

Power and politics: a case study of the failure of an evidence-based practice project in two rural communities

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ABSTRACT

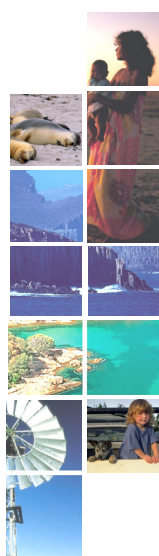
This paper reports on an evaluation of a two-year project aimed at implementing a multi-disciplinary, evidence-based approach to the management of back pain in two rural communities. The project attempted to address the significantly above-average rates of back pain admissions to the local hospitals. An external evaluation of the project was conducted using:

- in-depth, individual interviews
- postal surveys returned by a majority of GPs (general practitioners) in the town
- postal surveys returned by patients
- analysis of hospital admission data over a 3 year period
- analysis of the medical records.

The evaluation found that high quality, locally adapted evidence-based guidelines had been developed, but that there had been a general failure to achieve uptake of the guidelines. Previous research into evidence-based practice has sought to explain lack of uptake in terms of access, educational and technological issues, as well as cost effectiveness. The conclusions from this study indicate that uptake is principally about power and politics. The major sites of contestation in this project were:

- ownership by key stakeholders such as GPs and the local Division of General Practice
- perceptions of managerial control of the project and issues around GP autonomy
- medical control and referral patterns in the context of multi-disciplinary treatment structures and principles
- funding systems and rural hospital survival
- attitudes to back pain, co-morbidities and the stigma of mental illness
- patient education in the context of acute health and preventive principles.

These contestations, played out in the local community, reflect broader structural issues of power and control within the health system. This paper seeks to shift our perspective for understanding factors influencing the uptake of evidence-based



practice, and suggests that a new approach is needed to implement evidence-based projects in rural communities.

INTRODUCTION

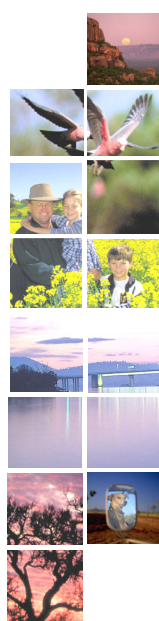
This paper describes certain issues associated with a rural project aimed at developing and implementing locally adapted, multi-disciplinary, evidence-based guidelines for the treatment of back pain.

Evidence-based practice involves the use of clinical guidelines – based on systematically reviewed, scientific evidence – to make decisions about the care of individual patients.¹ Imperatives for the use of evidence-based practice include the demonstrated effectiveness of specific interventions, demands for more efficient use of health resources, and greater accountability of health practitioners' decision making.² In rural areas, the use of evidence-based practice brings both increased demands and challenges.³ The fact that there are fewer and less specialised health services heightens the pressure for greater efficacy. Information technology enables access to the Cochrane Collaboration and other on-line data bases to help overcome the tyranny of distance imposed by geographical and professional isolation.⁴ Research knowledge about patterns of morbidity and mortality in rural Australia provides the opportunity to target known clinical conditions and risk factors. However, clinical guidelines that are based on urbo-centric assumptions about health service provision are likely to be dismissed by rural practitioners. Guidelines need to be tailored to the local context.²

The proliferation of evidence-based guidelines is almost matched by the burgeoning research into the problem of effectively transferring research evidence into clinical practice. The use of guidelines is not a straightforward technical matter of disseminating information. Endeavours to implement evidence-based practice not infrequently meet with limited success. The major impediments to change have been found to include: costs and technical barriers with accessing databases;^{5,6} the credibility of the developers of the guidelines;⁷ and the difficulty of applying guidelines to particular patients;⁸ gaps in our evidence-base about a range of clinical conditions;⁵ and the use of ineffective implementation strategies.⁹ There has been very little empirical research on how the rural context mediates the applicability and uptake of evidence-based practice.

The back pain project – a local, evidence-based approach

In 1997/98, a particular regional area had the state's highest hospital separation rates for medical back problems. Rates were particularly high in the three adjacent statistical local areas of Milford, Kinleith and Appleby (note that pseudonyms have been used throughout this paper to disguise the identity of people and places). These data were analysed to ascertain reasons for the different treatment patterns. The three possible explanations were: underlying differences in morbidity; differences in medical practice; and differences in coding or admission. Further analysis suggested that differences in medical practice could account for the treatment patterns. These practices were at odds with the best research evidence that hospitalisation, bed rest and spinal anaesthesia were of little proven therapeutic value and may even prolong or aggravate certain lower back problems.



A project was funded to develop and implement local evidence-based guidelines for the treatment of back pain in Milford and Appleby. The intended project outcomes were to:

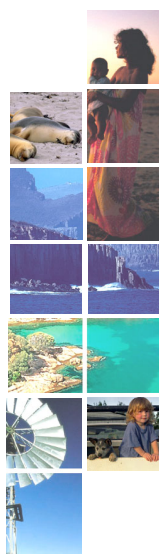
- reduce the rate of admission to hospital
- improve treatment practice for patients admitted to hospital
- improve referrals to multi-disciplinary health providers
- improve GPs' (general practitioners') attitudes and knowledge about medical back treatments
- improve consumers' attitudes and expectations.

The main project partners were the local Division of General Practice, the Milford District Hospital and the Appleby District Hospital. A Steering Committee was established to oversee the project, and a project officer was appointed. An external, summative evaluation was conducted to investigate the extent to which the project had achieved its objectives, and to identify factors affecting the outcome. This paper reports the evaluation findings.

METHODS

A range of research methods and data sources was used in this evaluation.

- Thirteen individual, semi-structured interviews with current and former members of the Steering Committee, the project officer, and allied health professionals. Interviews were requested with the key GPs with an interest in the project; however none agreed to be interviewed.
- Faxed surveys to GPs requesting information about their knowledge and use of the guidelines, and their perception of factors affecting the project. Twenty-three surveys were faxed out; 12 were received back from Milford and Appleby GPs, and 5 were received from GPs outside the area.
- Analysis of project documents and records, including formative evaluation data compiled by the project officer.
- Analysis of hospital admission data on hospital separation rates and length of stay over a three year period.
- Analysis of the hospital medical records of 54 patients (undertaken by an independent medical consultant).
- Postal surveys returned by 23 patients (undertaken by the project officer).
- A targeted literature review focusing on: factors affecting the uptake of evidence-based medicine; rates of application of evidence-based medicine by GPs; and the organisation of health services for back care treatment.



Several methodological and logistical issues impacted on the evaluation.

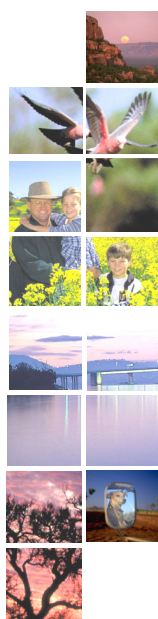
- The number of admissions to Milford and Appleby Hospitals each year is relatively small. For example, in the period September 2000 to March 2001, there were 14 admissions available for analysis. Small data sets such as these are not amenable to tests of statistical significance.
- Logistical problems, resource constraints and other issues prevented access to GPs' medical records. It was not possible to complete a detailed review of the records of the assessment processes and treatment regimes for all back pain patients before and after the introduction of the clinical guidelines. The project has had to rely upon reports by a sample of the GPs about their knowledge and practices (rather than a record of their actual practices).
- Hospital medical records proved to be of limited value in providing information about the initial assessment, the decision to investigate, and the decision to admit to hospital. Further, it was not possible to tell whether (and in what ways) those who were admitted to hospital either (a) differed from patients who were not admitted and/or (b) were assessed and treated in accordance with the clinical guidelines.
- Over the duration of the project, GPs have come and gone from Milford and Appleby and there has been a reduction in the number of practising GPs (from 23 in 1996 to 20 in 2001 – not accounting for the part-timers). These variations in the composition and size of the target group confound measurement of the uptake of the guidelines and weaken claims regarding attribution of health outcomes.
- During the project, the state's workers compensation authority ran a state-wide, high profile, public education media campaign that advocated similar treatment and rehabilitation regimes to those of the project. While it is good practice to synchronise local and state-wide initiatives, it is not possible to determine the relative impact of the local project in changing practice.
- Limited information has been available from GPs in Milford and Appleby regarding their assessment of the project. This probably reflects the general lack of engagement of GPs from these towns in the project itself.
- Hospital admission data collection periods for 2000/2001 do not coincide with the commencement or completion of the project. Therefore, data available from these sources are not a valid measure of the impact of the project on treatment decisions.

RESULTS

This section reports on the process, impact and outcomes of the project.

Process evaluation

At a process level, there were notable project achievements. The first was the development of high quality, locally adapted, multi-disciplinary, evidence-based guidelines for the treatment of back pain. The guidelines are based upon the best-available research evidence, incorporate frequent reference to the benefits of multi-



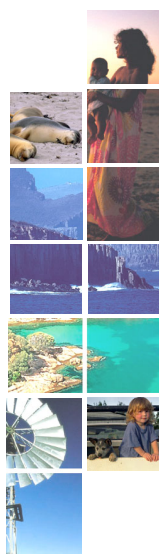
disciplinary treatments, and include contact details of local allied health professionals. The clinical guidelines were endorsed by the Royal Australian College of General Practice. The second achievement was the involvement of three Australian experts as consultants and educators; this was reported to enhance both the profile and credibility of the project. (This point was disputed by one of the GPs in Appleby who claimed that the Steering Committee had ignored most of the advice by the three experts). The third major achievement was the contribution of five allied health professionals in the Multi-disciplinary Committee responsible for reviewing and developing the clinical guidelines, and the participation of eleven allied health professionals in the education day. As one allied health professional reported: "The Committee meetings were very positive for multi-disciplinary discussions." The final achievement was the enthusiasm of ten GPs from outside Milford and Appleby to attend the education day: for some of these participants, the round trip was several hundred kilometres. This highlights the high demand for clinical education by professionals outside the larger towns.

On the negative side, the project failed to engage GPs in Milford and Appleby. The GPs were represented at every meeting of the Steering Committee by staff from the local Division of General Practice. However, only one GP participated in the first four monthly meetings of the committee. This GP resigned because of a disagreement over the project methodology. He wrote to the Committee asking:

Could somebody please explain to me how it came to pass that a committee designed to produce guidelines for GPs for the management of back pain had just one GP on it?

As a further indication, only four of the twenty GPs from the two towns – the primary target group – attended the education day. (Indeed, one of the limitations with the implementation strategy was that only a one-off education session was held). Stakeholders readily identified reasons for the lack of engagement. Several claimed that GPs saw the project as being "critical of their practice." Others reported that they believed the real agenda "was to cut back the power of GPs" by "getting them to stop clogging up the (hospital) beds with back pain patients." To the extent that this was true – or even if it was perceived as such – then GPs would obviously not wish to be involved. Interviews also revealed that there was a deeply entrenched, long-term problem with engaging GPs from Milford in the local Division of General Practice. A final factor was that the project lost its initial local champions. As one person explained: "The original passion for the project came from three people who were no longer around by the time that the project got off the ground."

Analysis of the medical records provides further evidence of the contestations and complexity in the project. The original project methodology prescribed access to and analysis of GPs' medical records to assess treatment changes. This became a point of significant conflict among the Steering Committee, and the decision to use GPs medical records was overturned. The project then had to rely upon analysis of hospital records. Twenty-five out of a random sample of 54 patients consented to a review of their hospital records. These records were not particularly useful for the evaluation as the great majority of patients had been seen, prior to admission, in the private practice of the Visiting Medical Officer where the diagnosis and treatment plan had been formulated. These records were not available to the hospital, and duplicate copies rarely made. Aside from this, analysis of the hospital records revealed that seven of the 25 patients had mental health co-morbidities including depression, paranoid schizophrenia, anxiety and personality disorders. This raises the question about the



availability of services for people with mental health and/or alcohol and drug related problems in rural areas.

Impact evaluation

The impact of the project on GPs' attitudes, knowledge and practices of the treatment of back pain was assessed in a couple of ways. In early November 2001, all eighteen GPs practising in Milford and Appleby at that time were asked to respond to a brief faxed survey regarding their knowledge and use of the guidelines, and factors affecting their level of use. Twelve GPs responded. Nine reported that they were aware of the guidelines and three were not aware. Three said that they always use the guidelines, four sometimes use them, and five never use them. GPs reported that the most significant factors affecting the low uptake rates were: the lack of effective implementation strategies; that GPs were not engaged in the project; that the local GP culture does not support the use of guidelines; and that back pain is not a high priority for guideline development. Comments offered by the respondents were:

The Project was a waste of time – poorly organised and low yielding.

Guidelines are no real change from my usual management so I do not actually refer to them.

No hope of finding them amongst all of the paper work. Do things by common sense and memory.

Seems like best practice and is what I do anyway. However, I rarely see acute back pain as I'm usually booked too far in advance!

One GP criticised the project objectives in the early stages:

We don't even know for sure if we do need to have a "change in GPs' treatment practice" – isn't this pre-empting the results of the evaluative phase of the study? Also, stated like this, it is a sure way to get GPs offside. ... Shouldn't we assess attitudes before trying to change them?

A second evaluation strategy was to interview allied health professionals from Milford and Appleby about changes to GPs' treatment regimes (in so far as they included multi-disciplinary referrals). The allied health professionals reported that the project had little if any impact. Typical responses were:

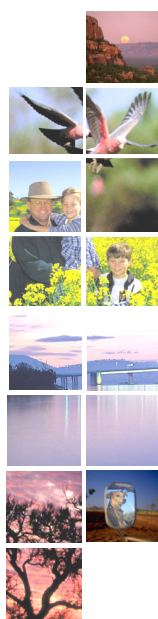
I don't know whether the project has changed ingrained medical practice. Doctors are not collaborative.

The GP culture here is very exclusive and hierarchical.

I've noticed no change in the care by GPs. The physios only seem to get them at the six-week stage when there are more problems. I can tell when the doctors' books are full – we are just the overflow system.

We are treated as second-class health professionals.

The perceptions by allied health professionals were that the project had basically not changed referrals patterns and rates. Quantitative data were not available to validate these claims.



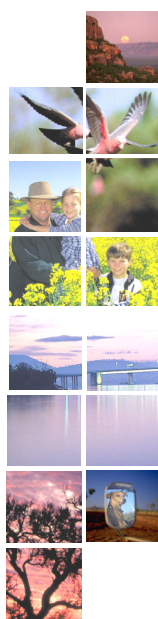
and rates. Allied health remained subordinate to medicine.^{12,13} This is contrary to evidence that intensive multi-disciplinary rehabilitation improves clinical outcomes for chronic back pain¹⁴

- casemix funding and rural hospital survival. There were pressures on Visiting Medical Officers and hospital managers to regulate hospital separations and length of stay of back pain patients to ensure that the local hospital survived under casemix funding
- co-morbidities and the stigma of mental illness. A high proportion of back pain patients admitted to the hospitals also had mental health problems. Underlying issues include the adequacy of psychiatric services in the area, and the stigma of being labelled “psychiatrically ill” in small rural communities
- the dominance of acute health. Project resources were directed to GPs and the acute health system, rather than – or in addition to – a project focusing on patient education and health promotion. The prognosis for most patients with acute low back pain is good, although recurrence is common. Therefore, patient education about the natural history of episodes of back pain and prevention of recurrence are significant.¹⁵

It is important to acknowledge that the lack of uptake of evidence-based guidelines experienced in this project is not atypical. While general practitioners are generally supportive of such guidelines,^{7,16} transferring research into practice is complex and problematic.^{5,17}

To date, research knowledge on the factors affecting the uptake of evidence-based practice can be understood in terms of four explanatory models.⁴ Very briefly, these are: (1) the Passive Dissemination Model, which assumes that practice changes will simply occur if clinical guidelines are disseminated; (2) the Educational Model, which educates practitioners about evidence-based practice and clinical guidelines in the belief that this will change practice; (3) the Stimulus/Reward Model, which uses behaviourist techniques including decision-support systems, audits and financial incentives; and (4) the Change Management Model, which employs a strategic planning process to engage stakeholders in collaborative change processes. Elements of the Educational, Stimulus/Reward and Change Management Models were all used or attempted in the back pain project. This is consistent with the view that a multi-dimensional approach is most effective.⁵ However, all of these models assume a rational, linear and mechanistic view of the transfer of research knowledge into practice. By contrast, qualitative methodologies and interpretivist perspectives are now being used to investigate limits to the uptake of evidence-based medicine. This perspective reveals that health practice is constructed in local contexts by various stakeholders who have different – sometimes competing – interests, models of practice and epistemologies.^{7,8,18,19} While offering a useful advance on previous approaches, this micro-sociological perspective does not appear to fully explain the back pain project.

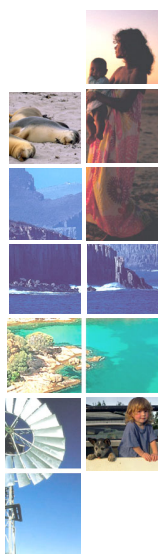
The reasons for the failure of the evidence-based practice project in the two local, rural communities can perhaps be best seen as the playing out of broader power relationships and competing interests in the health system. General practitioners preserved their autonomy by successfully resisting (perceived) attempts by health bureaucrats and hospital managers to change their practice. Visiting Medical Officers



retained a high degree of authority in admitting patients to hospital for treatment. Allied health professionals remained subordinate to medicine. Health consumers were not empowered to take more control over their own health decisions, or to make use of research evidence. Community-based, health promotion initiatives were largely overlooked: project resources were directed to individualised, institutionalised medicine. This paper shifts our perspective for understanding the factors that influence the uptake of evidence-based practice. It suggests that new approach is needed to implement evidence-based projects in rural communities.

There are two key policy recommendations. The first concerns the relevance of evidence-based health care to rural areas, and the second focuses on the need for rurally-sensitive theoretical and practical approaches to the adoption of evidence-based health care:

- This paper has highlighted a range of issues peculiar to rural and regional areas that impact on the development and implementation of evidence-based guidelines. These issues indicate that evidence-based approaches to health care may not be readily transferable from metropolitan settings to rural and regional settings. A key recommendation is that *the National Rural Health Alliance inquire into and prepare a position paper on the applicability of, and factors affecting, the uptake of evidence-based health care in rural areas.*
- This paper has also argued that existing explanatory models about the uptake of evidence-based health care in rural areas have been dominated by micro-level perspectives. A key recommendation is that *future projects should also be informed by consideration of broader power relationships within the health system, and the development of effective strategies to reconcile potentially competing views and interests. One such strategy may be the introduction of multi-disciplinary undergraduate training and ongoing professional development in evidence-based health care for all rural health care practitioners.*



REFERENCES

1. Dawes M, Davies P, Gray A, Mant J, Seers K, Snowball R. *Evidence-Based Practice: A primer for health care professionals*. Churchill Livingstone, London, 1999.
2. National Health and Medical Research Council. *A Guide to the Development, Implementation and Evaluation of Clinical Practice Guidelines*. Australia, NHMRC, 1998.
3. McCarthy A, Hegney D. Evidence-based practice and rural nursing: A literature review. *Australian Journal of Rural Health*, 1998; 6, 96–99.
4. McDonald J. Implementing evidence-based health care: A new model for rural areas. Proceedings of the Sixth National Rural Health Conference. National Rural Health Alliance, Canberra, 2001.
5. Rubin G, Frommer M, Vincent N, Phillips P, Leeder S. Getting new evidence into medicine. *Medical Journal of Australia*, 2000; 172: 180–183.
6. Stapleton A, Cuncins-Hearn A, Pinnock C. Attitudes to evidence-based practice in urology: Results of a survey. *Australian and New Zealand Journal of Surgery*, 2001; 71(5): 297–300.



7. Mayer J. and Piterman L. The attitudes of Australian GPs to evidence-based medicine: A focus group study. *Family Practice*, 1999; 16: 627-632.
8. Freeman A, Sweeney K. Why general practitioners do not implement evidence: A qualitative study. *British Journal of Medicine*, 2001; 323: 1100-1105.
9. Davis D, Thomson M, Oxman A, Haynes R. Changing physician performance: A systematic review of the effect of continuing medical education strategies. *Journal of the American Medical Association*, 1995; 274(9): 700-705.
10. Lipman T. Power and influence in clinical effectiveness and evidence-based medicine. *Family Practice*, 2000; 17(6); 557-563.
11. Bero L, Grilli R, Grimshaw J, Harvey E, Oxman A, Thomson M. Closing the gap between research and practice: An overview of systematic reviews of interventions to promote the implementation of research findings. *British Medical Journal*, 1998; 317: 465-468.
12. Hawk C, Nyiendo J, Lawrence D, Killinger L. The role of chiropractors in the delivery of inter-disciplinary health care in rural areas. *Journal of Manipulative and Physiological Therapeutics*, 1996; 19(2): 82-91.
13. Willis E. *Medical Dominance: The division of labour in Australian health care*. 2nd. ed. Allen and Unwin, Sydney, 1989.
14. Guzman J, Esmail R, Karjalainen K, Malmivaara A, Irvin E, Bombardier C. Multi-disciplinary rehabilitation for chronic low back pain: Systematic review. *British Journal of Medicine*, 2001; 322(7301): 1511-1517.
15. Atlas S, Deyo R. Evaluating and managing acute low back pain in the primary care setting. *Journal of General Internal Medicine*, 2001; 16(2): 120-131.
16. Puech M, Ward J, Hirst G, Hughes A. Local implementation of national guidelines on lower urinary tract symptoms: What do general practitioners in Sydney, Australia suggest will work? *International Journal for Quality in Health Care*, 1998; 10(4): 339-343.
17. Deyo R, Schall M, Berwick D, Nolan T, Carver, P. Innovations in education and clinical practice : Continuous quality improvements for patients with back pain. *Journal of General Internal Medicine*, 2000; 15(9): 647-655.
18. Fairhurst, K, Guro, H. From trial data to practical knowledge: A qualitative study of how general practitioners have accessed and used evidence about statin drugs in their management of hypercholesterolaemia. *British Medical Journal*, 1998; 317: 1130-1134.
19. Ferlie E, Wood M, Fitzgerald L. Some limits to evidence-based medicine: A case study from elective orthopaedics. *Quality in Health Care*, 1999; 8: 99-107.

PRESENTER

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