

# Putting evidence into practice in low-resource settings

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There is growing recognition of the need to maximize efforts to bring evidence into practice in low-resource settings, following realization that the gap between evidence and practice in developing countries results in ineffective treatments that drain their health systems (1). In health systems with few resources, putting evidence into practice is proving exceedingly challenging for reasons that are only partially understood.

Some of these challenges are highlighted by two papers in this issue of the *Bulletin*. From Mali (935–941), Mahé et al. propose that simply translating evidence into user-friendly clinical management algorithms, together with a one-off training session, can bring about substantial improvement in the diagnosis and management of common dermatological conditions. They argue that improvements can be sustained over a prolonged period, even if resources are lacking to provide refresher training. Noticeably, rapid staff turnover in Mali meant that nearly half the health-care workers initially trained were replaced by new members of staff, underlining the need for some form of induction or continuing education. The second paper, by Tita et al. from Cameroon (895–903), demonstrates that only a small proportion of health-care workers is abreast of current evidence on maternal and child health care. Moreover, only a few of those who are aware of the evidence apply it to their clinical practice. The authors identify a number of reasons, including limited access to educational resources, poor formal training and lack of continuing medical education. They suggest these barriers can be overcome using traditional approaches such as seminars, refresher courses, ward rounds and lectures.

Both papers identify the need for a comprehensive approach, consisting

of at least two major steps: the first is to translate evidence into context-specific and user-friendly formats (such as algorithms, guidelines and desktop guides), requiring resources, support and specific skills; the second — which is perhaps even more challenging — is to ensure that clinical practitioners adopt the available evidence into practice. Knowledge on the effectiveness of various interventions to influence clinical practice in low-resource settings is limited and is flawed because of weak research design (2). Moreover, a strong publication bias against reports from developing countries with negative results contributes to our lack of understanding of barriers to implementing such interventions (3). The effectiveness of a one-off training session is also questionable. Continuing medical education and formal training that focuses on local educational needs and barriers to implementing evidence are likely to be effective in influencing clinical practice, although more research is needed to demonstrate unequivocally the cost-effectiveness of continuing medical education in resource-poor settings, the most appropriate ways of providing and supporting it, and ways of ensuring its long-term sustainability.

Despite these knowledge gaps, much can be done to intensify efforts to influence clinical practice: evidence is now being accumulated on the effectiveness of a continuous quality improvement process based on experiential learning theory in stimulating change in professional behaviour (4, 5). Such a process involves a continuous cycle with three stages: measuring, analysing and comparing current performance with locally agreed evidence-based standards of care; identifying opportunities for improvement; and adopting a multifaceted approach to bringing about improvements. This process ensures that health professionals have access to concise, context-specific, evidence-based

clinical guidance and that they continuously evaluate their practice against it. It has the potential to apply evidence that goes beyond the traditional biomedical education and training of health-care professionals. In wealthier countries, processes such as clinical audit and continuous quality improvement are already embedded in health systems.

Attempts to integrate continuous quality improvement in order to bring evidence into practice in a poorly resourced health system will face many challenges. In settings where blame takes precedence over learning from mistakes, a major cultural shift will be required to adopt a self-evaluation process. In addition, authorities will need to set aside resources to make such a system work in the face of other competing needs. International donors and agencies will need to provide initial financial and technical support required for the implementation and evaluation of such initiatives; the investment is justified as it could bring about substantial improvements in the quality of clinical care and outcomes.

The current drive to scale up delivery of key health interventions to meet the Millennium Development Goals is at risk if poorly resourced health systems continue to deliver poor quality services. We strongly recommend that international agencies and ministries of health work together to implement integrated quality improvement processes in clinical practice so as to improve outcomes. ■

### References

Web version only, available at: <http://www.who.int/bulletin>

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Ref. No. 05-027151

1. Garner P, Kale R, Dickson R, Dans T, Salinas R. Getting research findings into practice: implementing research findings in developing countries. *BMJ* 1998;317:531-5.
2. Siddiqi K, Newell J, Robinson M. Getting evidence into practice: what works in developing countries? *Int J Qual Health Care* 2005;17:447-54.
3. Horton R. Medical journals: evidence of bias against the diseases of poverty. *Lancet* 2003; 361:712-3.
4. Dick J, Lewin S, Rose E, Zwarenstein M, Walt H. Changing professional practice in tuberculosis care: an educational intervention. *J Adv Nurs* 2004;48:434-42.
5. Weeks AD, Alia G, Ononge S, Mutungi A, Otolorin EO, Mirembe FM. Introducing criteria based audit into Ugandan maternity units. *BMJ* 2003;327:1329-31.