeared to increase clinical epidemiology and biostatistics knowledge and reading behaviour, but not appraisal skills. EBHC courses improved appraisal skills and knowledge. Interactive online courses with guided critical appraisal showed a significant increase in knowledge and appraisal skills. A short workshop using problem-based approaches, compared to no intervention, increased knowledge but not appraisal skills.

Dissemination and knowledge translation

Borah, EV, Aguiniga, DM, 2013, Research note: Online dissemination of research: Are professional associations making the grade? *Journal of Social Work Education* 4, 3, 506–14

The websites of social work and other helping profession associations were assessed on the dissemination of research to their members. Research dissemination was lacking, and recommendations are made for using these resources to help social workers keep up to date with current research.

Evans, S, Scarbrough, H, 2014, Supporting knowledge translation through collaborative translational research initiatives: 'Bridging' versus 'blurring' boundary-spanning approaches in the UK CLAHRC initiative, *Social Science and Medicine*, Online first

This study explores how knowledge translation is achieved within the UK Collaborations for Leadership in Applied Health Research and Care networks; it found two significantly different approaches: a 'bridging' approach that spans boundaries between communities through discrete episodes of knowledge translation; and a 'blurring' approach that de-emphasises boundaries to enable continual and incremental translation within routine work practices. The way boundaries are constructed and interpreted in different contexts contributes to the different approaches.

Fowler, SA, Yaeger, LH, Yu, F, Doerhoff, D, Schoening, P, Kelly, K, 2014, Electronic health record: Integrating evidence-based information at the point of clinical decision making, *Journal of the Medical Library Association* 10, 1, 52–5

Two resources are described that support diagnosis and treatment: having selected possible diagnoses via a diagnostic decision support tool, physicians were presented with a 'knowledge page' which presented relevant evidence-based library resources. Responses to these tools were positive.

Goldfried, MR, Newman, MG, Castonguay, LG, Fuertes, JN, Magnavita, JJ, Sobell, L, Wolf, AW, 2014, On the dissemination of clinical experiences in using empirically supported treatments, *Behavior Therapy* 4, 1, 3–6

Dissemination normally involves bringing research findings to clinicians; this paper describes a different way of bridging the research-practice gap in psychotherapy. Three clinical surveys of the experiences of practitioners in using specific evidence-based treatments were used to disseminate clinical experiences to practitioners, creating a 'two-way bridge'. The aim is to provide a mechanism for involving clinicians in the research process. The three surveys are described in more detail in pages 7–46, with commentaries on pages 47–55.

Inspectorate of Prosecution in Scotland, 2013, *Thematic report on Knowledge Bank*, Edinburgh: Scottish Government, www.scotland.gov.uk/Resource/0043/00439247.pdf

The Knowledge Bank is a repository of information for use by legal and precognition staff, but it also contains materials for use by administrative and Victim Information and Advice staff. This report evaluates its vision and strategic direction, its usage, and the quality of its staffing, taking into account stakeholder views. Recommendations are made for further development.

Mathew, D, McKibbon, KA, Lokker, C, Colquhoun, H, 2014, Engaging with a wiki related to knowledge translation: A survey of WhatisKT wiki users, *Journal of Medical Internet Research 1*, 1, e21

The WhatisKT wiki is a collaborative platform for knowledge translation (KT) researchers and stakeholders to debate the use and definitions of KT-related terms; it was established in 2008. A survey of users indicated a range of improvements that will be used to inform further development of the wiki.

McCormack, L, Sheridan, S, Lewis, M, Boudewyn, V, Melvin, CL, Kistler, C, Lux, L, Cullen, K, Lohr, KN, 2014, *Communication and dissemination strategies to facilitate the use of health-related evidence*, Rockville, MD: Agency for Healthcare Research and Quality, http://effectivehealthcare.ahrq.gov/ehc/products/433/1756/medical-evidence-communication-executive-131120.pdf

This systematic review has three related components; all focus on promoting informed decisions about health-related behaviours and decisions among patients and clinicians. First, it addresses the comparative effectiveness of communicating evidence in various contents and formats that increase the likelihood that target audiences will both understand and use the information. Second, it examines the comparative effectiveness of a variety of approaches for disseminating evidence from those who develop it to those who are expected to use it. Third, it examines the comparative effectiveness of various ways of communicating uncertainty associated with health-related evidence to different target audiences, including evidence translators, health educators, patients and clinicians.

Moore, JL, Raad, J, Ehrlich-Jones, L, Heinemann, AW, 2014, Development and use of a knowledge translation tool: The rehabilitation measures database, *Archives of Physical Medicine and Rehabilitation* 9, 1, 197–202

The Rehabilitation Measures Database (RMD) is a free, web-based searchable database of standardised instruments designed to support knowledge translation. It helps clinicians select valid and sensitive instruments for screening patients, monitoring progress, and assessing rehabilitation outcomes. This paper describes its development and use.

Munabi-Babigumira, S, Johansen, M, Paulsen, E, 2013, The Norwegian EPOC-satellite: Support for evidence-informed decisions, *Norsk Epidemiologi* 2, 2, 211–4

This paper describes the work of the Norwegian satellite of the Cochrane Effective Practice and Organisation of Care (EPOC) Review Group, based at the Global Health Unit in the Norwegian Knowledge Centre for the Health Services, which focuses on interventions in health systems and services in low- and middle-income countries. The satellite provides editorial support to systematic review authors and contributes to building the capacity for producing and using systematic reviews.

Noonan, E, 2013, The Campbell Collaboration: Contributing to evidence informed social policies, *Norsk Epidemiologi* 2, 2, 177–80

The Secretariat of the Campbell Collaboration was relocated to the Norwegian Knowledge Centre for the Health Services in Oslo in 2008; this article outlines its activities since then and the trends in the systematic reviews produced. The authors argue that more space is needed in Norway and internationally for quantitative research and systematic research synthesis, and that enhanced dialogue between researchers and practitioners is necessary.

Pettman, TL, Armstrong, R, Pollard, B, Evans, R, Stirrat, A, Scott, I, Davies-Jackson, G, Waters, E, 2013, Using evidence in health promotion in local government: Contextual realities and opportunities, *Health Promotion Journal of Australia* 2, 1, 72–5

An Australian university–local government (LG) project explored the feasibility, usefulness and outcomes of a knowledge translation (KT) intervention to increase the use of evidence in LGs. One strategy evaluated was workforce capacity building; group discussions indicated barriers and possible solutions, such as access to academic literature, processes to make it easier to use evidence, training in evidence-informed health promotion, research-practice partnerships and mentoring. Targeted strategies towards staff and organisations will also be needed.

Preyde, M, Ardal, F, Chevalier, P, Sulman, J, Savage, D, 2013, Integrated knowledge translation: Hospital-based social work, *Social Work Research* 3, 4, 339–47

Using as case studies psychosocial care in community and teaching hospitals, this paper describes the process of integrated knowledge translation (IKT), in which knowledge users and investigators collaboratively engage in the entire research process. Facilitating factors for IKT include practitioners with field experience helping to determine relevant research questions; barriers include investigators' limited knowledge of daily operations in practice settings, and problems of resourcing.

Yousefi-Nooraie, R, Dobbins, M, Marin, A, 2014, Social and organizational factors affecting implementation of evidence-informed practice in a public health department in Ontario: A network modelling approach, *Implementation Science* 9, 29

In a Canadian public health department, managers and professional consultants named whom they turned to for help, whom they considered experts in evidence-informed practice, and whom they considered friends. The respondents were more likely to recognise the members of the supervisory / administrative division as experts. The extent to which an individual implemented evidence-based practice (EBP) principles in daily practice was a significant predictor of both being an information source and being recognised as expert by peers. Friendship was a significant predictor of both information seeking and expertise-recognition connections. The analysis showed a communication network segregated by organisational divisions. Managers were identified frequently as information sources, even though this is not a part of their formal role. Self-perceived implementation of EBP in practice was a significant predictor of being an information source or an expert, implying a positive atmosphere towards implementation of evidence-informed decision making. The results also implied that the perception of accessibility and trust were significant predictors of expertise recognition.

Implementation

Administration

Brownson, RC, Reis, R, S,, Allen, P, Duggan, K, Fields, R, Stamatakis, KA, Erwin, PC, 2014, Understanding administrative evidence-based practices: Findings from a survey of local health department leaders, *American Journal of Preventive Medicine* 46, 1, 49–57

A study of local health departments in the US investigated the patterns and predictors of administrative evidence-based practices in relation to workforce development, leadership, organisational climate and culture, relationships and partnerships, and financial processes. There was a wide range in performance. Just 35% provided access to current information on evidence practices, while 96% provided access to funding information. Positive factors were larger population jurisdictions and state governance structure.

Healthcare

Conner, BT, Kelechi, TJ, Nemeth, LS, Mueller, M, Edlund, BJ, Krein, SL, 2013, Exploring factors associated with nurses' adoption of an evidence-based practice to reduce duration of catheterization, *Journal of Nursing Care Quality* 2, 4, 319–26

This study identified factors associated with nurses' adoption of an evidence-based practice to reduce catheter-associated problems in hospitalised adults. Education on the nurse-driven protocol was found to be the primary factor contributing to the nurses' enthusiastic support for the intervention, but providing reminders beyond the initial educational sessions was also important.

Cunningham, SD and Card, JJ, 2014, Realities of replication: Implementation of evidence-based interventions for HIV prevention in real-world settings, *Implementation Science* 9, 5

This study examined the extent to which organisations that obtain evidence-based interventions from the US HIV/AIDS Prevention Program Archive (HAPPA) and Program Archive for Sexuality, Health, and Adolescents (PASHA) implement, adapt and evaluate them, and looks at factors associated with programme implementation. Almost two-thirds of implementers made changes to the original programme; 80% monitored programme delivery; and 78% tracked participant outcomes, of which around one-third used a control or comparison group. Lack of adequate resources was significantly associated with decreased likelihood of programme implementation.

Dadich, A, Hosseinzadeh, H, 2013, Healthcare reform: Implications for knowledge translation in primary care, *BMC Health Services Research* 13, 490, www.biomedcentral.com/1472-6963/13/490

A survey of clinicians in Australia investigated their awareness and use of six resources to promote evidence-based sexual healthcare, the impact of the resources and the barriers to their use. Two resources, both double-sided A4 cards, were found to be most effective. Barriers to use of the resources included limited time, perceived need, and access to and familiarity with the resources. Reorganisation of the primary care sector and changes to medical benefits were also a hindrance.

Davidson, JE, Brown, C, 2014, Evaluation of nurse engagement in evidence-based practice, *AACN Advanced Critical Care* 2, 1, 43–55
In a series of meetings, nurses were supported in the process of practice change; the project was then evaluated and significant changes were noted. Barriers included loss of momentum, the need for cross-disciplinary change and problems with the evidence. Practice issues included measurement of quality, costs of care, patient satisfaction and safety, and compliance with regulations. For change to occur, nurse leaders needed to be actively involved.

Demby, H, Gregory, A, Broussard, M, Dickherber, J, Atkins, A, Jenner, LW, 2014, Implementation lessons: The importance of assessing organizational 'fit' and external factors when implementing evidence-based teen pregnancy prevention programs, *Journal of Adolescent Health* 5, 3, supplement S37–44
This article describes the barriers and facilitators found during the pilot year of implementation of an evidence-based teen pregnancy prevention programme in the US in a range of settings, and the lessons learnt. The authors consider core implementation components, organisational components and external factors.

Hwang, J-I, Park, H-A, 2013, Relationships between evidence-based practice, quality improvement and clinical error experience of nurses in Korean hospitals, *Journal of Nursing Management* Online first
A Korean survey investigated individual and work-related factors associated with nurses' perceptions of evidence-based practice (EBP) and quality improvement (QI), and the relationships between EBP, QI and clinical errors. Nurses' ages and educational levels were significantly associated with EBP scores, whereas age and job position were associated with QI scores; there were positive, moderate correlations between the two scores. The authors recommend educational support for younger staff nurses without Masters degrees.

Johnson, H, 2013, Selling evidence over the counter: Do community pharmacists engage with evidence-based medicine? *Medical Writing* 2, 4, 275–8
There is evidence that although pharmacists understand the concepts of evidence-based medicine (EBM), and are willing to embrace them, EBM is not often used in community pharmacies. Community pharmacists appear to rely more on personal experiences and consumer feedback in their recommendations. Lack of time, resources and appraisal skills may be a factor. More training, awareness of information resources and provision of tailored information would be of value.

Kershner, S, Flynn, S, Prince, M, Potter, SC, Craft, L, Alton, F, 2014, Using data to improve fidelity when implementing evidence-based programs, *Journal of Adolescent Health* 5, 3, supplement S29–36
Fidelity of the South Carolina Campaign to Prevent Teen Pregnancy was monitored across 12 middle schools using an innovative model, Fidelity Through Informed Technical Assistance and Training. This resulted in over 98% curriculum adherence and a high quality of implementation scores.

Kim, YN, Cho, S-H, 2013, A survey of complementary and alternative medicine practitioners' perceptions of evidence-based medicine, E*uropean Journal of Integrative Medicine*, Online first

A questionnaire to Korean doctors practising traditional medicine investigated their attitudes to evidence-based medicine (EBM). Although the response rate was low, most respondents were positive towards EBM, but lacked awareness of information sources and technical terms. Barriers were differences in fundamental concepts between EBM and complementary and alternative medicine, lack of evidence and lack of time. Guidelines and protocols would be of benefit.

Lee, H, Fitzpatrick, JJ, Baik, SY, 2013, Why isn't evidence based practice improving health care for minorities in the United States? *Applied Nursing Research* 2, 4, 263–8

Health disparities among racial / ethnic minorities are persistent in spite of the adoption of standardised evidence-based care. Potential issues in relation to evidence-based practice (EBP) are: lack of data for EBP with ethnic / racial minority populations; limited research on the generalisability of the evidence based on a European-American middle-class; and sociocultural considerations in the context of EBP. Relevant evidence relating to racial / ethnic minorities and contextualised implementation are needed.

Margolis, AL, Roper, AY, 2014, Practical experience from the Office of Adolescent Health's large scale implementation of an evidence-based teen pregnancy prevention program, *Journal of Adolescent Health* 5, 3, supplement S10-14

After three years of experience overseeing the implementation and evaluation of evidence-based teen pregnancy prevention programmes in a diversity of populations and settings across the US, the authors describe the lessons learnt in implementing evidence-based programmes on a large scale, covering being ready for implementation, the role of the programme developer in replicating the programme, and the importance of a planning period and measures of fidelity.

Melnyk, BM, Gallagher-Ford, L, Long, LE, Fineout-Overholt, E, 2014, The establishment of evidence-based practice competencies for practicing registered nurses and advanced practice nurses in real-world clinical settings: Proficiencies to improve healthcare quality, reliability, patient outcomes, and costs, *Worldviews on Evidence-Based Nursing*, Online first

The aim of this study was to develop a set of clear competencies in evidence-based practice (EBP) for both registered and advanced practice nurses in clinical settings. Following consultation with seven US leaders in EBP and two rounds of Delphi survey with EBP mentors, 13 competencies were established for registered nurses and 11 more for advanced practice nurses. Incorporating these competencies into all aspects of healthcare expectations is proposed, but tools for assessing the competencies need to be developed.

Metz, A, Albers, B, 2014, What does it take? How federal initiatives can support the implementation of evidence-based programs to improve outcomes for adolescents, *Journal of Adolescent Health* 5, 3, supplement S92-6

Based on experiences of replicating evidence-based programmes, this paper considers the factors required for successful scaling up. These are: careful assessment and selection of the programme to be implemented; sufficient time and resources for planning and

setting up; setting up an infrastructure with the support of key stakeholders; and the use of data to guide decision making and foster curiosity.

Nápoles, AM, Santoyo-Olsson, J, Stewart, AL, 2013, Methods for translating evidence-based behavioral interventions for health-disparity communities, *Preventing Chronic Disease* 10, 130–3
The authors present seven methodological phases for translating and implementing evidence-based behavioural interventions (EBIs) in communities with vulnerable groups, such as racial / ethnic minorities, disabled people and people with low socioeconomic status. For each phase, specific methodological steps and resources are described and examples from research are given. A key tenet of the approach is to integrate EBIs with community best practices to the extent possible while building local capacity. Trade-offs between maintaining fidelity to the EBIs while maximising fit to the new context are considered.

Norton, WE, Funkhouser, E, Makhija, SK, Gordan, VV, Bader, JD, Rindal, DB, Pihlstrom, DJ, Hilton, TJ, Frantsve-Hawley, J, Gilbert, GH, 2014, Concordance between clinical practice and published evidence: Findings from the national dental practice-based research network, *Journal of the American Dental Association* 145, 22–31
The authors conducted a study of the concordance between clinical practice and published evidence across preventive, diagnostic and treatment procedures among a sample of US dentists. Mean concordance by practitioners was 62%, but procedure-specific concordance ranged from 8% to 100%. Positive factors were: affiliation with a large group practice; being female; and receiving a dental degree before 1990.

Okamura, KH, Nakamura, BJ, Mueller, C, Hayashi, K, McMillan, CKH, 2014, An exploratory factor analysis of the knowledge of evidence-based services questionnaire, *Journal of Behavioral Health Services and Research*, Online first, http://dx.doi.org/10.1007/s11414-013-9384-5.
The structure of evidence-based practice (EBP) knowledge in a large sample of US youth community therapists was investigated using Knowledge of Evidence-Based Services questionnaire. Three factors were found to be relevant, relating to therapists' primary practice setting and education level. Relationships between knowledge of and attitudes to EBP are also discussed.

Prasad, V, Ioannidis, JPA, 2014, Evidence-based de-implementation for contradicted, unproven, and aspiring healthcare practices, *Implementation Science* 9, 1, www.implementationscience.com/content/9/1/1
Abandoning ineffective medical practices and mitigating the risks of untested practices are important for improving patient health and containing healthcare costs. Historically, this process has relied on the evidence base, societal values, cultural tensions and political sway. The authors propose a conceptual framework to guide and prioritise this process, shifting emphasis toward the principles of evidence-based medicine, acknowledging that evidence may still be misinterpreted or distorted by recalcitrant proponents of entrenched practices and other biases.

Rangachari, P, Madaio, M, Rethemeyer, RK, Wagner, P, Hall, L, Roy, S, Rissing, P, 2014, Role of communication content and frequency in enabling evidence-based practices, *Quality Management in Health Care* 2, 1, 43–58

Using as an example a technique relating to the use of catheters, this prospective study in a US academic health centre aimed to promote an evidence-based practice through periodic quality improvement interventions over one year, while assessing the communication log and outcomes. Proactive communications increased during the year, and adherence to the evidence-based practice increased to 100%. The study identifies evidence-based management strategies for positive practice change at the unit level.

Smith, BD, Liu, J, 2013, Latent practice profiles of substance abuse treatment counselors: Do evidence-based techniques displace traditional techniques? *Journal of Substance Abuse Treatment*, Online first

A US study investigated the profiles of substance abuse treatment counsellors to determine the characteristics of those continuing to use traditional techniques as well as cognitive-behavioural techniques. The authors conclude that practitioners with less experience, more education or fewer traditional beliefs about treatment and substance abuse are least likely to mix traditional techniques with cognitive-behavioural techniques.

Stein, BD, Celedonia, KL, Kogan, JN, Swartz, HA, Frank, E, 2013, Facilitators and barriers associated with implementation of evidence-based psychotherapy in community settings, *Psychiatric Services* 6, 12, 1263–6

A qualitative study of community mental health centre staff in the US investigated their implementation of empirical support psychotherapy, using as a case study interpersonal and social rhythm therapy. The themes identified were: pre-training with the therapy; administrative support for implementation; fit of the therapy with usual practice and clinic culture; the implementation theme and plan; and supervision and consultation. The participants proposed several strategies for facilitating implementation.

Steinfeld, B, Scott, J, Vilander, G, Marx, L, Quirk, M, Lindberg, J, Koerner, K, 2014, The role of Lean process improvement in implementation of evidence-based practices in behavioral health care, *The Journal of Behavioral Health Services and Research*, Online first

The authors discuss how Lean, a quality improvement process, can address factors important in the successful implementation of evidence-based practice, with examples from implementation in mental health delivery systems. The limitations of the system and recommendations for future research are presented.

Upton, D, Stephens, K, Williams, B, Scurlock-Evans, L, 2014, Occupational therapists' attitudes, knowledge, and implementation of evidence-based practice: A systematic review of published research, *British Journal of Occupational Therapy* 7, 1, 24–38

This systematic review aimed to determine occupational therapists' attitudes, knowledge, and use of evidence-based practice (EBP). The studies found indicated that although occupational therapists had positive attitudes to EBP, this did not translate into practice. Barriers included lack of time, availability and accessibility of research and limited research skills.

Walker, EM, Mwaria, M, Coppola, N, Chen, C, 2014, Improving the replication success of evidence-based interventions: Why a preimplementation phase matters, *Journal of Adolescent Health* 5, 3, supplement S24-8
The authors argue for the importance of a preimplementation phase and the planning year for the identification and resolution of potential implementation barriers in generalising evidence-based interventions to other settings, using as an example an abstinence replication study.

Walker, BF, Stomski, NJ, Hebert, JJ, French, SD, 2013, A survey of Australian chiropractors' attitudes and beliefs about evidence-based practice and their use of research literature and clinical practice guidelines, *Chiropractic and Manual Therapies* 2, 1, 44
This survey aimed to identify Australian chiropractors' attitudes to and beliefs about evidence-based practice (EBP) in clinical practice, and also examined their use of research literature and clinical practice guidelines. The respondents' perceptions of EBP were generally positive. Almost half of the respondents read between two and five articles a month and nearly half used literature in the process of clinical decision making two to five times each month. However, many Australian chiropractors did not use clinical practice guidelines. The most common factor associated with increased research uptake was the perception that EBP helps in making decisions about patient care.

Wilk, JE, West, JC, Duffy, FF, Herrell, RK, Rae, DS, Hoge, CW, 2013, Use of evidence-based treatment for posttraumatic stress disorder in army behavioral healthcare, *Psychiatry: Interpersonal and Biological Processes* 7, 4, 336–48
A survey of US army behavioural health providers investigated the degree of evidence-based treatment for post-traumatic stress disorder (PTSD). Respondents reported that 86% of patients with PTSD received evidence-based psychotherapy (EBP) and its reported use correlated with the number of formal training hours in EBP. However, clinicians who delivered EBP often did not adhere to all the recommended core procedures.

Wilson, BL, Phelps, C, 2013, Identifying and applying a targeted evidence-based practice change in the maternal / child health inpatient setting, *Nursing for Women's Health* 1, 6, 490–7
This article describes a nurse-initiated evidence-based practice (EBP) study on urinary catheterisation at a labour and delivery unit in the US; it describes barriers to and successful strategies for implementing EBP, and makes recommendations for the facilitation of EBP in the maternal / child inpatient setting.

Information systems

Oates, BJ, Wainwright, DW, Edwards, HM, 2013, Endless bad projects or evidence-based practice? An agenda for action, in Dwivedi, YK, Henriksen, HZ, Wastell, D, De', R (eds), *Grand successes and failures in it: Public and private sectors*, Berlin, Heidelberg: Springer, 619–24
High numbers of information systems (IS) projects have failed either through not meeting objectives, being over budget or having negative effects on people, processes

or organisations. The authors advocate an evidence-based process for IS research, including systematic reviews and meta-analyses in order to produce more coherent, consistent and referable bodies of evidence and knowledge. An action plan and suggestions for further research are included.

Justice

Mancini, C, Mears, DP, 2013, US Supreme Court decisions and sex offender legislation: Evidence of evidence-based policy? *Journal of Criminal Law and Criminology* 10, 4, 1115–54
The US Supreme Court has addressed the constitutionality of a range of federal and state laws that target sex offenders.The authors examine these cases and conclude that the Court demonstrates an awareness of scientific research but frequently overstates or misinterprets research findings. Implications for research and policy are discussed.

Social welfare

Archer-Kuhn, B, Bouchard, TT, Greco, A, 2014, Creating an EBP framework on a journey to becoming an EBP agency: Pioneers in the field of children's mental health, *Journal of Evidence-Based Social Work* 1, 1–2, 2–17
This Canadian example of introducing research evidence into practice in a children, youth and family agency resulted in the creation of a framework for assessing evidence-based practice programmes in services.

Heiwe, S, Nilsson-Kajermo, K, Olsson, M, Gafvels, C, Larsson, K, Wengstrom, Y, 2013, Evidence-based practice among Swedish medical social workers, *Social Work in Health Care* 5, 10, 947–58
A cross-sectional survey of Swedish medical social workers in university hospitals and primary care investigated their attitudes, beliefs, knowledge and behaviour concerning evidence-based practice (EBP). Attitudes were positive; EBP was seen as necessary and respondents considered that it should be implemented more often. The main barriers were: lack of time; a sense that EBP does not take into account clinical practice limitations; and lack of knowledge about relevant research.

Jones, JM, Sherr, ME, 2014, The role of relationships in connecting social work research and evidence-based practice, *Journal of Evidence-Based Social Work* 1, 1–2, 139–47
The author argues that the chasm between social work researchers and practitioners can be broached by merging the roles; this would, however, require emphasis on relationships in the research process. Such relationships are explored here and strategies recommended for cultivating relationships with stakeholders that lead to community-derived and implemented research.

Masso, M, McCarthy, G, Kitson, A, 2013, Mechanisms which help explain implementation of evidence-based practice in residential aged care facilities: A grounded theory study, *International Journal of Nursing Studies*, Online first
An Australian qualitative study investigated the mechanisms influencing the implementation of evidence-based practice in residential aged care. Four mechanisms

accounted for the results: a common ground for change to occur; connecting new knowledge with existing practice and knowledge and making connections between actions and outcomes; new practices had to compete with existing priorities; and bridging the gap between agency and action.

Pennachia, J, 2013, *Exploring the relationships between evidence and innovation in the context of Scotland's social services*, Glasgow: IRISS, www.iriss.org.uk/sites/default/files/iriss-evidence-innovation-dec2013.pdf

This report uses theoretical, empirical and practice literatures and case studies to reflect on the links between evidence and innovation in the context of Scotland's social services. The first section provides the context, with a consideration of the challenges facing Scotland's social services, and the reform agendas that have been ventured in response to these. The next sections deal with evidence and innovation, providing an overview of the core debates surrounding their definition and conceptualisation. Section four reflects on the different relationships between evidence and innovation, and the implications of these for practice. This is done through the theoretical and empirical literature in the first instance, and is followed by a detailed exploration of two practice case studies.

Phillippi, SW, Cocozza, J, DePrato, DK, 2013, Advancing evidence-based practices for juvenile justice reform through community development, *Journal of Community Practice* 2, 4, 434–50

In Louisiana, USA, a community development model has been introduced, through a combination of state, local, university and national partnerships, that has resulted in an increase of 27% in those young people involved in juvenile justice having access to evidence-based services. Concurrently, juvenile arrests have dropped by nearly half.

Soenen, B, D'Oosterlinck, F, Broekaert, E, 2014, Implementing evidence-supported methods in residential care and special education: A process-model, Children and *Youth Services Review* 36, 155–62

In the context of a Flemish centre for children and young people with emotional and behavioural disorders, a qualitative study was undertaken to inform the development of a pre-implementation model for introducing an evidence-informed treatment. The study is described in this paper.

Critique

Diamond, GA, 2014, Randomized trials, observational registries and the foundations of evidence-based medicine, *American Journal of Cardiology*, Online first

The author argues that in evidence-based medicine, randomised trials and observational studies are not always in agreement because of limitations in the process of randomisation and the selective referral of patients for treatment. These differences can affect clinical decisions, practice guidelines and national health policy. Thus independent agencies are needed to identify and resolve these differences.

Hardill, I, Mills, S, 2013, Enlivening evidence-based policy through embodiment and emotions, *Contemporary Social Science* 3, 321–32
The authors argue that although there is a belief that evidence-based policy and practice are purely rational, knowledge production is in fact more messy, iterative and non-linear. They suggest that adding emotional sensitivities into the body of knowledge when in discussion with policy makers will enrich evidence-based policy that is centred on behaviour change.

Shlonsky, A, Mildon, R, 2014, Methodological pluralism in the age of evidence-informed practice and policy, *Scandinavian Journal of Public Health* 4, 13, supplement 18–27
In the context of social services, the author discusses the nature of evidence and the context in which it should be used, noting that scientific knowledge evolves, different types of evidence are needed for different purposes, evidence varies in quality, synthesising multiple forms of evidence is difficult and can be subjective, and effective implementation of evidence is essential.

Watine, J, Wils, J, Augereau, C, 2014, Clinical practice guidelines: Potential misconceptions of the GRADE approach, *Journal of Clinical Epidemiology* 6, 1, 7–9
The authors challenge the Grading of Recommendations Assessment, Development and Evaluation (GRADE) group, list four potential misconceptions about their approach to grading the strength of recommendations in clinical practice guidelines and request the GRADE team to address these issues. A reply to this article can be found in pages 10–14

Evidence and policy

Brown, C, 2013, *Making evidence matter: A new perspective for evidence-informed policy making in education*, London: IOE Press
The author argues that research is used in educational policy making only in *ad hoc*, sporadic and inconsistent ways, with the chosen evidence carefully selected. If the subsequent policies fail, this has huge costs for both taxpayers and the population at large. This book re-examines the arguments in favour of an evidence-informed approach to education policy, looks at the reasons why much evidence is ignored by policy makers, and proposes a partnership between researchers and policy makers.

Brown, R, 2013, Evidence-based policy or policy-based evidence? Higher education policies and policymaking 1987–2012, *Perspectives* 1, 4, 118–23
Writing from personal experience, the author suggests that UK higher education policy making has become increasingly ideological, emphasising the economic role of higher education. The influence of the civil service and the higher education sector on policy has reduced. The author argues that universities could do more to protect themselves, but this would require a willingness to act on the basis of research evidence.

Michaels, S, Holmes, J, Shaxson, L, 2014, Science communication and the tension between evidence-based and inclusive features of policy making: The nature of communication, in Drake, JL, Kontar, YY, Rife, GS (eds), *New trends in earth-science*

outreach and engagement: Advances in natural and technological hazards research, London: Springer, 83–92

Good practice in policy making involves the development of evidence-based approaches and inclusive deliberative processes. Managing the tension between these requires knowledge brokering, reconciling different ways of knowing, and recognising when reconciling the two approaches is either not achievable or not desirable.

Orpin, P, Walker, JH, Boyer, K, 2013, *Developing evidence based policy in ageing well*, Seoul, Korea, 23–27 June, http://ecite.utas.edu.au/88608

Ensuring that policy and practice initiatives in relation to ageing are evidence based presents a major challenge for policy makers. Following a critical analysis of a broad range of ageing well policy documents, this project aimed to construct a policy design framework to assist policy makers in this task. The analysis found that evidence was used in understanding the challenges of an ageing population and identifying the factors associated with ageing well, but there was no evidence base for strategic responses to these issues. Such evidence was found to be quite scarce because bureaucratic and political processes and timelines are relatively unsupportive of reflective and evaluative practice.

Smits, PA, Denis, J-L, 2014, How research funding agencies support science integration into policy and practice: An international overview, *Implementation Science* 9, 28, www.implementationscience.com/content/pdf/1748-5908-9-28.pdf

In this paper, the authors investigate health research funding agencies in six countries and how they support the integration of science into policy and practice, and vice versa. For 13 funding agencies intentions to support, actions related to science integration into policy and practice, and the reported benefits of this integration were considered. Most funding agencies emphasised the importance of such integration in their strategic orientation, and stated how it was structured. Their funding activities were embedded in the push, pull, or linkage / exchange knowledge transfer models, but few programme funding efforts were based on all three models. The agencies reported more often on the benefits of integration on practice, rather than on policy. External programmes that were funded largely covered science integration into policy and practice at the end of grant stage, while overlooking the initial stages. External funding actions were more prominent than internally initiated bridging activities and training activities on such integration.

Sullivan, TP, Hunter, BA, Fisher, BS, 2013, *Evidence-based policy and practice: The role of the state in advancing criminal justice research*, findings from the Researcher-Practitioner Partnerships Study (RPPS), Rockville, MD: National Institute of Justice, www.ncjrs.gov/pdffiles1/nij/grants/243916.pdf

This report from the Research-Practitioner Partnerships Study (RPPS) presents the findings of a survey and recommendations regarding the role of US criminal justice State Administrative Agencies (SAAs) in advancing criminal justice research, with attention to research characterised by researcher-practitioner partnerships. The study found that 70% of SAAs had used research findings to inform the agency's mission and 89% had collaborated with a researcher in the previous five years. However, only 36% of respondents reported products from collaborations that directly influenced practices, services or policies. Factors identified as most helpful in developing a

collaboration with a researcher were the availability of funding and researchers, allocated time for collaboration, and an institutional culture that supports researcher-practitioner collaboration.

Young, I, Gropp, K, Pintar, K, Waddell, L, Marshall, B, Thomas, K, McEwen, SA, Rajic, A, 2014, Experiences and attitudes towards evidence-informed policy-making among research and policy stakeholders in the Canadian agri-food public health sector, *Zoonoses and Public Health*, Online first

A qualitative descriptive study of agri-food public health policy makers and research and policy analysts in Ontario, Canada, considered their perspectives on how the policy-making process is informed by scientific evidence and how this process could be facilitated. Six key principles were established: the need for clear policy objectives; credible evidence from different sources; integration of scientific evidence with other policy factors, such as economics, local context and stakeholder interests; relevant and user-friendly communication of the evidence; the need for interdisciplinary relationships and networks across the research and policy communities; and enhanced skills in evidence-informed policy making.