Why does primary care need more implementation research?

Robbie Foy, Martin Eccles and Jeremy Grimshaw


How can we improve the quality of primary care?

Clinical research continually produces new findings that can contribute to effective and efficient patient care. However, such research cannot change patient outcomes unless health services and health care professionals adopt them in practice. Uneven uptake of research findings—and thus inappropriate care—occurs across different health care settings, countries and specialities, as demonstrated by two papers on implementing evidence-based medicine published in this issue of Family Practice.1,2

In primary care, the detection and management of risks related to hypertension3 or hyperlipidaemia are highly variable.4 The impact of secondary prevention, including the administration of secondary prophylactic drugs to patients surviving a myocardial infarction, is reduced by similar disparities.5–7 Much of this variation is not attributable to either patient or resource factors.

There are mounting expectations to deliver high quality primary care from governments impatient for results. Legitimate challenges to improve the quality of care6 must be informed by research that can offer clinicians and managers effective and efficient means to enhance service delivery.5 Implementation research (the scientific study of methods to promote the uptake of research findings, and hence to reduce inappropriate care) aims to inform policy decisions about how best to use resources to improve the uptake of research findings by testing approaches to change professional and organizational behaviour.

What is known?

As with clinical care, systematic reviews of rigorous studies have contributed greatly to our knowledge about what works in changing professional and organizational behaviour. A recent overview of systematic reviews10 suggested that it was possible to identify strategies that were more, or less, effective. Strategies such as postal distribution of guidelines or didactic educational sessions were suggested to be largely ineffective. Local consensus conferences, the use of opinion leaders or audit and feedback were of variable effectiveness, and strategies such as interactive educational workshops, reminder systems, educational outreach and multifaceted interventions were suggested as largely effective. This sounds very promising but, as is ever the case, the devil is in the detail.

Limitations of the evidence

On closer scrutiny, the evidence for effective interventions may not stand up to the real world of local implementation because of limited or unpredictable transferability. Our understanding of what makes professionals and organizations change (or not) is based upon superficial and, sometimes, hopeful interpretation of the processes. ‘Academic detailing’ (or educational outreach) involves the use of a trained person providing information, including feedback on performance, to professionals in their practice settings with the intent of changing behaviour. This appears to be effective when combined with ‘social marketing’ approaches that help identify and overcome barriers to change—but demonstrated benefits have been largely confined to prescribing in North America.11 We need to understand in greater detail which factors influence the effectiveness of interventions in other circumstances, such as different settings, types of professional or targeted behaviours.

Attempts to generalize research findings to primary care (or any other setting) encounter three main problems. First, we are unsure of what factors are important in the relative success or failure of reported strategies...
because of the lack of an established theoretical framework. Secondly, studies do not measure or report potential effect modifiers, e.g. the influence of different attributes of targeted behaviours on outcomes. 

Thirdly, interventions are often poorly described—thus posing a problem for aggregation within systematic reviews and for subsequent interpretation in order to reproduce successful interventions. These problems are analogous to those of applying clinical research findings from secondary to primary care settings without considering population characteristics or available resources and skills.

Systematic reviews of more rigorous evaluations (including randomized trials) indicate variable effectiveness within the same interventions, such as audit and feedback or use of local opinion leaders (people identified by their peers as being educationally influential. These variations might be attributable to the modifying effects of context and content. For example, it might be more feasible to identify and use local opinion leaders in secondary care settings than in primary care. Inconsistent findings might also be explained by variations in the intensity or quality of the interventions tested. Although prompts and reminders appear to be consistently effective, their frequency and proximity to the point of clinical decision making may influence the size of their impact.

Evidence on the effectiveness of certain strategies is sparse. For total quality management (TQM), uncontrolled evaluations have suggested benefit not borne out by randomized controlled trials. Existing evidence may not be trustworthy or may be difficult to interpret because of methodological weaknesses, such as randomizing and analysing organization-wide interventions on an individual rather than group basis.

Where effectiveness is consistently demonstrated, it is difficult to judge whether benefits are outweighed by costs. Few studies have assessed the direct costs of changing clinical behaviour, not to mention the indirect effects on health services following implementation strategies. Resources are limited and any implementation strategies that exhaust these limited resources will not be sustainable in the long term. Those responsible for local implementation need to know as much about the cost-effectiveness of behavioural interventions as they do about that of clinical interventions.

What is needed?

Implementation research has to tackle a number of issues in order to improve the transferability of its findings. Studies require a conceptual framework within which to describe common elements of settings, individuals, targeted behaviours and interventions. Hence, it should be possible to identify what features influence the likely effectiveness of interventions.

Behavioural models that attempt to explain change require further development and testing in health care settings. We need to assess, for instance, how far changes in beliefs about research findings translate into changed practice.

Beyond explaining change, greater use should be made of theoretical models in the design of interventions. Ultimately, the aim is to develop an empirical basis for selecting interventions given specific barriers and circumstances.

Better designed trials, more usually based upon cluster rather than individual randomization, will produce more valid (trustworthy) results. Randomized trials of head to head comparisons are required to establish the relative effectiveness of interventions in the same setting. Further work is needed to optimize the evaluation of evolving systems, such as computer support for clinical decision making and managed care pathways. Such evaluations should incorporate some assessment of the economic consequences of change strategies.

This research agenda demands stronger collaborations not only between different research teams and disciplines, but also among researchers, policy makers and those clinicians and managers responsible for local implementation.

Conclusion

Scope exists to improve the effectiveness of strategies to change behaviour. However, the current evidence base is limited. If efforts to improve the quality of primary care are to achieve their potential, we will need a new generation of theoretically derived, tailored, efficiency-based trials that will move us towards “evidence based medicine being complemented by evidence based implementation.”

References

More implementation strategies in primary care


