



Report of the Evidence Based Clinical Practice Research Workshop

Hosted by the Strategic Research Development Committee of the
National Health and Medical Research Council

NHMRC

National Health and Medical Research Council

**Report of the
Evidence Based Clinical Practice
Research Workshop**

16 and 17 December 1999
Melbourne Business School
200 Leicester Street, Carlton, Victoria

Hosted by the Strategic Research Development Committee
of the National Health & Medical Research Council

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EXECUTIVE SUMMARY

The Strategic Research Development Committee (SRDC) is a principal committee of the National Health and Medical Research Council (NHMRC). Its objective is to develop a strategic research capability in areas where current research is not concomitant with the magnitude of its importance to health care in Australia. The SRDC provides a mechanism through which the NHMRC can target research funding, and SRDC has a discretionary budget to commission work. The SRDC felt that the translation of research findings into evidence based clinical practice (EBCP) warranted such strategic focus.

One million dollars was made available in 1999 for research to resolve two questions:

1. What are the structures and processes required to implement and sustain evidence based clinical practice research programs in different health care settings?
2. Does the application of Evidence Based Clinical Practice in clinical settings lead to improved health outcomes?

Fourteen grants were awarded and, after a 12 month research period, all the researchers reported their preliminary findings to a peer workshop.

The EBCP Research Program workshop on 16 and 17 December 1999 brought together clinicians, clinical researchers, administrators, consumer representatives and others from a variety of backgrounds to discuss and try to resolve issues that relate to every day clinical practice. The two major foci were how to facilitate and then sustain change.

The workshop was opened by the Hon Dr Michael Wooldridge, Minister for Health and Aged Care who set the scene by identifying the five major workshop themes (described in detail below).

Does clinical practice mirror the research? If not, why not?

The research funded by the NHMRC's SRDC identified a range of key issues for consideration, including:

- Local ownership of the evidence
- Working with respected opinion leaders to promote implementation of EBCP
- Ensuring that organisational infrastructure is in place
- That clinical staff are involved from the beginning of the project.

Identification of gaps in knowledge and skills, along with solutions to fill them should be factored into the implementation of EBCP. Conversely, the plethora of knowledge sources (for example, the proliferation of various guidelines for specific diseases) can make the selection of Best Practice extremely difficult.

Guidelines are frequently over long and duplicated. Whilst clinicians may readily 'own' such guidelines, the guidelines can become unmanageable.

Opinion leaders can play a vital role in influencing change amongst clinicians. There is no clear way to identify who should take on the role of opinion leader and how best to utilise such people. For example, endorsement by major and respected organisations can add credibility to the status of guidelines. However guidelines can just as easily be ignored by clinicians. In certain settings, the evolution of a local opinion leader can add validity to the adoption of the guidelines.

How appropriate is the current evidence base for specific populations?

Two research projects shed particular light on this issue:

Within the Aboriginal community on Thursday Island, it was found that the drive for change came from the community's high level of concern at the prevalence of type 2 diabetes. In rural and remote locations, lack of clinical leadership, inadequate information technology or a lack of management expertise generally hindered change. Other factors included features of the population and its location – for example, limited access to adequate nutrition.

The other project was related to evidence based practice in residential care of the elderly. The Australian residential care system consists of a number of individual private or State run homes, rather than being managed by a single governing body. Medical management in residential care was delivered by local general practitioners who had responsibility for individual patients. Rather than a Medical Director providing care for all residents, each resident could have their own general practitioner.

The lack of an overarching organisational structure, combined with the individual management of residents by GPs, was found to be an obstacle to the uniform application of EBCP. This resulted in a lack of coordination in the quality process.

How can we apply and evaluate EBCP in diverse situations?

'Ownership' was found to be a vital key in the implementation of EBCP. Sometimes the conflicting needs for ownership of the guidelines by clinicians, institutions and professional bodies could lead to the process of implementation becoming subverted.

One project team reported that they successfully implemented change by ensuring that the people promoting change were respected both in their clinical environment and professionally; all health care personnel were included in the process. By allowing individual practices to be included within the guidelines where there was evidence for, and external validity of, the variation, clinicians gained ownership of the content of the guidelines.

Clinician behaviour change was identified as a key requirement for implementation, but there could also be organisational and structural barriers to change, outside of the clinician's influence. For example, the lack of a single controlling body for

domiciliary oxygen therapy and the proliferation of different authorities and rules within each State and Territory results in unequal access to oxygen therapy across Australia. This restricts the implementation of EBCP. Best Practice supports the use of oxygen therapy to lengthen the lives of patients with hypoxia.

One project directly tackled the structural barriers by providing a quality improvement kit to enable hospitals to audit their work in managing early breast cancer. Hospitals were provided with the tools and resources to effect structural change in a way that they could easily identify.

Issues of change are not unique to the health arena. There is considerable overlap with other disciplines and many solutions are currently being tried and tested elsewhere. Proponents of EBCP would do well to draw on other disciplines' knowledge and expertise of change.

Is measurement of EBCP a quality assurance activity or clinical research?

A consistent issue for the projects funded through the EBCP Research Program was that of ethics. Institutional Ethics Committees approval for projects seemed to be dependent upon how the project was 'packaged' and whether the committee considered the project to be clinical research or quality assurance.

Where the project was deemed to be quality assurance, Ethics Committees did not have to provide clearance, whilst other Committees refused ethics clearance where they felt that clinical research was taking place. Problems with ethics clearance impeded the establishment of projects and was a surprising obstacle to EBCP implementation. It was also an unfortunate barrier given that one could ask the question 'Is it ethical not to implement best practice?'

Sustainability and transferability

Once evidence based practice has been implemented, how can one ensure that practice change is sustained?

One project looked beyond the structural requirements and contextual issues to implement EBCP, and focussed on sustaining change beyond the trial period. The team tracked the progress of a sample of young patients at risk of self harm, monitoring suicide statistics, and surveying mental health and emergency staff to see how many of the new evidence based practices survive the day to day pressures of clinical practice. The work highlighted the need for adequate measurement systems to provide data that distinguish between actual rather than perceived practice.

Across the projects, there was an observation that sustainability of EBCP can be enhanced by the involvement of the patient, such as the patient contributing to a care plan and then holding their own copy of the plan.

The notion of clinicians and consumers working together to improve practice was prominent. Consumer involvement in the initial development of the NHMRC's breast cancer guidelines has led to the guidelines being more precisely and carefully written, improving their acceptability to clinicians and patients.

The issue of economics and health was considered integral to the sustainability of EBCP. It was seen as regrettable that economists had not played a significant role in many of the projects discussed. However, as the projects had been working to a very tight timeframe and budget, resources were not available in this instance for economic issues to be considered adequately. It was recognised that cost benefit analysis is an essential part of EBCP.

In the broader health system, it was noted that evidence based medicine, and the cost to implement it, influences Government policy and the distribution of resources. Economic analysis is a crucial ingredient to the implementation of EBCP because health care funders need to be convinced that interventions are not only clinically effective, but also cost effective, and that the final outcome is an improvement in health outcomes.

Conclusion

The major workshop outcome was the recognition that practice change is a complex process that has a number of clearly identified components in need of attention. Drawing on the knowledge and expertise of others involved in the change management process furthers the sustainable and effective implementation of EBCP.

BACKGROUND

The National Health and Medical Research Council

The National Health and Medical Research Council (NHMRC) is a statutory body that provides advice on all aspects of health and health care delivery in Australia, from health and medical research to ethical issues. In accordance with its statutory obligations, the NHMRC has responsibilities ranging from basic medical research and applications research and development in health, to the provision of comprehensive advice on the most complex and important matters affecting the nation's health.

The Strategic Research Development Committee

Until the 1997 – 2000 triennium, the NHMRC had, to a large extent, relied on the imagination and initiative of researchers to determine the direction of the research it funded. While this produced robust health and medical research in Australia, it became increasingly apparent that Australia needed to improve its ability to respond more effectively to health and medical research issues that have not been addressed as adequately, effectively or expeditiously as desired.

To address this, the Minister for Health and Family Services (now Health and Aged Care), Dr Michael Wooldridge, established the Strategic Research Development Committee (SRDC) as a Principal Committee of the NHMRC in April 1997.

The stated objective of the SRDC is to develop a strategic research capability in areas where the research effort is not commensurate with the magnitude of its importance to health care in Australia. To fulfil its aims, the SRDC was specifically constituted to have a wide perspective and range of expertise. Its membership covers many different disciplines – not only the biomedical community, but also economics, business and the media.

Besides providing a useful mechanism by which the NHMRC is able to target research funding, the SRDC, through its own small budget, has the capacity to determine broad areas needing strategic research focus. The SRDC is able to commission work in these areas. One area that the SRDC identified as important was the translation of research into clinical practice.

The Evidence Based Clinical Practice Research Program

The SRDC was concerned that research outcomes were not effectively influencing clinical practice. The Committee felt that the most likely reason for this was a lack of, or ineffective, dissemination strategies. The Committee also suspected that evidence based clinical practice was implemented in an ad hoc way in Australia, and that it required a more focussed direction.

The Committee recognised that the process of translating research into clinical practice applies to decisions made in a broad range of health care areas, and that it encompasses diagnosis, prognosis, therapy and other health care issues.

Specifically, the Committee agreed that clinical practice involves the following steps:

1. Finding the best available evidence from a variety of sources
2. Critically appraising the evidence
3. Deciding what outcomes are sought
4. Applying the evidence in clinical practice
5. Evaluating the performance of the strategy against the envisaged health outcome.

The SRDC established the Evidence Based Clinical Practice Research Program (EBCPRP) as part of its research program in June 1998, to identify the impediments that exist in the translation of evidence into practice in Australia. In particular, the SRDC aimed to identify impediments to the translation and application of evidence into clinical practice in Australia, as well as sustainability and transferability issues.

To achieve this objective, two fundamental questions were asked:

1. What structures and processes are required to implement and sustain evidence based practice in different health care settings across Australia?
2. Does the application of evidence based practice in clinical settings lead to improved outcomes?

A sub committee of the SRDC was established to oversee the Program, and one million dollars was made available to fund research addressing these questions. Research proposals were limited to a maximum timeframe of 12 months. An advertisement calling for expressions of interest for research funding under the EBCPRP was placed in the national press on 11 July 1998. Over 340 expressions of interest were received, of which 38 were short listed by the Committee and invited to submit a full proposal for further consideration. The Committee subsequently received 35 full submissions by the deadline of 19 October 1998. Most of these were from the more populated states and from urban settings (32 out of 35), with 21 of the 35 submissions from hospitals (21 of 35). Overall, the proposed research would encompass a wide variety of clinical issues.

The Federal Minister for Health and Aged Care subsequently approved 14 projects for funding under this Program in December 1998, at a total outlay of \$1 million dollars.

The Evidence Based Clinical Practice Workshop

The EBCPRP Committee deliberately designed the EBCPRP to incorporate specific features that would facilitate speedier translation and dissemination of research findings. As a condition of funding, initial pastoral visits were conducted at the commencement of projects to assist researchers, to ensure that the research was quickly addressing the aims of the Program. As a further condition, research was to

be completed within 12 months, and all researchers were obliged to report their preliminary findings to a peer workshop towards the end of the research period.

The purpose of the Workshop was to stimulate debate, facilitate the adoption of evidence based clinical practice and ultimately inform the future directions of the EBCPRP. The Workshop drew on the expertise and experience of a broad range of medical and health professionals.

The Workshop was held at the Melbourne Business School on 16 and 17 December 1999, and was officially opened by Dr Michael Wooldridge, the Minister for Health and Aged Care. The Workshop sought to examine and address the following issues:

- What congruence was there between the actual and expected outcomes for each of the EBCPRP projects? Does the clinical practice mirror the research? If not, why not?
- How appropriate is the current evidence base for specific populations, such as the aged and/or indigenous populations?
- How can we successfully apply and evaluate evidence based clinical practice in diverse contexts and environments?
- In what circumstances and environments is the measurement of clinical practice a quality assurance activity? In contrast, when is it clinical research? What are the associated ethical, confidentiality and privacy issues, and how can we best manage these?
- What sustainability and transferability issues have we identified from the EBCPRP projects? What are the organisational and infrastructure implications, and what is the best approach to implementing these? How important is ownership?

The primary focus of the first day of the Workshop was to examine the current state of knowledge about implementing evidence based clinical practice. Day Two focussed more on identifying the remaining gaps in knowledge, and on exploring alternative approaches and possible solutions to the challenges that have been identified through the EBCPRP projects, in order to refine future efforts in relation to the Program.

The findings from this Workshop are discussed in depth in this report.

THE WORKSHOP FINDINGS

Congruence between the actual and expected outcomes of the projects

Research to date under the EBCPRP highlights the importance of considering a number of issues from the outset. These include:

- Local ownership of the evidence
- Respected opinion leaders promoting the implementation of EBCP
- Organisational structures and contexts that are amenable to the implementation of EBCP
- Involvement of clinical staff from the beginning of the project.

Not surprisingly, a lack of knowledge about, or skills in, evidence based research and clinical practice impeded the implementation of evidence based clinical practice. Identification of gaps in knowledge and skills, along with solutions to fill them should be factored into the implementation of evidence based clinical practice. At times, however, there may be a lack of evidence for certain populations or illnesses. Not least of these is the lack of evidence in the treatment of people who are aged over 80 years.

In outlining her project, *Falling short of best practice*, exploring why doctors and nurses in Adelaide nursing homes and hostels were not following guidelines for elderly people at risk of falls and strokes, Dr Maria Crotty identified the following four factors:

1. There was a lack of information
2. Doctors and nurses did not think guidelines were applicable to their patients
3. They were worried about the side effects of treatments
4. They were concerned about the time and money required to implement the guidelines.

In his project, *New prescribing habits for asthma*, Dr Peter Gibson found that nursing staff preferred to use equipment (nebulisers) with which they were more familiar for emergency asthma admissions. The guidelines are based on the evidence that metered dose inhalers and spacers can be just as effective as nebulisers at one fifth the cost of nebulisers. Practice change requires both the identification of the knowledge or skill deficit, and upskilling or skill development in these areas of deficit.

The converse to a lack of knowledge may also apply. In some cases where there is a plethora and overlap of knowledge sources, the task of implementation becomes one made more difficult by the need to synthesise a vast array of 'evidence'. For example, there may be such a proliferation of various guidelines for a specific disease (such as asthma) that selection of the best guidelines for use can be fraught.

In *Best practice for common respiratory problems*, Dr Brian Smith examined the attitudes of doctors, nurses and allied health professionals to an evidence based management plan for chronic obstructive pulmonary disease, and incorporated their views in the draft guidelines. The final guidelines were criticised for their duplication and length. Although there was a large degree of 'ownership' of the guidelines, the resulting guidelines were unmanageable.

Smith and his team of researchers found that different staff held different expectations of the guidelines and their role in clinical practice. For example, senior consultants felt that their authority in the treatment of patients would be diminished, while junior staff prioritised issues of practicality, access to the preferred clinical pathway and the benefits to patients. Staff acceptance and 'buy in' were seen as critical factors in the successful implementation of evidence based clinical practice.

The findings to date of the EBCPRP suggest that 'opinion leaders' are important players influencing change amongst clinicians. What is not yet clear is who is best to take on the role of opinion leader and how to best utilise such people. In addition, endorsement by major and respected organisations can add credibility to the status of guidelines. In contrast, a 'figurehead', such as a president of a professional college, rather than an 'opinion leader' may be unsatisfactory in promoting change because of the often short duration of tenure. For example, a figurehead with a one year appointment is unlikely to establish a role in leading opinion and translating evidence into practice. It may then be better to encourage the evolution of opinion leaders in the local setting. This will also provide local validity.

How does the evidence affect specific populations?

The issue of acceptance and 'buy in' is important for the patient as well as for clinical staff. Dr Robyn McDermott attributes much of the success in her project, *Tackling diabetes in Aboriginal communities*, to the community's demand for changed practice. The drive for changes in practice arose from the community's concern about the increased hospitalisation rates and poor outcomes, such as lower limb amputations, for people with Type II diabetes. This project entailed the adaptation of evidence based guidelines for Type II diabetes to local Cape York Peninsula conditions.

In McDermott's project, the specific features of the population and its location also impeded the implementation of evidence based clinical practice. For example, a lack of footwear or flooding in the wet season restrict the nature and extent of exercise that can be safely undertaken for a person with Type II diabetes.

Falling short of best practice, the project led by Dr Maria Crotty, examined the difference between the aged and residential care setting, and other health care service settings in the implementation of evidence based clinical practice. The major difference appeared to be that the aged and residential care systems consist of large numbers of individually managed and relatively small institutions, with no overarching organisational structure. The researchers encountered a lack of coordination in the quality process, and a wide variation in the quality of personnel.

For example, individual patient care in an aged and residential care setting requires each setting to maintain liaison with a range of medical personnel, including general practitioners. Under these circumstances, uniformity of clinical practice is likely to be more difficult to implement.

The implementation, sustainability and transferability of Evidence Based Clinical Practice in rural and remote locations could be hindered by the lack of clinical leadership or the limitations of information technology, or the limitations or lack of management expertise. All of these restrict the avenues for clinical practice change.

How can we successfully apply and evaluate evidence based clinical practice in different contexts?

Where professional jurisdictions compete, professional ownership of guidelines can hinder rather than assist the implementation of evidence based clinical practice. This issue particularly came to light in Dr Judith Searle's project, *Diagnostic tests under the microscope*. This project trialed an intervention aimed at reducing the number of costly and inappropriate diagnostic tests on women aged 40 and under who experienced abnormal bleeding from the uterus. The players in this project included gynaecologists, Ethics Committees, institutions and medical colleges, with each player wanting to own part of the project and its content. This introduced the risk of the project being steered in a direction other than that planned by the research team.

Other issues of ownership also appeared in Searle's project. The omission of key individuals, the perceived threats to power, the perceived threats to income (for example, if a patient could be managed by a general practitioner rather than by a gynaecologist), the boundaries of each player's responsibility, the concerns about workload, and the degree of concomitant change were all factors that limited the implementation of evidence based clinical practice.

Indirectly, A/Professor Don Campbell's project, *Breathing easier with evidence based medicine*, tackled and overcame a number of ownership issues. The project team developed an acute inpatient clinical practice guideline for chronic obstructive pulmonary disease, and provided a discharge package for continuing care. Campbell attributed the success of his project to the following considerations:

- Ensuring that those people implementing change were respected in their clinical environment as well as in their own discipline
- Involving, from the beginning, all personnel associated with the patient's care – from the obvious personnel, such as medical practitioners and specialists, to others, including pharmacists, nurses, and allied health clinicians
- Where necessary, to ensure clinician ownership of the content of the guidelines, permitting individual practices within the guidelines where the level of evidence and external validity of the variation justified its acceptance.

While individual clinician behaviour change was identified as a major requirement for the implementation of evidence based clinical practice, it was acknowledged

that on its own it is insufficient. There may be barriers to change that are outside the clinician's influence; these can largely be classified as organisational and structural. For example, the organisation and delivery of services in a hospital setting, or the rules and responsibilities, levels and structures of government, may restrict the implementation of Evidence Based Clinical Practice.

Such restrictions were highlighted in A/Professor Alan Crockett's project, *Reviewing at-home oxygen therapy*. Crockett noted that the lack of a single Australian controlling body for domiciliary oxygen therapy and the proliferation of different authorities and rules within each Australian State and Territory has resulted in unequal access to domiciliary oxygen across the country. This inequality restricts the implementation of evidence based clinical practice, which promotes oxygen therapy to lengthen the lives of patients with hypoxia due to chronic breathing difficulties. Australian State guidelines limit the prescribing of home oxygen (ostensibly due to cost), and Australia's private health funds do not bridge this gap.

Dr Sally Redman's project, *Better breast cancer management*, explicitly tackled the structural barriers that stand in the way of improved care for women with breast cancer. As part of their project, the researchers have provided a quality improvement kit that has enabled hospital sites to audit their own work against the NHMRC's *Clinical Practice Guidelines for the Management of Early Breast Cancer*. Redman's findings to date suggest that organisational 'buy in' – a commitment to change – was enhanced by giving hospitals the tools and resources to effect structural change.

Further discussion of 'buy in' led to conclusions that organisational and structural change can only come about with the 'buy in' of the 'power broker', although the role and status of the 'power broker' is not fixed. For example, in a hospital setting, the power broker may be the Chief Executive Officer, or the Director of Nursing, or the director of a specific clinical department.

Overall, it was acknowledged that issues of change are not unique to the health arena. There is considerable overlap with issues in the sociological and anthropological disciplines. Many solutions are being tried and tested in business and other such environments. Proponents of the implementation of Evidence Based Clinical Practice would do well to draw on other disciplines' knowledge and expertise of change management.

Clinical practice or quality assurance?

One consistent issue for the projects funded through the EBCPRP was that of ethics. Institutional Ethics Committees' approval of the project put before it seemed to depend on how the project was 'packaged' and whether the committee considered the project to be clinical research or quality assurance.

Where the project was deemed to be quality assurance, the Ethics Committee largely felt that it was not appropriate to provide ethics clearance. Other Ethics Committees refused ethics clearance, citing concerns about the ethics implications of clinical research. Those projects involving multiple sites faced an additional difficulty in that each site's ethics committee required a different ethics submission and format.

These difficulties of ethics clearance impeded the rapid establishment of a number of projects and was a surprising obstacle to the implementation of evidence based clinical practice. It is also an unfortunate barrier given that one could ask the question, 'Is it ethical not to implement best practice?'

Sustainability and transferability

Now that it has been shown that evidence based practice can be implemented, how can one ensure that practice change is sustained?

A/Professor Stewart Einfeld in his project, *Innovations in routine clinical practice to reduce youth suicide rates*, looked beyond the structural requirements and contextual issues of Evidence Based Clinical Practice, and focussed on sustaining changed practice beyond the initial trial period. Einfeld's project team tracked the progress of a sample of patients under the age of 24 years who are at risk of self harm. They monitored suicide statistics and surveyed mental health and emergency staff to see how many of the new Evidence Based Practices survive the day to day pressures of clinical practice. Einfeld's work has so far highlighted the need for adequate measurement systems to obtain data about actual clinical practice rather than perceived clinical practice.

Across the projects, there was an observation that sustainability of evidence based clinical practice can be enhanced by the involvement of the patient, for example, by involving the patient in the development of the care plan and providing them with a copy of the plan.

The notion of clinicians and consumers working together to improve practice was prominent. Consumer involvement in the initial development of the NHMRC's breast cancer guidelines has led to the guidelines being more precisely and carefully written, improving their acceptability to clinicians and patients.

Though considered integral to the sustainability of evidence based clinical practice, constraints of time prevented full consideration of the issue of economics and health. The limited timeframe and funds had prevented economists from playing a significant role in many of the projects discussed. It was recognised that cost benefit analysis is an essential part of Evidence Based Clinical Practice.

In the broader health system, it was noted that evidence based medicine and its costs influence Government policy and the distribution of resources. For example, the Therapeutic Goods Administration evaluates every new drug put before it for its clinical and cost effectiveness. The Medicare Services Advisory Committee evaluates services to be funded under Medicare by clinical need, efficacy, safety and comparative cost effectiveness. If Evidence Based Clinical Practice is to be adopted, it is essential that economic incentives, rather than disincentives, are available. Economic analysis is a crucial ingredient to the implementation of Evidence Based Clinical Practice. Health care funders must be convinced that interventions are not only clinically effective, but also cost effective, and that the final outcome is an improvement in health outcomes as defined by all stakeholders.

DIRECTIONS FOR FUTURE RESEARCH

Issues	Action
Ethics committees Take issue back to SRDC, and also NHMRC and the Australian Health Ethics Committee. Issues around recognition of research and quality assurance, unethical to prevent audit.	To be discussed by NHMRC Ethics Committee.
Residential aged care Under resourced, no quality assurance structure to make changes in health practices and also lack of skills amongst health care staff who don't understand the process. This needs to be fed back to the Department of Health and Aged Care.	Refer to Priorities Committee for meeting on 23/1/2000. Initiate round table discussion between parties within Aged Care.
Indigenous health The uniqueness of the problem of the implementation of EBCP in certain settings, for example, the lack of infrastructure – such as availability of appropriate food and exercise facilities. Needs to be reinforced with both the Department of Health and Aged Care and OATSIH	Item for discussion by the Aboriginal and Torres Strait Islander Health Research Agenda Working Group
No national chronic obstructive pulmonary disease guidelines Needs to be taken back urgently to the NHMRC and the Thoracic Society and other bodies who may be involved.	Item for SRDC and HAC meetings
Health economics involvement There is a need for more economics and health economic systems research and this should be an integral component of all research into Evidence Based Clinical Practice. Cost benefit analysis should also be applied to existing products and services on the schedule to provide equal basis for comparison.	NHMRC to look at requirement for cost benefit analysis in research. NHMRC to enter active dialogue with relevant organisations
NHMRC project grants EBM research has been hindered by inexpert peer review and lack of expertise on discipline panels. Traditionally panels are organ based. EBM research crosses boundaries.	Issue to be raised with NHMRC Research Committee
Further SRDC funded research of EBM Hoping in next triennium of SRDC to further fund EBM research, with at least \$1 million dollars per annum for three years. Sustainability issues one possible area for exploration, and other areas not well covered in the original 14 projects.	Depending on funds, EBM research issues raised by workshop to be considered. Could involve further consultation with stakeholders.

CONCLUDING REMARKS

The Evidence Based Clinical Practice Research Program workshop was a unique opportunity to bring together a group of clinicians, clinical researchers, administrators, consumer representatives and others from a variety of backgrounds to discuss and try to resolve issues that relate to every day clinical practice. The main foci of the discussions were how to facilitate changed practice, and then sustain the change.

The major workshop outcome was the recognition that practice change is a complex process requiring attention to a number of clearly identified components. Drawing on the knowledge and expertise of others involved in change management should help to further the implementation of evidence based clinical practice, and in a way that is sustainable.

Acknowledgments

We would like to thank Terrie O'Brien and other staff of the SRDC Secretariat for their time and effort in organising the workshop. Members of the Evidence Based Clinical Practice Research Program Subcommittee of the SRDC are: Paddy Phillips (Chair), Lesley Barclay, John Best, Colin Chapman, Rebecca Coghlan, David Copolov, Sue Morey, David Roder and Chris Silagy.

APPENDIX A

Projects funded by the Evidence Based Clinical Practice Research Program

Breathing easier with evidence based medicine

A/Professor Don Campbell, Head, Clinical Epidemiology and Health Services Evaluation Unit, Royal Melbourne Hospital

Chronic obstructive airway disease, such as bronchitis, emphysema and other respiratory problems, affect nearly ten per cent of the adult population of Australia over 45 years of age. This project is attempting to improve care for those who are hospitalised with the disease, by encouraging doctors to take account of clinical practice guidelines when managing the illness. The researchers are monitoring progress towards this goal by tracking the number of unplanned readmissions, symptoms, medicine use and quality of life of patients after discharge from hospitals.

Reviewing at-home oxygen therapy

A/Professor Alan Crockett, Chief Medical Scientist, Respiratory Unit, Department of Medicine, Flinders University

This project is reviewing British and US research results that found that oxygen therapy in the home can add years to the lives of patients with chronic breathing difficulties. The researchers are trialing the effects of home oxygen treatment on the longevity and quality of life of patients with chronic airflow limitation in South Australia, compared with their counterparts in the overseas studies. At the same time, they are examining physicians' adherence to the guidelines for prescribing home oxygen therapy, to see if the level of compliance affects patient health.

Falling short of best practice

Dr Maria Crotty, Senior Lecturer, Department of Rehabilitation and Aged Care, Flinders University, Adelaide

Falls and strokes are common and serious health care problems for the frail and elderly. Strokes affect about 40,000 Australians a year, while falls are the leading cause of injury related deaths in people aged 75 and over. The researchers are attempting to tackle both these causes of death and disability by educating doctors and nurses from Adelaide nursing homes and hostels in proven prevention strategies. They have conducted outreach visits and workshops, developed reference materials, undertaken casenote audits and provided feedback on risk factor management, and will conduct an evaluation of the impact of these educational strategies on staff practices.

Innovations in routine clinical practice to reduce youth suicide rates

A/Professor Stewart Einfeld, Director, Child and Adolescent Psychiatry Programs, South Eastern Sydney Area Health Service, Sydney

The suicide rate has tripled since the 1960s and now accounts for 22 per cent of deaths among young people in Australia. One of the major risk factors for youth suicide is a history of previous attempts; therefore there are opportunities to reach young people at risk when they present for medical care after deliberately harming themselves. This research attempts to build upon an earlier two year project which achieved greater treatment compliance for patients presenting to the ten mental health services that took part in the trial. The challenge is to make these changes last beyond their initial trial. The researchers have been tracking the progress of a sample of 'at risk' patients under 24 years of age, monitoring suicide statistics and surveying mental health and emergency staff, to see how many of their new practices survive the day to day pressures of clinical practice. The results will help health care agencies and workers who want to maximise the value of future interventions among young people who attempt suicide.

New prescribing habits for asthma

Dr Peter Gibson, Department of (Respiratory) Medicine, John Hunter Hospital, Newcastle

This research is attempting to identify the most cost effective way of influencing prescribing habits when there is a need to change established practice. There are two common treatments for emergency asthma admissions – nebulisers or inhalers and spacer devices. Studies show that metered dose inhalers and spacers can be just as effective as nebulisers, at one fifth the cost of nebulisers. The researchers have been using different methods to promote greater use of inhalers and spacers by hospitals, and will evaluate the success of each to assess the level of intervention required to introduce this new evidence based practice.

Keeping mother and baby together

Professor David Henderson-Smart, NSW Centre for Perinatal Health Services Research, Queen Elizabeth II Institute for Mothers and Children, University of Sydney

This study is trialing different methods of feedback to hospitals to minimise separations of mother and baby at birth, with the aim of reducing the number of admissions of premature or caesarean babies to special care nurseries, in line with NHMRC guidelines. The researchers have identified hospitals with high rates of admission to special care nurseries and developed customised programs, including outreach visits, meetings and written feedback, to educate hospital staff. They are monitoring the number of admissions and any failures to admit babies in need of special nursery care to determine the success of the intervention.

Preventing infections at the time of birth.

A/Professor James King, Director, Perinatal Epidemiology Unit, Mater Misericordiae Children's Hospital

In this project, the researchers are encouraging compliance with evidence based guidelines to reduce the rate of infections in newborn babies, acquired during birth. A mother can carry bacteria in her birth canal that can pass to her child during labour and result, in rare cases, in dangerous infections such as meningitis. However, the risk of early onset Group B streptococcus disease and other infections before and after birth can be greatly reduced through preventive action. This study compares the effects of two different education strategies – one that relies on written material only, the other that uses a multifaceted approach – on clinical management of those at risk of these diseases in Queensland maternity hospitals.

Tackling diabetes in Aboriginal communities

Dr Robyn McDermott, Clinical Epidemiologist, Health Surveillance Office, Cairns

Indigenous Australians have one of the highest rates of type 2 diabetes in the world, and suffer many related conditions such as heart disease, renal failure and stroke. The researchers in this study have adapted evidence based guidelines to local conditions with the aim of improving the care of people with diabetes in remote Aboriginal communities. The researchers have met with health care workers from north Queensland communities, conducted workshops, and will conduct a follow up audit and data analysis during the controlled trial, to assess changes in clinical management in diabetes.

Better breast cancer management

Professor Sally Redman, Director, National Breast Cancer Centre, Sydney

Breast cancer is the major cause of cancer deaths among women but, if diagnosed early, may be successfully treated. However, one of the obstacles in the treatment of the disease can be the health care system itself. This study is tackling the structural barriers that stand in the way of improved care for women with breast cancer. It is helping hospitals identify and change policies that discourage the use of the NHMRC's *Clinical Practice Guidelines for the Management of Early Breast Cancer*. The researchers will analyse the impact and process of these reforms and develop a guide for other institutions who want to adopt a similar program.

Coordinating care for heart disease

Dr Christopher Reid, Director, Second Australian National Blood Pressure Study, Baker Medical Research Institute, The Alfred Hospital, Melbourne

This study enlists general practitioners to help heart attack victims reduce the risks of further cardiovascular damage. While patients generally take their drugs regularly and control their blood pressure while in hospital, research shows that compliance drops off over time once they are discharged. The researchers have been providing specific details of each patient's medication, risk profile and health targets to their general practitioner so that they can better manage the illness together. If successful, the intervention has the potential to improve patient health and increase coordination between hospitals and community care.

A cooperative approach to childhood asthma

Dr Colin Robertson, Deputy Director, Department of Respiratory Medicine, Royal Children's Hospital, Melbourne

Asthma affects 25 – 30 per cent of children in Australia and costs more than \$600m per year. It is the most common cause for admission to a paediatric hospital and results in an unacceptably high rate of readmissions. While evidence based guidelines for asthma management exist, they are not always followed. The researchers are implementing and evaluating a coordinated asthma management program at the Royal Children's Hospital in Melbourne, which admits 2,000 children for asthma a year. They have enlisted the help of the Hospital's emergency, paediatrics, respiratory medicine, allergy and immunology departments, as well as general practitioners, to ensure continuity of care.

Diagnostic tests under the microscope

Dr Judith Searle, Senior Lecturer, Department of Obstetrics and Gynaecology, Flinders University

This study is trialing an intervention aimed at reducing the number of costly and inappropriate diagnostic tests on women (aged 40 or under) who experience abnormal bleeding from the uterus. This condition is often wrongly associated with endometrial cancer or hyperplasia, which evidence suggests results in thousands of unnecessary tests – such as dilations, curettages and hysteroscopies – every year. The researchers are using information kits, newsletters, workshops and other techniques to promote better management of dysfunctional uterine bleeding among sample groups of general practitioners and gynaecologists in Victoria and South Australia. If successful, the education program should result in fewer referrals and lower rates of the procedures over the six month trial period.

Best practice for common respiratory problems

Dr Brian Smith, Senior Lecturer, Department of Medicine, University of Adelaide

Chronic obstructive pulmonary disease is one of the most common adult respiratory conditions. It accounted for 6,400 deaths in Australia in 1995 and poses a considerable burden for society. This study is examining the attitudes of doctors, nurses and allied health professionals to an evidence based management plan for the disease, to identify any barriers to its use and explore ways of building acceptance of the guidelines. It is also tracking the length of stay and rates of readmission to hospital among a group of patients with chronic obstructive pulmonary disease to evaluate the effect of the intervention.

Proven methods of combating heart disease

Dr David Weller, Senior Lecturer, Department of Evidence Based Care and General Practice, Flinders University

This study is attempting to close the gap between recommended and actual practice in the management of heart disease. The researchers have been encouraging doctors to use proven preventive strategies, such as the control of blood pressure and cholesterol, and the use of aspirin with patients at risk of heart disease. The trial will provide an opportunity to review the effectiveness of outreach visits, casenote audits with feedback and information technology with general practitioners and specialists.

APPENDIX B

Participants at the Evidence Based Clinical Practice Research Workshop Melbourne Business School, 16 and 17 December 1999

Adu, Dr Ammish	Department of Health and Aged Care
Andrews, Professor Gavin	Royal Australian and New Zealand College of Psychiatrists
Baggoley, Dr Christopher	Committee of Presidents of Medical Colleges and Flinders Medical Centre
Barclay, Professor Lesley	National Health and Medical Research Council, Health Advisory Committee and Evidence Based Clinical Practice Research Program Committee
Beard, Dr John	Northern Rivers Institute of Health and Research
Best, Dr John	National Health and Medical Research Council; Chair, Strategic Research Development Committee of the National Health and Medical Research Council; Evidence Based Clinical Practice Research Program Committee
Black, Professor Judith	Strategic Research Development Committee of the National Health and Medical Research Council
Boyce, Mr Robin	Department of Health and Aged Care
Brewster, Professor David	Northern Territory Health Services
Brien, Dr Joanne	Victorian College of Pharmacy
Brooks, Professor Peter	University of Queensland
Buchan, Dr Heather	Victorian Department of Human Services
Burns, Dr Jane	Royal Children's Hospital
Campbell, Professor Donald	Chief Investigator, Evidence Based Clinical Practice Research Program
Capp, Mr Stan	Barwon Health
Cheek, Dr Frida	Department of Human Services, South Australia
Clavisi, Ms Ornella	Centre for Clinical Effectiveness and Australian Network for Effective Health Care
Coghlan, Ms Rebecca	Evidence Based Clinical Practice Research Program Committee

Cohen, Dr Hershhal	Previous Director, Division of General Practice (Victoria)
Colagiuri, Dr Ruth	National Centre for Diabetes Strategies
Copolov, Professor David	Evidence Based Clinical Practice Research Program Committee
Craig, Dr Jonothan	The New Children's Hospital and Australian Network for Effective Health Care
Cranston, Mrs Jo	Co-Investigator, Evidence Based Clinical Practice Research Program
Crockett, Associate Professor Alan	Chief Investigator, Evidence Based Clinical Practice Research Program
Crotty, Dr Maria	Chief Investigator, Evidence Based Clinical Practice Research Program
Currie, Ms Kay	Centre for Clinical Effectiveness and Australian Network for Effective Health Care
Davy, Dr Margaret	Strategic Research Development Committee of the National Health and Medical Research Council
Du Preez-Wilkinson, Dr Gabrielle	Career Medical Officer's Association
Donovan, Ms Jan	Consumers' Health Forum of Australia
Einfeld, Associate Professor Stewart	Chief Investigator, Evidence Based Clinical Practice Research Program
Elliott, Mr Rohan	Centre for Applied Gerontology
Fennessy, Dr Paul	Centre for Clinical Effectiveness and Australian Network for Effective Health Care
Ferguson, Ms Joanne	Co-Investigator, Evidence Based Clinical Practice Research Program
Fiddes, Kaylene	Victorian Centre for Ambulatory Care Innovation
Fletcher, Mr Martin	Department of Health and Aged Care
Galbraith, Mrs Kirstie	Victorian College of Pharmacy
Gibson, Dr Peter	Chief Investigator, Evidence Based Clinical Practice Research Program
Gilberte, Ms Emma	Co-Investigator, Evidence Based Clinical Practice Research Program
Gilsenan, Ms Belinda	National Ageing Research Institute
Gough, Ms Jenny	National Ageing Research Institute
Grenfell, Dr Robert	Australian Divisions of General Practice

Grover, Dr Sonia	Co-Investigator, Evidence Based Clinical Practice Research Program
Hagan, Mr Philip	Department of Health and Aged Care
Harvey, Ms Vanessa	Department of Health and Aged Care
Hender, Ms Kim	Co-Investigator, Evidence Based Clinical Practice Research Program
Henderson-Smart, Professor David	Chief Investigator, Evidence Based Clinical Practice Research Program
Hogan, Dr Chris	Royal Australian College of General Practitioners
Jeacocke, Dr David	Newcastle Institute of Public Health and Australian Network for Effective Health Care
Johnston, Ms Renea	Centre for Clinical Effectiveness and Australian Network for Effective Health Care
Killalea, Dr Sheila	Monash University
King, Associate Professor James	Chief Investigator, Evidence Based Clinical Practice Research Program
Kirk, Dr Ray	Christchurch School of Medicine and Australian Network for Effective Health Care
Larkins, Professor Richard	Chair, National Health and Medical Research Council
Leggat, Associate Professor Peter	James Cook University
Lowrie, Ms Liz	Department of Health and Aged Care
Luxford, Dr Karen	Co-Investigator, Evidence Based Clinical Practice Research Program
Lyall, Ms Heather	Department of Health and Aged Care
MacLellan, Professor Donald	ACT Department of Health and Aged Care
Maire, Ms Joanne	The Chiropractic and Osteopathic College of Australasia
Manaszewicz, Ms Rosetta	Breast Cancer Action Group Victoria
Mathews, Professor John	Department of Health and Aged Care
Matthey, Professor Stephen	South Western Sydney Area Health Service
McCann, Mr Paul	Tasmanian Department of Health and Human Services
McDermott, Dr Robyn	Chief Investigator, Evidence Based Clinical Practice Research Program

McElroy, Ms Heather	Co-Investigator, Evidence Based Clinical Practice Research Program
McEncroe, Dr John	Australian Divisions of General Practice
McGowan, Dr Christopher	South Australian Health Commission
McInnes, Ms Liz	Co-Investigator, Evidence Based Clinical Practice Research Program
McKenzie, Ms Margaret	Victorian Centre for Ambulatory Care Innovation
McKinnon, Dr Moira	Strategic Research Development Committee of the National Health and Medical Research Council
McNeil, Professor John	Monash University
McRae, Dr Roderick	Australian Salaried Medical Officers Federation
Mellis, Professor Craig	The New Children's Hospital and Australian Network for Effective Health Care
Moloney, Dr John	Australian Salaried Medical Officers' Federation
Morey, Dr Sue	Evidence Based Clinical Practice Research Program Committee
Newton, Mr Bill	Australian Divisions of General Practice
Nosworthy, Ms Jill	Co-Investigator, Evidence Based Clinical Practice Research Program
O'Brien, Professor Paul	Health Advisory Committee of the National Health and Medical Research Council
Olsson, Dr Craig	Centre for Adolescent Health
Pearson, Professor Alan	Royal College of Nursing Australia
Phillips, Professor Paddy	Strategic Research Development Committee of the National Health and Medical Research Council and Chair, Evidence Based Clinical Practice Research Program Committee
Primrose, Dr John	Department of Health and Aged Care
Rajendran, Ms Meera	Centre for Clinical Effectiveness and Australian Network for Effective Health Care
Redman, Professor Sally	Chief Investigator, Evidence Based Clinical Practice Research Program
Reid, Dr Christopher	Chief Investigator, Evidence Based Clinical Practice Research Program
Robertson, Dr Colin	Chief Investigator, Evidence Based Clinical Practice Research Program

Rowett, Ms Debra	Co-Investigator, Evidence Based Clinical Practice Research Program
Rubin, Professor George	Health Advisory Committee of the National Health and Medical Research Council
Ruthnam, Dr Jay	Mid North Coast (NSW) Division of General Practice
Santamaria, Dr Nick	The Alfred Hospital
Saunders, Professor Nicholas	Committee of Deans of Medical Schools and Monash University
Schmidt, Ms Barbara	Co-Investigator, Evidence Based Clinical Practice Research Program
Scott, Associate Professor David	Committee of Presidents of Medical Colleges and Royal Australasian College of Surgeons
Scott, Ms Leonie	Royal Hobart Hospital
Searle, Dr Judith	Chief Investigator, Evidence Based Clinical Practice Research Program
Shield, Ms Alison	Co-Investigator, Evidence Based Clinical Practice Research Program
Silagy, Professor Chris	Health Advisory Committee of the National Health and Medical Research Council and Evidence Based Clinical Practice Research Program Committee
Smallwood, Professor Richard	Chief Medical Officer, Department of Health and Aged Care
Smith, Dr Brian	Chief Investigator, Evidence Based Clinical Practice Research Program
Speare, Associate Professor Richard	James Cook University
Spink, Ms Janet	Health Issues Centre
Stewart, Ms Fran	Co-Investigator, Evidence Based Clinical Practice Research Program
Thomson, Capt Clyde	Strategic Research Development Committee of the National Health and Medical Research Council
Tibbits, Dr Di	Royal Australian College of Obstetricians and Gynaecologists
Tobin, Dr Margaret	Co-Investigator, Evidence Based Clinical Practice Research Program
Turner, Dr Mary	Victorian Department of Human Services

Van der Heide, Dr George	Research Committee of the National Health and Medical Research Council
Van Der Weyden, Dr Martin	Australian Medical Association and Medical Journal of Australia
Veale, Dr Bronwyn	Co-Investigator, Evidence Based Clinical Practice Research Program
Villanueva, Dr Elmer	Centre for Clinical Effectiveness and Australian Network for Effective Health Care
Ward, Dr Michael	Queensland Health
Wasiak, Mr Jason	Centre for Clinical Effectiveness and Australian Centre for Effective Health Care
Waters, Dr Mary Jo	Royal College of Pathologists of Australasia
Waters, Ms Donna	NSW College of Nursing
Watts, Professor Robin	Australian Health Ethics Committee of the National Health and Medical Research Council
Weller, Dr David	Chief Investigator, Evidence Based Clinical Practice Research Program
Whitehead, Dr Craig	Co-Investigator, Evidence Based Clinical Practice Research Program
Willis, Ms Louise	Australian Divisions of General Practice
Wood-Baker, Dr Richard	University of Tasmania
Young, Dr Lis	Liverpool Area Health Service

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