Implementation research — its importance and application in primary care

Moving evidence from theoretical to practical levels requires a collaborative effort

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doi: 10.5694/mja14.00063

The gap between what we know can optimise health care outcomes and what is everyday practice, remains a major challenge for health systems.[1] Implementation research seeks to close this gap by using scientific methodologies to support the movement of research-based evidence into policy and practice.[2,3] Sometimes used interchangeably with the terms *translational research* and *implementation science*, implementation research seeks to understand and maximise the uptake of quality research by potential users — in our case, the busy and complex clinical and health service environment. Interest in primary care-based implementation research is growing rapidly, as governments seek to maximise investment in research for its citizens.[4]

Last year, the *Strategic review of health and medical research — better health through research* (the McKeon Review) made 21 recommendations for improving the nation's research quality and productivity. A focus on implementation research was central, with "strengthened partnerships between researchers, health professionals and the community", facilitated "translation of research into evidence-based healthcare and policy" and measures to "enhance health services research" identified as important priorities.[5] We are fortunate that the Australian Primary Health Care Research Institute (http://aphcri.anu.edu.au/about-us) has long promoted such strategies and encouraged our Centre of Research Excellence to explore this approach to industry–research partnership within all programs.

Research findings coming down the pipeline from clinical trials are not always fit for purpose across a complex health system. Clinical trials for efficacy emphasise internal validity, controlling for all factors except the one being tested. This means the application of these findings is frequently problematic in the real world, where external factors play a crucial role. Implementation research, with its requirement to work with end users, emphasises external validity. This highlights the need to develop hybrid designs, balancing both internal and external validity, to achieve maximum uptake.

Implementation research methodology is developing rapidly, using multiple theories and approaches to identify, operationalise and understand implementation processes, mechanisms and causal influences. There is an emphasis on mixed methods, including realistic review, hybrid efficacy–effectiveness trials, and implementation salvage to understand when and why interventions fail. In health, it often focuses on the complex barriers and enablers to the systematic uptake of evidence into routine practice. This includes an understanding of the interplay between science and health professional, and organisational behaviour, population-under-care and local delivery environment, in the adoption of new knowledge.

This supplement reports early results of a specific approach to implementation research, based on normalisation process theory[6] and the co-creation paradigm.[7] This approach closes the evidence–practice gap by involving end users in every step of the research process: shaping the research questions, methodological approach, implementation challenges and identifying the most important outcomes. Clinicians, managers, policymakers, consumers and bureaucrats are all involved. This process requires extensive consultation, flexibility and front-end review and adaptation.

Articles in this supplement describe the positive impact on practitioner participation, policy intelligence and end-product use. Janamian, Jackson and Dunbar report the perspectives of influential national organisations partnering with researchers to use this approach (*page S44*). Abou Elnour and colleagues describe surveyors' perceptions of the impact of accreditation on patient safety in general practice (*page S56*). Crossland and colleagues report on the development of a quality and safety practice e-tool, co-created with a range of partners, which they then pilot tested in several general practices in Queensland (*page S52*). Hernan and co-workers report on patient perceptions of safety and quality in rural general practice (*page S60*). In a "for debate" article, Wilkinson and colleagues call for increased clarity and general practice involvement in caring for women during and after a pregnancy complicated by gestational diabetes mellitus (*page S74*).

Health care reform is a feature in many countries, driven by global trends such as diminishing health returns for investment in health care, and demographic trends in populations that age and become more diverse in health need. Primary health care is the generally accepted road towards a robust, cost-effective health care system,[8] which makes its inclusion in research partnerships a pivotal component. An essential objective of health care reform is to respond to the needs of populations, and this requires the system to understand and adapt to local circumstances. Effective implementation research must therefore be directed bottom-up from the community, through effective and consultative partnerships at every stage.[9] Although this requires a refocus on the way we conduct health services research, such relationships are essential to ensure limited investigative and implementation resources are deployed to maximum community benefit.

Competing interests: No relevant disclosures.

Provenance: Commissioned; externally peer reviewed.

1 Green LW, Ottoson JM, Garcia C, Hiatt RA. Diffusion theory and knowledge dissemination, utilization, and integration in public health. *Annu Rev Public Health* 2009; 30: 151-174.

2 Brownson RC, Colditz GA, Proctor EK, editors. Dissemination and implementation research in health: translating science to practice. New York: Oxford University Press, 2012.

Online first 21/07/14

3 Rubenstein LV, Pugh J. Strategies for promoting organizational and practice change by advancing implementation research. *J Gen Intern Med* 2006; 21 Suppl 2: S58-S64.

4 Peters DH, Tran NT, Adam T. Implementation research in health: a practical guide. Geneva: Alliance for Health Policy and Systems Research, World Health Organization, 2013. http://who.int/alliance-hpsr/alliancehpsr_irpguide.pdf (accessed Oct 2013).

5 Australian Government Department of Health and Ageing. Strategic review of health and medical research: better health through research. Canberra: Commonwealth of Australia, 2013. http://www.mckeonreview.org.au/downloads/Strategic_Review_of_Health_and_Medical_Research_Feb_2013-Final_Report.pdf (accessed Oct 2013).

6 May C, Mair F, Finch T, et al. Development of a theory of implementation and integration: normalization process theory. *Implement Sci* 2009; 4: 29.

7 Ramaswamy V, Ozcan K. The co-creation paradigm. Redwood City, Calif: Stanford University Press, 2014.

8 World Health Organization. Primary health care, including health system strengthening. Sixty-Second World Health Assembly Resolution 62.12. 22 May 2009. http://www.who.int/hrh/resources/A62_12_EN.pdf (accessed Oct 2013).

9 van Weel C. Primary-care research to inform policy and implementation. *Lancet* 2013; 382: 1156-1157. ❑