

Behavioural medicine: changing our behaviour

A growing body of evidence shows how to make behavioural interventions effective

Human behaviour is a major determinant of health. Factors that influence health related behaviours and people's adaptive responses to disease and illness are becoming better understood. This understanding is leading to behaviourally based interventions targeted at the level of the individual and at service delivery, with impacts on both. Yet there is much more to do. In the United Kingdom the Society of Behavioural Medicine has been set up to promote research into and the use of well founded behavioural interventions.

An example of behavioural interventions working at the individual level is that of psychological preparation of patients facing surgery: procedural information and behavioural instructions reliably reduce the use of analgesia and length of hospital stay.¹ Similarly, psychological treatments based on the principles of cognitive behavioural therapy, when compared with alternative active treatments, reduce the experience and expression of chronic pain.²

Behavioural interventions can also trump prescribing in preventing disease: in a rare design comparing behavioural interventions head to head with medication, intensive promotion of physical activity and weight loss reduced the incidence of biochemical diabetes in a high risk group by 58%,³ a greater reduction than that achieved by metformin.

Getting behavioural research into practice

Behavioural interventions can also improve health-care delivery. For example, organisational measures such as changing a team's skill mix and roles, or reminder and prompt systems for clinicians, can result in measured effects on clinicians' behaviour and clinically important reductions in blood pressure among their hypertensive patients,⁴ again often greater than those achieved in pharmacological trials.⁵

These are success stories. Yet such favourable evidence is poorly or inconsistently translated into clinical practice: patients are not routinely prepared for clinical procedures; those with chronic pain are more likely to be managed with medication than behavioural interventions; and drugs are more likely than systematic behavioural interventions to be deployed in treating diabetes and hypertension.

As important as the success stories are the "work in progress" stories. Thus in the area of adherence to medication, systematic reviews of the many studies available reveal little progress in developing interventions that improve adherence rates, at least within randomised trials.⁶ Most interventions to change professional behaviour such as clinical audit or educational approaches have modest effects which vary unpredictably with context.⁷ One major reason for this may be that the interventions are designed with no basis in the theory or evidence of why they might work.

The potential impact of behavioural interventions in prevention and treatment raises the question as to

why they do not feature more strongly in research, policy, and practice. One reason may be the lack of skilled researchers and clinicians working to develop, evaluate, and deliver these interventions, reflecting a failure of investment. Systematic reviews repeatedly highlight the problems of poorly developed and described interventions, weak study designs, lack of thought about context and target population, and imprecise measures of behaviour.

The culture of medical practice itself may also be antipathetic. Physicians remain the most powerful voice in medicine. They are predominantly trained in the use of drugs and surgery to control disease, rather than behavioural interventions.

Furthermore, pressures on doctors from the pharmaceutical and technology industries to deploy their products are strong.⁸ Research funding from these groups outstrips that from governments and charities throughout the world. In 2003 the pharmaceutical industry spent £3550m (\$6250m; €5165m) on research in the UK, more than twice the amount spent by the Medical Research Council, Department of Health, and major charities put together (Association of the British Pharmaceutical Industry, personal communication). The influence of the pharmaceutical industry is important since, despite regulation, there is evidence that its funding can lead to results biased in favour of its products.⁹

The major imbalance between investments in pharmaceutical development and in understanding and supporting health related behaviours must be of concern. While industry drives an important research agenda it also strongly influences subsequent health-care delivery. Yet the global health priorities of preventing and managing chronic disease¹⁰ will clearly not be achieved by prescription alone.

Changing researchers' and practitioners' behaviour

What is needed to increase the chances that effective behavioural interventions are developed and incorporated into health care? Investment in more and better quality research is essential, involving boundary breaking interdisciplinary collaborations.

Too much behavioural research is based neither on valid theories of human behaviour nor on existing empirical evidence. Interventions that are theory based seem more effective in supporting behaviour change than those that are not, and can be more effectively generalised and disseminated.¹¹ The proposed new field of behavioural medicine within the Cochrane Database proposes additional CONSORT items to be reported in studies of behavioural interventions, detailing their content and context to enable pooling of homogeneous studies.

Behavioural medicine, as conceptualised in the United States, brings together the many different disciplines and professions that aim to improve health and healthcare outcomes through behavioural change. The

field includes psychology, public health, geography, sociology, health economics, architecture, epidemiology, psychophysiology, sports medicine, and human movement sciences as well as clinical medicine. The UK's new Society of Behavioural Medicine (<http://www.uksbm.org.uk>) is one of 21 national societies affiliated to the International Society of Behavioural Medicine, an organisation aimed at achieving a better understanding of the pathways between biological, psychological, social, and cultural factors that influence health as a basis for developing interventions that improve health outcomes.

Progress in understanding and changing behaviour to improve health is modest but real. Potential gains from the wider application of effective interventions are large and include reduced costs for healthcare systems and increased autonomy and health for individuals. We need to challenge ambivalent attitudes towards behavioural medicine among those who develop science and health policy.

Theresa Marteau *professor of health psychology*

(theresa.marteau@kcl.ac.uk)

King's College London, Health Psychology Section, London SE1 9RT

Paul Dieppe *director of MRC Health Services Research Collaboration*

Department of Social Medicine, University of Bristol, Bristol BS8 2PR

Robbie Foy *clinical senior lecturer in primary care*

Centre for Health Services Research, University of Newcastle upon Tyne, Newcastle NE2 4AA

Ann-Louise Kinmonth *professor of general practice*

General Practice and Primary Care Research Unit, Cambridge University, Cambridge

Neil Schneiderman *James L Knight professor of psychology, medicine and psychiatry*

Department of Psychology and Behavioural Medicine Research Centre, University of Miami, FL 33124-0751, USA

Competing interests: TM is president of UK Society of Behavioural Medical (SBM), PD is vice president, RF is chair of the UK SBM scientific committee, and ALK is an ordinary member of the UK SBM committee. NS is past president of the International Society of Behavioral Medicine.

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