

# Encouraging Best Practice in Residential Aged Care Program: Final Evaluation Report

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## Key messages

The EBPRAC program represents the most comprehensive, coordinated, approach to implementing evidence-based practice in residential aged care undertaken in Australia, involving 13 projects working with facilities in 108 locations across six states. Previous work has been limited, generally undertaken on a small scale and within short timeframes.

Changes to the care received by residents as a result of the EBPRAC program were diverse. There were lots of small changes by many individuals, reflecting the capacity for small-scale change within residential aged care and the nature of evidence, which is never ‘fixed’ or certain. Overall, it was difficult to gauge the extent to which changes were implemented.

Improvements in resident outcomes were mixed. The best improvements for residents resulted from behaviour management and prevention strategies. About one third of intended outcomes for residents were achieved which, in part, is a reflection of how challenging it can be to measure outcomes.

About 7,000 people received some form of training during the program, resulting in improvements in awareness, confidence, knowledge and skills.

Impacts on facilities included improvements to the physical environment, better access to equipment and outside services, and improvements in key processes and systems of care.

Significant resources were developed in the form of training materials, tool kits and evidence summaries. It is important that these resources are made available throughout residential aged care in a way that does not add to the fragmented nature of resources already available.

The program objectives were ambitious; four of the seven objectives were met, one was partially met and two not met. This is a good result, given that it is too early to fully assess the extent to which some objectives were met.

A wide range of strategies were employed to implement evidence-based practice but with some common elements – a strong focus on education (primarily 1:1 or small-group and interactive), use of local facilitators, feedback of data to staff and provision of resources.

The results indicate that there are no ‘magic bullets’ for successful implementation, which is consistent with current knowledge about how to implement evidence-based practice. All projects adopted a multi-faceted approach to change, which is recognised as more effective than reliance on single strategies.

Residents had little influence on the design and implementation of each project. The focus was more on keeping residents informed rather than seeking their opinion about what should happen.

A very positive consequence of the program is that it has helped to bridge the ‘evidence gap’ by bringing researchers and practitioners together.

There were no adverse unintended consequences. Some variations to project scope and the pace of project implementation resulted in minor delays.

The major issue for the EBPRAC program is how to build on the lessons learnt and instil evidence-based practice throughout residential aged care. This should include consideration of issues such as

linking evidence-based practice to existing systems of funding, accreditation, education and quality improvement. What is required is a more strategic approach that supports the ongoing development and implementation of evidence, at the same time as providing a receptive context for implementation to take place.

Feedback from those attending the EBPRAC workshops was very positive, indicating that workshop aims were met, that the workshops were a worthwhile use of time and an effective way of promoting networking and collaboration.

The lessons learnt during the EBPRAC program about how to implement evidence-based practice can be summarised in a series of 'principles of practice change':

- Leadership - without someone to lead change it is probably not worth starting. One person might be able to start the change but it takes more than one leader to keep going. Leadership does not have to come from managers but if that is the case it is important that managers support the change.
- Staff motivation - the motivation of individuals working in residential aged care is one of the 'keys' to successful implementation.
- Change advocates - involving the people who will be affected by any change is important. Strong advocates for change may come from staff who would not normally be considered change agents.
- Evidence - simply having 'evidence' is not sufficient. Staff will want to know whether the proposed changes 'make sense' and will work i.e. provide benefits for themselves, their colleagues or residents.
- Education - education is necessary but not sufficient to change the practices of those providing care to residents. Education needs to be done in tandem with other strategies and tailored to the knowledge, skills and literacy levels of staff. A 'one size fits all' approach to education is likely to be ineffective.
- Communication - informal communication such as conversations and impromptu meetings can be just as important as more formal means of communication.
- Capacity to change - the capacity to implement evidence-based practice in residential aged care is limited, resulting in change that is likely to take place 'step by step' and in small doses rather than change on a more radical scale.
- Planning - some form of plan for implementing evidence-based practice is generally a good idea, but there is a need for flexibility to cope with unpredictable events that can upset those plans.
- Resources - resources are required, usually in the form of resources to provide education or to 'free up' at least some staff time to support change.

## Executive summary

The Encouraging Best Practice in Residential Aged Care (EBPRAC) program is funded by the Australian Government with the aim of improving evidence-based clinical care in government-subsidised residential aged care facilities, including those providing low-level and high-level care. The EBPRAC program represents the most comprehensive, coordinated, approach to implementing evidence-based practice in residential aged care undertaken in Australia. Previous work to implement evidence-based practice within residential aged care in Australia has been limited, generally undertaken on a small scale and within short timeframes.

The program to date has consisted of two funding rounds, with a total of 13 projects. Round 1 commenced in December 2007 and concluded in December 2009, Round 2 commenced in December 2008 and concluded in December 2010. Each project required the support of management in participating facilities and focused on improving resident care by taking into account gaps in current care practices. The objectives of the program included improvements for residents, improvements in clinical care, improvements for staff, improvements in the system of residential aged care and increased consumer confidence. The program sought to take account of resident preferences, communicate changes required by the projects to residents and adopt a multidisciplinary approach.

In total, Round 1 and Round 2 involved residential aged care facilities in 108 locations in all states of Australia. Projects consisted of a lead organisation working with a group of facilities to implement evidence in one of nine areas of clinical practice – pain management, falls prevention, prn medications, oral health, nutrition and hydration, behaviour management, palliative care, wound management and infection control. Lead organisations included five universities, three research centres, three divisions of general practice and two service providers.

Each project was funded for two years and included a project-level evaluation, at the core of which was a ‘before and after’ design i.e. measuring a series of variables before implementation commenced and then measuring the same variables after implementation of the evidence. In the absence of control groups, there is a need for some caution in interpreting the results. For example, any judgements about impact on clinical care will be subject to the problem of attributing changes to what was done as part of each project, rather than other factors. Many activities were undertaken both to change practices and to collect data for an evaluation. The extent of data collection for the project-level evaluations was extensive. On average, 18% of project budgets were devoted to evaluation but this was skewed by three projects with much higher amounts spent on evaluation. The median amount spent on evaluation was 15%.

The evaluation of the program, as distinct from the evaluation of individual projects, was based on a framework to examine the delivery and impact of the program on residents, providers and the residential aged care system. The design of the evaluation was informed by a review of the literature which identified eight ‘key success factors’ that may influence the uptake and continued use of evidence. Data was collected for the program evaluation from interviews, six-monthly project progress reports, a tool to measure sustainability, visits to lead organisations and an economic evaluation which consisted of two questionnaires and a spreadsheet to collect data on project inputs, costs and project outputs.

The implementation strategies adopted across the 13 projects were wide-ranging and consistent with what is found in the literature on evidence-based practice, including many different approaches to education. All projects adopted a multi-faceted approach to change, which is recognised as more effective than reliance on single strategies. The rationale for projects selecting

the implementation strategies they used was underpinned by a mix of evidence, previous experience and available expertise.

Implementation of the program generally proceeded as planned. Some delays with implementation were experienced, usually during the initial 'establishment' phase because of under-estimating how long it would take to undertake some activities. In some projects full implementation in all facilities was not achieved. Changes in project scope usually involved an increase in scope, particularly regarding the development and delivery of education programs. An average of \$59,000 was spent on implementation costs for each facility, including project salary costs, payments to participating facilities, travel costs and other operating expenses.

Some projects did not just implement 'evidence' but also added to the available evidence. One of the challenges for the future of EBPRAC is how to incorporate the dynamic nature of 'evidence' into ongoing work to maintain and improve evidence-based practice. There is scope for greater coordination to avoid duplication, facilitate consistency in the production of evidence, share knowledge about how best to implement evidence-based practice and link the various resources that are currently available.

Changes to the care received by residents were diverse. Many of the changes built on work that had been done previously in participating facilities and were relatively small scale and incremental in nature. In part, this reflects the focus of the program and the available evidence but is also indicative of the somewhat limited capacity of the sector to change. The capacity to change is dependent on the availability of resources, including the knowledge and skills of staff, the nature of daily work and the influence that a wide range of factors that are largely outside the control of those trying to bring about change can have e.g. turnover of facility managers which had a significant impact on some facilities and some projects. The nature of the changes (relatively small and difficult to measure) makes it difficult to judge the extent to which changes were implemented.

Engagement and participation of staff was extensive and generally in line with what each project expected. There was a strong emphasis on engaging the relevant stakeholders in all the projects. Facility managers had the most participation at the start of each project but were then joined by registered nurses, enrolled nurses and personal carers as the main groups participating. Participation by general practitioners was low, although this was generally anticipated.

Residents did not have a significant influence on project activities. The focus was more on keeping residents informed rather than seeking their opinion about what should happen. Various approaches were undertaken to achieve this including the use of posters, brochures, newsletters, speaking at resident meetings and media releases to local newspapers. Cognitive difficulties made communication with some residents difficult.

Involvement of residents' families was variable, with projects tending to limit family involvement to keeping them informed via newsletters and meetings. Those families who did attend meetings were reported to have found the experience useful. The impact of the program on families was not evaluated by most projects. Those projects that did seek the views of families focused on family perceptions of how the project may have impacted on residents, rather than the family members themselves.

All projects offered facilities a financial incentive for participating in EBPRAC, with payments that ranged from \$460 to over \$60,000 per facility, averaging approximately \$12,500 per facility. Only five facilities did not receive any payment. Facilities incurred some costs for which they were not

reimbursed. The additional time spent by facility staff participating in each project does not appear to have been excessive, although this is difficult to estimate and is likely to be an under-estimate.

Almost 7,000 people were trained in the 13 projects, at a project salary cost ranging from about \$100 to \$300 per person trained. The full cost of training is higher, including as it does salary costs for the person attending the training and other miscellaneous costs.

The program has resulted in the development of a significant volume of materials (education programs, tool kits, evidence summaries) which require some means of dissemination and regular updating. What has been learnt about changing practices needs to be incorporated into the daily life of facilities and the structure of the industry if it is not to be lost as ‘just another program’ that came and went.

The outcomes of the program for residents were difficult to measure. For many people residing in aged care facilities maintaining health status rather than improving health status may well be a satisfactory outcome. The three behaviour management projects produced the best evidence that resident outcomes improved. The pain management project in Round 1 had arguably the most comprehensive evidence that practices improved but was unable to show consistent reductions in pain. Two projects with a strong focus on prevention (oral health and wound management) were able to demonstrate improved outcomes (improved oral health and reduction in wounds).

Impacts on staff were mixed but generally included improvements in awareness, confidence, knowledge and skills. Staff had improved access to and use of evidence-based resources and tools. There was evidence in some projects of greater collaboration between nursing staff and personal carers, as well as with health and allied health in the planning and provision of care. Impacts on facilities included improvements to the physical environment, better access to equipment and outside services and improvements in key processes and systems of care.

Each project identified the main outcomes that it was designed to achieve over the course of the two years. Many of the intended outcomes were expressed in ways that made it difficult to determine whether the outcomes had in fact been achieved, which may have contributed to a lower rate of achievement than if the outcomes had been expressed more precisely. Projects had more success achieving intended outcomes for facilities and staff than for residents.

The seven objectives for the EBPRAC program were not well understood by projects in Round 1 but this improved in Round 2. Only one of the objectives was not well incorporated into project activities (‘Build consumer confidence in the aged care facilities involved in EBPRAC’). Four of the seven objectives were met, one was partially met and two not met. This is a good result, given that some of the objectives are ambitious or it is too early to fully assess the extent to which some objectives have been met.

An important part of the EBPRAC program was a series of six national workshops, attended by members of lead organisations and participating facilities. Feedback indicated that the workshops largely met the workshop aims, assisted in understanding how individual projects fitted within the program, were a worthwhile use of time and were a useful way of promoting networking, interaction and the sharing of ideas.

Dissemination about project activities was extensive, primarily at a local level but also more broadly with presentations at state and national conferences. Over 2,200 dissemination activities were estimated to have ‘reached’ over 200,000 people.

Sustainability is probably the most challenging aspect of any program. Use of a sustainability tool to measure ten factors that have been shown to influence sustainability indicated an increased likelihood of project activities being maintained, when results at the end of each project were compared with the results at the beginning of each project. Sustainability will depend more on factors within each facility (e.g. the presence of leadership and management support), rather than what was done by each project.

The factors most consistently identified by lead organisations and staff from participating facilities as ‘key’ to successful implementation were a receptive context for change (including leadership), adequate resources and stakeholder engagement. Being able to ‘see’ the benefits of change, either for residents or staff, was an important motivator for staff to either implement or maintain a change in practice.

## About this report

### *Acronyms*

Acronyms have been kept to a minimum:

DoHA            Department of Health and Ageing

EBPRAC        Encouraging Best Practice in Residential Aged Care

### *Terminology*

The terms used to refer to nursing staff are registered nurses (also known as Registered Nurses Division 1) and enrolled nurses (also known as Registered Nurses Division 2), referred to collectively as nursing staff.

The term ‘personal carer’ is used to refer to those staff providing personal care in residential aged care facilities, also known as assistants in nursing or personal care assistants.

The term ‘facilities’ is used to refer to residential aged care facilities.

### *Project details*

Details of each EBPRAC project are included in appendices to this report (Appendix 1 – Appendix 13). The aim of these appendices is not to summarise every aspect of each project but to provide enough detail to inform this report and highlight interesting aspects of each project.

### *Attribution of quotes*

Any quotes in this report that arise due to work undertaken as part of the EBPRAC program (interviews, project progress reports, project final reports) are indented, italicised and written in blue colour:

- Quotes from interviews are attributed to either someone working in a facility (F) or project team (P).
- Each project produced four six-monthly progress reports. Quotes taken from these reports are designated by the relevant time period – T1, T2, T3 or T4.
- Quotes taken from project final reports are referenced to the relevant report.

Quotes taken from the literature are cited with a reference and page number.





## 1 Introduction

### 1.1 EBPRAC program

The Encouraging Best Practice in Residential Aged Care (EBPRAC) program commenced in late 2008 with the aim of achieving evidence-based improvements for people living in residential aged care facilities (henceforth referred to simply as ‘facilities’), the staff caring for them, the aged care system and the broader community, summarised in the seven program objectives:

#### *Improvements for residents*

- Improvements in clinical care

#### *Improvements for staff*

- Opportunities for aged care clinicians to develop and enhance their knowledge and skills
- Support staff to access and use the best available evidence in everyday practice

#### *System improvements*

- Clearer industry focus on improvements to clinical care
- Wide dissemination of proven best practice in clinical care
- Develop national clinical or educational resources and evidence summaries that support evidence-based practice in aged care and are able to guide the ongoing development of accreditation standards

#### *Community impact*

- Build consumer confidence in the aged care facilities involved in EBPRAC

The program consisted of two funding rounds, with a total of 13 projects (Table 1). Round 1 commenced in late 2007 and ran until December 2009. Round 2 commenced in late 2008 and ran until December 2010. The length of each project was 24 months, except for two projects which were 22 months in length. Each project required the support of management in participating facilities and focused on improving resident care by taking into account gaps in current care practices. The objectives were supported by four key priorities which give further insight into what the program was meant to achieve and the means to do this:

- Improving quality of clinical care for residents in Australian Government funded aged care homes taking into account resident preferences.
- Communication of the changes required as part of this project to the residents and their families.
- Implementation of change management processes across all levels of staff to ensure that clinical best practice is accepted and informs care delivery.
- Improving clinical capacity and staff skills through a multi-disciplinary approach.

Further details of each project are included in appendices 1-13 in this report. The funding information in Table 1 includes \$600,000 in additional money for the South Australian Dental Service project to develop resources for the national Oral and Dental Health Care Plan. The abbreviations are used to identify projects throughout the report, particularly in tables.

**Table 1 EBPRAC projects**

Abbreviation	Lead organisation	Clinical area	Funding (excl. GST)
<b>Round 1</b>			
DATIS meds	Drugs and Therapeutic Information Service	PRN medications	\$511,511
NARI falls	National Ageing Research Institute	Falls prevention	\$1,072,980
NARI pain	National Ageing Research Institute	Pain management	\$1,057,183
SA dental	South Australian Dental Service	Oral health	\$1,793,184
UN nutrition	University of Newcastle	Nutrition & hydration	\$821,338
<b>Round 2</b>			
HC behav	Hammond Care	Behaviour management	\$907,187
MU behav	Monash University (later Flinders University)	Behaviour management	\$1,272,225
MGPN pall care	Murrumbidgee General Practice Network	Palliative care	\$755,353
NEVDGP pall care	North East Valley Division of General Practice	Palliative care	\$873,480
PW inf control	PivotWest	Infection control	\$703,116
QUT wounds	Queensland University of Technology	Wound management	\$885,425
UQ pall care	University of Queensland	Palliative care	\$1,375,098
UTS behav	University of Technology, Sydney	Behaviour management	\$890,158
		<b>TOTAL</b>	<b>\$12,918,238</b>

Details of participating facilities are summarised in Table 2. Less EBPRAC facilities are located in major cities (51%) compared to the country as a whole (61%), with more EBPRAC facilities located in inner regional and outer regional areas (total of 47%) compared to the country as a whole (37%). Two facilities are located in remote or very remote regions.

The main providers of residential aged care across the country are religious organisations (29%), private providers (28%), community-based providers (17%), charitable organisations (16%) and state governments (9%) (Australian Institute of Health and Welfare 2009). Amongst the EBPRAC facilities ownership reflected the pattern for the whole country except for a smaller percentage of private facilities (16%) and a greater percentage of state government facilities (19%).

**Table 2 Facility ownership and location**

Ownership		Location by state		Location by remoteness	
Type of ownership	No.	State	No.	Remoteness category	No.
Charitable	14	New South Wales	22	Major cities	55
Community-based	18	Queensland	14	Inner regional	34
Private	17	South Australia	23	Outer regional	17
Religious	38	Tasmania	2	Remote	1
State government	21	Victoria	43	Very remote	1
		Western Australia	4		
<b>Total</b>	<b>108</b>		<b>108</b>		<b>108</b>

## 1.2 EBPRAC evaluation

The evaluation of the EBPRAC program had two main components:

- Summative evaluation which seeks to ascertain whether and to what extent the program was implemented as intended and the desired/anticipated results achieved. The purpose is to ensure accountability and value for money with the results of the evaluation informing any future planning decisions, policy and resource allocation.
- Formative evaluation whereby the results of the evaluation inform the ongoing development and improvement of the program. This ‘action research’ approach fits well with the aim of the program to build resilience and capacity within the health system for longer term sustainable change.

Both components seek to achieve the same goal: to help clinicians, managers and policy makers make better informed decisions about how to improve the use of evidence in residential aged care facilities. The formative component of the evaluation has been reported in four progress reports and two annual reports over the course of the program.

The evaluation was designed to allow the evaluation team to form a judgment as to how successfully the EBPRAC program was implemented, whether the desired results were achieved and what lessons were learnt. The evaluation framework consisted of three levels to examine the impact and outcomes for consumers (residents, their families and friends), providers and the broader residential aged care sector. The three levels fit well with the objectives of the program. Evaluation of the program focused on six key issues – program delivery, program impact, sustainability, capacity building, generalisability, and dissemination.

The program evaluation drew extensively on the aggregate findings of the project evaluations, constituting a ‘meta-evaluation’ of project achievements, constraints and successes. Given the diversity of projects there were no common clinical outcomes, hence improvements in clinical care were only identified by project-level evaluations. The primary focus of the program evaluation was at the project level (rather than individual facilities participating in each project), supported by examination of within-project variation (for example, why the pace of implementation and the results achieved might vary at different facilities within a particular project).

The evaluation commenced with a review of the literature which identified eight ‘key success factors’ that may influence the uptake and continued use of evidence:

- a model for change/implementation, including the role of specific change agents or facilitators
- a receptive context for change
- the nature of the change in practice, including local adaptation, local interpretation of evidence and ‘fit’ with current practice
- demonstrable benefits of the change
- stakeholder engagement, participation and commitment
- staff with the necessary skills
- adequate resources
- systems in place to support the use of evidence (Masso and McCarthy 2009).

A receptive context for change includes factors such as leadership (including informal leaders), the existing relationships between staff, a climate that is conducive to new ideas and the presence of a recognised need for change. The ‘key success factors’ were used as the initial framework for

structuring and directing data collection and analysis; to guide analysis of the links between project delivery and project impact; and assist in identifying the barriers and incentives influencing the use of evidence in day-to-day practice.

The remainder of this section briefly describes the components of the evaluation.

### **1.2.1 Project progress reports**

Projects were required to submit six-monthly progress reports to DoHA which were then forwarded to the program evaluation team. The evaluation team designed a template for the progress reports which was framed in accordance with the evaluation framework and the key success factors. When necessary, receipt of progress reports was followed up with a phone call to the relevant project team to clarify any details, elicit further information or confirm any findings

### **1.2.2 Site visits**

An initial site visit was undertaken to each project in the first six months, with various follow-up site visits depending on circumstances. In total, 28 site visits were undertaken, with one member of the evaluation team undertaking each visit. Most of the time during the visits was spent with staff from the lead organisations discussing progress with implementation and evaluation, together with data collection for the program evaluation. Data collection during the first site visit was influenced by the ‘theory of change’ approach which seeks to understand and construct the theory underpinning an intervention (Mason and Barnes 2007).

### **1.2.3 Economic evaluation**

The economic evaluation involved the distribution of two questionnaires (Questionnaire 1 and Questionnaire 2) and a spreadsheet to each project to obtain data on inputs and outputs. The design of the EBPRAC program, including the diverse nature of the projects and the lack of common outcomes, did not lend itself to a ‘classic’ economic evaluation, necessitating a pragmatic approach which focused on the cost implications for government and providers.

Questionnaire 1 requested information on the main intended outcomes for residents, staff and facilities, what was being implemented by each project and some details on project scope. Questionnaire 2 requested information on project activities (and some degree of quantification of those activities); payments to facilities, costs incurred by facilities, wider cost impacts of the project (e.g. referrals to external providers) and project effectiveness (both qualitative and quantitative data). The spreadsheet was used to collect data on the costs of different phases of each project – governance, establishment, implementation and evaluation. Data from both questionnaires and the spreadsheet were used to inform many sections of the report, not just the section on costs.

### **1.2.4 Interviews**

Interviews were conducted with three groups of stakeholders. The first two groups consisted of people working as part of the project consortiums and facility staff with a good understanding of the project (e.g. managers, facilitators). Selection of those invited for an interview followed a purposive sampling approach using data from project progress reports and discussions with lead organisations to identify suitable people to interview. Interviews were conducted between September 2009 and November 2010 in Queensland, South Australia, New South Wales and Victoria, including interviews with staff from 25 facilities.

The third group of interviewees included ‘high level’ stakeholders who could inform the program evaluation. This included people from the Department of Health and Ageing, Aged Care Standards and Accreditation Agency, Aged Care Association Australia, Royal College of Nursing Australia

and two major providers of residential aged care. Purposive sampling was used (interviewing people with a good knowledge of the program or residential aged care), with some snowball sampling i.e. inviting some of those interviewed to suggest additional people that it might be useful to interview. Interviews were conducted in June and July 2010. The numbers of people interviewed are summarised in Table 3.

**Table 3** Summary of people interviewed for the EBPRAC evaluation

Group of stakeholders	Number of interviews	Number interviewed
Staff working in residential aged care facilities	28	34
Working as members of project consortiums	16	17
High level stakeholders	13	18
<b>Total</b>	<b>57</b>	<b>69</b>

### 1.2.5 NHS Sustainability Tool

To gain some quantification of the likely sustainability of project improvements we requested projects to complete a sustainability tool developed in the UK National Health Service (Maher, Gustafson et al. 2006), once at the beginning of project implementation and once near the end of project implementation, for each facility.

### 1.2.6 Ethics approval

The program evaluation was initially approved by the University of Wollongong / Illawarra Area Health Service Human Research Ethics Committee in April 2008, with subsequent amendments in July 2009 and October 2009. All projects received ethics approval from the relevant human research ethics committees.

## 2 Evidence, changes in practice and the EBPRAC program

### 2.1 Evidence used in the program

The evidence implemented by the 13 EBPRAC projects involved three types of evidence, with some projects focusing on one type of evidence whereas others sought to implement more than one type:

- Practice level evidence i.e. the evidence with the potential to directly impact on residents such as the evidence about pain management or wound management.
- Evidence about key processes in caring for residents e.g. assessing residents, care planning, case conferencing.
- Context level e.g. person-centred care, palliative approach to care.

Some projects used one or two main sources of evidence whereas others used a considerable number of additional sources, primarily the results of individual studies and guidelines for specific areas of practice e.g. venous leg ulcers. Table 4 summarises the main sources of evidence used by the projects.

**Table 4** *Main sources of evidence implemented in the EBPRAC program*

Source of the evidence	Title of the evidence	Year of publication
Victorian Quality Council	Minimising the risk of falls and fall-related injuries: guidelines for acute, sub-acute and residential care settings.	2004
Australian Safety and Quality Council	Preventing falls and harm from falls in older people. Best practice guidelines for Australian hospitals and residential aged care facilities.	2005 (updated in 2009)
Central Coast Area Health Service (NSW)	Best practice food and nutrition manual for aged care facilities.	2004
Australian Pharmaceutical Advisory Committee	Guidelines for medication management in residential aged care facilities, 3rd edition.	2002
Australian Pain Society	Pain in residential aged care facilities - management strategies.	2005
Joanna Briggs Institute	Best practice: oral hygiene care for adults with dementia in residential aged care facilities (part of the series, Best Practice: Evidence Based Practice Information Sheets for Health Professionals).	
Primary Dementia Collaborative Research Centre	A review of the empirical literature on the design of physical environments for people with dementia.	2008
National Health & Medical Research Council	Guidelines for a palliative approach in residential aged care (enhanced version).	2006
Department of Health and Ageing	Infection control guidelines for the prevention and transmission of infectious diseases in the health care setting.	2004 (updated in 2010)
Australian Wound Management Association	Standards for wound management	2002

## 2.2 Links with other sources of evidence

During the course of the EBPRAC program work on developing evidence for residential aged care has taken place in various forums, examples of which are included in the next three sections.

### 2.2.1 Falls prevention guidelines

The falls prevention project in Round 1 based its work on two main sources of evidence: *Minimising the risk of falls and falls injuries: Guidelines for acute, sub-acute and residential care setting*, published by the Victorian Quality Council in 2004 and *Preventing falls and harm from falls in older people. Best Practice Guidelines for Australian Hospitals and RACFs*, published by the Australian Safety and Quality Council in 2005. The latter has recently been updated (by the Australian Commission on Safety and Quality in Health Care in 2009) to produce three separate guidelines for hospitals, residential aged care and community care. The guidelines for residential aged care (*Preventing falls and harm from falls in older people: best practice guidelines for Australian residential aged care facilities*) are comprehensive, running to a total of 184 pages, supported by a guidebook, an implementation guide and separate fact sheets for support workers, nurses, doctors, health managers, allied health professionals and residents.

One of the outcomes of the falls prevention project was a web-based resource which provides a guide to implementing falls prevention interventions - *Working together to prevent falls in residential aged care: resource package*. The two publications have appeared in the same year, providing guidance on how to implement evidence-based falls prevention in residential aged care.



The web-based resource is much simpler than the guidelines produced by the Australian Commission on Safety and Quality in Health Care and focuses on the methodology used by the EBPRAC project e.g. use of action research. In some ways the two resources are complementary (one a simple starting point, one a more comprehensive set of guidelines for those who need more detailed information). On the key issue of how best to conduct falls risk assessments the two resources are not consistent. The Australian Commission on Safety and Quality in Health Care guidelines note that there is no consensus on which factors to include in a tool for assessing the risk of falls but does include details of one particular tool. The resource developed by the EBPRAC project includes the tool developed as part of the project, labelled a draft tool. The two tools have some similarities but quite different systems for rating the risk of falls.

### **2.2.2 JBI COnNECT**

Since 2008 various evidence summaries have been published on the JBI COnNECT (Clinical Online Network of Evidence for Care and Therapeutics) Aged Care website for the areas of clinical practice included in the EBPRAC program e.g. dementia, falls, wound management, medication management and mouth care. Not all of these evidence summaries are specifically targeted at residential aged care but all have some relevance to the care of older residents. JBI COnNECT Aged Care represents a system for generating, on a regular basis, evidence about best practice in aged care. Although the evidence summaries are quite cryptic and their use within residential aged care is not known there may be opportunities to link with this existing system for the further development, not only of evidence, but the evidence about how to implement the evidence.

### **2.2.3 How to translate knowledge into practice**

The Australian Health Ministers' Advisory Council Health Care of Older Australians Standing Committee commissioned the development of the publication in 2008 of *The 'how to' guide: turning knowledge into practice in the care of older people* which is targeted at project officers and project managers involved in quality improvement and implementation initiatives to improve the care of older people. Although the audience for the guide is wider than just residential aged care it includes very useful information about change management principles; matching implementation strategies to identified barriers to change; Plan-Do-Study-Act cycles; monitoring and evaluation. It includes a good summary of the relevant literature. The guide has the potential to augment the lessons learnt from the EBPRAC program and assist ongoing implementation of evidence-based practice. It is published by the Department of Health in Victoria and is available on its website.

## **2.3 Summary**

Evidence is constantly evolving and the examples above indicate that there is scope for greater coordination to avoid duplication, facilitate consistency in the production of evidence, share knowledge about how best to implement evidence-based practice and link the various resources that are available. Over 1,000 articles are published each year just on dementia, and this number is steadily increasing (Draper, Low et al. 2009). Although many of those articles may not be relevant to residential aged care it gives an indication of how rapidly knowledge is expanding.

In a recent publication Buchan et al (2010) identified that between 2003 and 2007 a total of 313 clinical practice guidelines were produced or reviewed for use in Australia. Interestingly, only 29% were classified as 'evidence-documented'. It is reasonable to assume the rate of production of such guidelines has not diminished in the last 2-3 years. Although many of these guidelines are not applicable to residential aged care this data gives an indication of the scale of activity in this area. The authors conclude 'a more coordinated approach to identifying national priorities for developing and updating clinical practice guidelines may produce better returns on investment in Australian guidelines' (Buchan, Currie et al. 2010, p 490).

## 3 Program delivery/implementation

### 3.1 Introduction

The key success factors referred to in Section 1.2 were used to ‘frame’ the evaluation, including data collection and data analysis. This section draws on those key success factors to report on the factors that influenced the implementation of evidence within the EBPRAC program. The one exception is the key success factor of ‘staff with the necessary skills’ which is covered in sections 4.4 and 5.1.

The primary sources of data for this section are the six-monthly progress reports submitted by each project and the interviews conducted with facility-based staff and members of the project consortia. Data analysis was informed by a conceptual framework which considers change as a constant interplay between the context of change, the content of change and the process of change (Pettigrew 1985). The conceptual framework was used to structure the coding of data, facilitated by the use of NVivo software.

#### *Planning for implementation*

In Round 1, only one project submitted a detailed project plan. In Round 2, the level of detail provided in the project plans varied considerably but was generally improved compared to Round 1, ranging from very simple plans to a comprehensive 15 page plan and a simple, but very well structured, plan.

Four of the five projects in Round 1 did not have plans that documented the project objectives, project activities against performance targets or evaluation measures against time frames. This improved in Round 2 where seven of the eight plans used a format linking activities with project objectives although only two demonstrated links between project activities and EBPRAC program objectives. In some cases this made it difficult to follow the links between program objectives and what each project planned to do but easier to follow the links between project objectives and project activities. In Round 2, one plan lacked detail, focusing more on the management of the project than the content of the project, one plan included little information about what was planned and how implementation would take place and one plan included almost no detail about how anything would be implemented.

When project plans incorporated ‘indicators of achievement’ or some other descriptor of performance these tended to be framed in process terms rather than outcomes. In almost all cases indicators of achievement were either not quantified or were not readily quantifiable. All project plans included timeframes, but with considerable variation in level of detail. The lack of a consistent approach and level of detail for the project plans made it more difficult to monitor the progress of each project.

#### *Stage or extent of implementation*

There is a lack of understanding in the literature about what is meant by the term ‘implementation’, although this is improving with the recent development of what is known as ‘implementation science’. It has been argued that there appear to be discernible stages of implementation - exploration and adoption, installation, initial implementation, full operation, innovation and sustainability – and that ‘it appears that most of what is known about implementation of evidence-based practices and programs is known at the exploration and initial implementation stages’ (Fixsen, Naom et al. 2005, p 18). An alternative way of thinking about implementation is the concept of ‘implementation fidelity’ which is about the degree to which something has been implemented rather than the stage of implementation. The main issue is whether implementation of an intervention adheres to what was intended i.e. is the content, frequency, coverage and duration of the intervention consistent with the evidence on which it is based (Carroll, Patterson et al. 2007)?



In the absence of good information about the stage of implementation or the degree to which an evidence-based practice has been implemented, judgements about reported outcomes are problematic.

The nature of the changes typically made by projects (see Section 3.4) makes it difficult to judge the extent to which changes were implemented, either in terms of stage of implementation or degree of implementation. Some projects indicated that they would have liked more time for implementation, suggesting that ‘initial’ rather than ‘full’ implementation had been achieved, demonstrated by these comments made in the last six months of two projects:

*The most movement has been made in the last three or four months, which is why it’s a shame it’s not going for just another six months (P)*

*What frustrates me at times is the fact that if I could just get a hold of that facility for a bit longer yes we could put things in place. We’re just now starting to see the real benefits of the project, just now starting to get things working how we thought that they should. (P)*

With these caveats about the difficulty of judging the extent of implementation it can be concluded that, in general, projects did what they set out to do at project commencement. There were some variations to project scope, usually an increase rather than a decrease in scope, particularly with regard to education programs e.g. providing additional education.

### 3.2 Implementation delays

In any project there will always be changes to the sequence and scale of what takes place, when compared against initial plans, some of which may constitute a ‘delay’. Some project activities (e.g. obtaining approval from an ethics committee) may take longer than anticipated but not delay implementation. Some delays will be minor with an impact that is difficult to gauge.

Delays in implementation tended to occur during the initial ‘establishment’ phase because of under-estimating how long it would take to recruit staff, prepare materials, conduct audits, obtain ethics approvals or similar activities:

*Things took longer at the beginning to really get rolling in terms of identifying the issues and then waiting for the base line reports to be finished so you could see what the data was saying. So it really slowed down. (P)*

*There was a lot more work in translating the guidelines than I think people thought there would be. (P)*

Projects that involved environmental modifications experienced delays either in deciding what changes to make or actually making the changes, sometimes due to the need to identify a source of funding for the modifications. With some projects it was more a case of delays throughout the project cycle or delays with what was taking place in the facilities:

*Every step of the project is taking more time than expected as we think of better ways to do things and we consult more professionals than originally planned. (T2)*

*Almost all facilities have taken longer than anticipated to identify, plan and implement their interventions. (T3)*

Two projects experience significant delays due to the need to work with state-based health services: in one case to ensure compatibility of medical record numbers, in another case to obtain permission

to use a particular audit tool. Table 5 summaries the more substantial delays that affected implementation.

**Table 5** *Delays in implementation*

Project	Delays in implementation and reasons for those delays
1	One facility withdrew early on, which required considerable time and effort to replace (the project had the minimum number of facilities allowable). Difficulty recruiting nurse educators slowed progress in delivering the education program, although not to any great extent. Gaining ethics approval was time consuming due to the complex process of obtaining multiple ethics committee approvals across three states, resulting in a delay of 1-2 months in commencing data collection. Active involvement of one facility delayed by accreditation visit and outbreak of gastroenteritis.
2	Various issues in one facility resulted in temporary withdrawal of that facility from the project, rejoining later on and undertaking activities as originally planned. Almost all facilities took longer to identify, plan and implement interventions than anticipated. Some delays in ordering and obtaining equipment. Delay in commencing implementation in pilot facility due to delay in obtaining ethics approval.
3	Ethics approval and completion of baseline audits (to inform the action plans of each facility) took longer than anticipated. Resulted in one month delay in commencing action research meetings. Environmental modifications took longer than anticipated due to difficulty deciding which modifications to implement and the time taken to obtain quotes for the modifications.
4	Every step of the project took longer than anticipated due to constant refinement and greater consultation than originally planned. Delays in purchasing products resulted in reduced period of implementation in two facilities.
5	The project accumulated a delay of about one month in the first nine months due to various project establishment issues, including delays in obtaining ethics approval, baseline data collection being more time consuming than expected and the need to re-schedule education of staff to avoid accreditation visits. By the time the delivery of the final (of three) education modules commenced the project was back on schedule.
6	Unpredictable issues in some facilities (e.g. illness outbreaks, media attention) resulted in implementation activities being shortened and postponed, with fewer staff available to participate.
7	A web portal maintained by the project team took about six months longer to develop than originally anticipated and when it did become operational staff found it difficult to use. This meant that for over half the project there was a reliance on paper-based systems for collecting data, rather than using the web portal.
8	Delayed implementation of an end-of-life care pathway in one state due to issues around compatibility of medical record numbers with state health services. This delay meant that an evaluation of the acceptability of the pathway did not take place. Delay also occurred due to the need to negotiate a reasonable price for using the Respecting Patient Choices approach to advance care planning.
9	Departure of project manager and general practitioner resulted in some delays in project establishment phase. Delay in developing the educational resources for 1:1 education, with the result that delivery of the education did not commence until early 2010, several months later than initially planned.
10	It took longer than anticipated to translate the clinical guidelines into a form that could be used during the project. Recruitment of residents and families took longer than anticipated because of additional assistance required for staff to identify eligible residents and competing priorities e.g. accreditation and ACFI audits. Period of implementation in each facility reduced from 12 months to 9 months.
11	Delays due to Christmas holiday period soon after project commenced. Finalisation (with DoHA) of project plan, evaluation plan and communication and marketing plan took longer than anticipated. Changes in facility staffing and accreditation visits delayed initial engagement of some facilities.

Project	Delays in implementation and reasons for those delays
12	Took longer than anticipated to prepare for staff training, assessments and mentoring, resulting in delay in preparing materials for family support groups, hence such groups started late. Environmental modifications took longer than anticipated. Data collection and analysis took longer than anticipated, resulting in delays feeding back audit results to staff.
13	Originally planned to use environmental assessment tool developed in Victoria but there was a delay in getting approval to use the tool from the Victorian Department of Human Services. Decision made to use another tool (the Environmental Audit Tool) but this resulted in a delay in conducting the initial audits, putting back the time period for environmental modifications by six months. When the environmental modifications did start it took longer than anticipated due to the time taken to make decisions about what modifications to make. Use of policy audit delayed due to time taken to develop suitable tool.

In summary, the delays in implementation experienced by projects would not be considered unusual in a program of this scale and complexity.

### 3.3 Model of change/implementation

#### 3.3.1 Model of change

Having a model of change is sometimes referred to in the literature as having a planned approach to change or designing specific interventions based on some form of needs assessment or diagnosis. The importance of considering change at various levels (the individual, the team, the organisation, the broader context) is well-recognised (Ferlie and Shortell 2001; Grol and Wensing 2004), with a multi-level approach implying the need for some degree of organisation and planning. A recent large-scale empirical study of organisational change in health care has identified ‘a coherent change strategy’ as playing a key role in progressing service improvement (Fitzgerald, Ferlie et al. 2007).

The implementation strategies used in the EBPRAC program to change practices are summarised in Table 6, based on a well-recognised taxonomy (Elkhuizen, Limburg et al. 2006; Cochrane Effective Practice and Organisation of Care Review Group (EPOC) 2007).

The range of implementation strategies in Round 1 and Round 2 were similar except for a greater emphasis in Round 2 on changes to improve continuity of care, primarily in the three palliative care projects, and education of general practitioners, in part due to greater involvement of divisions of general practice in Round 2.

All projects included a financial incentive for facilities to participate, usually to cover the costs of staff training. Twelve projects relied heavily on structured education of one form or another to change practice, either educational meetings or educational outreach visits. The mix of implementation strategies summarised in Table 6 is generally consistent with the range of strategies identified in a recent systematic review of dissemination and implementation strategies used by teams working in healthcare (Medves, Godfrey et al. 2010).

For two projects action research was the primary driver of change. Other projects which used action research did so more as a form of evaluation, with less focus on influencing what was implemented in individual facilities. There is variation in how the term is used in the literature but typically action research involves the simultaneous use of data gathering, feedback and action ‘which offers a method of research and intervention and also a process for change’ (Bate 2000, p 491). Action research is commonly used in nursing but a recent review of the literature on using action research to implement evidence-based practice in nursing could only conclude that it was a ‘promising approach’ (Munten, van den Bogaard et al. 2010).

**Table 6 Summary of implementation strategies**

Category of intervention	No. of projects	Examples
Institutional incentive	13	Back-fill costs for staff training Purchase of equipment
Educational meetings	11	Workshops for 'champions' or facility staff
Local opinion leaders (including 'champions' or 'link nurses')	10	Pain champions Falls resource nurses
Distribution of educational materials	10	Development and distribution of flow charts and brochures
Audit and feedback (any summary of performance on providing care)	9	Dementia care mapping Rates of infection
Resident mediated interventions (new clinical information, not previously available, collected from residents and given to the facility)	7	Pain assessments Oral health assessments
Cooperation with external services or communication and case discussion with off site health professionals	6	Nutrition support person External mentor
Changes to improve continuity of care	5	Oral health care plans End-of-life care pathways
Environmental audits	4	Environmental Audit Tool
Changes in physical structure, facilities and equipment	4	Environmental modifications Purchase of beds and hip protectors
Local consensus processes	3	Action research Plan-Do-Study-Act cycles
Clinical multidisciplinary teams (new team or additional members of an existing team)	3	Pain management team Wound care network
Educational outreach visits (also known as academic detailing)	2	1:1 education as part of the prn medications project
Reminders (resident or encounter-specific information intended to prompt someone to recall information)	1	Reminder system for skin tear prevention

One project used the Collaborative Methodology which is one of the most widely recognised quality improvement methodologies. The evidence base for the methodology is not strong, although positive (Schouten, Hulscher et al. 2008), but this should not be taken as an argument not to use the methodology – it simply reflects current knowledge and is consistent with what is known about quality improvement in general. As far as can be ascertained, the Collaborative Methodology has not been used previously in residential aged care.

The rationale for selection of the various implementation strategies was underpinned by a mix of evidence (e.g. use of education), previous experience (e.g. use of action research) and available expertise. One project did a search of the literature to identify change management strategies that the project could employ.

Elements of planning and diagnosis occurred in both rounds of EBPRAC projects. Diagnosis typically occurred in the form of a baseline audit which then informed what was implemented. Eleven projects implemented changes across all facilities at approximately the same time, whereas two projects took a staggered approach to implementation.

In summary, projects used appropriate interventions to implement evidence-based practice. Many different approaches were taken but with several common elements – a strong focus on education (primarily 1:1 or small-group and interactive), use of local facilitators, feedback of data to staff and provision of resources. All projects used multiple interventions to bring about change, averaging seven per project, which is recognised as more effective than reliance on single strategies.

The mixed results for the impact of the program (see Chapter 4) indicate that there are no ‘magic bullets’ for successful implementation of evidence-based practice in residential aged care, which is consistent with current knowledge in the literature. The various strategies such as education or audit and feedback are not ends in themselves but means for increasing staff skills, gaining insight into why change is necessary or understanding the benefits of change. Education is necessary, but not sufficient, for change to occur (see Section 4.4). More definitive evidence of ‘what works’ in what circumstances requires further research.

### 3.3.2 Activities of project staff

Another indication of the approach taken by each lead organisation can be seen in an analysis of how staff employed on projects spent their time. Table 7 summarises the activity of project staff according to four main categories – project governance, project establishment, project implementation and project evaluation – for each project, based on data provided by projects in the economic evaluation spreadsheet. Averaged across all projects, approximately one quarter of project staff time was spent on project governance and establishment, one quarter on evaluation, with half the time spent on implementation.

**Table 7** *Percentage of project staff time by purpose and activity*

Project activity	Project													Av.
	1	2	3	4	5	6	7	8	9	10	11	12	13	
Governance	22	13	8	23	25	23	3	27	15	14	23	18	6	17%
Establishment	3	2	3	4	2	5	7	4	15	6	8	3	7	6%
Implementation	59	33	77	59	30	64	53	53	50	63	30	63	68	51%
Evaluation	15	51	12	14	43	8	37	16	20	17	39	16	19	27%
<b>Total</b>	<b>Each column totals 100%</b>													

The data should be treated with some caution as the percentages are estimates only. For example, it is very difficult in some cases to separate out time spent on implementation from time spent on evaluation when a particular activity (e.g. baseline auditing) may have been used both for evaluation and implementation (by feeding the results back to facility staff to inform goal setting and action plans).

Of the time spent by project staff on implementation Table 8 summarises how that time was spent on project implementation activities, averaged across all projects.

**Table 8** *Percentage of project staff time spent on implementation activities, across all projects*

<b>Implementation activities</b>	<b>Percentage</b>
Preparing and running education of one form or another (workshops, academic detailing, on-the-job training).	12.9%
Development and dissemination of policies, protocols, procedures and educational materials.	8.8%
Working with facilities to identify priorities for implementing evidence based practice/quality improvement.	7.3%
Assessment of residents.	5.6%
Identifying, working with and supporting a facility based ‘champion’ who takes the lead in implementation within the facility.	5.4%
Assessment/audit of facility performance or adequacy.	5.3%
Feedback and discussion of results of assessments/audit with facilities. This includes assisting facilities to develop a response to the results of an assessment/audit.	4.2%
Other activities	1.4%
<b>Total</b>	<b>50.9%</b>

Despite the different approaches used by each project there was a strong concentration of effort on a small number of activities – organising and supporting education, undertaking assessments of one form or another, supporting facility-based champions and working with facility staff to understand audit results and identify priorities for action.

### **3.3.3 Local facilitators**

Facilitation is used frequently to implement evidence-based practice, often in the form of facilitation by individuals. Facilitation is the process of enabling (or making easier) the implementation of evidence into practice (Harvey, Loftus-Hills et al. 2002). Despite the large body of literature ‘there are few explicit descriptions or rigorous evaluations of the concept’ (Harvey, Loftus-Hills et al. 2002, p 585). Eleven projects used some form of local facilitator, variously described as a ‘champion’, ‘link’ or ‘resource’ person, in some cases backed up by an external facilitator such as a ‘best practice manager’ or ‘nutrition support’ person. In some projects specific training for the role was provided. In one of the behaviour management projects (Hammond Care) there was no internal facilitator but an external mentor instead. The local facilitators had quite different roles, ranging from relatively passive ‘contacts’ for the transmission of information between project staff and facility staff to more active change agents. In total, 177 facility-based champions were trained as part of the EBPRAC program.

The diverse range of roles amongst facilitators in the EBPRAC program is reflected in the literature where the concepts of opinion leaders, facilitators, champions, linking agents and change agents are not clearly defined and are used inconsistently, making it difficult to compare results across studies that have investigated these roles (Thompson, Estabrooks et al. 2006). There is little empirical evidence on how best to identify organisational champions and harness their enthusiasm (Greenhalgh, Robert et al. 2004).

The particular role adopted by facilitators will determine the personal attributes required to be effective in that role. Given the range of roles across such diverse projects it is not possible to be definitive about what makes a ‘good’ facilitator. Facilitators, irrespective of their name and role, cannot be considered in isolation from other factors such as the resources available to undertake their role (some projects paid for facilitators to be released from their normal duties), the support they receive from their managers and the support they receive externally. It has been argued that



‘no amount of empirical research will provide a simple recipe for how champions should behave that is independent of the nature of the innovation, the organizational setting, the socio-political context and so on’ (Greenhalgh, Robert et al. 2004, p 615).

However, based on the experience in the EBPRAC program, it is apparent that facilitators should be respected members of staff, who are enthusiastic about the role, have good knowledge of the staff and the facility they work in, and have good communication skills:

*In order for these sorts of projects to work well, we need to have the champions to be passionate people. There’s no point putting someone into a champion role who is a bit lukewarm. You need to have someone who’s excited, keen to be driving the project. You need to have someone who’s got some intelligence. You need to have someone who’s got some good facility knowledge and knows the staff they’re working with and knows the things that will work and the things that won’t. They need to be someone who’s accountable to deadlines and timeframes. (F)*

*Where they’ve made a good choice and they’ve empowered them, its’ worked really well ... I think the bottom line is it needs to be somebody who is respected in the organisation ... who their peers will listen to and who has a good communication skill so they can talk to management about what they require and be an advocate for what’s going on, but also not be afraid of taking on staff in the sense of the way in which they can alter the way they provide support to different people. (P)*

*This person was highly motivated, highly engaging, well liked, respected ... she spent a lot of time helping out other staff do other things, which really helped build a collegial relationship which meant that people would try to travel further for her, in whatever she was asking to do. (P)*

It is important that facilitators are not working without support. As indicated in Section 3.5.1 they should be supported by their managers. Support can also come from elsewhere:

*A lone champion is not an effective way to facilitate change in practice. It is essential that there is a team approach either with a champion supporting other staff structures to facilitate change or a small group of key staff to drive change at different levels/points in the process. (T4).*

Facilitators in the EBPRAC program received considerable support from project teams, support that would not be available to them in day-to-day practice. There is a need to be cautious about drawing conclusions about the facilitator role based on experience in the EBPRAC program. Only two of the projects identified the champion role as an ‘essential ingredient for success’ (the wording used in one of the questions in the six-monthly project progress reports):

*The funded best practice champion position is essential not only in terms of their role within the organisation and the consortium activities, but also as a demonstration to the organisation that having such a role, even with a minimal .2 EFT can be effective in implementing change. (T2)*

*Having an enthusiastic and dedicated resource nurse appears to be critical. (T3)*

The lead organisations tended to identify (in project progress reports) the ‘essential ingredients for success’ in broader terms than just the local facilitator role, referring to:

*engagement of interested people*

*trust and good communication between the key staff*

*a committed and enthusiastic senior member of the aged care staff to facilitate uptake of the learning initiatives amongst all staff*

*recruit a supportive team with leadership and change management skills*

*the project must be supported by credible, known local leaders*

It may be that the more useful way of considering this issue is that when there is a need for change to be 'facilitated' that this work can come from a formally appointed 'champion' but it can also come from other people in leadership positions e.g. people in management positions, clinical leaders (typically registered nurses) or informal leaders.

In summary, a large number of local facilitators were trained by the projects but there was no consistent evidence about the effectiveness of the role. In part, this may be due to the differing roles and responsibilities of the facilitators.

It is apparent that the concept of 'champions' is well established across the sector and given the resources devoted to the role it would be useful to know more about whether it is effective. Consideration should be given to undertaking further research to identify how best to select champions, how best to train champions, how best to support champions or even whether the champion model is effective at all.

### **3.4 The nature of the changes in practice**

At the beginning of the evidence-based practice movement 'evidence' was largely conceptualised as the findings from randomised controlled trials. In general, a much broader definition is now used, encompassing 'evidence' from research, clinical experience, patient/resident preferences and the local context, including what might be considered as local evidence derived from quality improvement activities (Kitson, Harvey et al. 1998; Pearson, Wiechula et al. 2007). Good examples of the use of local evidence can be found in the EBPRAC program with audits, the results of which were then fed back to facilities to guide future actions, and Plan-Do-Study-Act cycles which relied on collection of monthly data to evaluate past actions and guide future actions. 'Evidence' is not something that is fixed but rather is constantly evolving and subject to new interpretations (Walter, Nutley et al. 2003; Greenhalgh, Robert et al. 2004)

In an important study in the UK two teams of researchers reflected on their research across seven studies using similar case-study-based methods (consisting of 49 individual case studies) and considered how innovations are diffused and adopted in clinical practice including the issues of what makes information credible (and hence used) and why people decide to use new knowledge. They identified some common themes: having robust evidence is not sufficient for getting the evidence adopted; the interpretation of evidence is socially constructed; evidence is differentially available for different professions; there are different views on what constitutes credible evidence and professional networks shape behaviour with reliance on trusted colleagues for advice (Dopson, FitzGerald et al. 2002).

The consequence of taking the broader approach to conceptualising 'evidence' referred to above is that clinicians require answers to four questions to aid their decision-making:

- Is the evidence-based intervention feasible in the local context?
- Is the intervention appropriate (i.e. will it 'fit' the context of care delivery)?
- Is the intervention meaningful (the extent to which the intervention is experienced positively by the patient)?
- Is the intervention effective? (Pearson, Wiechula et al. 2007).



Based on the interviews conducted with facility staff and members of project consortia the strength of evidence, or even the presence of ‘evidence’, does not appear to have been a major factor influencing staff to change their practices, particularly for those providing the bulk of ‘hands on’ care. Rather, what has been influential are the answers to two very pragmatic questions, which are effectively a condensed version of the four questions referred to above:

- Does it (the proposed change) make sense?
- Will it work?

‘Will it work’ is framed in terms of potential benefits for staff or potential benefits for residents. Evidence has a role to play in answering both questions but in itself is not sufficient. This finding is best summarised in the following comments in response to a question about the importance of evidence:

*(For) the really critical thinking registered nurses and the care managers, I think it’s important for them. For the enrolled nurses and the personal carers, I don’t think they probably connect it. I think what makes a difference for them about what it is they’re going to do in their clinical practice is if it makes sense and if it works and it doesn’t matter what the evidence says. (P)*

*I don’t think in every day work routine in aged care, evidence really means much of anything to those who are actually doing the hands on stuff. (P)*

*You have to know what the reasoning is behind the change and if that matches what you think makes sense to good care and help, that will make a difference. (F)*

*All they can see is how it’s going to work for them in a practical sense, not the philosophical stuff. (F)*

*Why the change? What’s the purpose of it, where is it heading? How does it impact on me? And that’s what people want to know. (P)*

This suggests a need for caution in using the concept of evidence-based practice to change practices:

*I think it’s about demystifying evidence based practice, it’s about relating it to what they do know in their settings. I think that’s probably been one of the biggest lessons learnt and I think if you disseminate this project to others focusing on evidence based practice and transference of that into every day clinical practice is probably not the best way to go about it. I think it’s about we want to improve care for residents and even then that makes them sound as if they’re not doing it the right way now, improve is not even the right word - it’s how can we help residents better. (P)*

The ‘evidence’ used in the EBPRAC program included the full spectrum of what might be considered evidence i.e. more than just the evidence from research. Some of the EBPRAC projects effectively created their own evidence either by taking several different sources of evidence and creating something new or generating new evidence as part of their project. In addition, local knowledge was created, all of which is consistent with the dynamic nature of evidence as reflected in the literature.

Many projects had a strong focus on what are described in Section 2.1 as the ‘key processes’ in caring for residents, primarily assessing residents and care planning. For the pain management project resident assessment was critical – pain is ‘hidden’ and can’t be managed effectively unless it is assessed. The rationale for the oral health project was based on the idea that general

practitioners and registered nurses can competently undertake oral health assessments, something that has not traditionally been part of their role. Improving nutrition requires a mechanism to screen and assess the need for improved nutrition; reducing falls requires a means of assessing the risk of falls; managing wounds requires a mechanism for assessing the type and severity of wounds. In some cases this meant adjustment of assessment tools already in place, in others the introduction of new assessment tools.

The process of assessment is closely linked to the issue of how the care of residents is planned. Care planning, particularly the use of end-of-life care pathways, was a key component of the three palliative care projects and featured in other projects as well. The changes to assessment and care planning as part of the EBPRAC projects took place within the context of the existing systems of resident assessment and care planning within facilities. The focus of the evaluation has not been on these existing systems but it appears that the act of assessment can be seen as more of a task than an opportunity to reflect on what the resident needs and that care planning can be highly structured, rather than continually responsive to the changing needs of residents:

*The trouble is that care planning has become a tool to gain funding and demonstrate quality for accreditation and it doesn't reflect the real world of the workers anymore ... The trouble is we do a lot of assessments, we collect a lot of data but nobody actually analyses that data and draws a conclusion from it. (P)*

*As we continue to specialise and focus on all the different aspects of care, it becomes just a bigger and bigger Ben Hur, than the care plan which shouldn't be a library book [but] is, because everything has its full and broad assessment and goals and interventions. (F)*

*Care plans are not a 'living document', they reside in filing cabinets, are seen only by staff completing the ACFI and do not reflect the type of changes attempted in this project. (T4)*

One of the key issues is the process of making the connection between resident assessment and care planning, which some of the EBPRAC projects did in various ways, by formal case conferencing, by more informal review meetings, through the use of mentoring and by establishing local teams e.g. wound care networks, pain management teams. The ability to make these connections is linked to staffing, particular existing roles and responsibilities:

*Part of the problem is, you know, the staffing. RNs are the ones that are trained to make those connections and you can have one RN for 50 residents and how the hell would they ever have time to do that. So then you are reliant on the personal carers and the enrolled nurses to actually report those things. Personal carers can't make those connections and so it's a system failure and they do absolutely, they spend a lot of time writing care plans and a lot of time assessing, but less time actually linking what they're assessing to the management strategies. (P)*

Given the ubiquitous nature of documentation in residential aged care it is surprising that there is little evidence to guide how best to structure such documentation. Care plans are seen not just as a means of planning resident care but also as a form of contract with residents' families setting out what care will be delivered and as necessary for funding and accreditation purposes. It is worth noting the results of a recent systematic review which identified that 'if documentation is designed to serve purposes other than the planning, delivery and evaluation of care, the quality of care will be compromised' (Pearson and Peels 2009, p 120). The results from the evaluations of the EBPRAC projects include a variety of recommendations about documentation, including use of particular assessment and care planning tools. There may be some merit in undertaking some more

broad-ranging work to review the whole question of documentation in residential aged care and how best this might be structured, including what evidence-based tools should be used.

End-of-life care pathways implemented by the palliative care projects were generally well-received. The pathways did what care plans (however named) are meant to do – provide clear direction and ensure all those providing care are ‘on the same page’:

*Most of the feedback has been that it's a really good prompt to do things ... they're all on the same page and they're all doing the same thing. (P)*

*I think the pathway was a much better way of doing it, because by the end when someone is close to death, and everyone is on the same page, it makes it so much easier to get the GPs on board. (F)*

*For the RNs it gives them confidence, they say that when they're not around, which is a lot of the time, that the personal carers have a very clear checklist of things that they should look for, for somebody that's dying, particularly the physical checklist. People have to sign or tick that they've actually gone to the resident and actually looked at those things. They like the fact that it signals to the family member that things are at the terminal stage, so this person is dying and so it gives them an entree to have that conversation. (P)*

When it came to making changes in the care received by residents the picture across all the projects was one of lots of small changes, rather than major changes. In many cases the changes were refinements to existing practices or reinforcement of what is ‘best practice’, rather than the introduction of something completely new. Examples of such changes are included in the summaries of each project (Appendices 1-13). These changes are best described as ‘incremental’, as referred to elsewhere in this report (Section 3.5.3).

This is not to say that small changes can't make a difference, well-captured in this comment in one of the project final reports:

*Hanging a picture can make a difference. Moving a chair can make a difference. Opening or closing a curtain can make a difference. Doing something is important. Even if something can only be started, it is worth painting that one wall in the lounge. (HC behav final report, p 21)*

Or this comment from a facility manager:

*A drink of water stops lots of things. It stops urinary tract infections, skin tears, constipation and falls and things, low blood pressure has stopped - it is such an important thing to do, and that has just allowed our carers to have that much more sense of value about their positions.*

Many of the changes require uptake by all staff, which is quite a different situation to healthcare more generally where implementation of evidence-based practice can be reliant on a small number of clinicians e.g. a surgeon using a new surgical technique. Whether it is a range of strategies to improve nutrition and hydration, use of an end-of-life care pathway or use of particular techniques to manage difficult behaviour, to give three examples, implementation is reliant on involvement across all staff and all shifts.

### 3.5 Context for change

The definition of a receptive context for change used for the evaluation includes factors such as leadership (including informal leaders), the existing relationships between staff, a climate that is

conducive to new ideas and the presence of a recognised need for change. Reference to the influence of ‘context’ occurs repeatedly in the literature, including the idea that what works in one context may not work in another (Kitson, Harvey et al. 1998; Dopson, FitzGerald et al. 2002); that implementation may be more context-dependent for some interventions than for others (Øvretveit 2004); or that some contexts may be more receptive to change than others (Pettigrew, Ferlie et al. 1992; Greenhalgh, Robert et al. 2004).

Dopson et al (2002) identified a set of factors for a receptive context, including appropriate infrastructure and resources, pressure for change, a supportive culture, sharing information and clear goals for change. Gustafson et al (2003) refer to a ‘tension for change’ and the need to adapt changes to fit existing culture and practices. Implicit in the literature is that context is not some inert background to what people do but interacts with staff and the systems within which they work in many different ways (Fitzgerald, Ferlie et al. 2007).

This section explores some of the components of the context for change, as it applies to the EBPRAC program.

### 3.5.1 Leadership and management support

The literature indicates that leadership in the management of change is of crucial importance (Gustafson, Sainfort et al. 2003; Walter, Nutley et al. 2003). It is worth noting Shanley’s research into the management of change by facility managers which found that most managers in residential aged care learn to manage change ‘through on-the-job experience, which has considerable limitations as a form of learning’ and that ‘many managers in the sector do not get appropriate training and support in the management of change’ (Shanley 2007, p 997).

All projects identified the importance of either leadership from senior managers or management support, with the presence of either of those two factors helping implementation and the absence of leadership or management support hindering implementation. Management support did not necessarily entail a lot of active involvement but did include things like sanctioning the attendance of staff at education programs, being seen to support local facilitators, ‘fixing’ problems that couldn’t be solved by staff or the project team and generally letting their own motivation inspire others:

*Whoever is your champion ... is very crucial to the success of it but it’s obviously really important to have that organisational support as well. (P)*

*If they don’t have supportive management at any level, it’s a dead duck in the water, because it just meets brick walls all the time. (P)*

Whether it is framed as ‘leadership’ or ‘management support’ a critical element in supporting implementation has been that there is more than one person involved. Leadership can come from one source but is fragile if it does e.g. the leader leaves, takes on a new role or has insufficient time to provide the leadership required. Most facilities only have a small number of leadership positions but the various positions nominated as being sources of leadership (facility managers, staff appointed to formal facilitator positions, informal leaders, quality managers) indicates the importance of having a system of leadership and support:

*There have been differences in progress across facilities. This appears to reflect the level of motivation of the (resource nurse) in combination with the level of support from the facility’s management. If both of these occur there seems to be great progress in project activities. If only one of these factors is present then the project will progress but perhaps not as quickly, and possibly with additional support required from the project’s management, such as meeting with facility managers. In facilities where*

*neither factors are present, there are major barriers to progressing project activities. (T3)*

*Significant involvement from the Director of Nursing in spearheading involvement in face to face training and completion of e-learning led to significant staff participation. The champion was supported by the quality manager, who has taken responsibility for the sustainability of the program and practices implemented. (T4)*

*Two out of three of the facilities are very, very supportive and the third one, their care person was actually a part time worker so sometimes it was difficult as they juggle things ... But in that particular facility their director of HR and then from the other registered nurses actually came on board ... rather than it just depending on one person they had then three people that could be involved in it, kept and maintained. (P)*

There are many different types of leadership, and a vast literature on the subject. What came through from the interviews with those involved in the projects was the importance of having leaders with a wide range of skills, including excellent interpersonal skills. This is summed up in the following interview with two people (A1 and A2) who identified two of the facility managers in their project as ‘outstanding’ and when asked ‘what made them outstanding’ responded as follows:

*(A2) They were interested and committed.*

*(A1) Yes they both run facilities where you think, “Well if I had to go to an aged care facility I would want someone like that running it.” They’re compassionate but they’re also fairly tough, like the way that they manage staff and so that they’re fair people, very compassionate and...*

*(A2) Willing to try something new.*

*(A1) Yes, and always friendly, cooperative, yeah just good people really to work for, good to work for...*

*(A2) But would still have the dialogue if they didn’t agree with something or...*

*(A1) That’s right.*

*(A2) As a collegial approach.*

*(A1) And both obviously with a lot of nursing experience and a lot of managerial experience as well ... people that we got to know on a personal level just through our interaction with them. (P)*

Resistance or overt lack of support from facility managers was uncommon. More typically, lack of support was due to competing priorities. Turnover of facility managers was reported as having an adverse impact on implementation by eight projects, primarily the lack of continuity resulting from the change of manager and the need to orientate the new manager to what the project was about:

*In each facility major managerial changes occurred over the 14 months of mentoring, and each case left the staff and facility with a period of uncertainty, followed by some months of adjusting to new leadership styles. (T4)*

For two projects the turnover of facility managers was considerable, in one case affecting 9 out of the 10 facilities in the project. One facility in another project had four different directors of nursing over the course of their project.

There is considerable debate in the literature about what is meant by the terms ‘leadership’ and ‘management’ but both are important for the implementation of change. Table 9 includes a useful



summary of the distinction between the two, based on a review of the literature specific to residential aged care (Jeon, Glasgow et al. 2010).

**Table 9 Elements of leadership and management**

Elements of leadership	Overlapping elements of leadership and management	Elements of management
inspiration, transformation, direction, trust, empowerment, creativity, innovation and motivation	communication, decision-making, integrity, role model, negotiation, professional competence and setting standards	delegation, performance, planning, accountability, finance, teamwork and team building, monitoring and evaluating, formal supervision and control

Note: This table is taken from the paper by Jeon et al (2010) entitled *Policy options to improve leadership of middle managers in the Australian residential aged care setting: a narrative synthesis*.

The role of senior management and how this links with organisational culture is well-illustrated by this comment from one of the project final reports:

*Two facilities have been highly successful in maximising participation in the consortium to build capacity in their staff and move towards more dementia friendly physical and social environments in a sustainable way. In these organisations the existing culture was compatible with the person-centred philosophy of care underpinning the development of dementia friendly environments. Person-centre care is core to their mission and their approach to participation was one of a vision of long term sustainable change, not just a project. Senior management was open to doing things differently and utilised the resources provided to support staff participation. (MU behav final report, p 48)*

The same project concluded that successful implementation was found in those facilities where ‘flexible responsibility was the dominant component in management’, characterised as:

*senior management delegated widely and supported those delegated in their responsibilities to effect change. This facilitated team work and under this management, significant numbers of staff were involved in the change process. (MU behav final report, p 50)*

The term ‘clinical leadership’ is frequently used in health care to identify the need for leadership from clinicians. The complex clinical needs of many residents mean that the term is also applicable to residential aged care. However, the term ‘clinical’ can have very unclear boundaries. Providing adequate nutrition, for example, can be driven by some very clinical reasons but is also simply part of providing a good service. Pain management requires clinical leadership but for something like the implementation of person-centred care the word ‘clinical’ seems inappropriate. The application of moisturiser after showering residents, a key change in the wound management project, is usually not thought of as ‘clinical’. One of the issues in residential aged care is that clinicians with the most knowledge and expertise (registered nurses and general practitioners) have the least involvement in the day-to-day care of residents.

It is useful to think in more general terms about the need for leadership, of which clinical leadership is an important part, with the source and type of leadership varying with the context and the content of change. That leadership might come from a manager, a registered nurse, an enrolled nurse, a personal carer or other category of staff (e.g. allied health). It is the qualities that count, not the position a person holds, as these examples from eight different projects illustrate:

*(Names of two personal carers) are really leaders in their areas, and people listened to them, and it was a way to get information across without being bossy or stand overy or anything like that. It was hey, you know this? (F)*

*Generally they had one (champion) who was a registered nurse so if that registered nurse advocated it then that was generally well taken up and it was usually driven by a (champion) or someone who was interested in the whole idea and wanted to push it forward. (P)*

*You've got to have that one key person I think who's really good, who's really clinically switched on too ... you've got to have a good driver at the top. (P)*

*You need good leadership, people who can turn that negative stuff around and give good argument for why change is really necessary, it's not really a choice. It's the way they communicate. (F)*

*We found that we had two Division 2 nurses who have great leadership and respect amongst the staff and are able to bring about change in a non-confrontational way. (F)*

*My resource nurse was an absolute star. There's not a question about it. (Name of resource nurse)'s leadership and enthusiasm for the project was infectious to begin with. (F)*

*Somebody has to keep driving it or co-ordinating it and doing the hard work. (F)*

*The leaders are the ones who can push the staff, who aren't frightened to up them, to reprimand and drive, challenge them, reprimand them really. If you don't do this well whatever, whatever. Because if they don't do that then the whole team doesn't get driven, we don't have the time. (F)*

Leadership was a recurring theme, not only amongst those involved in the projects, but also amongst the 'high level' stakeholders interviewed for the evaluation (see Section 11.5). The importance of leadership was illustrated at one of the EBPRAC national workshops when participants from 60 residential aged care facilities ranked leadership as the second most important factor (after adequate resources) influencing the implementation of evidence-based practice (see Appendix 15).

### **3.5.2 Need for change**

One component of a receptive context for change is the need for change. In general, projects did not frame the 'need for change' in their funding submissions in terms of the situation in participating facilities. Rather, 'need' was identified with reference to the literature which talks in terms of general needs in residential aged care. Some participating facilities included details about need in their letters of support to be involved and for one project the topic was chosen by one of the participating providers in recognition of the fact that the area of practice needed some development.

In general, lead organisations chose to work with particular facilities for various reasons: facilities they thought would be receptive to the program; facilities they had worked with previously; facilities where implementation was likely to be more challenging; facilities suggested as a result of personal networks. The facilities participating in the 13 EBPRAC projects may have had less 'need to change' than some others that did not participate.

The general picture, from both the perceptions of those working on projects and the results from baseline audits conducted by some projects, was one of building on what had gone before rather than needing to make dramatic changes:

*Our model of care came first and the EBPRAC project I saw as building on and giving more in depth knowledge and support to the staff on top of that. (F)*

*We already had ideas about we knew we had to improve things. So we knew we had to target specific people and really look at their patterns. We'd already started that prior to the project. (F)*

*I think the beauty of this one is that it coordinated everything together, and probably updated a lot of the paperwork that we were using in the past, and just making it a bit better in that way. I think prior to coming palliative care was done pretty well, it's just documentation probably needed to be updated, and the system of how it was delivered. (F)*

*In terms of environment and care quality, there was little room for improvement in each of the seven participating care units ... because many of the domains were close to the ceiling at pre-evaluation. (T4)*

This is consistent with what is reported elsewhere in this report about the changes implemented as part of EBPRAC being incremental in nature (Section 3.5.3). The changes were relatively small in scope, suggesting that the 'need for change' was not a particularly strong driver of change. However, an interesting aspect of these incremental changes is that although many seem to be quite minor there has to be recognition in the first place that something needs to be done, or that something can be done, to bring about an improvement. The projects played an important role in bringing about that recognition:

*They weren't aware that wounds were such a big problem. (P)*

*We thought we were giving good oral care and it was obvious we weren't. (F)*

One area where this was particularly important was in promoting a physical environment to support behaviour management. In one behaviour management project the need for change was described as a 'key factor' in bringing about modifications to the physical environmental. Another of the behaviour management projects noted that physical environments ranged from those that were very poor to new purpose built facilities.

### **3.5.3 Capacity for change**

An important dimension of context is the nature of daily work. Residential aged care facilities are busy places, with a tendency to revert to 'routine' to cope with that workload and little capacity to introduce anything that is seen to be additional. Much of the work 'has' to be done:

*I think they're very adaptable to change however they are also very task driven in regard to the fact that that's how they cope with their stress, they have high workloads ... their method of dealing with that work stress is routine. (F)*

*The reality of say an afternoon shift is, there's 20 residents this end and 20 residents that end that need to be – we need to make sure they're fed, we need to make sure they've been toileted, that they've had a bit of a wash, they've got their nightgowns on, they're comfortable. You still have to actually do that work. It still has to be done. (F)*

*They're so used to just being so task focused and going back to what their routine is and they have such a routine. (F)*

*This is what we're talking about, this embedding this kind of idea, busy or not, they have to take five minutes out to pull up a chair, sit down, engage that individual in conversation while they're providing some nutrition; it's about an eating experience, it's not about shovelling nutritional intake into them. (P)*



When everything is going ‘right’ things are fine but it doesn’t take much to upset the equilibrium of a ‘good day’:

*When things start going wrong, there doesn’t seem to be enough staff. (F)*

*On a great day when your team’s great, residents are quite settled today, it’s sunny, there’s no noise, it’s quiet, you know, everyone ate – everyone went to the toilet when they took them – all those sorts of things. They have a great day, they love it, when it’s been a really good day they can spend one to one time. On a day like when you get a new resident who might be more aggressive or someone stripping or things start to unravel for them and they start to feel they’ve lost a bit of control, that’s when they seem to slip out of person-centred focus, get them up, they’ve got all of them, do this, do that, get them out – you can just hear them talking, you can see them rushing and I think that’s where it falls apart. (F)*

The experience of those involved in the EBPRAC program was that the capacity for change was not large, requiring careful consideration to be given to what changes were introduced and how those changes were introduced. Interviewees described the process of change in different ways but typically characterised it as incremental in nature, with a need for ‘small changes over a period of time’, making changes ‘in step-wise progression’, breaking changes down into ‘bite-size chunks’, bringing about change ‘in stages’, with a need to ‘chip, chip, away slowly’. This is not to say that small changes can’t accumulate over time into something more significant:

*Sometimes they didn’t really realise how much they had done, because it had happened over the span of a year, it was somewhat subtle. (P)*

This way of describing change presents a basic paradox – on the one hand change is incremental but residential aged care as a sector is one that appears to be in a constant state of change.

Based on what was said in interviews and reported in progress reports change in residential aged care can be conceptualised as having four levels, summarised in Table 10.

**Table 10 Levels of change in residential aged care**

Level of change	Scale of change	Source of change	Planned or unplanned	Frequency of change	Examples of changes
Level 1	Large-scale	Primarily external	Typically planned	Infrequent	Changes to funding system, change of facility ownership
Level 2	Medium-scale	Primarily internal	Combination of planned and unplanned	Relatively frequent	Change in key staff member, implementation of a new record system, planned move to a new model of care
Level 3	Medium to small-scale	Internal	Usually some degree of planning but can also be quite spontaneous	Relatively frequent	The level at which most quality improvement takes place The level at which implementation of evidence takes place
Level 4	Small-scale	Internal	Unplanned	Frequent	A new resident, a new member of staff, ‘one off’ incidents on a particular day, small changes to daily routines

Not everything will fit neatly into the levels described in Table 10 but it is a useful way of thinking about what occurred. The EBPRAC projects were generally trying to implement changes at Level 3 but had no control over the changes that were happening at levels 1, 2 and 4. Changes at these other three levels, particularly levels 2 and 4, had a major impact on what the projects were trying to achieve, with the most commonly reported changes being turnover of facility managers (Level 2) and turnover of facility staff (Level 4). Further details of the impact due to turnover of managers are included in Section 3.5.1.

The following examples from five different projects illustrate the point about change at one level influencing what goes on at the ‘project level’ of implementing evidence-based practice:

*One facility has had a change in resource nurse as well as the facility manager and this has disrupted progress substantially. (T3)*

*A continual high rate of aged care staff turnover has disrupted continuity of the project and requires continuous re-education and re-engagement with the project. (T3)*

*Implementation period extended due to multiple unpredictable events, including sickness absence of Care Service Manager, accreditor visits and a period of ‘lock-down’ of the facility due to infectious disease. (T3)*

*Change comes from two sources. One is the residents themselves because every time a new resident comes in the routine has to be changed ... there’s also the changes brought by new members into the work team so there’s that group dynamics, the testing of the group that’s going on out there until that member’s accepted so those changes are out there for them all the time. Then there’s the changes enforced on us from above. (F)*

*There’s always small change, like change in staff, change in leadership – we’re having a major change at the moment, we’re going through a restructure. So our management has changed and that’s really had an affect on staff ... I think there’s always changes, our residents change. (F)*

This conceptualisation of change not only has implications for understanding what helped and what hindered the projects in implementing evidence-based practice but also indicates the challenges faced by facilities undertaking day-to-day practice improvement.

#### **3.5.4 Characteristics of individuals**

Many different ways were used to describe people with positive attitudes towards the changes implemented in EBPRAC e.g. motivated, committed, enthusiastic. The importance of having enthusiastic facilitators has been referred to elsewhere in this report (see Section 3.3.3) but enthusiasm/motivation played a critical role more broadly:

*The only reasons things are successful is that I have some staff that go way over and beyond. (F)*

*The key to any project is finding those people who are enthusiastic and very often change does come down to someone who is motivated to take on a role. (P)*

*Directors varied in their level of commitment to the project ... the ones who are more heavily committed to the project and took more of interest were probably our better performing facilities and certainly that was easier for us to interact with them there. (P)*

*That other facility that improved the most. Their director of nursing was probably the most enthusiastic about it all as well. (P)*

*The staff were enthusiastic so we were all onside and ready to go and it’s been a most beneficial project for us. (F)*

*The best way to get people on board is to be enthusiastic about it and I have to say I really was because it was my passion. I was very keen to be involved in this project. (F)*

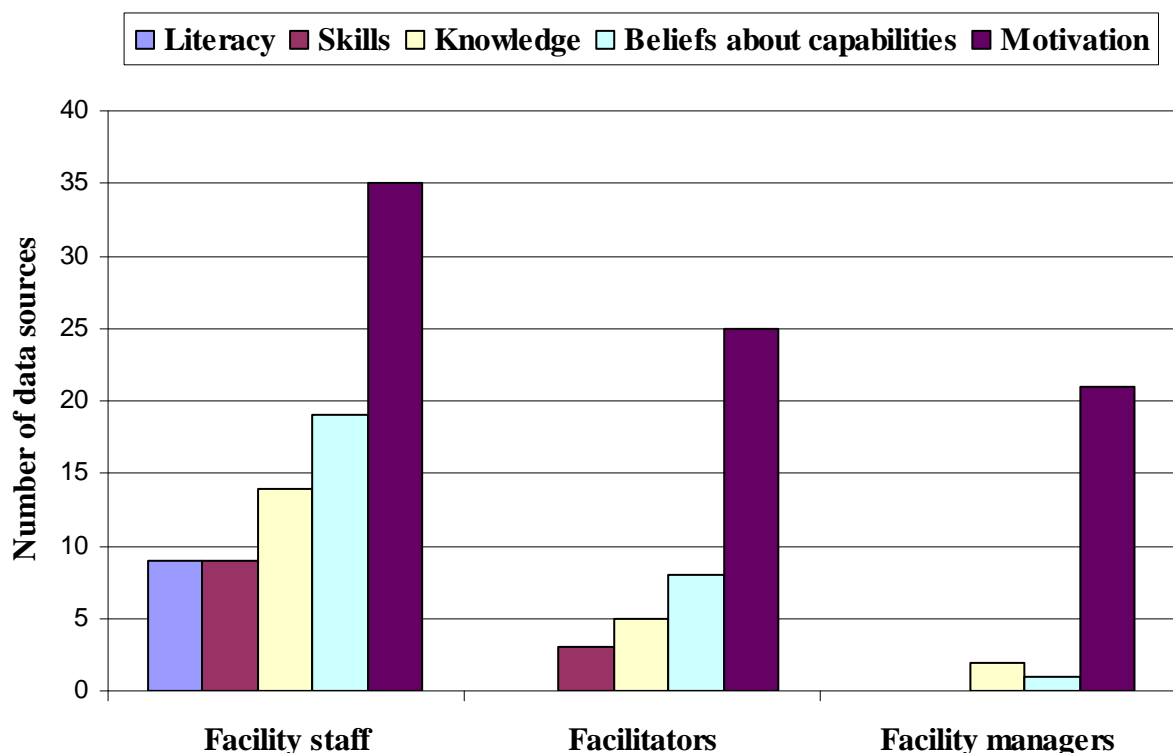
*It seems that those who are making most progress appear to be highly dedicated and motivated staff, who report that they undertake some of the project work in their own time. ( T3)*

*You can do anything if you've got the right attitude (F)*

Motivation is but one part of a broader set of individual characteristics that were 'key' factors influencing implementation during the EBPRAC program, including the beliefs held by individuals about their own capabilities, as well as levels of knowledge, skills and literacy.

Figure 1 gives an indication of the importance of these characteristics amongst the three main groups of staff – managers, facilitators and the remainder of the facility staff. There is a need for caution in interpreting the figure as it simply gives a count of the number of data sources (an interview or a project progress report) where motivation or any of the other characteristics are mentioned. However, the figure is consistent, in general terms, with more in-depth analysis. Motivation is the most important of the characteristics for all three groups; knowledge, skills and beliefs about their own capabilities are important characteristics for facilitators and facility staff (people won't do something if they are not confident they can do it), and literacy is an issue confined to facility staff.

**Figure 1** *Characteristics of individuals*



The role played by these characteristics was not one of the 'key success factors' identified in the initial literature review although individuals are an important part of some of those factors, particularly a receptive context for change and stakeholder engagement, participation and commitment. This finding about the influence of individuals is consistent with an important review of the theoretical literature, published since the evaluation began, which developed a 'meta-theory' consisting of five domains, of which one is 'characteristics of individuals' (Damschroder, Aron et al. 2009).

As with much of what took place in the EBPRAC projects there were close links between being motivated and enthusiastic and factors such as stakeholder engagement (Section 3.9) and demonstrable benefits (Section 3.6). Some staff were motivated from project commencement, some staff became ‘engaged’ (and motivated) later on as a result of receiving some education, others ‘saw’ the benefits of the changes taking place and then became enthusiastic about what was going on.

### 3.6 Demonstrable benefits

There is some evidence that if the benefits of a new practice are ‘visible’ then that practice will be adopted more easily (Greenhalgh, Robert et al. 2004) and there were many examples in the EBPRAC projects of demonstrable benefits providing positive reinforcement for changes that were being made. The type of benefits that are ‘visible’ manifested in various ways, including improved outcomes for residents:

*These people had been completely reluctant up to that point in time about the whole benefit of the project. They saw this one wound heal and it was like the light went on and they went ‘oh I get it’. (P)*

*It’s a much more calmer environment. The staff are now really embracing, engaging with the residents and their families. There’s been improved family involvement. (F)*

*I can see the residents are much happier. (F)*

improved systems of working (in examples from two of the palliative care projects):

*I think the pathway was a much better way of doing it. (F)*

*Everything’s heaps more structured. It’s got a beginning and an end. (F)*

benefits for staff:

*They can see the benefits ... they find that because they’re using these interventions, and they’re using them every day, they have got more time. (F)*

or a more general sense that something positive has taken place:

*I think the key thing was they started seeing results. They started seeing changes. (F)*

*Staff report that the relationships that they have with the family after a palliative care case conference are far better and things are far easier and there’s less complaints. (P)*

Instances of ‘seeing’ the benefits can serve to reinforce that ‘what we were doing was right’ and prompt the introduction of further changes. Underpinning these different forms of benefits is the idea that something is ‘working’, even if it is unclear what it is that is working. This is well captured by the following comment in response to a question about the importance of being able to see that something ‘works’:

*I think that’s extremely important to them, and that’s the clincher. They’re more willing to try it and try even in a different way – like they’ll try new things if they know that that thing worked. I think that’s really, really, important. (P)*

The importance of this factor was illustrated at one of the EBPRAC national workshops when participants from 60 residential aged care facilities ranked ‘demonstrable benefits’ as the third most important factor influencing the implementation of evidence-based practice (see Appendix 15).

### 3.7 Adequate resources

The availability of adequate resources has been identified in the literature as an important factor in achieving successful change (NHS Centre for Reviews and Dissemination 1999; Gustafson, Sainfort et al. 2003; Walter, Nutley et al. 2003; Greenhalgh, Robert et al. 2004; Meijers, Janssen et al. 2006), and lack of resources has been identified as a potential barrier to the use of evidence in residential aged care (Black and Haralambous 2005; McConigley, Toye et al. 2008).

The issue of resource availability arose in all projects in one way or another, generally framed as not enough resources hindering implementation and sufficient resources helping implementation. Resources can be considered in terms of time, money or staffing, or a combination of all three. Staffing involves not only numbers of staff but also factors such as staff mix and rostering of staff.

Instances where lack of money was a hindrance were quite specific e.g. the money required for environmental modifications, the money to purchase particular supplies (e.g. wound care products, oral health care products). The general tone of comments made in interviews or project progress reports was that residential aged care is not well-resourced, but there were exceptions:

*We never have to beg for anything and we never want for anything. (F)*

*When we look at (name of facility), they are extremely well resourced, and I think if they want to do something they do it and they know that they will be funded. (P)*

During two of the national EBPRAC workshops, one for Round 1 and one for Round 2, exercises conducted with groups of people working in facilities (95 people in total) identified the availability of adequate resources as either the highest or second highest ranked factor influencing the implementation of evidence-based practice (see Appendix 15).

Issues arose in several projects where the money was available to pay for staff to be released from their normal duties to attend education or work in the role of a facility ‘champion’ but staff could not be found to ‘backfill’ those staff. This is one of many examples where the availability of resources is perhaps better thought of as an issue of the capacity to change, within residential aged care. As can be seen from elsewhere in this report the scale of the changes made during the EBPRAC program and the fact that changes tend to be incremental are indicative of a relatively modest capacity to change. There does not usually appear to be much spare capacity (everyone is busy doing something) but unless some thought is given to how some capacity can be ‘released’ to make the change then change is less likely. People and services from ‘outside’ facilities can play an important role here by supporting what goes on ‘inside’ the facilities and bringing fresh insight into how change can be made. However, reliance on outside services raises the issue of whether such support is sustainable.

#### 3.7.1 Staffing

Staffing within participating facilities varied significantly, with some facilities staffed entirely by registered and enrolled nurses with others staffed by a high proportion of personal carers. This diversity not only affects the available level of knowledge and skills within facilities but also the roles and responsibilities of staff. This situation manifested itself in various ways:

- Registered nurses, the category of staff best qualified to provide leadership, being seen to be too busy to get involved as local facilitators –

*(Registered nurses) are just consumed by management issues. There’s no clinical leadership and there isn’t anybody qualified to give that clinical leadership. (P)*

- Some staff being appointed to the role of local facilitators (champions) but not having sufficient skills and/or confidence to perform the role e.g. provide education using a ‘train the trainer’ model –

*We chose champions who we saw identified with person-centred care ... But in hindsight they probably weren't necessarily leaders. It was looking at confidence levels and people who were willing to step up and lead their teams as well. (F)*

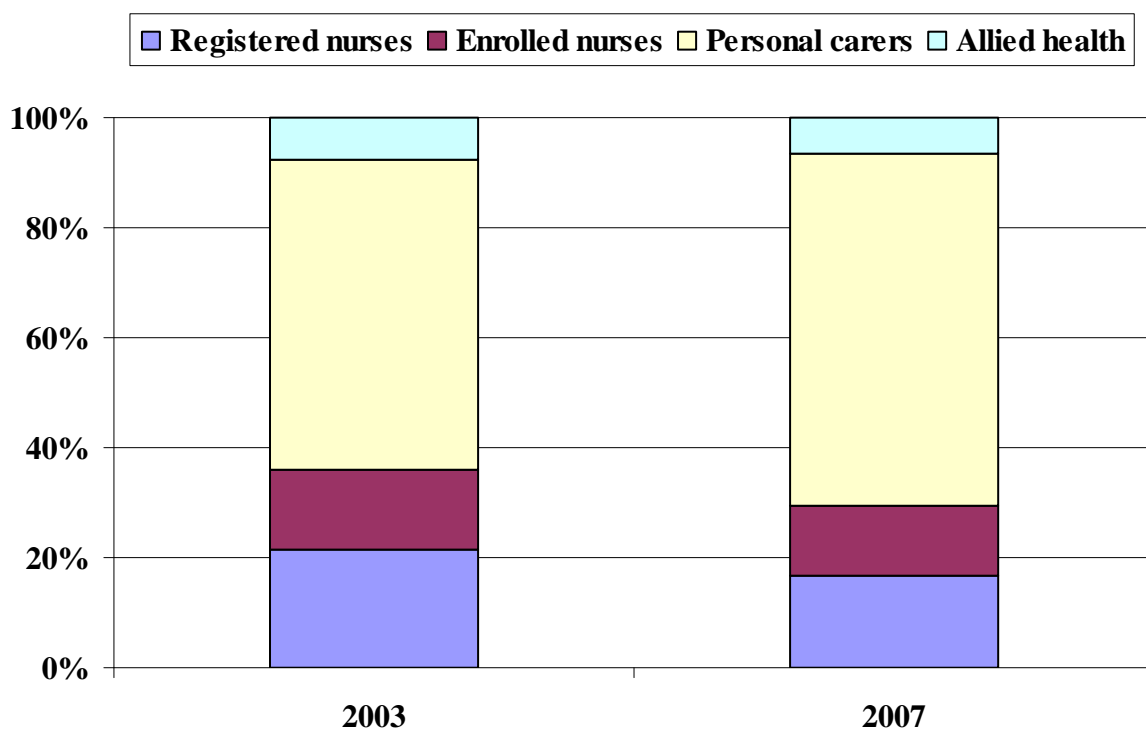
- Some personal carers being unsure whether what they were being asked to do as part of a project really was part of their role:

*There was a little bit of hesitancy because the staff were saying well ‘I’m only a PC’ and ‘why should I be expected to do this as part of my role and I don’t get paid any more for this’. (F)*

Although outside the scope of the evaluation these findings do raise two important issues with the potential to influence the ability of the sector to implement evidence-based practice.

The first relates to the role of registered nurses. As a percentage of total full-time equivalents working in residential aged care registered nurses decreased by 21.5% between 2003 and 2007 (Figure 2). The number of registered nurses in the sector decreased at the same time as the total workforce increased (Martin and King 2008). This has occurred at the same time as the dependency of residents has, for the most part, been increasing (Gargett 2010).

**Figure 2 Composition of residential aged care workforce, 2003 and 2007**



Data in the table from Martin B and King D (2008) *A picture of the residential and community based aged care workforce, 2007*. Published by National Institute of Labour Studies, Flinders University, Adelaide.



DoHA has argued in its recent submission to the Productivity Inquiry into aged care that the reduction in registered nurses (and enrolled nurses):

‘may in part represent efficiencies being made in the sector. Models of service which ensure the effective use of nursing expertise, and enable registered nurses to provide clinical leadership and overall care management for residents rather than a focus on tasks which can be undertaken by other staff with appropriate skills are essential for an efficient system. However the need for sufficient registered and enrolled nurses (and other allied health professionals) to ensure that aged care services can deliver the necessary level and quality of care into the future cannot be understated’ (Department of Health and Ageing 2010, p 59).

This tension between the need for efficiency and the need for quality care played out in the EBPRAC program in various ways – having sufficient registered nurses to provide clinical leadership (Section 3.5.1), engagement of staff (Section 3.9.1) and using facilitators to support and lead change (Section 3.3.3).

This suggests a need to re-think the role of registered nurses in residential aged care, which does not necessarily mean an increase in the numbers of registered nurses, as this comment indicates:

*Nurses do well when people are sick, and not all old people in their care need clinical care. They need a different kind of care, and I don't think nurses should be removed completely from aged care, but I think there's a role for them to play that's not within the way we staff places at the moment. We need people who are trained to provide older people with quality of life. (P)*

The second issue arises from the fact that 64% of the total workforce are personal carers (in 2007, the most recent year for which data is available), of whom about 65% have a Certificate III in Aged Care, generally accepted as the base qualification for the role (Martin and King 2008). The competencies for Certificate III include ‘performance of a defined range of skilled operations’ and ‘adapting and transferring skills and knowledge to new environments and providing technical advice and some leadership in resolution of specific problems’. Some distinguishing features of working at the level of a Certificate III (although such features are not meant to be used prescriptively) include application of ‘known solutions to a variety of predictable problems’ and performing ‘processes that require a range of well developed skills where some discretion and judgement is required (Australian Qualifications Framework Advisory Board 2007).

The increasing clinical care requirements for residents and the changes in practice required for evidence-based practice raise the question of the extent to which this places unreasonable demands on personal carers, as indicated by this comment from someone with considerable experience training staff in residential aged care:

*We're expecting our Cert III workers to work well beyond that. So they are not equipped and won't be equipped with the knowledge and skills to problem solve for example, it's not part of that Certificate III level course. They don't know enough about clinical issues to be able to problem solve when part of the problem is that. (P)*

Certificate III competencies may be about ‘known solutions to a variety of predictable problems’ which is fine for a lot of the time but behaviour management, for example, can be about working out as yet unknown solutions to unpredictable problems.

No situations have arisen in the EBPRAC program where these issues have given rise to any concerns about resident safety – the issues simply arise from a combination of thinking about the staffing structure within residential aged care and the context of what happened in the program.

### **3.8 Systems and use of data to support the use of evidence**

The use of audit and feedback was the commonest way in which systems and data supported the implementation of evidence. Audit and feedback is defined as ‘any summary of clinical performance of health care over a specified period of time ... the information may have been obtained from medical records, computerised databases, or observations’ (Cochrane Effective Practice and Organisation of Care Review Group (EPOC) 2007). The effects of audit and feedback are generally ‘small to moderate’ and are likely to be more effective when baseline performance compared to recommended practice is low (Jamtvedt, Young et al. 2006). Differences in the characteristics of feedback (e.g. timeliness, credibility of source, format and punitive/non-punitive nature) may influence its effectiveness (Hysong, Best et al. 2006). Audit and feedback has not been widely studied in nursing (Dulko 2007).

Four of the Round 1 projects and five of the Round 2 projects undertook various forms of auditing of clinical performance. The auditing was extensive with some very comprehensive reports produced. However, extensive auditing does not lend itself to being maintained in the absence of a project with dedicated resources and expertise for such work.

There appear to have been few attempts to link the work of the EBPRAC projects into existing systems of data collection and review within facilities. The main issue that arose in terms of incorporating what the projects did with existing systems was the difficulty of integrating a new tool (e.g. assessment tool, care planning tool) into medical record systems, particularly if the medical record system was computerised and/or part of a larger corporate system used by a chain of facilities, a situation that can create additional work:

*A number of the facilities that we worked in had a larger organisation with multiple facilities and it's a major thing for them to adopt a new tool, whatever it might be, because it's got to be rolled across every facility and they had no money to change all the tools at all the other facilities. To some extent that's an impediment, because it just means although the facility that was in the project were doing it, in some cases they were actually also doing the one that the organisation themselves had suggested. (P)*

As identified elsewhere in this report (Section 3.11) having systems in place to support the use of evidence was not a particularly important factor influencing implementation overall. It may be that such systems are more important for sustainability than implementation (see Section 7).

### **3.9 Stakeholder engagement, participation and commitment**

#### **3.9.1 Facility staff and other providers**

The importance of engaging the right stakeholders and achieving their commitment to change is referred to repeatedly in the literature (NHS Centre for Reviews and Dissemination 1999; Walter, Nutley et al. 2003). The template for the six-monthly project progress reports included two questions which asked projects to rate the degree of participation they expected from different categories of staff and the degree of participation they achieved from those categories of staff, based on their experience over the preceding six months. The questions asked for answers on a five-point scale: no participation, little participation, some participation, moderate participation, significant participation.



Across all projects in both rounds the degree of participation from the various stakeholder groups closely matched expectations (Table 11), except for one project where participation was slightly less than expected for most categories of staff.

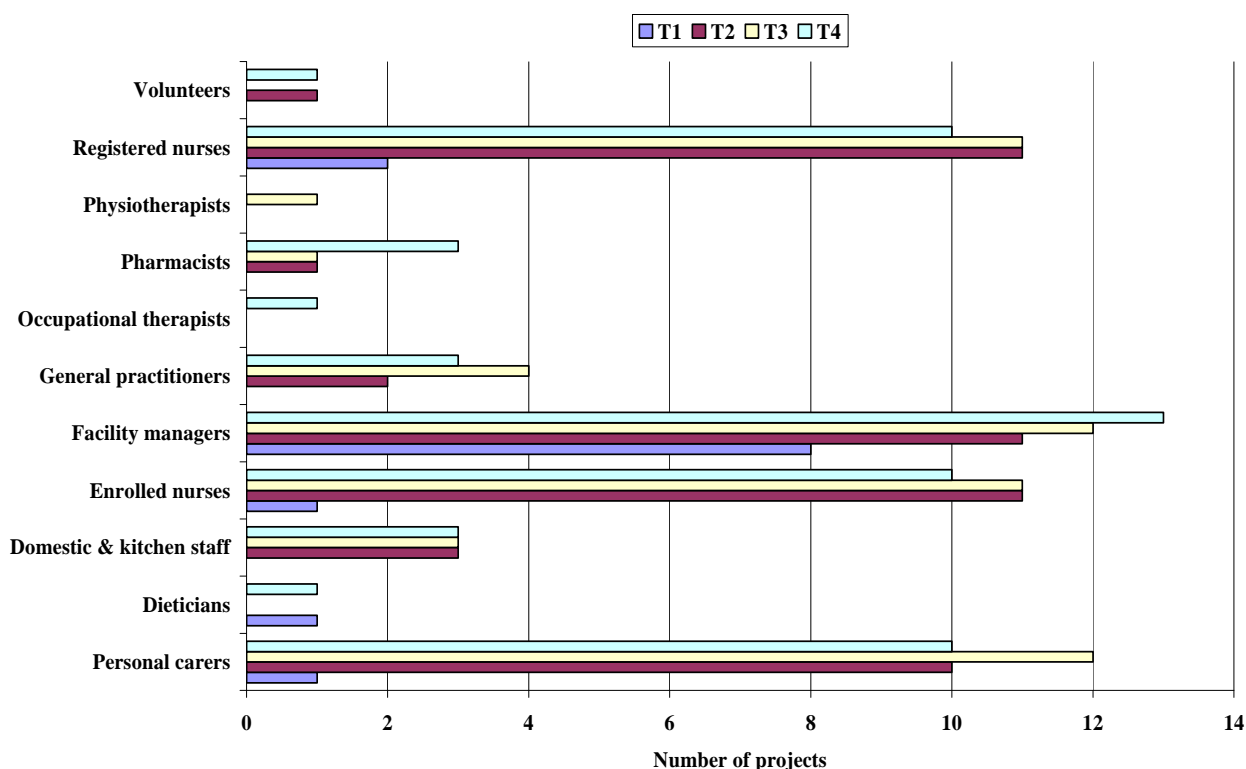
**Table 11** *Extent to which stakeholder participation met expectations – percentage of all stakeholder groups across all projects*

Actual participation compared to expected participation	T1	T2	T3	T4
Actual participation less than expected participation	10%	13%	15%	21%
Actual participation equalled expected participation	87%	73%	72%	69%
Actual participation greater than expected participation	3%	13%	13%	9%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

When participation was less than expected or difficulties engaging stakeholders were encountered it tended to involve one or more of the following: (1) individuals in key positions; (2) particular facilities or (3) a stakeholder group in a specific project. Many of these difficulties proved intractable, reported by projects for more than one time period and in some cases for the whole project, indicating how difficult it can be to improve stakeholder engagement if it is lacking at the outset. Generic barriers to participation (lack of time, difficulties obtaining backfill staff to release people to attend meetings) were mentioned more frequently by projects than specific barriers engaging individuals or particular facilities.

Figure 3 shows the number of projects where the actual participation of the stakeholder groups over the lifetime of the projects (at T1, T2, T3 and T4) was either ‘moderate’ or ‘significant’. Facility managers had the most participation in the first six months after which they were joined by registered nurses, enrolled nurses and personal carers as the main groups participating.

**Figure 3** *Stakeholder participation over time - number of projects with moderate or significant participation*



Participation by general practitioners remained low throughout, although generally in line with expectations, with participation described in various ways, from ‘difficult’ and ‘sub-optimal’ to ‘high’. There was more general practitioner engagement in the three palliative care projects and the oral health project than other projects.

There were a small number of instances where engaging registered nurses was difficult but not enough to discern any patterns. The reasons given when this did occur included registered nurses being protective of their status and position or simply not having the time to engage with any aspect of the project because of their workload, described by one facility manager:

*We had one RN to 40 residents here so the availability of the RN to attend was quite minimal. (F)*

Engagement in project activities occurred for a variety of reasons - some people engaged because they were inherently motivated to do so, some became engaged as a result of the information or the education they received, some were influenced by their peers and some engaged when they started to see some clear benefits:

*I guess it always comes back to information, getting people on side with information and probably the attitude. (F)*

*I think the significance of having those small groups and mini educational sessions has been quite significant in bringing people along and bringing people on board. (P).*

*Some staff were reluctant to get involved in the early stages. They were encouraged by success in reducing behaviours as well as personal and professional affirmation from the sessions. (T4).*

*How we are trying to change that is getting the people at the floor level more involved, so they can champion each other and do that peer support stuff, which I think is very influential. (F)*

This suggests some important reasons why staff did not engage - because of their individual nature (they are not motivated to do so); because they do not see any benefits for either themselves or the residents; because they simply do not have the knowledge or skills to engage (e.g. poor literacy skills); because they do not have the confidence to engage or they don't see it as their role to participate in the change.

Ten of the projects, either in interviews or progress reports, raised the issue of developing trust between various stakeholders - trust between project staff and facility staff, trust between facility staff and general practitioners, trust between managers and staff. In some cases trust was an existing quality arising from previous relationships (e.g. lead organisations and facilities who had worked together previously) and in other cases it was important to build up a degree of trust early on in the life of a project.

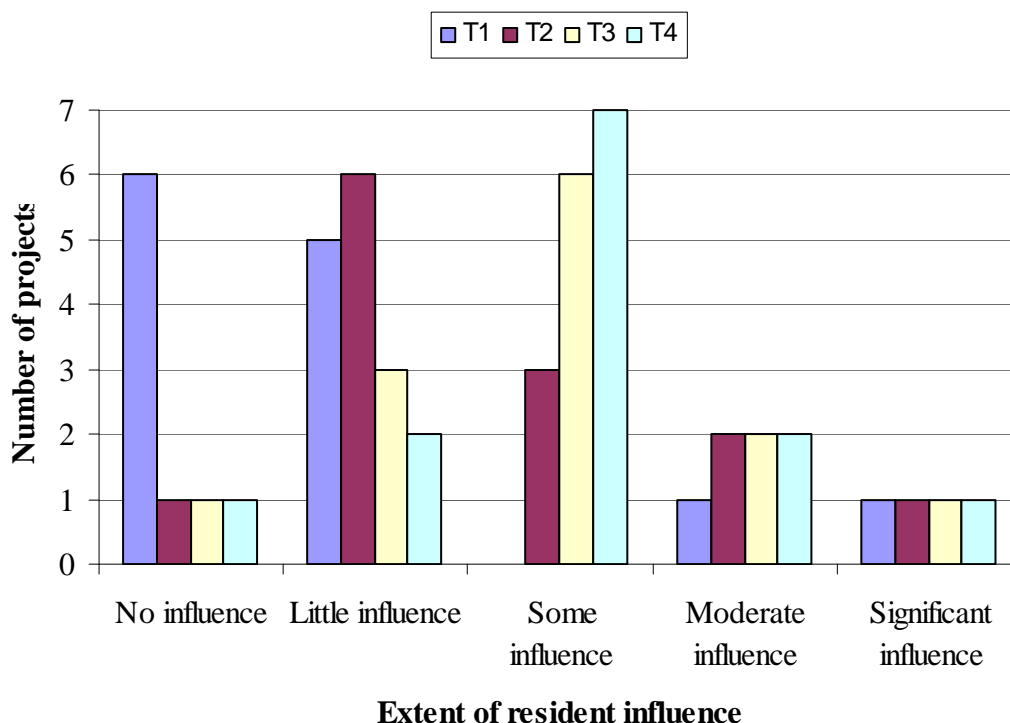
### **3.9.2 Residents**

Two of the four key priorities for the EBPRAC program set out the expected involvement of residents in the program:

- Improving quality of clinical care for residents in Australian Government funded aged care homes taking into account resident preferences.
- Communication of the changes required as part of this project to the residents and their families.

One of the questions in the project progress reports asked project leaders to rate the extent to which residents had influenced the project in the preceding six months. The results are summarised in Figure 4 across the four six-monthly progress reports (designated T1, T2, T3, T4).

**Figure 4** *Extent to which residents influenced projects over time, summary of all projects*



During the first six months, for all except two projects, residents had little or no influence. This level of influence increased as time went on, although only three projects achieved more than ‘some’ degree of resident influence during the lifetime of their project.

Activities took place in all projects to communicate with residents, in some cases by facility staff rather than those working on project teams. The design of three projects did not involve direct contact with residents. The focus of communication was keeping residents informed rather than seeking to involve them in what was happening. Various approaches were undertaken to achieve this including the use of posters, brochures, newsletters, speaking at resident meetings and media releases to local newspapers. Cognitive difficulties made communication with some residents difficult.

Interaction between residents and facility staff was increased in some instances depending on the nature of particular projects. Examples include:

- residents reminding staff to do something that had changed as a result of a project (e.g. application of moisturiser to residents’ skin after showering)
- staff discussing with residents the various options for managing their pain
- staff obtaining residents’ opinions and preferences regarding management and prevention of wounds
- staff getting to know residents more so that they are better able to understand and address behaviours of concern.

One project included residents in palliative care case conferences.

### 3.10 Key success factors – perceptions of lead organisations and facility staff

#### 3.10.1 Lead organisations - essential ingredients for success

The progress report submitted on a six-monthly basis by each project included the question ‘are there any essential ingredients for success (the ‘must have’ or ‘must do’) of the project?’ In answering this question projects built on what had been reported in previous progress reports, rather than identifying a completely new set of ‘must haves’ or ‘must dos’ with each progress report. Appendix 14 includes a summary of all the responses from all the projects over the two years of each project. Table 12 maps the responses to the key success factors underpinning the evaluation framework. Based on these responses some factors such as having a receptive context for change, leadership, certain aspects of the model of change (particularly local facilitators) and stakeholder engagement are mentioned more frequently than some of the other key success factors.

**Table 12** *Essential ingredients for success as reported by lead organisations*

Key success factor	Essential ingredients for success
Receptive context for change	Trust and good communication between key staff. Support from management that is evident to staff. Managers of facilities have volunteered to be involved. The goodwill and commitment of the residents. Effective communication and team work. Commitment to providing evidence-based practice and care. Ensure all staff are ready for change.
Leadership	Key drivers to engage project participants, maintain momentum and lead change. Dedicated driver within the organisation to implement best practice. Clear directive identifying tasks and responsibilities for others in the organisation to support the champion. A committed and enthusiastic senior member of staff. Committed leadership within facilities. Recruit a supportive team with leadership and change management skills. Support by credible, known local leaders.
Model of change	Regular, clear lines of communication between all project partners. Collaboration with the facilities at early inception of the project and as the project is conducted. Funded champion position. The champion position must be supplemented by assistants as a risk management strategy in larger facilities. An enthusiastic and dedicated resource nurse. Appointment and training of link nurses to be the key change agents and drivers. Enough link nurses to cover all shifts/days of the week including holiday relief. Ensure delivery of information, presentations, feedback and training appropriate for target audiences. Simple and user friendly messages using a minimum of terminology. Assist facility staff to identify areas of need and opportunities for practice involvement
Staff with the necessary skills	Understand the health literacy of the workforce and the environment in which they work.

Key success factor	Essential ingredients for success
Stakeholder engagement, participation and commitment	<p>Time for development of collaborative, trusting and collegial working relationships.</p> <p>Time for development of understanding of what each partner wants and needs.</p> <p>Ability to engage interested people with a variety of skills (multidisciplinary team) who have trust and willingness to work together.</p> <p>High level of communication and engagement with direct care staff and management.</p> <p>Engagement of the aged care sector and all consortium partners.</p> <p>Engage all levels of facility staff, residents and carers.</p> <p>Engagement with key stakeholders both within the organisation and those external.</p>
Adequate resources	<p>Adequate time and resources.</p> <p>Sufficient funding to help cover the increased workload associated with implementation.</p> <p>Remuneration to the facilities needs to be more generous.</p> <p>Provide resources and avenues for facilities to act on areas of need.</p>
Demonstrable benefits	<p>Reporting back successes to all levels of staff.</p> <p>Clarity on how implementing evidence based practice will benefit residents and families.</p>
The nature of the change in practice	<p>Identify evidence-based processes and tools that are readily available, user-friendly and have intuitive logic in their application (i.e. find and use the best bet that provides the best fit).</p>
Systems in place to support the use of evidence	<p>Provide continuous feedback on planning and progress towards goals.</p>

### 3.10.2 Perspectives of facility staff

At two of the EBPRAC national workshops, in March 2009 (Round 1) and February 2010 (Round 2), sessions were held with a total of 95 staff attending from facilities involved in the program to get their perspectives on what factors influence the implementation of evidence-based practice. In the first of these sessions participants were asked ‘what factors influence the implementation of evidenced-based practice in residential aged care based on your experience with the EBPRAC project and any similar projects or attempts to change practice that you have been involved?’ In the second session a different approach was taken – participants were asked the same question but then requested to apply a ranking to the eight factors identified in the literature review plus one other factor (leadership). In the framework for the evaluation leadership was incorporated as one component of a receptive context for change but because leadership had arisen repeatedly as an issue in the program it was decided to separate it out as a factor in its own right to gauge its importance.

In both sessions a receptive context for change (including leadership) and the availability of adequate resources were identified as important. The implication of the results from the second session is that leadership is the most important component of a receptive context. The main difference between the two sessions was the importance placed on ‘demonstrable benefits’ by the second group. Of the eight factors from the initial literature review three were identified as relatively unimportant by both groups – the nature of the change in practice, model for change/implementation and systems in place to support the use of evidence. Further details of the results from both sessions are included in Appendix 15.

### 3.11 Summary – incentives and barriers to sustained implementation

The essential ingredients for success identified by lead organisations in their progress reports and the factors identified by facility staff at the national workshops are not independent – it is reasonable to assume that each would have influenced the other in various ways. The results indicate that both groups support the importance of a receptive context (as defined for the evaluation), adequate resources and stakeholder engagement as important factors influencing the implementation of evidence-based practice. Likewise, the nature of the change in practice and having systems in place to support the use of evidence were not identified by either group as particularly important. Support for the other three factors used as the framework for the evaluation (having a model of change, demonstrable benefits of the change and staff with the necessary skills) was mixed.

The most important ‘key’ to the implementation of evidence-based practice during the EBPRAC program was leadership. This is consistent with evidence from the literature and the experience of the evaluation team from other evaluations (Eagar, Masso et al. 2008). Leadership came from various sources – facility managers, local facilitators, individual members of staff, members of project teams – but it had to come from somewhere. If leadership did not come from facility managers it was important that those managers were supportive of those who were providing leadership. For a useful summary, relevant to residential aged care, of the differences between leadership and management see Table 9 on page 30. It should not be forgotten that ‘improvement projects frequently fail in implementation and this is as much a management issue as a leadership issue’ (Masso, Robert et al. 2010, p 353).

A notable feature of the EBPRAC program was the motivation of many of the people involved. As with leadership, this came from various people but the critical group were the staff who had to change their practices. If they did not ‘come on board’ with what the projects were trying to achieve then the likelihood of changes being implemented and sustained were very much reduced.

Considerable resources were spent educating staff (for details see Section 5.1) and the approaches used, with a focus on targeting the needs of individuals and small groups, were consistent with what has been shown to achieve the best results (see Section 4.4). However, education can only take things so far. Knowledge is a necessary pre-condition for change to occur but is insufficient on its own to change behaviour. The projects demonstrated that it was important for staff to be able to ‘see’ the benefits of what they are being asked to do and to understand why changes were necessary. This was more important than simply being told that there was ‘evidence’ to support a change taking place. Many of the changes involved additional work, at least initially, which was difficult to incorporate into a pattern of daily work characterised by ‘busyness’ and lots of routine.

All of the EBPRAC projects invested considerable time and energy in communication of one form or another – between members of the project consortia, between project leads and facilities, and within facilities. There was a general sense that informal communication (chat, talk, conversation) between those working in the facilities could be very influential:

*It’s having conversations with our staff about how they can approach things differently, what might have been a better way to do it, that sort of stuff. (F)*

*They were talking about the project all the time. (F)*

*Communication across shifts and between levels of staff was almost always problematic because opportunities to talk are very limited. (T4)*

Residential aged care has a high proportion of part-time staff, not only in terms of the number of days worked per week but also in terms of the number of hours worked per day, which can make it

difficult to get good attendance at formal meetings. A recent paper has indicated the importance of conversation as an influence on implementation and argued that ‘instead of thinking of intervention implementation as a problem of reliable transfer, we would be better off to think of it as a problem of sensemaking and learning (Jordan et al 2009).

The lessons learnt from the EBPRAC program about how to implement evidence-based practice have been incorporated into a series of ‘principles of practice’ to be found in the chapter on generalisability (Chapter 6).



## **4 Program impact**

### **4.1 Introduction**

Each project included a project-level evaluation, at the core of which was a ‘before and after’ design i.e. measuring a series of variables before implementation commenced and then measuring the same variables after implementation of the evidence. In the absence of control groups, there is a need for some caution in interpreting the results. For example, any judgements about impact on clinical care will be subject to the problem of attributing changes to what was done as part of each project, rather than other factors.

Projects used a wide-range of data collection methods, primarily audits, interviews and surveys but also including focus groups, observation and case studies. Some project activities were as much a part of the evaluation as project implementation. In particular, many activities at project commencement not only provided data for the evaluation but also provided data that was fed back to staff to shape and inform the approach to implementation.

Four of the Round 2 projects based their evaluation on at least some elements of the framework for the program evaluation, something which did not happen in Round 1. Four projects framed their evaluation around a series of evaluation questions, as suggested at the Round 2 Orientation Workshop in December 2008. This helped to understand the rationale underpinning project evaluations but two projects took this to the extreme by limiting their evaluation plans to a table with four columns of information – objective, evaluation question, indicators, data sources - and nothing else. One project used the same table but within the context of a more comprehensive approach that provided information about the process of the evaluation and methods of data collection.

In Round 1 there was a strong emphasis on collecting data on residents. In Round 2 there was more of an emphasis on collecting data across the three ‘levels’ of the evaluation – residents, staff, facilities. In Round 2, a greater variety of tools were used to collect data about practice improvements e.g. interviews with staff, audits of practice and evaluating improvements in policies and procedures.

None of the evaluation plans included any direct means of assessing sustainability. Three projects planned to conduct economic evaluations but none ended up doing so. All projects planned to collect useful data to inform whether program objectives had been met, with the exception (in both rounds) of the objective ‘build consumer confidence in the aged care facilities involved in EBPRAC’.

This section of the report summarises project impacts on residents, families, staff, facilities and the community more broadly, based on the results of the project-level evaluations.

### **4.2 Impact on residents**

Despite widespread adoption in health systems, it is difficult to show that use of clinical guidelines improves outcomes for patients (Bahtsevani, Uden et al. 2004; Lugtenberg, Burgers et al. 2009). Evidence that the process and structure of care have improved is typically stronger than the evidence that patient outcomes have improved (Lugtenberg, Burgers et al. 2009). This does not necessarily mean that outcomes do not improve with the implementation of evidence; it simply reflects how difficult it can be to identify improvements in outcomes and attribute those improvements to what was implemented. Consistent with this finding from the literature, there was more evidence in the EBPRAC program of improvements in resident care than there was of improvements in resident outcomes.

Based on the results of the project-level evaluations Table 13 summarises the evidence regarding changes in resident care and changes in resident outcomes for each project. The former are those changes that influence resident care in some way. Environmental changes are included because such changes can influence the experience of care for residents. Other changes range from changes in key processes such as use of end-of-life care pathways and case conferences to changes in the care delivered to residents e.g. changes in medication use and wound management. Because it is so difficult to do, no attempt has been made to separate what are effectively system changes (case conferences) from practical ‘hands on’ changes. From a project perspective what is important is that there is evidence that some changes have taken place.

**Table 13 Summary of changes in practices and evidence of changes in resident outcomes**

<b>Project title</b>	<b>Changes in resident care (mainly processes)</b>	<b>Resident outcomes</b>
<b>NARI pain</b>	Good evidence to indicate that pain management practices improved.	Variable outcomes with no consistent pattern of pain reduction.
<b>UN nutrition</b>	Many different changes in practices but no measuring of extent of change.	Mixed results for change in nutritional status.
<b>NARI falls</b>	Evidence of improved falls prevention activities.	Number of reported falls increased and falls-related injuries decreased.
<b>SA dental</b>	Some evidence of improved practices, introduction of oral health assessments.	Improved oral health with mixed results for other indicators of resident outcomes.
<b>DATIS meds</b>	Some evidence of improved practices.	Not evaluated.
<b>QUT wounds</b>	Good evidence of improved practices.	Reduction in incidence of wounds.
<b>PW inf control</b>	Various changes in practice, none of which were measured.	No change in resident outcomes.
<b>MGPN pall care</b>	Almost no evidence to indicate changes in resident care.	Not evaluated.
<b>NEVDGP pall care</b>	Highly variable implementation of end-of-life care pathways.	Not evaluated.
<b>UQ pall care</b>	Good evidence that practices improved.	Not evaluated.
<b>UTS behav</b>	Some evidence that practices improved.	Variable outcomes, with improvements on some measures.
<b>HC behav</b>	Improvements to physical environment. Practice changes not measured. Implementation of mentoring meetings.	Consistent improvement in resident outcomes.
<b>MU behav</b>	Improvements to the physical environment. Good evidence of improved practices.	Improved resident outcomes.

For some projects the fact that there is no measurement of the changes that have taken place does not mean that no changes took place. As was pointed out in Section 3.4 the general finding across all projects was one of lots of small changes, rather than major changes. Many of these changes are difficult to measure. A more detailed version of Table 13 is included as Appendix 16, with details of both the changes made and the outcomes achieved.

Four projects did not evaluate resident outcomes, but rather focused on evaluating changes in practices such as changes in medication use (DATIS meds project) or, in the case of the three

palliative care projects, changes in the processes and systems for delivering palliative care. This was entirely appropriate and in accordance with the original funding submission for each project.

The three behaviour management projects produced the best evidence that resident outcomes improved. The pain management project in Round 1 had arguably the most comprehensive evidence that practices improved but was unable to show consistent reductions in pain. Two projects with a strong focus on prevention (oral health and wound management) were able to demonstrate improved outcomes (improved oral health and reduction in wounds).

### 4.3 Impact on families

Across the EBPRAC program involvement of residents' families was variable. Table 14 summarises the involvement of families in the EBPRAC projects and the impact on families.

**Table 14 Summary of family involvement and impact on families**

Project title	Process of family involvement	Impact on families
<b>NARI pain</b>	Minimal involvement with families.	Not evaluated.
<b>UN nutrition</b>	Minimal involvement with families.	Not evaluated.
<b>NARI falls</b>	Information provided to families. Project staff attended family meetings.	Not evaluated.
<b>SA dental</b>	Information provided to families.	Not evaluated.
<b>DATIS meds</b>	Provision of brochures to families and attendance at family meetings.	Not evaluated.
<b>QUT wounds</b>	Regular meetings with families.	Increased awareness by families of wound management and prevention.
<b>PW inf control</b>	Minimal involvement with families.	Not evaluated.
<b>MGPN pall care</b>	Increased discussions with families on advance care planning.	Families expressed satisfaction with the care.
<b>NEVDGP pall care</b>	Increased provision of written materials to families about palliative care. Increased discussion with families about end-of-life care.	Not evaluated.
<b>UQ pall care</b>	Families involved in case conferences 94% of the time. Families more informed and more involved in end-of-life care.	Over 90% of family members felt their views/wishes were respected during case conferences.
<b>UTS behav</b>	Improved involvement of families in decision making about the family member's care. Staff perceived by families to be forthcoming and helpful.	Family members felt more encouraged to visit their relatives and that their visits had been more pleasant. Family members who had formerly felt uncomfortable were able to now visit.
<b>HC behav</b>	Families difficult to engage. Involvement of families lower than expected.	Feedback from small number of families that families had very high expectations that were not met.
<b>MU behav</b>	More opportunities for families to meaningfully participate in resident's day (as perceived by family members). Families involved in providing more information about resident's personal history.	73% of family members identified resident family member as more content. Family involvement better meets the expectations of families.

Some projects had no contact with families and some projects limited family involvement to keeping families informed via newsletters, posters displayed in facilities and meetings. Those families who did attend meetings were reported to have found the experience useful.

There tended to be more involvement of families in the palliative care and behaviour management projects. The use of end-of-life care pathways and case conferences act as a catalyst for family involvement. Most notably, one of the projects (UQ pall care) was able to achieve attendance of family members at 94% of palliative care case conferences. Behaviour management is enhanced by family involvement, particularly to gain a better understanding of residents and their needs.

Seven of the projects did not aim to evaluate the impact of the project on families. Those projects that did seek the views of families tended to focus on family perceptions of how the project may have impacted on residents, rather than the family members themselves.

#### 4.4 Impact on staff

Table 15 summarises the processes of education and training used by the projects and the outcomes achieved, as identified in the project-level evaluations.

**Table 15 Processes of education and training, and staff outcomes**

Project title	Processes of education and training	Staff outcomes
<b>NARI pain</b>	Education tailored to the needs of individual facilities. Clinical nurse educator appointed in each facility to support staff, including pain champions in each facility.	Staff have enhanced knowledge and skills and a more positive attitude to pain assessments and interventions.
<b>UN nutrition</b>	Participatory action research approach, involving regular 'nutrition meetings'. Some education undertaken at the nutrition meetings. Other education was informal and opportunistic, in response to the needs of facilities.	Increased staff awareness of nutrition issues, and evidence of the application of specific tools to both monitor nutrition and respond when nutrition status is of concern.
<b>NARI falls</b>	A participatory action research method was used, in which 'champions' (falls resource nurses) were identified in each facility and received training.  The falls resource nurses were supported to work with staff to identify strategies and resources particular to their facility, and to organise interactive falls prevention expos and/or training sessions.	Slight improvement in knowledge of falls risk factors and prevention interventions following training of falls resource nurses.  Falls resource nurses reported improved skills in public speaking, leadership, organisation skills and running a training program.
<b>SA dental</b>	'Oral health' champions established in each facility and participated in education program on oral health assessments and oral health care. Three training modules on oral health assessment, oral health care planning and daily oral hygiene were developed. Champions supported in their delivery of training to staff.	Improved knowledge and insight about oral health by nursing and care staff, and improved oral health practices.  Registered nurses did 60% of the oral health assessments.
<b>DATIS meds</b>	The original funding submission includes reference to 'train the trainer' education but this did not occur. Training was provided by people employed for that purpose. The majority of staff trained were personal care workers (250-300 per module) compared to nursing staff (approx 135-150 per module).	The final project report notes that there was increased confidence, competency and knowledge of staff, but there is insufficient data to identify the extent to which these changes occurred. Staff demonstrated improved medication management techniques, indicated by medication chart audits of residents conducted prior to and following the project.

<b>Project title</b>	<b>Processes of education and training</b>	<b>Staff outcomes</b>
<b>QUT wounds</b>	Local ‘wound champions’ provided with training which was also delivered to staff individually and in groups. A self-directed learning package was established, and resources developed to support the training.	Improved staff knowledge and skills regarding wound care.  Improved learning culture and communication between staff.
<b>PW inf control</b>	Use of the Collaborative Methodology for quality improvement resulted in 102 PDSA cycles undertaken across seven facilities. Estimated that 70% of staff involved in education program that included various topics: hand hygiene, management of infections and issues around waste management, especially sharps.	Improvements in knowledge not directly measured. The project final report notes it had not been possible ‘to directly assess to what extent staff members generally understood the idea of a Collaborative methodology, remembered it and were capable of applying it in their workplaces, and/or were capable of teaching it to others’ (p 22).
<b>MGPN pall care</b>	The project facilitated access to existing education and training opportunities and built on existing infrastructure and resources. Additional training provided to introduce end-of-life care pathways and palliative care minimum data set.  Staff responsible for providing day to day care participated more readily in training, whereas decision-makers (registered nurses and general practitioners) were less responsive.	Some evidence of improved confidence and skills of staff in discussing and implementing end-of-life care.
<b>NEVDGP pall care</b>	Academic detailing was used to deliver the two education modules for the project.	The education sessions increased staff knowledge, skills and confidence about end-of-life care and medication administration.
<b>UQ pall care</b>	Link nurses and champions established in each facility and provided with education and training to support the implementation of the palliative care pathway. The champions were supported to flexibly deliver training to staff within their facility. Resources were developed to support the implementation of the pathway.	The project reported enhanced knowledge and skills of staff in providing a palliative approach. There was also improved access to evidence in palliative care, including through the Caresearch website.
<b>UTS behav</b>	Local champions identified in each facility and provided with a training program which combined person-centred care and needs driven behaviours models. The champions were supported in their introduction of the action research method within facilities.	Mixed outcomes for staff. Three of the six facilities demonstrated an increase in knowledge and attitudes regarding behaviours of concern. Improvements in the way staff interacted with residents, according to observations of project staff, management and residents’ families.
<b>HC behav</b>	Three mentors delivered training and support to implement person-centred care and manage behaviours of concern. 80% of staff working with identified residents participated in a two-day training program. Staff provided with more informal learning opportunities through the provision of support from mentors, and participation in mentoring sessions to identify strategies to reduce behaviours of concern.	Staff demonstrated increased knowledge, skills and confidence in identifying, and responding to behaviours of concern.  Many staff reported a reduction in stress and an increase in calmness and objectivity when faced with behaviours of concern.
<b>MU behav</b>	Best practice champions were established in each facility. The champions were supported to promote the e-learning package developed by the project which was made more generally available to facility staff. The champions were supported to facilitate ‘micro’ training in day-to-day practice.	Mixed outcomes for staff, dependent primarily on level of engagement and support of facility management. In those facilities where management was supportive, there were changes in staff behaviour which reflected person-centred care being implemented.

The main focus of activity for EBPRAC projects was improving the knowledge and skills of staff working in residential aged care. On the whole, projects developed their own materials to use with staff, basing them on existing evidence or clinical guidelines but adapted to suit the perceived needs of the audience. A small number used existing educational resources and/or infrastructure. The general approach of the majority of projects was the need to work closely with the facilities, and provide learning opportunities in a style and format that was flexible and responsive to the needs and circumstances of the facility, staff and resident profile, and the context within which care was being delivered. To that end, a number of strategies were used, including:

- Various collaborative approaches including action research and Plan-Do-Study-Act cycles.
- Structured training programs delivered in a group format.
- Self-directed learning modules.
- Academic detailing.
- Informal, opportunistic learning.

For further details about what was done to improve staff knowledge and skills see Section 5.1.

Outcomes for staff were mixed, but on the whole, included:

- Improved knowledge, skills and attitudes in the clinical area or approach to care.
- Improved access to and use of evidence-based resources and tools.
- Greater collaboration between nursing and care staff, as well as with health and allied health in the planning and provision of care.
- Increased confidence of staff.
- Reduction in stress.

Education is typically central to any program for promoting evidence-based practice, either alone or in combination with other strategies. Education that is more interactive seem to be more effective in changing practices than didactic education, although the effect tends to be small (Forsetlund, Bjorndal et al. 2009), and education outreach has a small to modest effect (O'Brien, Rogers et al. 2007). There has been little work on the effectiveness of inter-professional collaboration and education (Reeves, Zwarenstein et al. 2008). A recent review of the literature on the role of education and training for residential aged care staff concluded that education is a necessary but not sufficient for change and that the outcomes of such education 'are equivocal and that benefits for residents are variable, neither always detectable or statistically significant, nor persistent. Nonetheless, the literature describes a formidable range of positive outcomes for residents' (Nolan, Davies et al. 2008, p 418). From a human resource management perspective it is interesting to note that research into the effectiveness of training has generally focused on outcomes for individuals who attend the training, rather than the organisations they work for (Tharenou, Saks et al. 2007).

#### **4.5 Impact on facilities**

Table 16 summarises the impact of the EBPRAC projects on facilities. The summary aims to capture the more general impacts across facilities, rather than the impact in every single facility. The impacts on facilities were generally about improvements in structures, systems and processes.



**Table 16 Summary of impact on facilities**

<b>Project title</b>	<b>Impacts on facilities</b>
<b>NARI pain</b>	Improvements in compliance with best practice pain management standards by all facilities. Equipment purchased (heat packs and TENS machines). All facilities appointed a pain management team. Pain protocols changed to include more regular assessment. Documentation of pain improved.
<b>UN nutrition</b>	Elevated the importance of nutrition and hydration as essential components of care. Systems developed for weighing residents; recording weights and monitoring change; menu planning and assessing residents' preferences; processing and providing meals; and staff rosters. Changes to the dining room environment. Purchase of equipment for weighing residents and for preparing and heating food.
<b>NARI falls</b>	Statistically significant improvement in 14 out of 52 items in a safety culture survey between baseline and follow-up. 71% of staff reported resident safety to be either better or much better. Environmental modifications and equipment purchase improved the environment, with changes to signage, use of height adjustable chairs, sensors and hip protectors. Increased access to allied health support.
<b>SA dental</b>	Use of oral health assessments and oral care plans. Provision of on-site dental care.
<b>DATIS meds</b>	Some introduction of new policies and assessment tools.
<b>QUT wounds</b>	Improvement in positive attitudes and culture towards implementing changes in wound management practices. Staff reported improved communication between levels of staff. Improved capacity to access expertise with establishment of wound care networks and contact with outside experts.
<b>PW inf control</b>	Different changes in each facility, including changes to waste management, cleaning and hand hygiene. No reduction in infections.
<b>MGPN pall care</b>	Introduction of palliative care minimum data set. Introduction of end-of-life care pathways and promotion of advance care plans. No change in the frequency of case conferencing.
<b>NEVDGP pall care</b>	Some decoration and equipment purchases. Improvements in medication supply chain. Introduction and use of end-of-life care pathway in 43% of instances where it could have been used, with use highly variable between facilities.
<b>UQ pall care</b>	Introduction of end-of-life care pathways. Introduction and use of palliative care case conferences. Little change in services available for palliative care (based on self-assessment by facilities). Improved documentation of advanced care planning and end-of-life care.
<b>UTS behav</b>	Changes to physical environment, including improved signage. Changes to facility-wide policies and processes in some facilities. Improvement in five out of seven units in the organisational domain of the Person-centred Care Assessment Tool. Increased safety scores in five out of seven units.
<b>HC behav</b>	Changes to physical environment. Increase in quality of the physical environment.
<b>MU behav</b>	Improvements to the physical environment e.g. improved lighting, improvements to outdoor facilities. Five facilities made noticeable differences in mealtimes making them a more leisurely event (as perceived by families). Needs-based problem solving standard practice in several facilities and used regularly in other facilities.

There were indications of changes in some elements of culture in four projects. According to Schein, culture is layered, with observable patterns of behaviour being classified as Level 1, beliefs and values as Level 2 and assumptions as Level 3 (Schein 1992). Change may take place at Level 1 whereas deeper beliefs and assumptions (levels 2 and 3) remain unchanged. Until new behaviours become embedded and part of daily routine, they may not necessarily influence deeper levels of culture (Mannion, Davies et al. 2005), reverting over time to behaviours consistent with underlying (and unchanged) assumptions and values. It is unlikely that a time-limited project



focusing on one aspect of care, even a relatively broad ranging area such as behaviour management, would result in cultural change at levels 2 and 3 and even if it did the key issue is whether that change is maintained.

#### 4.6 Broader community impacts

Only two projects involved large numbers of referrals to health professionals working outside residential aged care. The pain management project referred 150 residents to general practitioners, 80 to physiotherapists, 15 to occupational therapists and 10 to a pain clinic. The oral health project referred 137 to a dentist after initial oral health assessments were undertaken, with another 39 referrals to a dentist after follow-up oral health assessment. In addition, six residents were referred for physiotherapy by the falls prevention project and the wound management project referred seven residents to a dietician and one resident to a vascular surgeon.

Projects were asked to identify the impact that project implementation may have had on hospitalisation of residents. Only three projects collected any data on hospitalisation and it is not possible from the data, either because of the small numbers involved or because no change was detected, to discern any impact on hospitalisation.

#### 4.7 Achievement of project outcomes

Each lead organisation was asked to identify the main intended project outcomes for each level of the program evaluation – residents and families, staff and facilities (up to four outcomes at each level). The main intended outcomes are listed in the summary of each project included in appendices 1-13. At the completion of each project the lead organisations (as part of completing Economic Evaluation Questionnaire 2) were requested to provide qualitative or quantitative findings to demonstrate the extent to which the outcomes had been achieved. The data was reviewed by the program evaluation team and the main intended outcomes categorised as ‘met’, ‘partially met’ or ‘not met’. For some intended outcomes data had not been collected to determine whether the outcome had been met. In those cases the intended outcome was categorised as ‘not measured’. The results across the 13 projects are summarised in Table 17.

**Table 17 Achievement of main intended project outcomes**

Evaluation level	Degree to which outcome met				Total
	No. of outcomes met	No. of outcomes partially met	No. of outcomes not met	No. of outcomes not measured	
Residents and families	11	8	7	8	34
Staff	15	10	5	1	31
Facilities	18	5	8	3	34
<b>Total</b>	<b>44</b>	<b>23</b>	<b>20</b>	<b>12</b>	<b>99</b>

The total number of main intended outcomes is 99. Therefore the totals in Table 17 can also be read as percentages e.g. 44% of main intended outcomes were met, 34% of outcomes were at the level of residents and families.

In the introduction to the section on program implementation (Section 3.1) it is noted that in almost all project plans the indicators of achievement were either not quantified or not readily quantifiable. The same applies to the main intended outcomes. Many were expressed in quite vague terms, making it difficult to determine the extent to which outcomes had been achieved.

Of the 34 resident/family level outcomes 11 were met (32%), with a greater level of achievement for staff level outcomes (15/31, or 48%) and facility level outcomes (18/34, or 53%). The incidence of outcomes not being measured was higher for resident/family level outcomes (8/34, or 24%) than for the other two levels, which is probably a reflection of how difficult it can be to measure resident outcomes.

## 4.8 Unintended consequences

There were no adverse unintended consequences. Some variations to project scope and the pace of project implementation resulted in minor delays (see Section 3.2)

An unintended, but very positive, consequence of the EBPRAC program is that the program has helped to bridge the gap between those who create evidence (researchers) and those who use evidence (practitioners). It was not a requirement that researchers lead projects but that is what happened. Eight of the 13 projects were led by university-based researchers and two of the other projects were led by organisations with strong track records in research. The only lead organisations without such a background were the three divisions of general practice but each of the divisions involved university researchers as a key partner in their consortium. In many cases the project provided an opportunity to build on existing relationships between a research/project lead and one or more participating facilities. In such instances, additional facilities were recruited which had no prior engagement with the research/project leads.

## 5 Capacity building

Capacity building, within the context of the EBPRAC program, has three main components:

1. Improving staff skills
2. Developing resources such as clinical guidelines, resources and other materials to support evidence-based practice
3. Other activities to improve clinical capacity e.g. purchase of equipment.

The main focus of capacity building activity has been on improving staff skills and developing resources, with a smaller number of projects improving clinical capacity with capital expenditure. Capacity building activities were wide ranging, consistent with the literature on how best to provide education that is effective in changing practices, and responsive to the needs of staff in participating facilities.

### 5.1 Improving staff knowledge and skills

All projects focused on improving staff knowledge and skills, predominantly through the provision of formal education and training processes delivered either by project leads, local facilitators or external consultants/services. On the whole, educational materials were developed anew for each project, or existing materials were modified to meet the approach being undertaken.

Twelve projects delivered structured training programs, usually in small groups. These comprised face-to-face training in blocks of either hours or days, ranging from half an hour to up to two days duration, generally undertaken at a time suitable to the needs of participating facilities. One project used five-minute 'micro training' sessions, incorporated into the day-to-day work of facilities. The majority of training was provided face-to-face, although some projects provided e-learning opportunities to encourage a broader range of staff to access the learning materials. Two projects used an explicit one-to-one training approach (academic detailing/educational visiting). One of the palliative care projects facilitated learning opportunities through clinical placements. The numbers of staff trained, and how they were trained, are summarised in Table 18.

The education programs were delivered by a combination of project staff, ‘champions’ or ‘link’ staff and specialist consultants. The overall reach of the education programs depended on the approach of the individual project, with some reporting participation of staff in their hundreds, or significant percentages of a defined workforce. To support the education most projects included the development of resources, or a tool kit, which provided prompts, pathways, protocols and educational resources. For further information about the resources see Section 5.2.

**Table 18 Numbers of staff trained**

Project	Numbers of staff trained by type of training			Total
	Training workshops	Academic detailing	Other on-the-job training	
1 <sup>1</sup>	350		350	350
2 <sup>2</sup>				0
3	364		4	368
4	187			187
5 <sup>3</sup>		675	60	735
6 <sup>4</sup>	641	94	47	782
7	473		98	571
8	1534			1534
9	216	564		780
10	525		60	585
11	30		350	380
12	180		50	230
13	267		100	367
<b>Total<sup>5</sup></b>	<b>4767</b>	<b>1333</b>	<b>1119</b>	<b>6869</b>

Notes:

1. The staff trained in this project attended a training workshop and received on-the-job training i.e. the total number of staff trained was 350, not 700. The total number trained in all projects is therefore 350 less than it would otherwise have been if the total trained by each method were simply added together.
2. Formal training was not part of this project’s methodology but 67 staff did attend action research meetings that formed the core of the approach to change management and would have developed skills as a result of their attendance.
3. This project trained staff using three education modules. Of the total of 675 who attended at least one module approximately 450 were trained in all three.
4. This project did not specifically use academic detailing but did report some 1:1 staff training in the section of the economic evaluation questionnaire which asked for information about academic detailing.
5. The totals in the table are the best estimate of numbers of staff trained but contain some inaccuracies. For example, one person may have attended more than one workshop (and hence been counted twice), or attended a workshop and also received some on-the-job training.

The audience for the majority of the education was staff working in facilities, predominantly those involved in direct care provision (personal carers, enrolled nurses) or clinical leadership roles (registered nurses). In addition, other staff working in facilities (e.g. allied health and hospitality staff) or visiting health practitioners (e.g. general practitioners, pharmacists) were also targeted, depending on the nature of the clinical issue being discussed.

One of the major challenges faced by the EBPRAC projects was tailoring education programs to the diverse level of knowledge and skills of facility staff:

*The varying levels of education, experience and literacy among RACF staff was one of the greatest challenges for the project. (QUT wounds final report, p 26)*

It is difficult to design education to meet the needs of both registered nurses and personal carers, for example. Six projects identified particular issues arising from low levels of literacy amongst facility staff, usually due to large numbers of staff from culturally and linguistically diverse backgrounds.

Some education facilitated the gradual development of knowledge and skills with a process of reflection and opportunities to ask questions, which seemed to work well:

*You need to actually keep resurfacing the material that's been taught and re-talking about it to make the cultural change. (F)*

*The way that you can get people to reflect on their practice and change their practice and then be available for them to come back at their own pace, that's the side that the participants have really enjoyed. (P)*

*When we had some of the training sessions that we were involved in, carers would come out and sit there and fold their arms like, "We have to sit through this training session." They very quickly became interested when they realised the impact because the first session is about knowledge, it's about the impact of oral health on general health and that started getting their interest. The second one was about practice, about workshopping activities, and then the third one was reflective practice. So very quickly their attitude changed. (P)*

Training in facilitation skills was a key focus of some of the EBPRAC projects, and staff in facilities acquired a number of skills to enable them to take on these roles. The falls prevention project reported that its falls resource nurses gained skills in running education programs, project management, group facilitation and quality improvement cycles. As reported in Section 3.3.3 a total of 177 facility-based champions were trained as part of the EBPRAC program.

Similarly, the oral health project placed considerable emphasis on strategies to create a team amongst the project partners, including team building exercises with an organisational psychologist at the start of the project, and a workshop on presentation skills. The wound management project reported that its engagement with staff resulted in an improved learning culture within the organisation and improved communication between staff.

Facilitation was also supported by developing linkages between staff in facilities and other professionals. Several projects reported that links had been developed between facility staff and local (outside the facilities) experts.

Staff were introduced to research skills, particularly in those projects which used an action/participatory research approach (e.g. falls prevention, nutrition and hydration projects). In these cases, project staff worked closely with facility staff to identify problems, develop strategies and implement solutions:

*I think it was good for some of the Div 2 staff to see what action research was all about, that gave a couple of them a really good understanding of action plans and how to evaluate and now all staff have a portfolio here and we do action plans but instead of me doing them all, I've noticed that a couple of girls on the project who actually write*

*out an action plan for their portfolio so they've learnt that through the project and they're good at it. I don't think they would have known how to have done it without doing the project. But they do now. (F)*

The same person, when asked how action research differed from quality improvement, responded as follows:

*Action research is exactly the way I do any action plan and part of my continuous improvement plan here for the unit and it's exactly the same.*

The question arises with action research, as with other capacity building techniques, as to whether action research can be used on an ongoing basis to make improvements. Nothing was reported by the projects using action research that gives cause for a great deal of confidence in this regard, as indicated by this comment from someone who helped facilitate action research:

*I think they would probably like to use that approach in other areas ... they enjoyed being part of this process and they enjoyed the ability to make their voices heard and drive something, but being able to do that on their own without a project or external researchers coming in and helping them, it's a bit of an ask for them I think. (P)*

A key aspect underpinning the improvement of skills has been the provision of resources, both in terms of training/educational material as well as financial support e.g. for backfill so staff can attend training or participate in the project activities.

## **5.2 Developing resources to support evidence-based practice**

The majority of training and educational resources were targeted at staff working directly with residents. In general, these built on existing resources, or else were based on a particular philosophy, in particular person-centred care. The resources were mainly educational training packages and CDs, designed to be used during the course of the EBPRAC project, as well as to serve as a resource for facilities once the project ended. One exception was the training resource developed by the nutrition and hydration project, which was produced as an outcome of that project.

A number of projects also targeted activities to families and carers who were the audience for a number of promotional resources, such as posters and leaflets, particularly evident in Round 1 projects. In addition, one of the behaviour management projects in Round 2 explicitly targeted families and carers of people with behaviours of concern and sought to introduce support groups within the facilities, with varying degrees of success. It was anticipated that the support groups could provide a venue for education and training, but predominantly would provide opportunities for mutual support with other families, and for families to contribute to the overall care of their family member's behaviours of concern.

The majority of projects used existing assessment tools, with a number of these being modified to suit the context of residential aged care. The pain management project simplified the Resident's Verbal Brief Pain Inventory and developed a PRN sticker with a pain scale for pre- and post-assessment of analgesia. Similarly, the falls prevention project developed a survey to scope evidence-based practice within a facility based on the falls prevention guidelines, and the oral health project developed a pocket guide to undertaking oral health assessments. The three palliative care projects all refined tools, resources and clinical pathways which had been developed for use in acute and sub-acute palliative care, to be more relevant and user-friendly for staff in aged care. All three behaviour management projects used an existing purpose designed tool to evaluate



the residential aged care environment – the Environmental Assessment Tool – with adaptations in particular projects.

Some projects were underpinned by particular approach to change management and developed resources to support its implementation and sustainability. One of the behaviour management projects used the Translating Evidence into Aged care Methods (TEAM) approach, which is a modified participatory action research method, and the falls prevention project developed guidelines for implementing action research. The Hammond Care behaviour management project included a distinct mentoring and guided reflective practice element in its training, the critical elements of which were articulated in its final report alongside potential funding models to enable its sustainability and broader application.

The section in the final report from each project about ‘new resources developed’ yielded a range of information, from details of major resources developed for use elsewhere to other, more minor, resources developed specifically for project use. Table 19 summaries the major resources developed by each project. In addition, each project developed various handouts, newsletters, flyers, brochures, presentations, assessment tools and audit tools, all designed specifically for their project and not necessarily intended for use elsewhere. Details of these resources have not been included in the table.

**Table 19 Summary of resources to support evidence-based practice**

<b>Project title</b>	<b>Resources developed</b>
<b>NARI pain</b>	A range of educational materials and a <i>Principles of pain management and assessment workbook</i> , one for nurses and one for personal carers. A tool for ascertaining the level of compliance of a facility against standards for the provision of best practice pain management.
<b>UN nutrition</b>	<i>Tool Kit for Best Practice Nutrition and Hydration in Aged Care.</i>
<b>NARI falls</b>	A web-based guide to implementing falls prevention interventions - <i>Working together to prevent falls in residential aged care: resource package.</i>
<b>SA dental</b>	Three educational resource portfolios, one for general practitioners and registered nurses; one for facilitators and one for facility staff.
<b>DATIS meds</b>	A complete set of resources for each of the three educational modules used in the project.
<b>QUT wounds</b>	<i>RACF Wound Management Education and Self-evaluation Resource Package.</i>
<b>PW inf control</b>	An <i>Infection Control Collaborative Program Handbook</i> developed at the beginning of the project.
<b>MGPN pall care</b>	Developing new resources was not a focus of this project.
<b>NEVDGP pall care</b>	Audit tools for self-assessment of use of end-of-life care pathway. Two education modules designed for delivery using academic detailing, for use with three audiences – general practitioners, nurses and personal carers.
<b>UQ pall care</b>	<i>Palliative Approach Toolkit</i> which includes three modules, one for managers; one on the key processes in a palliative approach and one on five domains of clinical care, supported by three self-directed learning packages and other educational material.
<b>UTS behav</b>	<i>EN-ABLE Toolkit</i> which includes comprehensive material on the EN-ABLE model, including CDs which provide electronic versions of presentations and tools.
<b>HC behav</b>	The project assembled a toolkit which includes information about environmental auditing, staff training, mentoring, family support and evaluation of outcomes.
<b>MU behav</b>	Two interactive e-learning CDs for provision of in-house education by facilities, supported by various documents, including a well-being checklist and policy audit tool.

### 5.2.1 Generalisability of the resources produced by the projects

The resources produced by the EBPRAC projects generally fall into one of four groups:

1. Resources that are already available on the Internet for use by anyone e.g. the *Principles of pain management and assessment workbook* and *Working together to prevent falls in residential aged care: resource package*.
2. Resources developed for use as ‘stand alone’ entities, either whole ‘packages’ of resources or components of resource packages: the *Tool Kit for Best Practice Nutrition and Hydration in Aged Care*, the brochures and tip sheets from the wound management project, and the resources developed by the Monash University behaviour management project. These resources can be taken up and used by anyone.
3. Resources that, based on advice from the authors, should preferably be used by someone if they have some expertise in the area or the ability to access appropriate expertise e.g. the evidence summaries produced by the wound management project, the environmental audit tool used in the behaviour management projects, and the material on mentoring and establishment of family groups developed by the Hammond Care behaviour management project.
4. Resources that are designed for a specific purpose and should only be used for that purpose. Examples include the educational resources produced by the two projects that used academic detailing and the *EN-ABLE Toolkit* which has been designed for use as an integrated package.

Further details of the resources summarised in Table 19 and comments about the generalisability of those resources are included in Appendix 17.

The material from the oral health project in Round 1 formed the foundation for the national training package implemented as part of the Oral and Dental Health Care Plan for residential aged care and is by far the best example to date of resources from the EBPRAC program being generalised across residential aged care.

The tool developed as part of the pain management project to assess compliance with best practice pain management could be used by facilities but it is quite a complex task to undertake as the tool stands at present, requiring a good knowledge of evidence-based pain management. The tool is not currently available on the Internet as the other resources developed by this project are but it could be simplified for widespread use. However, this would require further work. The simplified tool could be used to assess quality of care and identify areas for improvement.

The team from the University of Queensland palliative care project recommend that the toolkit they developed (the *Palliative Approach Toolkit*) should be reviewed and updated every five years which is a sensible recommendation but one which would require ongoing investment of resources. No resources comparable to the *Toolkit* were developed by either of the other two palliative care projects. Given the ubiquitous nature of palliative care in residential aged care and the existence of the *Guidelines for a palliative approach in residential aged care* it is recommended that the guidelines (which are due for review) and the *Toolkit* are made widely available ‘in tandem’ within residential aged care. It is important that the updated guidelines and the *Toolkit* are compatible.

At the workshop involving the three palliative care projects that took place in Melbourne in July 2010 concern was raised about the capability within residential aged care to access and use web-based resources. Although this is a legitimate concern the sheer volume of resources produced by the EBPRAC program makes it almost inevitable that the most viable option for making those resources widely available is via the Internet – the cost of producing and distributing paper versions would be prohibitive.



### 5.3 Other activities to build clinical capacity

Ten projects distributed educational materials of one form or another to participating facilities to support capacity building e.g. clinical guidelines and protocols. Other resources were made available to facilities as the resources were developed during the course of projects e.g. the toolkit for undertaking oral health assessments in the oral health care project and evidence summaries in the wound management project.

A number of projects included funding for the purchase of capital equipment to build the capacity of participating facilities to deliver best practice clinical care. The nutrition and hydration project purchased digital scales and a digital camera to assess plate wastage, scales to improve monitoring of residents' weights; and bread makers, toasters, flour bins and electric knives. The oral health project facilitated access to dental chairs in three facilities; and the falls prevention project purchased equipment such as hip protectors and appropriate beds. The falls prevention project also purchased computers for falls resource nurses to facilitate access to online resources. In recognition of the impact that the built environment can have on behaviours of concern, the behaviour management projects introduced processes to support modifications to the buildings and living spaces of participating facilities.

Development of policies and procedures was also used to build clinical capacity, with the two main areas being those which had a clinical focus, and those which had a change management or knowledge transfer focus. In Round 1, the pain management project sought to incorporate modified pain assessment procedures within quality improvement policies and procedures, and the oral health project found facilities had incorporated oral health assessments of residents as standard procedure upon admission, and as an integral part of the orientation processes for new staff. In Round 2, one of the palliative care projects developed policies and procedures regarding assessment and management of residents with palliative care needs for use by general practitioners.

## 6 Generalisability

For the purposes of this evaluation generalisability was defined as 'are your lessons useful for someone else?' Generalisability thus involves consideration not just of the 'lessons' but of some mechanism for linking those lessons to someone (or somewhere) else. With experimental research this is done by taking a sample (preferably a random sample) from a population and then using statistical tests to identify whether the results obtained from the sample can be generalised to the population. This is not relevant for the EBPRAC program.

The other way of considering generalisation, which is relevant to the EBPRAC program, is to use a particular theory as the way of linking what happened in one place (e.g. in a particular project) to what might happen in another place (facilities in the rest of residential aged care), known as analytic generalisation (Yin 2003). None of the EBPRAC projects used a theory to link what they did with what might happen elsewhere in residential aged care. Project final reports did not address the issue of generalisability, other than to comment in some cases that the various resources developed by projects (e.g. educational materials, tool kits) could be use elsewhere in residential aged care.

Projects ranged from those that were relatively prescriptive about what needed to be done (e.g. a palliative care project which implemented palliative care case conferences, a pain management project that implemented a pain assessment tool) to those with more latitude about the 'what' of change e.g. the two projects in Round 1 that adopted an action research approach to facilitate practice changes. To a degree, 'what' changed varied according to individual facilities – something

may have already been in place or may not have been 'needed'. In general though, 'what' changed varied less than 'how' changes were implemented.

Rather than developing a theory the lessons learnt during the EBPRAC program are presented here as a series of 'principles of practice' which should be 'useful for someone else', although still requiring adaptation to particular settings (Patton 2002). Research on improvement initiatives in the United Kingdom warns that information about how something worked elsewhere does not constitute knowledge about how to implement it in one's own organisation (Bate and Robert 2002). The strength of these 'principles of practice' lie in the fact that the principles have been derived from a diversity of different cases (projects), using different strategies to change practices, in a variety of settings (facilities of differing size, ownership and location) and areas of clinical practice. The principles are derived from data collected from many sources, with reference to the available literature:

- Leadership - without someone to lead change it is probably not worth starting. One person might be able to start the change but it takes more than one leader to keep going. Leadership does not have to come from managers but if that is the case it is important that managers support the change.
- Staff motivation - the motivation of individuals working in residential aged care is one of the 'keys' to successful implementation.
- Change advocates - involving the people who will be affected by any change is important. Strong advocates for change may come from staff who would not normally be considered change agents.
- Evidence - simply having 'evidence' is not sufficient. Staff will want to know whether the proposed changes 'make sense' and will work i.e. provide benefits for themselves, their colleagues or residents.
- Education - education is necessary but not sufficient to change the practices of those providing care to residents. Education needs to be done in tandem with other strategies and tailored to the knowledge, skills and literacy levels of staff. A 'one size fits all' approach to education is likely to be ineffective.
- Communication - informal communication such as conversations and impromptu meetings can be just as important as more formal means of communication.
- Capacity to change - the capacity to implement evidence-based practice in residential aged care is limited, resulting in change that is likely to take place 'step by step' and in small doses rather than change on a more radical scale.
- Planning - some form of plan for implementing evidence-based practice is generally a good idea, but there is a need for flexibility to cope with unpredictable events that can upset those plans.
- Resources - resources are required, usually in the form of resources to provide education or to 'free up' at least some staff time to support change.

In stating these principles there is a need for caution. The principles have arisen out of a program where the circumstances for bringing about change differ significantly from what might be found in day-to-day practice:

- Each project was allocated considerable resources and reasonable 'lead times' before implementation commenced.
- Lead organisations selected facilities to work with, often based on existing working relationships and networks.

- The facilities involved in EBPRAC may not be representative of facilities throughout residential aged care.
- Considerable sums of money were spent on education which would not normally be available to facilities.
- Lead organisations had considerable expertise, not only about the content of change (the evidence) but the process of bringing about change. This element of leadership is not available to those trying to implement evidence-based practice outside a project environment.

Most of the practice changes implemented in the EBPRAC program could be implemented throughout residential aged care but this would depend on the availability of sufficient resources and contextual factors such as leadership, with some adaptation to meet local circumstances and the learning needs of staff.

## 7 Sustainability

Sustainability is not well defined or well understood and can be ambiguous, with a natural tension between maintaining what is worthwhile and continuing to improve:

‘It may concern the stability of work methods, or the consistent achievement of performance goals independent of the methods deployed, and may also apply to the maintenance of a consistent trajectory of performance improvement. Maintaining methods and outcomes suggests a static view. The focus of an improvement strategy implies a more dynamic perspective’ (Buchanan, Fitzgerald et al. 2005, p 190).

Changes in work routines, patterns of behaviour, and mindsets are crucial for sustaining improvements after the end of any formal change program. Evaluation of sustainability is closely aligned with the issue of capacity building (e.g. increased capability and skills, increased resources) and any changes in structures and systems that ‘anchor’ or embed changes.

Definitions of sustainability, as applied to the EBPRAC program, focus on three main areas:

- Sustaining the benefits for clients (in this case, residents).
- Maintaining the program or its activities in an identifiable form within the facilities.
- Maintaining attention to the problem addressed by the program (Scheirer 2005).

As can be seen from Section 4.2 (impact on residents) the benefits of the EBPRAC program for residents are difficult to identify and even more difficult to quantify. Changes in the care of residents were more prevalent than improvements in resident outcomes.

As outlined elsewhere in this report (Section 2.1 and Section 3.4) changes implemented as part of the EBPRAC program include changes to the daily care of residents, changes to the ‘key processes’ of care (e.g. resident assessment, care planning) and more system level changes around changing attitudes e.g. to behaviour management or palliative care. These different changes are linked together in many ways – a change in practice will be influenced by attitudes and may be prompted by a formal assessment process or a change in attitude may be influenced by ‘seeing’ that a relatively minor change in practice is ‘working’.

Even changes to the physical environment, which might seem to have greater chance of being sustained (once the change is made it will stay there), depend on other factors and the issue of sustainability is not that simple, as pointed out in one of the project final reports:

*The changes to the environment are likely to continue beyond the life of the project but will the additional amenities (e.g. extra social space, better outside space) actually be used? Again, this question can only be answered by further evaluation. (HC behav, p 47)*

Each project was asked to collect data using a sustainability tool developed in the National Health Service in the UK which is designed to be used prospectively to assist project teams to gain knowledge about sustainability and incorporate this knowledge into the development of their projects (Maher, Gustafson et al. 2006). The tool uses a scoring system based on 10 factors, each with four options for scoring, grouped in three categories (Table 20). For each factor there is a maximum score, allowing for 'gaps' to be identified (between actual and maximum scores).

**Table 20 NHS sustainability tool – categories and factors**

Category	Factor
Process	Benefits beyond helping patients Credibility of the benefits Adaptability of improved process Effectiveness of the system to monitor progress
Staff	Staff involvement and training to sustain the process Staff attitudes toward sustaining the change Senior leadership engagement Clinician leadership engagement
Organisation	Fit with the organisation's strategic aims and culture Infrastructure for sustainability

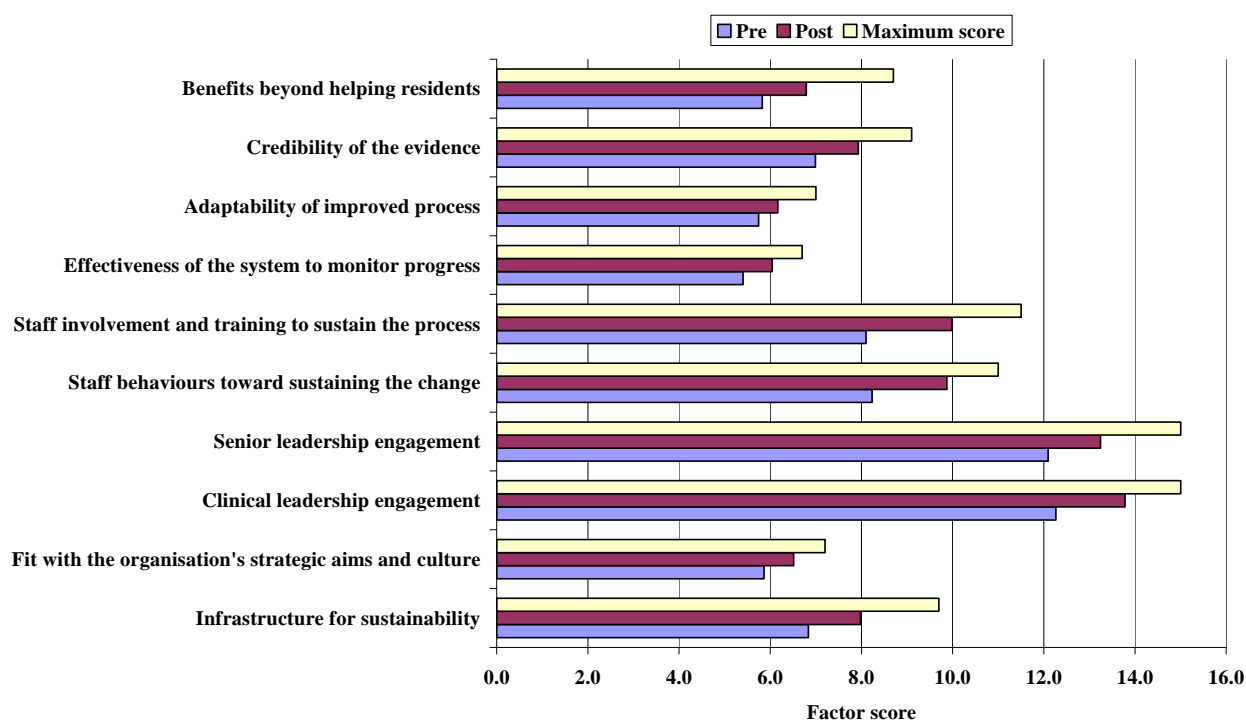
The factors match well with seven of the eight key success factors underpinning the program evaluation, the exception being the factors 'model of change/implementation'. Projects were requested to complete the tool:

- for each residential aged care facility
- by those involved in each project who were best placed to rate the factors
- within the first two months of implementation commencing in each facility (or as soon as possible thereafter)
- within the last two months of implementation ceasing in each facility (or as soon as possible thereafter).

Data was received for 99 facilities pre-implementation and for 87 facilities post-implementation. The primary reason for the difference between these two numbers is that post-implementation data was not received from one project, two facilities merged and one facility withdrew after pre-implementation data collection. Data collection by one project was poor and has been excluded from the analysis, except for three facilities with complete data.

Figure 5 shows the combined results across all projects, comparing the average pre-implementation score and the average post-implementation score with the maximum possible score for each factor. For each factor the post-implementation score was higher than the average pre-implementation score and closer to the possible maximum, indicating a move towards greater sustainability by the end of the projects.

**Figure 5 Sustainability tool – results for all factors for all facilities**



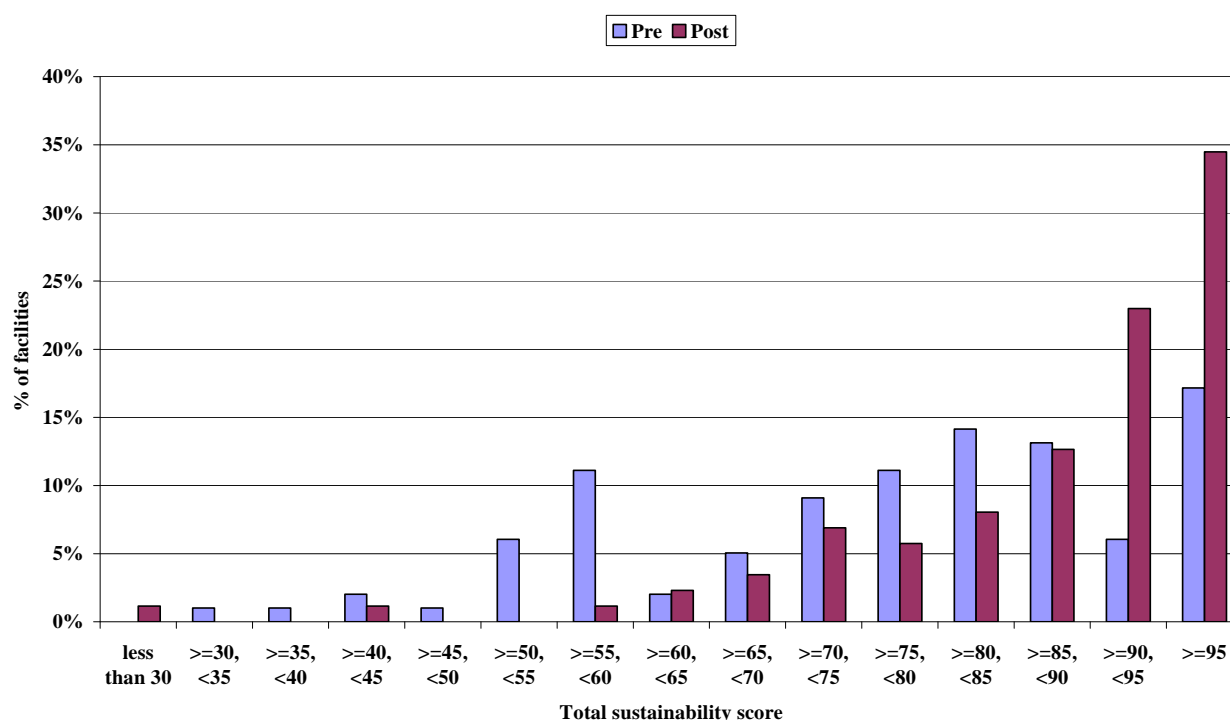
The factor with the greatest improvement between pre and post-implementation was the factor ‘staff involvement and training to sustain the process’. The factors with the greatest potential for improvement by project end were ‘benefits beyond helping residents’, ‘infrastructure for sustainability’ and ‘senior leadership engagement’ (in that order). To give an indication of what this means in practice the explanation of the four levels for each of these factors is included in Table 21, with the aim being to move to the highest level (Level 1).

**Table 21 NHS sustainability tool – areas with potential for greatest improvement**

	<b>Benefits beyond helping residents</b>	<b>Infrastructure for sustainability</b>	<b>Senior leadership engagement</b>
<b>Level 1</b>	The change improves efficiency and makes jobs easier.	Staff, facilities and equipment, job descriptions, policies, procedures and communication systems are appropriate for sustaining the improved process	Organisational leaders take responsibility for efforts to sustain the change process. Staff generally share information with, and actively seek advice from, the leader.
<b>Level 2</b>	The change improves efficiency but does not make jobs easier.	There is an appropriate level of staff, facilities and equipment, but inadequate job descriptions, policies, procedures and communication systems for sustaining the change	Organisational leaders don’t take responsibility for efforts to sustain the change process. Staff generally share information with, and seek advice from, the leader.
<b>Level 3</b>	The change does not improve efficiency but does make jobs easier.	The levels of staff, facilities and equipment to sustain the change are not appropriate although job descriptions, policies, procedures and communication systems are adequate	Organisational leaders take responsibility for efforts to sustain the change process. Staff typically don’t share information with, or seek advice from, the leader.
<b>Level 4</b>	The change neither improves efficiency nor makes jobs easier.	The staff, facilities and equipment, job descriptions, policies and procedures and communication systems are all not appropriate for sustaining the change	Organisational leaders don’t take responsibility for efforts to sustain the change process. Staff typically do not share information with, or seek advice from, the leader.

The highest possible total score for the sustainability tool is 101. According to the authors of the tool preliminary evidence suggests that a score of 55 or higher offers reasons for optimism that sustainability will be achieved. Figure 6 shows the data for all facilities at the ‘pre’ and ‘post’ points in time. Given the small difference in the number of facilities for which data was supplied at the two points in time the data is expressed as percentage of facilities. As can be seen the percentage of facilities with a total score greater than 90 increased markedly over the course of the program. Only 11 facilities scored less than 55 at project commencement, with only 2 facilities having a total score of less than 55 at project end. One of the surprising aspects of the data is the high total scores at project commencement, suggesting that participating facilities were already favourably inclined towards achieving sustainability even early on.

**Figure 6 Total sustainability scores – all facilities**



The data from use of the sustainability tool indicates ‘reasons for optimism’ although experience with previous evaluations suggests that sustainability is challenging for a project-driven model of change. Many projects relied on dedicated funding for education which begs the question of how this will be maintained beyond the life of each project. The dependence on ‘champions’ and ‘link staff’ by most projects to drive improved clinical practice will require continued commitment by facility management, and the sector more broadly, if the positions are to be maintained.

The views of those involved in the projects regarding the issue of sustainability were quite mixed. Some were confident that sustainability was not a problem:

*The thing that separates it from other projects that I've been involved in is the money was there initially to provide the education and all those things. You don't require that finance to continue to provide the program. Once staff are educated, once you've got that model of care in place, it doesn't cost anything to maintain it. It's all about internal education. Simple little things like we've introduced the EBPRAC project on our orientation check lists for staff. We run sessions about it. When our best practice champion pulls up stumps and walks out of here on the last day of (month), there's no reason why it can fall over because that person isn't required to be ... they're not the person that's doing the person-centred care. The staff that are on the floor, that are*



*already rostered in the areas are the people that provide the person-centred care. The best practice champions introduced it, educated around it and monitored it as it's gone along and when they step away it should be entrenched and that's why I firmly believe that it's a sustainable program. (F)*

*It's part of our calendar now so it's just normal every day therapy that they have and it's on the calendar so it's consistent so it causes no stress to the unit, it causes no extra, we don't need any extra staff and it just flows into a therapy calendar. (F)*

Others framed the issue of sustainability in terms of other factors such as establishing links with the funding of residential aged care, the perceived value of the changes and the ability to incorporate changes into normal practice:

*We've embedded the three monthly assessments into the ACFI funding instrument determination which they have to do anyway. I think that sort of approach will make those assessments, you can almost guarantee that they will be done. (P)*

*It's got to come down to the perceived value from the staff. If they see it making their job easier, better, then I think that's going to almost guarantee the continuation. (P)*

*These projects are funded and then there's no money to sustain it. How do you build it into your normal workplace? That's what we have to do and that's our struggle now. (F)*

When the three behaviour management projects met at the EBPRAC workshop in February 2010 suggestions for achieving sustainability included having resource nurses to work with facilities across regions. It was not felt that the existing Dementia Behaviour Management Advisory Services could assist with this as the focus of that service is on the immediate needs of individual clients rather than working with staff in a systematic way.

When the three palliative care projects met at a workshop in Melbourne in July 2010 it was generally agreed that advance care plans, palliative care case conferences, and end-of-life care pathways could be sustained but that each was dependent on maintaining awareness and providing appropriate education. Palliative care case conferences require input from general practitioners and/or nurses with some expertise in palliative care in order to work effectively. As long as that input is available the case conferences should be sustainable. An interesting aspect of the end-of-life care pathways is that one reason staff like a pathway is that it is a 'live' paper-based document that is used regularly, as opposed to the standard care plans maintained by facilities which tend not to be referred to much on a day-to-day basis. With many facilities moving to electronic records it is not clear what will happen with use of paper-based end-of-life care pathways.

Comments from other projects in their final reports supported the importance of maintaining the infrastructure for sustainability and senior leadership engagement, as indicated in the results from the sustainability tool. For some projects an important issue is whether links established with outside services will be maintained. For example:

- Links between facilities and clinicians from the local community with expertise in wound management (wound management project).
- Links with local community palliative care services to provide input into case conferences and monthly reviews (palliative care project).

One important issue is that of staff turnover, with staff trained by their involvement in EBPRAC projects resigning from participating facilities, generally viewed as a 'loss' to what has taken place.

However, some projects pointed out that many of those staff end up working elsewhere in residential aged care, a case of ‘our loss is someone else’s gain’.

The pain management project was notable for three of the participating five facilities allocating funding to employ someone to work in a dedicated pain management role, which should make a significant contribution to ongoing sustainability.

The project which achieved arguably the best and most consistent improvement in resident outcomes raised serious doubt about the sustainability of their achievements. The project was critically reliant on the use of mentors but the mentors (who gained a good knowledge of the capabilities of facility staff by their involvement with those staff) were unable to identify any facility staff with what they describe as the ‘three essential conditions required for the mentoring role’:

- The required skills and attitudes.
- The time to undertake the role.
- The distance from the day by day responsibilities and decision making that is required to enable staff members to see the mentors as a safe, neutral person able to hear their concerns without having to act (HC behav final report, p 47).

The conclusion from the project is that this combination of skills and contextual conditions is not readily available within residential aged care, thereby limiting its ability to be replicated.

One of the components of sustainability referred to earlier (maintaining attention to the problem addressed by the program) is in part the responsibility of individual facilities and the larger provider organisations to which they belong. The lead organisations also have a role to play. Many of the lead organisations, and the individuals involved in those organisations, have had involvement in either residential aged care or evidence-based practice in the past and are likely to maintain that involvement in the future. It is unlikely that the issue of evidence-based practice will fade away any time soon. There is a potential role for government in maintaining the momentum developed in the EBPRAC program which, in part, has already occurred with the decision to make EBPRAC an ongoing program.

## **8 Dissemination**

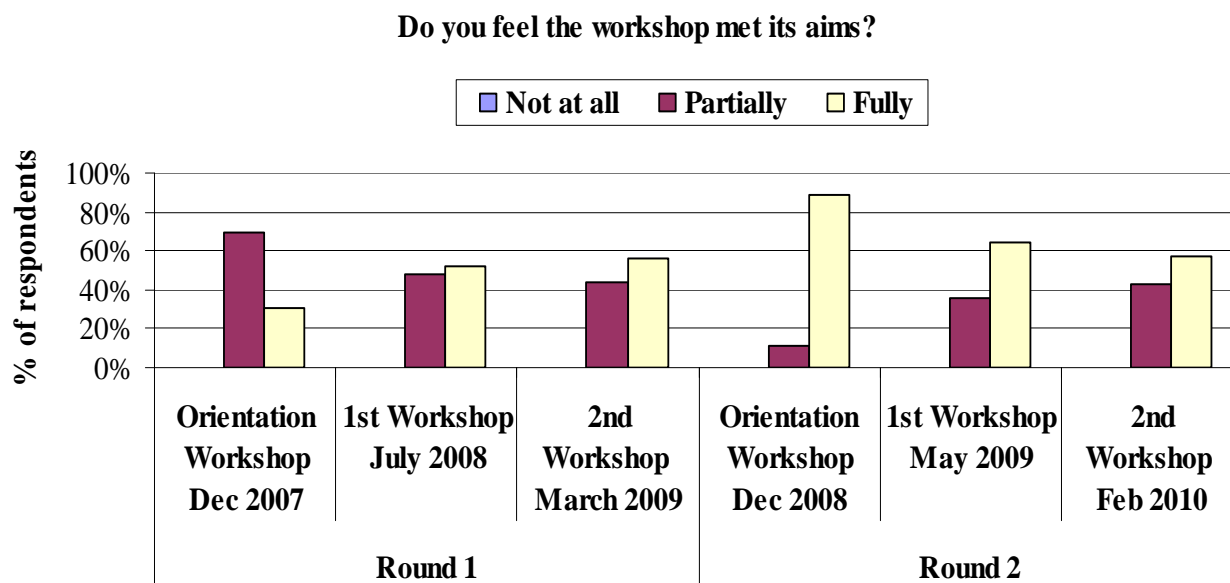
The evaluation included an assessment of planned dissemination such as the national workshops that formed a key part of the program and unplanned dissemination activities that might occur within the program, including informal networks and communities of practice within and between projects or facilities.

### **8.1 National workshops**

Six workshops were held during the EBPRAC program (three for each round) with workshop participants invited to complete an evaluation form. Five of the workshops involved people from lead organisations and facilities and one (Round 2 orientation workshop) only included members of lead organisations and evaluators. The Round 2 orientation workshop was notable for best meeting the workshop aims and the Round 1 orientation workshop for least meeting the workshop aims (Figure 7). This vindicates a decision not to include facility staff in the Round 2 orientation workshop to focus more on the responsibilities of lead organisations and the program evaluators. Although the extent to which the aims were fully met in the subsequent Round 2 workshops declined compared to the orientation workshop the results from these two workshops were not that dissimilar to the results for the equivalent workshops in Round 1 and perhaps reflect the difficulty

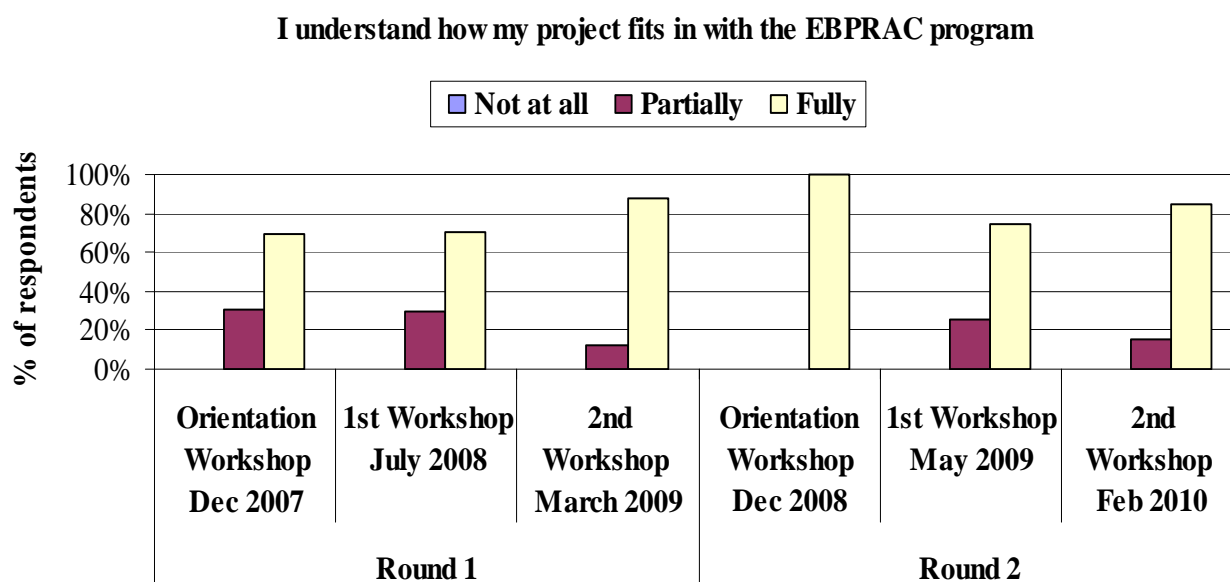
of achieving workshop aims with a more diverse group of attendees i.e. people from lead organisations and participating facilities rather than just people from lead organisations.

**Figure 7 EBPRAC workshops – were the aims met?**



In Round 1, the understanding of ‘how my project fits with the EBPRAC program’ increased over time (Figure 8). For Round 2, the highest rating occurred at the orientation workshop, with a subsequent decline in understanding of ‘fit’ in the 1<sup>st</sup> and 2<sup>nd</sup> workshops, although the results are similar to the equivalent workshops in Round 1. Again, this probably reflects the more diverse group of attendees at the 1<sup>st</sup> and 2<sup>nd</sup> workshops, compared to the orientation workshop.

**Figure 8 EBPRAC workshops - understanding of ‘fit’ with the program**



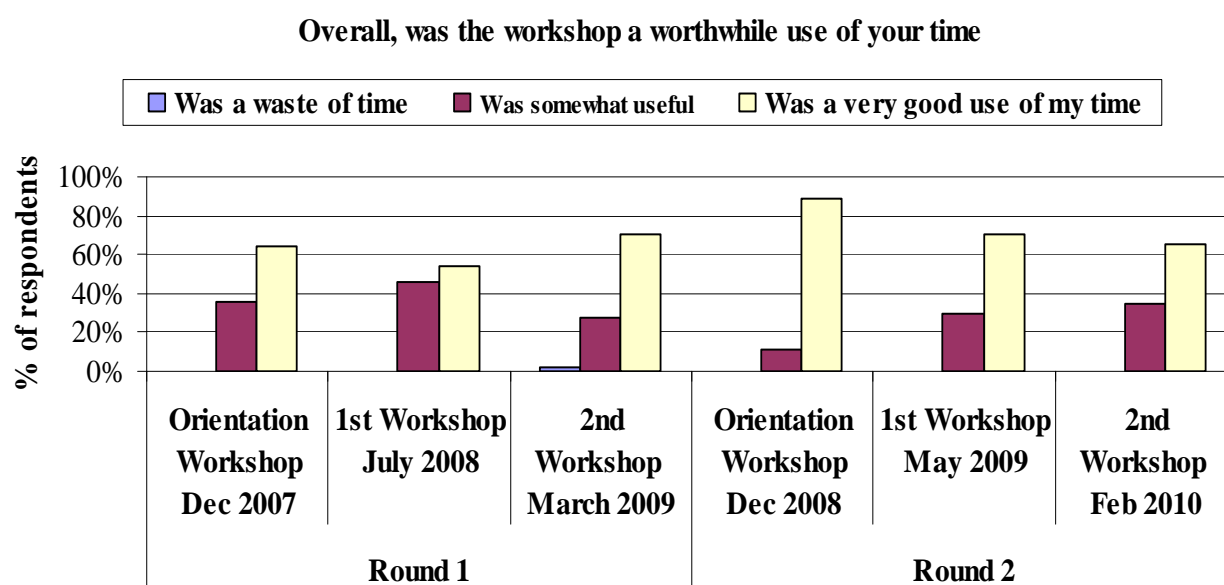
Across all six workshops 81% of participants found the workshop facilitators to be ‘very helpful and approachable’ and 18% found the facilitators to be ‘sort of helpful and approachable’, with only one person at one workshop finding the facilitators to be ‘not helpful or approachable at all’.

The evaluation form included two questions on networking and collaboration at the workshop. Across all six workshops 86% found that ‘networking and collaboration with other members of my project’ was ‘very useful’ and 52% found ‘networking and collaboration with other projects’ was ‘very helpful’. Nobody at any of the workshops thought that networking and collaboration with their own project was not useful and only 1.6% thought that networking and collaboration with other projects was not helpful.

The feedback form sought responses to the question ‘are you leaving this workshop with any new strategies or ideas to improve your project?’ This question was not asked at the last of the Round 1 workshops as it was felt to be inappropriate at that relatively late stage in the project cycle but for the other five workshops a very high percentage (89%) responded that they were leaving the workshop with new strategies and ideas.

The final question on the evaluation form asked whether the workshop had been a worthwhile use of participants’ time. Again, the Round 2 orientation workshop fared best in this regard. Only one person at one workshop thought the workshop was a waste of time, with everyone else finding the workshops to be useful to some degree (Figure 9).

**Figure 9 EBPRAC workshops – a worthwhile use of time?**



The evaluation form included open-ended questions about the strengths and weaknesses of the workshops, any new ideas that people were leaving the workshops with and suggestions for future workshops. Responses were very varied but largely support the results summarised above. Networking, interaction and the sharing of ideas were repeatedly raised as strengths of the workshops. Many respondents indicated that having longer workshops would be beneficial. There were many comments, both positive and negative, about various aspects of the way in which the workshops were organised including start/finish times, location of venues, size of venues, and transport to and from venues.

In summary, feedback from those attending the EBPRAC workshops indicated that the workshops largely met the workshop aims, assisted in understanding how individual projects fitted within the program, were a worthwhile use of time and were a useful way of promoting networking and collaboration, particularly between members of the same project.

## 8.2 Links between projects and communities of practice

### 8.2.1 Links between projects

The links that developed over the course of the EBPRAC program both within and between projects varied according to the different nature of the projects; particularly, according to whether content knowledge and leadership was concentrated in one organisation or more dispersed. Most activity was focused on building relationships within consortiums, especially between lead organisations and participating facilities, rather than between projects or between facilities.

An example of links within and between projects is the DATIS meds project in Round 1, led by the Drug and Therapeutics Information Service based in Adelaide, which involved a consortium that included the National Prescribing Service and a division of general practice in South Australia. The project built on previous collaborations between the three agencies, which together had contributed to the resource base of the National Prescribing Service. This collaboration continued into Round 2, with members being part of a consortium lead by the North East Valley Division of General Practice which used the same methodology (academic detailing) and resource base (National Prescribing Service). Similarly, the oral health project in Round 1 used the Australian Research Centre for Population Oral Health based at the University of Adelaide as the project's external evaluator, building on a previously established relationship with the South Australian Dental Service (the project lead).

In some projects, EBPRAC provided the opportunity to realise long-held plans for collaboration between project partners. An example is the MU behav project where the local Primary Health Care Partnership and the School of Rural Health at Monash University had been seeking an opportunity to work with McCarthy Psychology Services to provide support in a way that addressed the specific needs of rural facilities. Similarly, the UTS behav project was a collaboration of well established aged care/dementia research centres (at La Trobe University, University of Technology Sydney and Queensland University of Technology) which had developed a similar philosophy and approach to care, and sought an opportunity to collaborate on a methodology and resource kit which could be applicable more generally.

In order to facilitate links between projects, a number of program-wide activities were undertaken, including the convening of six program workshops (one orientation and two annual workshops per Round), discussed in more detail in Section 8.1. In addition, three program-level email list-servers were established by the program evaluators to facilitate ongoing communication between projects, one for all lead organisations, one for the three palliative care projects in Round 2 and one for the three behaviour management projects, also funded in Round 2 (see Section 8.4 for details).

At the Round 2 workshop in February 2010, 10 people from the three behaviour management projects attended a meeting with the program evaluators. Discussion focused on the progress of each project and the major issues that had arisen along the way. Consideration was also given to the evaluation tools which were being used to collect data and whether there were opportunities to collect consistent data across the three projects to provide a more comprehensive picture of overall impact. All three projects used the same tool to assess the design of the physical environment within facilities but no other tools were identified to enable consistent data collection. The three projects collaborated in a symposium at the Hammond Care Conference in July 2010, where each of the project leads described the objectives, processes and preliminary outcomes of their individual projects.

A similar exercise was undertaken with the three palliative care projects at the Round 2 February 2010 workshop, resulting in a two-day workshop in Melbourne in July 2010, attended by 23 people from the three projects. The workshop provided an opportunity to share the lessons learnt from the

EBPRAC program, identifying issues and recommendations across six key domains regarding the delivery of evidence-based palliative care within residential aged care:

- How to identify residents that require palliative care.
- Key processes of palliative care.
- End-of-life care pathways.
- Core educational topics and learning packages/resources.
- Education learning packages/resources that are not currently available or have not been used but have been identified.
- Sustainability and generalisability.

The outcomes of the workshop were the subject of a report to DoHA in September 2010 and are not repeated here. The workshop was the most successful example within the EBPRAC program of developing links between projects.

Some of the largest providers in residential aged care were involved in the program e.g. Uniting Church aged care services (UnitingCare Ageing NSW.ACT, Blue Care in Queensland and Uniting Aged Care in Victoria), Baptist Community Services, Illawarra Retirement Trust, Bupa Australia, and Masonic Care. There is some evidence from stakeholder interviews of enhanced links within these organisations as they seek to capitalise on the lessons learned and resources developed as a result of participation in the EBPRAC projects. An example is the University of Queensland/Blue Care Palliative Approach Toolkit which has been graphically designed and distributed as part of the project. Blue Care subsequently indicated a strong interest in printing copies for all of their 60 facilities in Queensland at its own expense. A similar interest has been expressed by organisations that participated in the project including Padman Care (which owns 14 facilities in South Australia), Brightwater (20 facilities in Western Australia) and Brisbane South Palliative Care Collaborative, which supports 80 facilities in Queensland. For providers that participated in more than one project there is the potential to extend the impact more broadly within these organisations.

Several projects were built on existing relationships between lead organisations and individual facilities, and these are likely to continue. An example of ongoing capacity building activities is a local rural conference planned by the MU behav project. Management and staff from rural facilities in the Loddon-Mallee region in Victoria will be invited to attend, with contributions to the cost of the conference coming from project funds and the Bendigo-Loddon Primary Care Partnership. The conference will consist of short presentations by each of the seven facilities involved in the project.

In 11 projects the lead organisation ‘came in from the outside’ to work with a group of facilities. The remaining two projects involved what are effectively the ‘research and development’ arms of large providers (Hammond Care in New South Wales and Blue Care in Queensland), both primarily including facilities from other providers (6 out of 7 and 4 out of 6, respectively). Hence, residential aged care providers can be considered the junior partner in the program, which is accentuated by the turnover of staff in the sector (particularly facility managers) compared to the relatively stable staffing of most lead organisations. It seems reasonable to conclude that ongoing links across projects are more likely to involve the lead organisations and their existing networks, rather than participating facilities.



## 8.2.2 Communities of practice

The concept of ‘communities of practice’ was originally based on the idea that knowledge should not be separated from practice and that learning takes place in social relationships. Referring back to that original work this has been summarised more recently:

‘Many of the exchanges of practical information and problem-solving happened during informal gatherings where tradesmen exchanged stories about their experience. Novices could also consult with experts in a non-threatening environment. Through this process, gaps in the practice were identified and solutions were proposed. Individuals might apply the solution in their own practice, and the outcomes were fed back to their colleagues for further refinement of the solution. Eventually these informal communications became the means for sharing information for improving practice and generating new knowledge and skills’ (Li, Grimshaw et al. 2009, p 2).

This quote describes very well some of the most successful aspects of the EBPRAC program which involved either individuals or small groups working together or learning together as part of mentoring sessions, 1:1 or small group education, PDSA cycles, action research meetings, case conferences or having an experienced educator or expert in the field spending time in the workplace. The evidence from the literature about the extent to which these activities contribute in the longer term to the uptake of evidence-based practice is not clear (Li, Grimshaw et al. 2009).

Communities of practice within health care have primarily focused on ‘fostering social interactions at the workplace or during task-oriented activities (e.g. a journal club)’ and have some or all of the following characteristics:

- Social interaction – interacting in formal or informal settings.
- Knowledge-sharing – sharing relevant information between individuals.
- Knowledge-creation – developing new ways to doing things.
- Identity-building – the process of acquiring an identity.

As communities of practice become more mature there is tendency to develop all four characteristics (Li, Grimshaw et al. 2009).

Bate and Robert identified the importance of the following factors in determining the success or otherwise of a community of practice: ‘strong personal connections, a high degree of cognitive interdependence among participants and shared sense of identity and belongingness with one’s colleagues and the existence of cooperative relationships’ (Bate and Robert 2002, p 24).

The EBPRAC program helped to facilitate communities of practice at the level of individual facilities but these may become quite fragile as project support is withdrawn. Such local arrangements embody the characteristics of communities of practice such as social interaction and the sharing of knowledge. In some projects there was an element of identity-building, particularly for personal carers who arrived at a different understanding of their role:

*Staff who generally had been seen as not formally involved in that side of care of residents, have had that recognition, that opportunity to learn, have just actually thrived. (P)*

*The PCAs and the domestic services staff, hotel services, gardeners, maintenance people have been far more receptive because their roles are not as carved in stone, and what they have been particularly receptive about is being recognised as being part of the care. (P)*

The important question is the extent to which, if at all, a community of practice can be facilitated across the residential aged care sector, bearing in mind that a community of practice involves practitioners. Existing mechanisms in the form of professional associations and networks tend to involve managers and academics rather than nurses and personal care workers.

Some aged care providers are investing in practice development programs, which are designed to incorporate a broader spectrum of participants. Practice development has been described as ‘a function of the relationship between the evidence, context and facilitation’ (Tolson, McAloon et al. 2005). In their review of a practice development model in Scotland which used a ‘virtual college based on a situated learning model’, Tolson et al found that while there were some advantages (confidence building, strengthened sense of professional identity), the challenges were not dissimilar to those experienced in the EBPRAC program, in particular the absence of a learning-at-work culture and lack of time. There are some cultural and resource implications if communities of practice are going to be viable and sustainable within the aged care sector.

### 8.3 Project dissemination

This section reports on dissemination activities carried out by projects, comprising data from the four progress reports submitted by each of the five Round 1 projects (covering the time period from October 2007 to September 2009) and the four progress reports submitted by the eight Round 2 projects (covering the time period from October 2008 to September 2010).

Project officers were asked to classify their dissemination activities by purpose. Between them, the 13 projects carried out a total of 1,683 dissemination activities to support capacity building and sustainability. This included, for example, presentations to staff at participating facilities. A total of 488 dissemination activities were designed to support generalisability, for example, through publicity and consultations involving the wider aged care community. An additional 32 dissemination activities were classified as serving both purposes, while 14 activities were not coded. Table 22 summarises the kinds of dissemination activities undertaken by projects. The accuracy of some of the data may be influenced by differing interpretations about what constitutes a dissemination activity.

The most commonly reported types of activities involved presentations and talks to staff, either within a single residential aged care facility or to mixed groups of staff from several facilities or agencies. Together, presentations to staff accounted for approximately 60% of all dissemination activities. This type of activity supports capacity building and sustainability.

Projects reported using a range of other methods of dissemination. Using email communications as a way of disseminating information was popular, as was publishing stories in newspapers, newsletters, and magazines. A significant number of presentations were given at local, state and national conferences. Additionally a small number of presentations were reported to have been delivered at international conferences. Other methods of dissemination that were only used a few times by a small number of projects included stories on radio and television. No peer-reviewed journal articles were published in the literature by projects during the course of the EBPRAC program. However, there are plans to write journal articles as project leads seek to capitalise on project outcomes and the potential to contribute to the sector more broadly.

More than 14% of dissemination activities were classified as ‘other’. These activities primarily included presentations at residential aged care facilities that not only included staff but also residents and families, talks at residents’ meetings and other focus groups and resident information sessions, phone calls, teleconferences and reporting to steering committees.

**Table 22 Types of dissemination activities - October 2007 to September 2010**

Dissemination Activity	Total activities	Percent of activities	Range across projects
Presentation or talk to staff at one residential aged care facility	910	41.05	0 – 156
Presentation or talk to staff from more than one residential aged care facility	138	6.22	0 – 41
Presentation or talk to staff from one or more services or agencies	257	11.59	0 – 55
Story in the local newspaper	19	0.86	0 – 8
Story in a local magazine or newsletter	30	1.35	0 – 7
Story in a professional or industry magazine or newsletter	24	1.08	0 – 4
Story on radio	4	0.18	0 – 2
Story on television	1	0.05	0 – 1
Presentation or poster at a local conference	15	0.68	0 – 5
Presentation or poster at a state/territory conference	15	0.68	0 – 6
Presentation or poster at a national conference	29	1.31	0 – 7
Peer reviewed journal article	-	-	-
Information provided on a website	52	2.35	0 – 36
Email communication to groups/lists	200	9.02	0 – 153
Brochures, leaflets or posters in health, aged care and community settings	57	2.57	0 – 22
Project newsletter	32	1.44	0 – 9
Other (please describe briefly)	320	14.43	0 - 117
Multi-coded/not coded	114	5.14	0 – 49
	<b>2,217</b>	<b>100%</b>	

As is evident from the data relating to ranges of activities across projects, at least one project did not undertake any activities for each type of dissemination activity. This may reflect projects having differing priorities and in regards to methods of dissemination, or may just be the result of differences in interpretation and reporting of dissemination.

As was the case for Round 1 projects, a number of Round 2 final project reports have documented additional dissemination activities following the submission of their final progress reports. These activities included presentations at state and national conferences, articles in newspapers and newsletters, and media releases. However, data about these activities has been excluded from this report to minimise inconsistencies, as it was only reported by a minority of projects. It is nonetheless an encouraging indicator that projects are continuing to disseminate their work, and it is anticipated that more dissemination activities will be undertaken subsequent to the completion of projects.

Project officers were also asked to estimate the number of people who heard or read about the project via the dissemination activity, and to indicate whether anyone who heard about the project had followed up by seeking more information. Table 23 presents this information for all dissemination methods.

**Table 23** *Persons reached and level of follow-up for dissemination activities*

Dissemination Activity	Reach	Follow-up	
	Persons reached	Number of activities followed up	Number of people who follow-up
Presentation or talk to staff at one residential aged care facility	7,975	218	492
Presentation or talk to staff from more than one residential aged care facility	1,662	42	189
Presentation or talk to staff from one or more services or agencies	3,244	66	339
Story in the local newspaper	34,016	7	17
Story in a local magazine or newsletter	5,971	4	51
Story in a professional or industry magazine or newsletter	109,217	7	16
Story on radio	unknown	2	10
Story on television	unknown	0	0
Presentation or poster at a local conference	747	9	79
Presentation or poster at a state/territory conference	1,622	6	34
Presentation or poster at a national conference	3,374	12	53
Peer reviewed journal article	-	-	-
Information provided on a website	1,393	9	24
Email communication to groups/lists	3,909	73	300
Brochures, leaflets or posters in health, aged care and community settings	8,347	20	135
Project newsletter	18,869	7	31
Other (please describe briefly)	5,660	89	467
Multi-coded/not coded*	3,311	25	863
	<b>209,317</b>	<b>596</b>	<b>3,100</b>

\* Multi-coded items were dissemination activities that were assigned more than one code, 'not coded' items were dissemination activities which were not assigned a code. In both cases it was not possible to allocate the dissemination activity to any of the other categories in the table.

It should be noted that these numbers are estimates only and should be treated with some caution. As not all projects provided this information for all activities, it is not possible to include the total number of activities in this table.

Presentations and talks to staff at residential aged care facilities and other agencies had the most follow-up, suggesting this is an effective (albeit time-consuming) way to reach people who are genuinely interested. Talks which also included residents and families (reported as 'other') had a similarly effective reach. Email communication to groups/lists, and brochures, leaflets or posters in health and community settings also had significant reach and follow-up.

#### 8.4 List servers

The EBPRAC list server was established to promote information exchange and discussion between the program evaluation team and the projects. The list server email address is: [ebprac\\_list@mailman.uow.edu.au](mailto:ebprac_list@mailman.uow.edu.au). There were 46 emails sent to the list server between March

2008 and December 2010. As of December 2010, the list server had 54 members. After some initial activity the use of the list server petered out as other communication channels became established e.g. between the program evaluation team and individual projects, between DoHA and individual projects, between individual projects.

Two more list servers were set up to facilitate information exchange and discussion between Round 2 projects related to palliative care and behaviour management ([ebprac\\_palliative@mailman.uow.edu.au](mailto:ebprac_palliative@mailman.uow.edu.au) and [ebprac\\_behaviour@mailman.uow.edu.au](mailto:ebprac_behaviour@mailman.uow.edu.au)). The behaviour management list server had 16 members in total, but was never used.

The palliative care specific list server was created on 17 June 2009, with 18 members. Since that time it has been used 16 times. Although it was anticipated that the list server would be used by projects primarily to share tools and resources that have been used and/or developed by each project, it was mainly used in the lead up to EBPRAC Palliative Care Workshop held in July 2010, to communicate about the logistics of the workshop.

## **8.5 Centre for Health Service Development website**

The Centre for Health Service Development established a website to disseminate information about the EBPRAC program (<http://ahsri.uow.edu.au/chsd/ebprac/index.html>). The content of the site includes general information about the program, and summaries of Round 1 and Round 2 projects (including hyperlinks to organisations' websites about their respective EBPRAC project). Additionally, presentations by the program evaluation team are available on the website, as well as details of the evaluation framework.

## **9 Appropriateness**

The evaluation of the EBPRAC program included a consideration of the appropriateness of the program - the consistency of the program with government priorities, potential consequences of not addressing the issues which have arisen, and the identification of gaps in the current program.

### **9.1 Alignment of EBPRAC with Government priorities**

The EBPRAC program is among a range of initiatives developed in recent years in response to changing demographics, client preferences and the increasingly complex care requirements facing the aged care and health sectors. New programs have been introduced and existing programs enhanced to address the attendant pressures within acute hospitals, expansion of community care service options and the impacts of disease-specific and end-of-life care issues which are increasingly part of aged care services (e.g. dementia-specific services, palliative care programs). Within this context, service providers have been required to change their practices and provide opportunities to ensure staff have the skills and resources to provide quality care.

At the same time, evidence-based guidelines specifically for residential aged care have been developed to address concerns such as palliative care, pain management and falls prevention. The development and dissemination of these resources have sometimes been supported by education and training initiatives funded by governments, at others times not. Increasingly, these efforts have been enhanced through the development of partnerships between academic institutions and aged care providers in a bid to ensure research, education and training are appropriate to the needs of the sector. Similarly, the federal government has invested in a range of initiatives to strengthen the capacity of the aged care sector, particularly to 'provide additional training opportunities for existing staff and to create better career paths for all care workers' (Department of Health and Ageing 2010, p 69). This includes a combination of financial, workforce and systemic approaches:

- The introduction of the Aged Care Funding Instrument in March 2008 which, through the use of validated assessment tools, provides funding based on the assessed need of residents, rather than the care provided.
- The Practice Incentives Program General Practitioner Aged Care Access Incentive which provides a financial incentive of up to \$5000 per year for general practitioners to provide increased and continuing services in residential aged care facilities, in recognition of the difficulties faced in providing care in these facilities.
- The Aged Care Nursing Scholarship Scheme and Joanna Briggs Aged Care Clinical Fellowships which provide opportunities to undertake further education.
- The Dementia Care Essentials Program which provides accredited training in dementia care, including care planning, communication, and managing challenging behaviour.
- The Aged Care Education and Training Incentive Program announced in the 2010/2011 Budget which will provide payments to nurses and personal care workers to undertake further studies to enhance their career.
- The Teaching Nursing Homes program which will provide funding of \$4 million over four years to strengthen the links between the aged care sector, research and training institutions by supporting the establishment of Teaching Nursing Homes across Australia.

The EBPRAC program fits well within this overall strategic context of addressing the changing needs of residential aged care. It has provided an opportunity to not only extend the reach of evidence-based practice guidelines but also to embed the guidelines in daily practice. The focus of the program has been on implementing existing evidence, although there has been some degree of developing new evidence as the program has progressed, in keeping with the dynamic nature of how evidence is generated.

The EBPRAC program has built on and enhanced existing initiatives. However, there is also an element of duplication. This is particularly the case with the projects targeting dementia, pain and palliative care, which parallel the significant investments by other parts of DoHA. Examples include the Care Planning Sub-Program of the Local Palliative Care Grants Program, which funded 33 projects nationally, over half of which focused on end of life care planning, predominantly in aged care settings; and the Dementia Behaviour Management Advisory Services funded under the Dementia National Priority Initiative, whose role is to 'build staff capacity in aged care services so that they gain increased knowledge and confidence in understanding the needs of people with dementia and in managing care recipients presenting with Behavioural and Psychological Symptoms of Dementia' (Department of Health and Ageing 2011, p 4).

## **9.2 Likely consequences of not addressing continuing community needs or problems**

Aged care providers will continue to need a workforce which has contemporary clinical skills to underpin effective care delivery. Therefore, there is a high likelihood of the need for ongoing investment and focus of effort (by government and/or the sector) to facilitate access to and application of evidence-based practice. Programs such as EBPRAC have a role to play in enabling the sector to meet the needs of an older and increasingly diverse population.

The experience of the EBPRAC program has confirmed that the key success factors identified in the literature review undertaken at the commencement of the evaluation are a useful mechanism for 'framing' the implementation of evidence-based practice in residential aged care (see Section 3.11). Stakeholders highlighted the importance of leadership, the main elements of which have been identified (in a systematic review funded by DoHA) as inspiration, transformation, direction, trust,



empowerment, creativity, innovation and motivation (Jeon, Glasgow et al. 2010). Research in New South Wales indicates that the change management aspects of a facility manager's role have been 'largely ignored or taken for granted' and that there are many ways in which facility managers can be supported in managing change (Shanley 2005).

The lessons learnt from the EBPRAC program about the importance of leadership indicate that any future initiatives to improve clinical practice, whether the rationale is based on implementation of evidence-based practice or not, should be underpinned by a systemic approach to developing the particular skill sets and attributes that aged care clinical managers require. Without a focused effort on developing clinical leadership there will continue to be limits to the extent to which evidence-based practice is initiated, implemented and sustained, within individual facilities and across the sector.

The interviews with high level stakeholders (see Section 11) identified particular barriers to the sustainability of evidence-based practice – reduced numbers of qualified staff; a culture of 'compliance' which inhibits innovation; limited opportunities for staff to participate in education and training; and variable access to information technology. There was also recognition of the need for a national approach to dissemination of evidence-based resources. Evidence-based practice does not happen in isolation from these broader considerations.

These challenges have been recognised by the Australian Government, which has commissioned the Productivity Commission to undertake a review of the aged care sector. The mandate of the review includes 'social, clinical and institutional aspects of aged care', consideration of 'options for reforming the funding and regulatory arrangements' and 'transitioning ... to a new system that ensures continuity of care' (Productivity Commission 2010, pp 2-3). These foundational aspects of residential aged care need to be addressed if the education delivered, resources developed and systems implemented under EBPRAC are to be sustained and applied to the sector more generally.

### **9.3 Gaps in the current Program**

The clinical areas chosen as priorities for the EBPRAC program were based on an internal DoHA review of issues identified from aged care complaints and accreditation processes which are generally consistent with the clinical areas identified by the high level stakeholders who were interviewed during the evaluation.

One of the gaps in the program was the missed opportunity to develop a degree of coherence within the program, and between the individual projects. This was particularly evident in Round 1, where it was recognised early on by project leads that there were linkages between each of the clinical areas e.g. improved oral health can reduce pain and improve nutrition, improved nutrition can reduce the risk of falls. There is little evidence that these connections were actively pursued, and the email list-servers to promote communication between projects were underutilised. The clinical areas addressed in Round 2 provided more coherence, with three palliative care projects and three projects targeting behaviours of concern, which provided the opportunity to identify common tools and lessons. However, no links were established between projects focused on different areas of practice. Perhaps understandably, the overall focus has been for each project to meet the requirements in their contract, with coordination between projects a secondary consideration.

A key advantage of the choice of project leads was that many of those involved in EBPRAC were also involved in other aged care and industry related projects. There is evidence that this has resulted in some cross-fertilisation between EBPRAC and the project leads' other activities.

Another gap, not so much in the program itself but the sector more broadly, has been the lack of coordination and coherence at a policy level, with major industry-wide initiatives underway simultaneously with the potential to impact on the delivery of the EBPRAC projects. Some projects reported a sense of ‘change fatigue’ amongst staff arising from a sector that is in a constant state of change. Some industry stakeholders who were participants on key industry committees convened by DoHA also had limited awareness of the program, or of its potential to impact on their deliberations. Similarly, initiatives were underway by State and Territory governments which also aligned, or had the potential to confound, the EBPRAC projects.

This theme of coherence and coordination at the policy and project levels is also reflected at the individual client level. There is increasing recognition of the importance of a holistic approach to care, rather than an issue-specific approach, and yet the EBPRAC program tended to focus on very specific aspects of care in isolation. The concept of ‘person-centred care’ was at the core of the behaviour management projects but increasingly this approach is being adopted more generally across health and aged care. While there is good evidence about the benefits of this approach for people with dementia, the uptake of person-centred care within the sector appears to be driven primarily because of a fundamental philosophy rather than the evidence base regarding its efficacy. The Aged Care Standards and the Code of Ethics for Residential Aged Care endorsed by key leaders in the sector espouse similar sentiments. Therefore a gap, which has been partly addressed by EBPRAC, is the evidence about how person-centred care can be well-implemented across the sector. This has implications for the way aged care is provided into the future, particularly the clinical outcomes of older people in care, and the staff and system which support them.

## **10 Cost implications for government and aged care providers**

EBPRAC is a complex program with several components, many of which interact in terms of their potential effects. Due to the nature of the evaluation and the information on the effectiveness of various components, the EBPRAC program can only be assessed indirectly from studies of similar interventions or from the opinions of key informants. Furthermore, many of the intended impacts have not been quantified, or would be extremely difficult to quantify. Several aspects of the impacts have a complicated causal relationship with potential health outcomes.

These factors severely limit the extent to which an economic evaluation can be performed. Therefore the principal aim of this section of the report is to identify the key cost implications of the program for government and providers, rather than undertake a full economic evaluation. Traditional economic evaluation methods (cost minimisation, cost effectiveness, cost utility or cost benefit analysis) are not feasible in a strict sense.

### **10.1 Cost implications for government**

Based on data provided by each project the inputs for the program have been quantified, both in terms of expenditure and in terms of full-time equivalent staff. However, there are some key issues that need to be considered:

- Inputs for the program included a significant component for evaluation.
- The projects were relatively short-term in nature. In addition they started from a situation in which there was effectively no existing program. Therefore there were significant ‘establishment’ costs involved (e.g. recruiting staff, establishing relationships, developing materials, ensuring project staff themselves were well trained). Over a longer time frame the proportion of costs related to these initial ‘establishment costs’ would be significantly reduced.
- Governance costs are also likely to be significant for projects of this nature initially, but are likely to diminish over time.

Projects were asked to estimate costs across four phases, distinguished by the purpose of the expenditure – project governance, project establishment, project implementation and project evaluation. The results are summarised in Table 24. There are some, mostly minor, differences between the total amounts for each project in this table and the budget for each project in Table 1 at the beginning of this report.

**Table 24 Estimated project expenditure by purpose of expenditure**

Project No.	Expenditure by phase of project (\$)				Total
	Governance	Establishment	Implementation	Evaluation	
1	193,558	33,060	726,573	107,485	1,060,676
2	90,865	62,000	271,310	357,890	782,065
3	153,240	33,275	808,045	107,220	1,101,780
4	1,300	31,000	1,139,940	123,000	1,295,240
5	166,588	48,671	195,554	96,647	507,460
6	130,785	41,816	427,299	64,979	664,879
7	-	20,000	435,341	260,784	716,125
8	97,500	13,500	507,253	137,100	755,353
9	95,288	125,165	381,464	271,563	873,480
10	173,239	115,065	879,583	210,363	1,378,250
11	242,991	45,094	288,670	104,764	681,520
12	248,173	27,847	475,707	138,146	889,873
13	29,856	111,636	846,353	166,155	1,154,000
<b>Total</b>	<b>1,623,383</b>	<b>708,129</b>	<b>7,383,092</b>	<b>2,146,097</b>	<b>11,860,701</b>
<b>% of total</b>	<b>14%</b>	<b>6%</b>	<b>62%</b>	<b>18%</b>	<b>100%</b>

To allow for the different amounts of money allocated to each project the same data is presented in Table 25 as percentages to give an indication of how each project allocated expenditure in proportion to the size of their budget.

The data in Table 24 and Table 25 should be treated with some caution as the amounts are estimates only. For example, it is very difficult in some cases to separate out expenditure on implementation from expenditure on evaluation when a particular activity (e.g. baseline auditing) may have been used both for evaluation and implementation (by feeding the results back to facility staff to inform goal setting and action plans). What is notable is the very high cost of evaluation for three projects (31%, 36% and 46%) which skews the average amount of money devoted to evaluation (18%). The median cost was 15%.

**Table 25** *Percentage of project expenditure by purpose of expenditure*

Project no.	Expenditure by phase of project (\$)				Total
	Governance	Establishment	Implementation	Evaluation	
1	18%	3%	69%	10%	100%
2	12%	8%	35%	46%	100%
3	14%	3%	73%	10%	100%
4	0%	2%	88%	9%	100%
5	33%	10%	39%	19%	100%
6	20%	6%	64%	10%	100%
7	0%	3%	61%	36%	100%
8.	13%	2%	67%	18%	100%
9.	11%	14%	44%	31%	100%
10	13%	8%	64%	15%	100%
11	36%	7%	42%	15%	100%
12	28%	3%	53%	16%	100%
13	3%	10%	73%	14%	100%
<b>Total</b>	<b>14%</b>	<b>6%</b>	<b>62%</b>	<b>18%</b>	<b>100%</b>

Table 26 summarises the expenditure, across all projects, of both salary expenditure and other expenditure devoted to implementation. For the purposes of data collection ‘other implementation expenditure’ consisted of three expenditure categories: payments to participating facilities, travel costs and other operating expenses. Implementation activities cost an average of \$59,000 per participating facility across the whole program. This gives an indication of what a differently structured program might cost, one where governance and establishment costs were borne by facilities (which might be quite low depending on the nature of the project) and there was no evaluation.

**Table 26** *Implementation expenditure per facility*

Expenditure item	Average cost
Salary expenditure on implementation per facility	\$36,000
Other implementation expenditure per facility	\$23,000
Total implementation expenditures per facility	\$59,000

Each lead organisation was asked to identify how much time was spent by each person employed on their project on the four project phases. The time spent on implementation activities was also estimated for each staff member (see Section 3.3.2 for details). The most time consuming aspect of implementation was the time spent establishing, organising and delivering the various education programs undertaken by each project which represented 12.9% of total project staff time. Details of the education and training are included in Section 5.1. The data were linked to data about project costs to arrive at a salary cost for training staff. Details of the number of staff trained and the salary cost of doing so are included in Table 27. On-the-job training was generally conducted 1:1.

**Table 27 Numbers of staff trained and training costs**

Form of staff training	Total trained	Average salary cost per staff member trained
Staff trained through training workshops:	4,767	\$103
Staff trained through academic detailing	1,333	\$163
Staff trained through other on-the-job training	1,119	\$322

The data in Table 27 provides an indication of the sort of trade off that needs to be made when deciding how education should be provided. As indicated elsewhere in this report the literature generally supports 1:1 and small group education as being more effective than larger ‘workshop’ style education (Forsetlund, Bjorndal et al. 2009) but this needs to be balanced against the additional cost, as indicated in Table 27. It is difficult to judge whether the mixed outcomes achieved by the various education and training programs in the EBPRAC program (see Section 4.4) are consistent with the findings from the literature but there is a general sense that staff prefer more individualised, small group, education.

Another important cost in the program has been the cost of identifying, working with and supporting local facilitators (e.g. champions, link nurses) in the 10 projects which adopted this approach to change management. The 177 facility-based champions trained as part of the EBPRAC program cost an average of \$2,197 in salaries and wages for project staff. No attempt has been made to allow for the different periods of time each week that these facilitators were employed in the role. As with all the other data that relies on estimates of how people have spent their time this cost is an estimate only.

Travel costs varied from a low of 2% to a high of 10% of total costs, averaging 7% across all projects, a total of approximately \$640,000. Not surprisingly, the lead organisations with the lowest travel costs (2% and 3%) were located in Melbourne with all their participating facilities in close proximity.

## 10.2 Cost implications for providers

For the purposes of identifying the cost implications of the EBPRAC projects for participating facilities data was collected on four main types of cost:

1. Costs of staff training.
2. Costs incurred as a result of the time spent by staff assisting in project implementation, other than the cost of staff training.
3. Any other costs associated with participating in the project i.e. any costs not included in cost categories (1) and (2).
4. Cost savings arising from the project.

All except five facilities received payments from the lead organisations for their participation, with the rationale for the payments being that costs (1), (2) and (3) had been incurred by facilities. The level and purpose of those payments are summarised in Table 28. The main reason for the payments was the cost of staff time to participate in various project activities – attend education, work as local facilitators, collect data and attend national workshops.

In the absence of common outcome measures across the 13 projects it is difficult to judge the extent to which the amount of money paid to facilities was associated with improved outcomes. Two of the projects with least evidence of any impact paid small amounts of money to facilities but so did

one of the projects with good evidence of a positive impact. For projects that paid larger sums of money to participating facilities the evidence of impact was very mixed.

**Table 28** *Payments to facilities and purpose of payments*

Project No.	Average payment per facility (\$)	Purpose of payments
1	35,718	Provision of champions. Backfill costs for staff attending education and training up to a maximum of 16 hours per staff member. Attendance at the EBPRAC national workshops.
2	12,100	Assistance with audits and surveys. Backfill staff involvement in practice development, offset costs of minor equipment purchases and other resources to enable facilities to implement the changes required.
3	34,067	Purchase of equipment. Backfill cost for resource nurses and staff to attend meetings. Environmental modifications.
4	18,990	Project liaison officers one day per week.
5	7,500	Link staff time involved in planning and implementation of the project.
6	460	Backfill staff when attending EBPRAC national workshops or workshop at lead organisation. Staff time for data collection.
7	2,679	Attendance of staff at education and training events. Data collection and other involvement in project activities.
8	952	Backfill for staff to attend training.
9	3,308	Participation in project meetings, data collection, backfilling to allow attendance at EBPRAC national workshops.
10	14,813	Backfill for staff to attend training.
11	7,378	Backfill for nurse champions.
12	15,000	Backfill associated with the training.
13	62,857	Funding for champions. Backfill for staff to attend training and management to attend workshops. Support participation in the consortium and implementation of best practice. Support staff in-house e learning. Environmental modifications.

The amount of time reported by projects as being spent by facility staff on project activities, in addition to the time involved in staff training, varied considerably between projects, as can be seen from the data in Table 29. There was no association between the amount of money paid to facilities and the reported amount of time spent on project activities by facility staff.

The data in Table 29 are not consistent, and tend to underestimate the time spent by facility staff on implementation, in part because of different interpretations of what is meant by the term 'implementation'. Comparison of the data in Table 29 with information elsewhere in this report (e.g. the changes in resident care summarised in Appendix 16) indicates that time spent on implementing the changes in practice have not generally been reported. As indicated in Section 3.4 the practice changes tended to be small scale and incremental in nature. It is not only difficult to estimate the extent of such changes, it is also difficult to estimate the time spent implementing those changes e.g. the additional time to use a new assessment tool, the time spent giving regular rather than PRN pain relief.



**Table 29** *Time spent by facility staff assisting with project implementation, in addition to participation in workshops and training*

Project No.	Average hours per facility	Description of activity
1	25	Staff had a role in timetabling of education and in sourcing backfill for these activities. In most facilities a team was formed which met on a regular basis (usually monthly) for about one hour. In two facilities the project team met on a monthly basis for about one hour with three facility staff to ensure strong communication. Some staff involved in completion of two assessment tools for participating residents. Staff assisted with the process of obtaining informed consent from residents.
2	300	Development and implementation of action plans.
3	Not known	Some additional time outside meetings and other training and workshops spent implementing interventions. The amount of time was not recorded and would have been difficult to separate out from time spent on other activities.
4	Not known	Coordination of evaluation activities. Care activities for residents.
5	No answer	Question not answered.
6	20	Extra time spent at the beginning of the project setting up network contacts and generally taking time to understand the purpose and requirements of the project.
7	360	Each facility manager or delegate spent time on data collection and entry and additional hours with other facility staff in discussing, developing and submitting Plan-Do-Study-Act cycles.
8	54	Facility staff spent time assisting with file audits, implementing care planning tools, piloting care pathways and reviewing application of proposed minimal data set.
9	36	Pilot facilities completed chart audits, trialled evaluation tools and provided feedback to the project team. Facility staff completed evaluation tools, attended EBPRAC workshops and spent time scheduling staff for training and education. Most facilities established committees. Senior facility worked to ensure pathways were used and introduced other staff to clinical resources folder. At some facilities staff spoke at meetings of residents and relatives about the project.
10	10	Attendance at case conferences.
11	Nil	No additional time that project staff are aware of.
12	43	External facilitation – approximately one hour per fortnight per person involved. Assessment for evaluation purposes.
13	170	E-learning not supported with backfill funds from the project. One facility provided study leave for some staff to complete it. One ran small group sessions in work time. For the most part facility staff completed in their own time.

Projects were asked if facilities incurred any other costs. One project estimated additional costs at just over \$2,500 per facility for items such as equipment, manuals, travel costs and miscellaneous office costs. All other projects did not estimate additional costs but gave examples of what would have contributed to increased costs:

- Infrastructure costs associated with use of office space by project staff.
- Various office costs including phone calls, computer use and photocopying.
- Time spent collecting data, either for project evaluations or additional resident assessments arising from project implementation.
- Equipment purchases e.g. syringe drivers, food preparation equipment, pressure reducing mattresses.

- Environmental modifications.
- Consumables such as wound care products and oral hygiene products.

Projects were asked if there was any evidence that project implementation had resulted in facilities being able to save any staffing costs in other areas. This question was generally not well answered and there were no estimates of any savings in staff time.

The only project which attempted to compare the cost of what was being implemented with potential savings was the oral health project which estimated the cost of providing oral health products for residents with natural teeth as approximately \$55 per year. For residents enrolled in the project who required dental treatment the average cost of that treatment was \$386 (based on Department of Veterans Affairs fee scale).

### **10.3 Summary**

The EBPRAC program represents a significant investment of government funds, a total of almost \$13 million across the 13 projects. An average of \$59,000 was spent on implementation costs for each facility. There was considerable variability in the quantum of resources devoted to the four project phases – governance, establishment, implementation and evaluation. An average of 18% of the total budget allocated to projects was spent on evaluation. In return, a large number of people received training in various aspects of evidence-based practice, at a project salary cost ranging from about \$100 to \$300 per person trained. The full cost of training is higher, including as it does salary costs for the person attending the training and other miscellaneous costs.

All projects offered facilities a financial incentive for participating in EBPRAC, with payments that ranged from \$460 to over \$60,000 per facility, averaging approximately \$12,500 per facility. Only five facilities did not receive any payment. It is difficult to judge the extent to which differences in payments to facilities were associated with differences in project outcomes.

Facilities incurred some costs for which they were not reimbursed. Based on the data provided by projects the additional time spent by facility staff participating in each project does not appear to have been excessive, although this is easy to under-estimate, if it can be estimated at all.

## **11 Perceptions of high-level stakeholders**

### **11.1 Introduction**

Interviews were conducted with ‘high level’ stakeholders comprising representatives of organisations involved in the funding and regulation of aged care (e.g. DoHA and the Aged Care Standards and Accreditation Agency); industry, professional and consumer peak bodies (e.g. Aged and Community Services Association, Royal College of Nursing and Alzheimer’s Australia); and aged care providers and researchers. The interviews were semi-structured, open-ended and conversational in tone. Not all questions were appropriate for all interviewees. Interviewees were provided with the opportunity to expand on their answers when it was needed, to clarify their answer, understand the rationale for their answer, identify any further options or to understand any implications of their ideas or comments. Questions covered issues such as impact and effectiveness, clinical indicators, sustainability, knowledge management, communities of practice, the context for change within residential aged care, and future directions.

### **11.2 Awareness, impact and effectiveness of EBPRAC program**

Participants were asked about their awareness of the EBPRAC program, and impressions of its impact and effectiveness. The overwhelming response was that there was limited or no awareness

amongst those who had not been directly involved in the program. Some indicated that the first they had heard of it was when approached to participate in the interview. Others commented that the extent of their knowledge of the program was through their attendance at one of the Better Practice seminars conducted by the Aged Care Standards and Accreditation Agency.

For those who had been involved in the program the feedback was generally positive. One respondent noted they were 'excited to be involved', while another noted that it was 'great' to have been part of a program that had a 'quality improvement ... framework' and enabled aged care staff 'to think and reflect on their practice'. Yet another highlighted the importance of the program in terms of its capacity building, as 'aged care doesn't have a well educated workforce' and the projects' facilitated direct access to expert advice, support and resources by staff working in such environments.

One respondent who had been involved in an EBPRAC project noted that despite their initial evaluation suggesting that it had 'not achieved many tangible outcomes', a subsequent discussion with the organisation several months after the completion of the project revealed that significant change had indeed occurred and was embedded within organisational practices and procedures. It is possible that the two-year time-frame of the projects was not long enough to really test out the extent to which the changes they had introduced were embedded and sustainable.

### 11.3 Importance of evidence-based practice

Responses to a question about the importance of evidence-based practice were overwhelmingly positive but participants were not so clear about the extent to which all aspects of the sector found evidence-based practice important. Some responded that evidence-based practice served as a counter to the 'fads' that arise within the sector, where practices are promoted 'because they sound good', but without any real evidence base to support the benefits. The majority indicated that there had been a shift towards a greater focus on evidence-based practice over the last decade, in part driven by greater availability of evidence; investment in research and learning by aged care providers (particularly the larger not-for-profit organisations) through partnerships with academic institutions; lobbying by peak interest groups; and through initiatives such as the Aged Care Standards and Accreditation Agency's Better Practice Conferences and government initiatives such as the EBPRAC program. Only two respondents saw a role for themselves in identifying best practice issues and processes.

A small number of respondents pointed out the importance of having a consumer perspective in the development and application of evidence based practice within aged care. One passionate consumer advocate proposed making better use of consumer peak bodies, as well as ensuring consumer representation on relevant committees or governance arrangements for national or local initiatives.

The aged care providers indicated that evidence-based practice was integral to their service model, reinforced by the development of 'Better Practice' programs for staff. However, there was recognition that in some 'pockets' within the sector evidence-based practice was considered either too difficult or unnecessary. As one respondent noted:

*Time pressure in any clinical setting is really really heavy; ... nurses are very pragmatic people; if something is working, and you know it is working, and it is safe, and you know how to monitor it, then to change this is a lot to ask.*

There was a sense that for some facilities, being involved in EBPRAC had raised awareness of and commitment to evidence-based practice, while for others involvement built on an existing platform within the organisation.

## 11.4 Knowledge management

### *Knowledge transfer*

Some respondents expressed clear views about the nature of knowledge management and transfer, in particular the advantages and disadvantages of particular approaches. At the core of most of this was the need for organisational leadership and support in regards to learning and development, and of the need for a culture of continuous improvement. Two large providers were actively involved in developing links with academic institutions in the development of learning and development packages and/or post-graduate curricula. One talked of this being a ‘marrying of both systems’ which ensured the organisational values and approaches were ‘embedding within courses as well as into the workplace’.

A common theme was the importance of mentoring. As one respondent noted:

*education and group learning is one way, but the best way to transfer evidence-based practice is mentoring; working with staff it becomes embedded within the organisation.*

One respondent who had been intimately involved in an EBPRAC project spoke of the realisation, as the project went on, of the need to

*work alongside staff ... while we did some general education, we did a lot more one-on-one education or around the bed with a few staff.*

This close working with staff was important as ‘people take a while to build confidence ... they initially think you are coming in and checking on them’ but ‘once the relationship is established’ they readily engage with the topic at hand.

A number of respondents also encouraged the use of reflective practice, action research or Plan-Do-Study-Act cycles with the aim of providing staff with skills that are generalisable to different problems/contexts.

The capacity of staff to acquire new knowledge and apply it in their day to day practices was a recurring concern raised by respondents. Issues such as variability in health literacy, staffing profiles and numbers, as well as heavy workloads and time pressures were the major impediments identified. While it was acknowledged that the majority of staff working in aged care had a personal commitment to providing quality care, their ability to provide this was often hindered by the ‘realities of day to day pressures’ which limit the opportunity for reflective practice, developing and embedding new approaches and systems, and maintaining currency with the latest research and/or clinical guidelines.

Two respondents cited examples of EBPRAC projects they had been involved in, which included additional funding for staff backfill to enable staff to attend training within work time. They both found, however, that this was rarely taken up due to the fact that there simply was not the workforce available to undertake the backfilling. Many group training activities were either attended by staff in their own time, or else a change of approach was required and project staff undertook more one-to-one or small group experiential learning at the bedside, when opportunities arose. Again, a number of respondents indicated that the capacity of smaller organisations or stand-alone facilities to participate in training or embed new practices would be limited due to such infrastructure issues.

A number of respondents identified changes within their local facility or organisation which enabled them to embed the changed practices arising from participation in EBPRAC. This was particularly evident in the responses of those involved in leading large aged care organisations,

where the ‘head office’ had a keen interest in EBPRAC activities being undertaken at local sites. Respondents from one organisation commented on their intent to ‘leverage off the project to impact into organisational procedures and practices’, and a desire to ‘codify the processes so we can use this across the organisation more broadly’. This suggests that there is greater scope for spread of outcomes and embedding changed practices and processes that arise from local project activities when the facilities involved are part of a larger organisation or provider group, due to the existing infrastructure and systems in organisations of this scale.

### ***Accessing knowledge***

Many respondents agreed that the resources produced under EBPRAC have the potential to make a significant contribution to the training and information available to the sector. However, there were two key issues which limit the realisation of this potential – variable access to information technology and the diffuse information sources available. Some pointed out that while there may be good intentions to embed evidence-based practice the reality for many smaller, stand-alone facilities is one of limited access to resources such as information technology (computers, internet) and skilled staff. As one respondent noted:

*Some would say yes it (evidence-based practice) is a high priority, but some days it’s a priority just to have someone with some skills on the floor.*

A small number of respondents acknowledged the role of peak bodies and industry/academic groups, including the Joanna Briggs Institute in enhancing evidence-based practice. Several indicated their active membership of the Joanna Briggs Institute, including supporting staff on the clinical fellowship programs. Others noted that there were two factors which limited the ability of the Joanna Briggs Institute to influence the sector more generally - the cost associated with accessing its information and the narrow research approach used to identify best practice.

## **11.5 Receptive context for change**

Respondents identified a number of areas where there was a ‘disconnect’ between the culture of those working in aged care and that of its regulators. One example cited was the inherent ‘tension between providing a home-like environment and the need to provide good clinical care’. While the aspirations of ‘home-like’ were generally agreed, it was noted that this can be difficult to maintain in situations where residents need high level clinical care, and occupational health and safety concerns of staff need to be managed.

Another example was DoHA ‘pushing the importance of having a good care plan’ which was translated by some staff as being a ‘requirement’. Many of the EBPRAC projects involved the introduction of including new assessment, monitoring and care planning processes. It was noted that these may be perceived by some staff as additional paperwork to fill in to ensure they ‘pass’ accreditation, and avoid sanctions. Several respondents noted that this was indicative of sectors within the industry that continued to have a ‘siege’ mentality, and who viewed accreditation as a ‘stultifying, rather than entrepreneurial or invigorating process’. A reframing of these regulatory requirements was required to move these groups from a ‘compliance focus’ to a ‘continuous improvement approach’ which, as one respondent noted, would be ‘not only evidence-based practice but evidence-generating’.

All respondents highlighted the role of leadership, particularly clinical leadership, as being critical to ensuring evidence-based practice is implemented and sustained. As one respondent noted

*Evidence based practice needs to be embedded into an organisation’s culture ... leadership is absolutely critical.*



A number of respondents pointed out the relative decline in the number of registered nurses in aged care which has impacted on the uptake of evidence-based care, and its sustainability. One nursing profession representative commented that the increasing reliance on enrolled nurses was worrying, as they did not have the ‘overall clinical expertise’ necessary to anticipate, prevent, assess, and manage the range of clinical issues with which an aged care resident could present. Similarly, a number of registered nurses interviewed who were employed in administrative, research and program management roles commented about the lack of support for those in clinical leadership positions within an organisation by those who control operational aspects, including budgets and staffing

A small number indicated a preference to see ‘national benchmarks’ or mandated staffing levels, particularly in relation to registered nurses in aged care, in recognition of the increased clinical complexity of residents within the sector. Not all agreed, however, as some felt that there were opportunities to better equip and support clinical leaders to utilise and develop their skills, through re-allocation of some of the more time-consuming administrative and management functions they currently undertake.

Structural features to facilitate evidence-based practice were evident in a number of ways, including having evidence-based practice, often in combination with person-centred care, articulated at a strategic level and underpinning different aspects of an overall service model and procedures. As one respondent noted, consumer-centric cultures ‘have the support from management ... you won’t get it in places where there is not good leadership’. Two large aged care organisations interviewed provided details of the clinical governance/leadership committees they had instituted, which were responsible for liaising with the broader sector to identify contemporary, evidence-based practices, and disseminating findings across the organisation. It was noted that such committees were in a position to influence resources, strategy and processes of the organisation to facilitate and underpin new initiatives.

The education and training agendas of organisations were used to reinforce these concepts, often through linking with tertiary organisations or offering credits towards post-graduate study. Again, these were generally larger organisations which had the critical mass to drive such initiatives. One organisation went further, embedding evidence-based practice and person-centred care within staff position descriptions and performance appraisals. Another provided financial incentives for staff to demonstrate their commitment to and promotion of evidence-based practice and person-centred care. There was also a strong view amongst respondents of the importance of engagement with all levels of an organisation in any future evidence-based practice initiatives. One-off training initiatives directed at specific classes of staff were considered insufficient to engender changed care practices which are sustainable.

While respondents strongly acknowledged the calibre and skills of many aged care clinical managers and leaders within the sector, there was a sense that those outside the sector did not appreciate the range and complexity of skills they possess e.g. those working in the acute sector and/or clinical specialties. The lack of a ‘professional identity’ which enables them to articulate their skills also impacts on their ability to advocate on issues which affect their practice, including the implementation of evidence-based research outcomes. It was noted that initiatives have been established in recent years, such as a mentor development program provided by a peak body, practice development programs within some of the larger organisations, and the formation of the Nurses in Management Aged Care group. However, these are all membership/provider driven, and have no systemic, guaranteed ongoing support or external recognition. Greater focus of effort to develop, resource and sustain clinical leaders was considered necessary to provide a receptive context for evidence-based care to be provided within the sector.



## 11.6 Clinical indicators

There was general consensus that EBPRAC provided the potential for the development of a coherent set of clinical indicators for the sector. A number of respondents pointed out that the clinical areas covered under EBPRAC are consistent with the indicators already available, e.g. the Draft Quality Indicator Set included as Appendix C in the report *Evaluation of the impact of accreditation on the delivery of quality of care and quality of life to residents in Australian Government subsidised residential aged care homes – final report* (Commonwealth of Australia 2007). In addition, one major provider indicated the use of a commercially available audit program that encompasses the 4 standards and 44 outcomes detailed in the aged care accreditation standards (available at <https://www.movingonaudits.com.au>).

As noted in Section 9.3, the clinical issues addressed in existing materials are generally the areas which cause most complaints and/or incidents within health and aged care settings. While this is recognised as a valid approach to identifying the key issues to be measured, some respondents argued that it reinforces the ‘compliance mentality’ i.e. these are the things you must do to ensure you are doing ‘no harm’ to residents. To that extent, the focus continues to be on harm prevention, rather than health and well-being optimisation.

Some respondents highlighted the need to move beyond this ‘duty of care’ approach to look at more positive indicators, to measure ‘how do we know we are doing well?’ There was a sense that the sector needed to move to an ‘excellence in clinical practice’ mentality, however it was also acknowledged that this would require a ‘massive cultural shift’ within the sector, including at the government, research and service provider levels. One industry representative commented that the current EBPRAC topics were ‘too narrowly focused’ and indicators were needed regarding issues such as the social needs of residents, supports required for the role of the registered nurses in residential aged care, as well as clinical indicators for community care.

Clinical indicators were generally held to be positive drivers of change, in particular if they incorporated some of these more positive and broader definitions. There was recognition, however, that there were a number of ‘underlying pre-requisites’ within organisations such as having the relevant systems in place to collect data and support improved practice, as well as a culture that embraced a total quality management approach. The question remains as to who is responsible for establishing and driving the clinical indicators which reflect more contemporary and enabling care practices. It was pointed out that a number of organisations had been contracted in recent years to develop clinical indicators for the sector, but these had not been widely circulated. It was also felt that the data already being collected – by DoHA and the Aged Care Standards and Accreditation Agency – were not well utilised in determining potential indicators for the sector. There was some consensus regarding the process by which the indicators should be developed; a number of respondents highlighting the importance of having a collaborative approach, which included government, providers and academics. However, none of the respondents mentioned the role consumers (residents and their families) might play in this process.

## 11.7 Future directions

A number of themes emerged from the interviews regarding how to ensure best practice is implemented and embedded within residential aged care – clinical leadership, learning and development, accessibility of resources and engagement of stakeholders.

### *Clinical leadership*

A consistent theme from the interviews was the need to recognise, articulate and support clinical leadership. Having a professional identity was considered by almost half the respondents to being a critical first step to improve awareness, engagement, and leadership of clinical nurses – i.e.

registered nurses – within aged care. This would include an articulation of the clinical skills needed to support residents requiring increasingly complex care with a broader set of managerial skills.

A number of respondents spoke of the need for a national approach to facilitating a clinical leadership profile within residential aged care. It was felt that the stakeholder consultation and advisory mechanisms currently employed by DoHA e.g. Ageing Consultative Committee, and Ageing Workforce Committee, provided an opportunity to identify priority areas for ongoing clinical skills enhancement, as well as being possible vehicles for dissemination of program findings, and advice regarding implementation issues. Fundamentally, however, the key message from respondents was the need for an ongoing focus by government into initiatives or mechanisms to support a viable and sustainable cohort of clinical leaders within the sector.

### ***Learning and development***

Some respondents pointed to the opportunities that the new national registration and accreditation scheme for health professionals provides, linking credentialing with professional support and advice, and the provision of educational opportunities. An example of such an initiative is the Royal College of Nursing, London, which is funded to coordinate and deliver a range of practice development initiatives, which are automatically linked to registration records, providing up to date records of who has done what in the sector. Such a development would assist in facilitating a community of practice amongst nurses working within leadership positions within the aged care sector. Suggested areas of focus include mentoring skills, Total Quality Management, strategic perspectives, clinical crisis response and reflective practice.

Clinical leadership needs to be underpinned by a sound learning and development framework which takes a holistic approach in recognition of the variety of factors (staffing, organisational, resourcing) that facilitate the embedding of evidence-based practice. A number of suggestions were made by respondents, including the provision of a learning and development levy by Government targeted at assisting staff to access academic qualifications or similarly credentialed educational opportunities. Suggestions included using the funding to assist new graduates pay off their HECS debt; payment of fees for staff to enrol in post-graduate courses; and providing subsidised access to clinical resources such as the Joanna Briggs Institute. These could be provided as an enhancement to the current suite of workforce initiatives available within residential aged care (see Section 9.1). There was general recognition of the investments which had been made by government in recent years to provide scholarships for staff working in aged care, and inducements for nurses to return to the workforce. However, there was some difference in perspective about the administration of these initiatives, whether they had targeted the right people, and whether the anticipated benefits had been realised.

One respondent suggested financial incentives (bonuses) for staff who have achieved additional qualifications. A number of the larger aged care providers (mainly not-for-profit) are trialling these approaches from within their own budgets; however all agree that there could be much greater benefits and uptake of educational opportunities if funding were made available across the sector.

### ***Accessibility of resources***

The importance of staff being able to access credible, contemporary best practice advice and information which was targeted to their needs was a recurring theme. There was general acknowledgement of the range of resources already available but that the variety of potential sources of information required some guidance to direct staff to appropriate resources in a timely fashion. The resources and outcomes of the EBPRAC program were acknowledged to be a significant resource which should be made more generally available.

Some respondents highlighted the need for a national approach to disseminating resources and continuing to make them available in the future. A particular concern was the additional cost

required to ensure materials were current and to facilitate distribution. It was recognised that DoHA and the Aged Care Standards and Accreditation Agency both had roles in disseminating resources but many considered that this might not attract a sufficiently wide enough audience. In particular, it was felt that the roles of these two organisations were predominantly associated with funding and compliance, rather than enhancing best practice. There seemed to be general consensus that an information/resource portal/site would be best provided by a university or organisation which was recognised as having a track record in evidence-based research and professional development within the sector. Such a function would invariably require additional investment, to enable the responsible agency to collate information (developed under EBPRAC as well as from other sources), maintain its currency, and disseminate advice and developments across the sector in a timely and accessible manner.

### ***Engagement with stakeholders***

There was general recognition of the importance of an ongoing dialogue between elements of the sector (management, clinical staff, care staff) and policy makers to ensure future policy and program development occurs in a structured, effective and timely manner. A number of those interviewed were members of national committees currently convened by DoHA, however their level of awareness regarding the EBPRAC program was not better than most of the others interviewed. In the main, respondents felt that DoHA needed to consult with the sector about the major outcomes from EBPRAC, the implications for practice, and opportunities to promote, disseminate and implement findings. The inclusion of consumers in this process was also recognised as important.

## **11.8 Summary**

The interviews reveal that key stakeholders within the aged care sector, while applauding the overall intent of the EBPRAC program, have limited knowledge and awareness of its overall impact and outcomes. A consistent theme was the need for better dissemination of information about the program, and in particular of its findings and resources. Key issues raised were the importance of information being accessible, current, and available in a range of formats which take into account the different health literacy and information requirements of the range of staff working in aged care settings.

There was a very clear appreciation of the recognition on the part of government for the need to invest in evidence-based practice. A number of themes emerged regarding factors which enable the application of clinical best practice, and of factors that inhibit it, many of which are consistent with the feedback from the EBPRAC projects and from the literature.

The respondents all agree that there is a need for ongoing investment to support the identification of evidence-based practice, its translation across the variety of structures and systems, resource constraints and cultures found in aged care services, the development of a professional identity which could drive ongoing developments and a mechanism to coordinate, update and disseminate best practice in a way that is accessible and credible to those working in the sector.

## 12 Discussion and conclusions

The EBPRAC program represents the most comprehensive, coordinated, approach to implementing evidence-based practice in residential aged care undertaken in Australia, involving 13 projects working with facilities in 108 locations across six states. Previous work has been limited, generally undertaken on a small scale and within short timeframes. Where there has been large-scale investment (e.g. Dementia Essentials Training under the Dementia Initiative) the target audience has been narrowly defined.

### *Accreditation and best practice*

The Australian Government's quality assurance framework for residential aged care comprises four elements - accreditation, building certification, complaints handling and supporting users' rights. The Aged Care Standards and Accreditation Agency has responsibility for the accreditation of residential aged care services. They carry out this responsibility by managing the accreditation process using the Accreditation Standards and by assessing, and strategically managing, services working towards accreditation. There are different approaches to improving the quality of aged care services. One such approach is to focus on strengths and expand them and the EBPRAC program represents a 'strength' that can be expanded upon.

As this evaluation has shown, changing practices to meet the standard of the best available evidence is not easy, even with the level of resources available in the EBPRAC program. At a strategic and policy level the question is not about 'what do we want the whole industry to do' but 'what strengths do we want to build on?' The concept of 'strengths' can be framed in a number of ways. For example, facilities already recognised as providing a high standard of care and which are 'receptive' to becoming even better could receive assistance to do so.

Another way of thinking about 'strengths' can be the evidence itself i.e. in which areas of practice is there good evidence to support practice change? This is the approach taken in the UK national health service with the campaign around '10 high impact changes' (NHS Modernisation Agency 2004) and the 5 million lives campaign by the Institute of Healthcare Improvement in the USA which focused on 12 interventions known to reduce harm in hospital (see the website for the campaign at <http://ihi.org/IHI/Programs/Campaign>). Rather than trying to be the 'best' at everything the aim is to set priorities based on the evidence about 'what works'. The recommendations arising from the program evaluation (see Section 13.2) include elements of the 'dual pyramid approach' by suggesting links with the current system of accreditation (recommendations 8 and 9) and focusing on changes with the potential for 'high impact' (recommendations 15, 16 and 17).

### *Implementation*

Evidence-based practice has significant overlaps with the concepts of change management, quality improvement and the dissemination of innovations. The literature about how to implement evidence is extensive but the findings are often equivocal, even at what is generally accepted to be the highest level of evidence - systematic reviews and reviews of systematic reviews. Much of the literature is not as useful as it might seem at first, primarily due to various methodological issues and lack of details about, for example, implementation.

These findings from the literature are relevant to any consideration of what was done as part of the EBPRAC program and what was achieved. Despite extensive progress reports and final reports it is not entirely clear how extensively changes in practice were implemented. Most of the changes were small-scale, undertaken by many different members of staff, at all hours of the day and night. There is no easy way of 'measuring' how often, or how well, residents' teeth are cleaned or moisturiser applied to their skin to prevent skin tears. In day-to-day practice, with so many one-to-

one interactions between residents and staff, there is no way of capturing how residents are spoken to by staff while being showered, assisted with their meals or helped to go back to sleep in the middle of the night. The corollary of this is that without neat and tidy measures of how extensively changes have been implemented it is very difficult to make judgements about why improvements may have taken place.

Implementation was generally consistent with what projects set out to achieve, as described in their original funding submissions and project plans. Some projects did not just implement 'evidence' but also added to the available evidence. Changes in project scope usually involved an increase in scope, particularly regarding the development and delivery of education programs. There were some delays but nothing that would be considered unusual in a program of this scale and complexity. No project implemented activities ahead of schedule. It was difficult to assess the 'stage' of implementation or degree of implementation although there were indications that in the case of some projects full implementation in all facilities was not achieved.

All projects followed a consortium approach, all except one with stable leadership. Good relationships were established between the consortiums and participating facilities. Some projects with large distances between consortium partners had to spend more time and energy building partnerships than more localised projects. It appeared that all project phases (governance, establishment, implementation and evaluation) were facilitated where consortiums involved project leads with strong pre-established relationships and credibility amongst consortia members and/or with participating facilities. Consortiums involving facilities which were part of large aged care organisations increased the potential for knowledge transfer within those organisations because of the infrastructure and systems in organisations of that scale.

The implementation strategies adopted across the 13 projects were wide-ranging and consistent with what is found in the literature on evidence-based practice. Many strategies were employed to engage and support staff in changing practices, with the most common being education of one form or another, use of local facilitators (champions, link nurses) and the collection of data (either of clinical performance or data on individual residents) which was then fed back to staff to inform future actions. All of these interventions have been shown to be effective, to varying degrees, in other settings. The evidence is not always strong, which is more a reflection of the current 'state of the science' regarding how to change practices rather than the methods themselves.

Some elements of what the projects implemented were standardised, particularly with regard to training. However, much of what was implemented was not standardised and varied from facility to facility, in response to local needs. This is entirely appropriate but, again, does make it more difficult to interpret the results achieved by each project. Some projects (e.g. oral health, pain management) adopted more of a 'top down' approach by indicating to staff what should be done (here is the evidence, so this is what you should do), while leaving scope for how it might be done. Other projects used more of a 'bottom up' approach, where staff decided what they would implement and how they implemented it.

In general, the approach to educating staff focused more on one-to-one and small group learning rather than large-scale, primarily didactic, education. The evidence from the literature supports this approach. Three interventions with limited application in residential aged care were featured in the program – academic detailing, action research and the Collaborative Methodology. All projects adopted a multi-faceted approach to change, which is recognised as more effective than reliance on single strategies. All projects included a financial incentive for facilities to participate, usually to cover the costs of staff training. The rationale for projects selecting the implementation strategies they used was underpinned by a mix of evidence, previous experience and available expertise.



Residents had little influence on project design and implementation. Projects tended to focus on keeping residents informed rather than seeking their opinion about what should happen. Various approaches were undertaken to achieve this including the use of posters, brochures, newsletters, speaking at resident meetings and media releases to local newspapers. Cognitive difficulties made communication with some residents difficult.

### ***Evaluation***

Many activities were undertaken both to change practices and to collect data for an evaluation. Project evaluations used a ‘before and after’ design i.e. measuring a series of variables before implementation, and then measuring the same variables after implementation. Some projects added elements of evaluating process, to work out what might be going on during implementation. In the absence of any control groups there is a need for caution in interpreting the results of such evaluations. There are many other reasons why improvements may have taken place other than the project itself, particularly given the factors that have been shown in this evaluation to be important influences on implementation (e.g. leadership and management support). The projects did not take place in a vacuum – many other changes took place at the same which influenced implementation.

The extent of data collection for the project-level evaluations was extensive, with much of the data collection also informing project implementation. Across all projects 18% of project funds were devoted to evaluation, ranging from a low of 9% to a high of 46%. On the whole, project evaluations were consistent with what was proposed in the original funding submissions and evaluation plans. The exceptions are the infection control project which did not undertake key elements of its evaluation and the three projects which intended to conduct economic evaluations but ended up not doing so.

### ***Impact***

Collectively, the projects had a positive impact on residents, staff and facilities, with considerable variation between individual projects, and within each project. Changes to the care received by residents were diverse. Many of the changes built on work that had been done previously in participating facilities and were relatively small scale and incremental in nature. In part this reflects the focus of the program and the available evidence but is also indicative of the capacity of the sector to change. The capacity to change is dependent on the availability of resources, including the knowledge and skills of staff, the nature of daily work and the influence that a wide range of factors that are largely outside the control of those trying to bring about change can have e.g. turnover of facility managers which had a significant impact on some facilities and some projects.

A useful analogy for the EBPRAC program is that of throwing a rock into a pool of water. The rock (the project) makes a big splash but by the time the effect has ‘rippled out’ to the periphery it is much smaller. The ‘ripple effect’ of implementation results in lots of small changes, rather than a few large changes. The important thing is that the changes keep happening and achieve a cumulative effect.

All projects provided some evidence that practices had changed for the better, although for two projects the changes were minimal. The pain management project had the best evidence of improved practices by being able to show increased adherence to ‘best practice’ guidelines between project commencement and project end. For most projects the scale of practice improvement was difficult to assess.

Generally, resident outcomes were difficult to measure or the evidence for improvements in outcomes were not particularly strong but this is not unexpected and is consistent with what is found in the literature. For many people residing in aged care facilities maintaining health status



rather than improving health status may well be a satisfactory outcome. The best evidence that resident outcomes improved came from the three behaviour management projects and projects that focused on prevention which resulted in improved oral health and a reduction in wounds.

Impacts on staff were mixed but generally included improvements in awareness, confidence, knowledge and skills. Staff had improved access to and use of evidence-based resources and tools. There was evidence in some projects of greater collaboration between nursing staff and personal carers, as well as with health and allied health in the planning and provision of care.

Impacts on facilities included improvements to the physical environment, better access to equipment and outside services and improvements in key processes and systems of care.

Each project identified the main outcomes that were to be achieved over the course of the two years. Many of the intended outcomes were expressed in ways that made it difficult to determine whether the outcomes had in fact been achieved, which may have contributed to a lower rate of achievement than if the outcomes had been expressed more precisely. Projects had more success achieving intended outcomes for facilities and staff than for residents.

### ***Key success factors***

Much of the program evaluation was ‘framed’ by the evidence from the literature about the ‘key success factors’ for implementing evidence-based practice. The results from the program evaluation indicate that three of these factors were of particular importance – a receptive context for change, the availability of adequate resources and engaging the relevant stakeholders.

An important ‘key’ to successful implementation was leadership - where it comes from is not so much of an issue as long as it comes from somewhere and does not rely on one person. This finding is not only based on the results of the evaluation regarding program implementation (Section 3.5.1) but also the views of the high level stakeholders interviewed for the evaluation (Section 11.5). It is recognised that investments have been made in the past to improve leadership skills within the sector but this finding warrants serious consideration being given to building on that investment (Recommendation 10).

Important though leadership may be the mixed results for the impact of the program (see Chapter 4) indicate that there are no ‘magic bullets’ for successful implementation of evidence-based practice in residential aged care. Considerable resources were spent educating staff (see Section 5.1). However, education can only take things so far. Knowledge is a necessary pre-condition for change to occur but is insufficient on its own to change behaviour. The projects demonstrated that it was important for staff to be able to ‘see’ the benefits of what they are being asked to do and to understand why changes were necessary. This was more important than simply being told that there was ‘evidence’ to support a change taking place. Many of the changes involved additional work, at least initially, which was difficult to incorporate into a pattern of daily work characterised by ‘busyness’ and lots of routine. These and other lessons from the evaluation have been summarised in a series of ‘principles of practice’ detailed in Section 6.

### ***Program objectives***

Table 30 provides a summary of the how the objectives of the EBPRAC program were met, drawing on evidence from across the program evaluation. The relevant section(s) of the report containing the evidence to support the conclusions about whether objectives were met or not are included in the third column of the table.

**Table 30 Summary of achievement of EBPRAC objectives**

Objective	Evidence to support achievement	Source of evidence in report (Section)	Objective met or not met
Improvements in clinical care	Diverse range of changes made to clinical care but difficult to measure extent of implementation. Outcomes for residents highly variable.	4.2	Objective met.
Opportunities for aged care clinicians to develop and enhance their knowledge and skills	The program provided extensive opportunities to develop and enhance knowledge and skills, primarily of nursing staff and personal carers.	4.4	Objective met.
Support staff to access and use the best available evidence in everyday practice	Extensive support (education, facilitation, education resources, financial resources) provided to staff to access and use evidence in everyday practice.	4.4 5.1 5.2	Objective met.
Clearer industry focus on improvements to clinical care	Limited awareness of the EBPRAC program amongst those not directly involved in the program. The program may well provide a clearer focus in the future but this will depend on the extent to which findings and resources are made known to the industry.	11.2	Objective not met.
Wide dissemination of proven best practice in clinical care	Wide dissemination has occurred, primarily within the program. A lot will depend on the extent to which the resources developed by the projects are widely disseminated.	8	Objective met.
Develop national clinical or educational resources and evidence summaries that support evidence-based practice in aged care and are able to guide the ongoing development of accreditation standards	Comprehensive educational resources and evidence summaries have been developed. It is too early to assess the extent to which this work will guide the ongoing development of accreditation standards.	5.2 5.2.1	Objective partially met.
Build consumer confidence in the aged care facilities involved in EBPRAC	Objective not well incorporated into project activities. Consumer confidence not evaluated by any project.	Not applicable	Objective not met.

In Round 1 the seven EBPRAC objectives were not well-understood by the project teams. This improved in Round 2 where the objectives had a higher profile, with the exception being the one regarding consumer confidence ('build consumer confidence in the aged care facilities involved in EBPRAC').

It is concluded that four of the seven objectives were met, one was partially met and two were not met. This is a good result, given that some of the objectives are ambitious or it is too early to fully assess the extent to which some objectives have been met

### ***Ongoing use of evidence***

The EBPRAC program has been operating 'in parallel' with existing mechanisms for developing evidence. Section 2.2 includes two such examples:

- Publication in the same year (2009) of two guides to implementing evidence-based falls prevention in residential aged care, one published by the Australian Commission on Safety and Quality in Health Care and one published by the EBPRAC Round 1 falls prevention project.
- Development of evidence-summaries by the EBPRAC Round 2 wound management project at the same time as the Joanna Briggs Institute, as part of their work maintaining the JBI COnNECT (Clinical Online Network of Evidence for Care and Therapeutics) Aged Care website, continue their work of producing evidence summaries, including wound care.

There are four key phases of evidence production and use that need to be considered – the generation of evidence (by research) in the first place, synthesising existing evidence, disseminating evidence and implementing evidence. The EBPRAC program includes elements of three of these phases – synthesis, dissemination and implementation – with a particular emphasis on implementation. While each phase requires a different set of skills and typically involves different organisations there are considerable overlaps. There is merit in improving the coordination of work taking place across these different phases to avoid duplication of effort and provide a platform for ongoing improvements based on the available evidence (see Section 13.2, recommendations 1-7).

According to Dearing ‘the state of the science (what researchers collectively know) and the state of the art (what practitioners collectively do) co-exist more or less autonomously, each realm of activity having little effect on the other’ (Dearing 2006, p 5). The EBPRAC program has helped to bridge the gap by bringing researchers and practitioners together. It is important that this momentum be maintained.

### ***Dissemination***

Dissemination of project activities was extensive, with over 2,200 dissemination activities estimated to have ‘reached’ over 200,000 people. Dissemination activity was focused at the project-level rather than the program level, with the national workshops being a major exception. Feedback indicated that the workshops largely met the workshop aims, assisted in understanding how individual projects fitted within the program, were a worthwhile use of time and a useful way of promoting networking, interaction and the sharing of ideas.

The majority of projects had similar dissemination and/or marketing strategies, with a focus, particularly in the early part of each project, on activities at the local level (project branding/logo, newsletters, engagement of key local stakeholders). Later dissemination strategies included presentations at conferences and the Better Practice seminars run by the Aged Care Standards and Accreditation Agency. The publication of journal articles by project teams has the potential to significantly add to the available literature on how to implement evidence-based practice in residential aged care. It is unclear how nursing staff, personal carers and other staff throughout the industry will be able to readily access information about individual projects or the program more generally.

The program has resulted in the development of a significant volume of materials (education programs, tool kits, evidence summaries) which require some means of dissemination and regular updating. To a certain extent this has happened already with two Round 1 projects making their resources available on the Internet. To facilitate ongoing dissemination there is a need to consider the use of some ‘higher level’ dissemination strategies such as linking the work of the EBPRAC program with the JBI COnNECT Aged Care website, the Aged Care Channel and the education programs of the Aged Care Standards and Accreditation Agency. Such dissemination would benefit from a degree of planning, rather than allowing it to occur in an ad-hoc fashion. These

findings are the basis for a series of recommendations regarding dissemination (see Section 13.2, recommendations 12-14).

Important resources for dissemination of the findings from the EBPRAC program are the final reports produced by each project. There is some variability in the way the final reports were compiled. Some are relatively 'self contained', providing a good summary in the main body of the report. Some rely on extensive appendices and some refer to other documents produced during the lifetime of the project.

There is also some variation in the quality of the reports. Some are well-written but would be enhanced by more attention to formatting and appropriate use of tables and figures to illustrate points and summarise data. Some reports include too much detail, which can make it more difficult to understand what happened and what was achieved during the project.

The reports should be made widely available but before doing so there would be merit in employing an editor to work with the lead organisations to prepare a suite of final reports that were consistent in style and quality. In most cases readability would be improved by editing the text and focusing on the key issues. The reports could be put together as a monograph series (Recommendation 11).

### ***Sustainability***

Sustainability is probably the most challenging aspect of any program. The sustainability tool used during the evaluation measured factors that have been shown to influence sustainability. When the results from using the tool at the beginning and end of each project are compared it shows an increase in the likelihood of project activities being maintained. The areas with the greatest potential for improvement by project end were being able to show that the changes improve efficiency and make jobs easier, that the appropriate infrastructure (staff, equipment, job descriptions, policies, procedures, communication systems) is in place to support the change and that senior leaders are engaged. Sustainability will depend more on factors within each facility (e.g. the presence of leadership and management support), than what was done by each project.

Sustainability of what has taken place so far will not be helped by undertaking more projects. What is required is a more strategic approach that supports the ongoing development and implementation of evidence, at the same time as providing a receptive context for implementation to take place. Of critical importance to that 'receptivity' is the availability of people who can provide the necessary leadership. Jeon et al (2010) argued that 'there is an urgent need for a national strategy that promotes a common approach to aged care leadership and management development, one that is sector-appropriate and congruent with the philosophy of person-centred care now predominant in the sector' (p 1).

### ***Future options***

There is a fundamental contradiction in the EBPRAC program – each project focused on one area of practice when, in reality, each facility needs to focus on multiple areas of practice (even more than the nine clinical areas covered by the program). The program has demonstrated how difficult it can be improving practices in just one area.

The EBPRAC program is a major initiative to improve the use of evidence within residential aged care. Sometimes the evidence is packaged in something like the national palliative care guidelines. More often, the evidence can be more difficult to find, spread across multiple guidelines in multiple locations. The guidelines that exist require updating at regular intervals. The significant volume of educational materials being generated by the program will require some means of dissemination and regular updating. What is being learnt about changing practices will need to be incorporated

into the daily life of facilities and the structure of the industry if it is not to be lost as 'just another program' that came and went.

One of the challenges for the future of EBPRAC is how to incorporate the dynamic nature of 'evidence', across all areas of practice, into ongoing work to maintain and improve evidence-based practice. There is scope for greater coordination to avoid duplication, facilitate consistency in the production of evidence, share knowledge about how best to implement evidence-based practice and link the various resources that are currently available. Existing mechanisms would benefit from the establishment of a central agency, separate from government, with responsibility for supporting the ongoing implementation of evidence-based practice in residential aged care. The roles and responsibilities for such an agency are set out in recommendations 2-7 (Section 13.2)

Much has been learnt from the 13 projects included in the first two rounds of EBPRAC. It would be preferable to invest in making the most of what has been learnt so far before embarking on more projects of a similar nature (Recommendation 15). If any projects are to be funded similar to those in Round 1 and Round 2 it may be better to more closely align those projects to 'real world' conditions, without some of the resources allocated to Round 1 and Round 2 (Recommendation 18).

There is a need for ongoing research into how best to implement evidence-based practice. Despite the considerable volume of work done to date, primarily in acute hospital services, there are still considerable gaps in knowledge about how to implement evidence in an efficient and effective way. Research into the roles and responsibilities of local facilitators would be a good place to start (Recommendation 19).

## 13 Recommendations

### 13.1 Project recommendations

Each of the lead organisations included recommendations in project final reports. In addition, the three palliative care projects met in Melbourne in July 2010 and the report of that workshop also includes recommendations. Some of the recommendations are targeted at government, some at facilities and some are not targeted at all. What follows highlights some of the issues raised.

The recommendations cover a broad range of issues, including improving the context within which implementation takes place (e.g. by developing leaders) and promoting a particular approach to change management (e.g. action research, use of a model, use of link nurses, use of mentors).

The need for additional resources feature strongly in the recommendations, including resources for education and resources to undertake further work on a national scale e.g. implement an end-of-life care pathway. There are many recommendations about improving staff skills to support evidence-based practice, including: improving the low level of education and literacy amongst personal care workers; adapting education resources for different audiences and promoting the use of e-learning.

Recommendations also refer to putting appropriate systems in place to support evidence-based practice. There are several recommendations about disseminating the resources that have been developed during the EBPRAC program, including using existing mechanisms such as the Dementia Training Studies Centres.

### 13.2 Recommendations arising from the program evaluation

The following recommendations are based on an underlying premise that there is a need to build on what has been learnt so that there is ongoing improvement of best practice in residential aged care.

To improve coordination, avoid duplication, facilitate consistency in the production of evidence and share knowledge about how best to implement evidence-based practice it is recommended that:

1. A central agency be established with responsibility for supporting the ongoing implementation of evidence-based practice in residential aged care. The agency should be funded by government but independent from government.

It is further recommended that the roles and responsibilities of this central agency include, but not be limited to:

2. Advising government and research funding bodies on opportunities to conduct primary research in residential aged care to fill gaps in current evidence.
3. Working with other agencies, including the Joanna Briggs Institute, to coordinate the synthesis of existing evidence into a form that can be applied in residential aged care. This should include a system of regular review and updating of the evidence.
4. Collaborating with existing networks and professional bodies involved in research and the application of research in residential aged care.
5. Disseminating existing evidence that is relevant to residential aged care.
6. Promoting the benchmarking of existing practices to identify opportunities for improvement.
7. Advising residential aged care providers on optimal strategies for implementing evidence-based practice.



To ensure ongoing links between the system of accreditation and use of evidence in residential aged care it is recommended that:

8. Accreditation surveyors, and the documentation which underpins their activities, support the ongoing use of the resources developed by the EBPRAC program and recommend use of those resources, where appropriate, during accreditation visits.
9. A mechanism be established whereby the latest evidence, and any resources to support the use of that evidence, can be used to inform the accreditation standards.

To develop clinical leaders who can support the ongoing implementation of evidence-based practice it is recommended that:

10. Consideration be given to the policy options for improving the leadership of middle managers in residential aged care, as set out in the paper by Jeon et al (Jeon, Glasgow et al. 2010).

To maximise the impact of what has been learnt to date from the EBPRAC program it is recommended that:

11. An editor be appointed to work with the lead organisations to prepare a suite of final reports that are consistent in style and quality. The reports could be published as a monograph series.
12. A central web-based repository be established and maintained which can act as a 'one stop shop' for resources (developed in EBPRAC or already available elsewhere) to support the implementation of evidence-based practice.
13. The work of the EBPRAC program be linked in some way with the current JBI CONNECT Aged Care website which already provides a mechanism for making the evidence to support clinical practice available to those working in residential aged care.
14. A dissemination plan be developed to promote the lessons learnt from the EBPRAC program, with a particular focus on how to reach staff working in residential aged care who do not access traditional mechanisms for dissemination (e.g. conferences, peer review publications).

With regard to the need for future projects within the EBPRAC program it is recommended that:

15. There is no need to fund more projects of a similar nature to those funded in Round 1 and Round 2. It would be preferable to invest in making the most of what has been learnt so far.
16. Funding should be allocated to identify a small number of 'high impact changes' that have the potential for maximum impact on quality of care, based on the available evidence. Indications on what some of those changes might be are to be found in the results of the EBPRAC projects.
17. Funding could then be allocated to the dissemination of the high impact changes throughout residential aged care i.e. a national approach.
18. If any projects similar to those in Round 1 and Round 2 are funded in the future consideration should be given to the intended outcomes. If the funded projects are to be replicated across the industry, then projects should be established to function in 'real world' conditions with the appropriate strategies and resources allocated to governance, implementation activities and evaluation
19. There is a place for high quality research about how best to implement evidence-based practice. An example is the use of local facilitators (champions), a large number of which were trained in the EBPRAC program, with differing roles and responsibilities. Identifying how best to select champions, how best to train champions, how best to support champions or even whether the champion model is effective at all, requires research to provide an answer.

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## Appendix 1: National Ageing Research Institute pain management project

<b>Project title</b>	<b>Implementation of sustainable evidence-based practice for the assessment and management of pain in residential aged care facilities.</b>
<b>Leader</b>	Professor Stephen Gibson, National Ageing Research Institute, Melbourne, Victoria.
<b>Consortium partners</b>	<p>Australian Centre for Evidence Based Aged Care, La Trobe University, Victoria.</p> <p>School of Nursing and Midwifery, Curtin University, Western Australia.</p> <p>Dementia Collaborative Study Centre, Queensland University of Technology, Queensland.</p> <p>Department of Pain Management, Sir Charles Gairdner Hospital, Perth, Western Australia.</p>
<b>Participating facilities</b>	Five facilities in three states, Victoria, Queensland and Western Australia.
<b>Sources of evidence implemented by the project</b>	The project used the Australian Pain Society evidence-based guidelines <i>Pain in Residential Aged-Care Facilities: Management Strategies</i> (2005) and an implementation toolkit that can be used in conjunction with the APS guidelines, published in 2006. The project also drew on five other sources of evidence, which contributed to the education and training program.
<b>Model of change for implementing the evidence</b>	<p>The design of the project was primarily based on the previous experience of the project team. Later in the project the ADKAR Change Management Model was used to guide project activities. ADKAR is a goal-oriented change management model that allows change management teams to focus their activities on specific organisational results. The model shows the phases that individuals go through in any kind of change - personal or professional. ADKAR refers to A (Awareness of the need to change); D (Desire to participate and support the change); K (Knowledge of how to change (and what the change looks like)); A (Ability to implement the change on a day-to-day basis); R (Reinforcement to keep the change in place). The ADKAR change management model was first published in the 1998 book <i>The Perfect Change</i> by Jeff Hiatt, founder and CEO of Prosci Research.</p> <p>The project had four phases, including 'pre-operational activities' to establish the project, a pre-implementation audit of existing pain management practices, a 12 month education and training program for staff, and a post implementation audit to evaluate project outcomes. In addition to education the main activities for implementing change included establishment of regular evidence-based pain assessment; appointment of pain champions and a pain team; and coordination of available resources for pain management.</p> <p>Implementation was generally consistent with the original project plan, with some delays. Implementation was tailored to fit the specific needs of individual facilities. For example, the education program varied in content and format across the facilities based on staff requirements, the areas identified in the pre-implementation audit and practical considerations, such as the capability to backfill staff to attend education.</p>
<b>Main intended outcomes</b>	<p>Improved quality of pain management practices for residents with bothersome pain.</p> <p>Raised awareness about the importance of pain management.</p> <p>Evidence-based practice in pain management embedded into the routine clinical care practices of residential aged care facilities.</p> <p>Better integration of external pain management resources into residential aged care facilities.</p>
<b>Examples of changes implemented</b>	<p>Use of pain medication on a regular, rather than PRN, basis.</p> <p>Use of non-pharmacological therapies, including use of heat packs, repositioning, passive/active exercises, massage, hernia belts, prostheses (such as hand splints) and aromatherapy.</p> <p>Use of analgesia patches.</p>
<b>Project evaluation</b>	Pre- and post-implementation data collection included:

Project title	<b>Implementation of sustainable evidence-based practice for the assessment and management of pain in residential aged care facilities.</b>
	<p>Quantitative data e.g. incidence of pain, incidence of untreated pain, number of pain reports that are unaddressed, resident levels of pain and pain impact.</p> <p>Audits of assessment procedures to identify and monitor pain, and environmental audits.</p> <p>Qualitative data (e.g. focus groups with residents and/or family to evaluate perceptions about new procedures, and documentation of action learning activities, goals and achievements).</p> <p>Each facility received two reports, a pre-implementation audit review which included recommendations to guide implementation and a post-implementation audit review describing the outcomes of the project.</p> <p>The project developed a tool for ascertaining the current level of compliance of any facility against 27 key standards for the provision of best practice pain management. It could potentially be used by facilities to identify areas for improvement but it has yet to be formally validated across a range of settings.</p>

## Appendix 2: University of Newcastle nutrition and hydration project

<b>Project title</b>	<b>Encouraging best practice nutrition and hydration in residential aged care.</b>
<b>Leader</b>	Professor Julie Byles, Research Centre for Gender, Health and Ageing, University of Newcastle, Newcastle, New South Wales.
<b>Consortium partners</b>	UnitingCare Ageing, Hunter, New England, Central Coast regions, New South Wales. Baptist Community Services, New South Wales. Nutrition Department, Gosford Hospital, Northern Sydney Central Coast Area Health Service, New South Wales.
<b>Participating facilities</b>	Nine facilities in New South Wales, all owned by either Uniting Care or Baptist Community Services.
<b>Sources of evidence implemented by the project</b>	Bartl, R & Bunney, C (2004) <i>Best Practice Food and Nutrition Manual for Aged Care Facilities. Addressing nutrition, hydration and catering issues</i> . Central Coast Health NSW: ISBN 1 74139 002 8
<b>Model of change for implementing the evidence</b>	Participatory action research and a practice development framework were the main change management approaches used by the project, with a process of staged implementation (32-week cycle for each facility). Each facility developed its own nutrition plan once facility staff decided what they wanted to implement. Change champions in each facility were supported by an external nutrition support person. The project used audit and feedback which involved assessing residents' nutritional status and feeding the results back to staff.
<b>Main intended outcomes</b>	Impact on residents' nutrition. Impact on residents' quality of life. Change in nutrition practice and use of evidence. Tool kit for best practice nutrition and hydration. System level changes. Change in food services.
<b>Examples of changes implemented</b>	Changes to type and manner of meal items, including the use of bread-makers and soup tureens. Changes to the preparation of pureed meals. Use of nutritional supplements. Changing menus to include fresh-cooked items. Use of coloured plates to help visually impaired residents with their meals.
<b>Project evaluation</b>	Evaluation of the project included a mix of quantitative and qualitative methods to collect data on processes and outcomes. The nutritional status of consenting residents was assessed at three points in time (beginning, middle and end of the project). The evaluation was generally implemented as intended. One change was the use of a survey based on the Promoting Action on Research Implementation in Health Services framework which was added to the evaluation during the course of the project. The original framework was published in 1998 and has continued to be refined ever since. It is probably the most frequently cited framework in the literature on implementing evidence-based practice but there has been little testing of the framework. There is the potential for some useful results to emerge from its use in the project evaluation.

### Appendix 3: National Ageing Research Institute falls prevention project

<b>Project title</b>	<b>An individualised, facilitated and sustainable approach to implementing the evidence in preventing falls in residential aged care facilities (the STAR project).</b>
<b>Leaders</b>	Professor Keith Hill and Kirsten Moore, National Ageing Research Institute, Melbourne, Victoria.
<b>Consortium partners</b>	University of Tasmania, Tasmania. Princess Alexandra Hospital / University of Queensland, Queensland.
<b>Participating facilities</b>	Nine facilities across three states, of which four provided a mix of high and low level care, two were high care (including one dementia specific unit and one that had a dementia specific unit on site), one provided dementia specific low level care and two provided psycho-geriatric care.
<b>Sources of evidence implemented by the project</b>	Victorian Quality Council (2004) <i>Minimising the risk of falls and falls injuries: Guidelines for acute, sub-acute and residential care setting.</i> Australian Safety and Quality Council (2005) <i>Preventing falls and harm from falls in older people. Best practice guidelines for Australian hospitals and residential aged care facilities.</i>
<b>Model of change for implementing the evidence</b>	The project primarily used action research as the driver of change, with most decisions and planning of activities taking place in regular action research meetings. Falls resource nurses were appointed in each facility and provided with training to fulfil the role. Training was provided for general staff on falls prevention, including falls 'expos' in some facilities. Baseline environmental audits and falls risk assessments of individual residents were undertaken with the results provided to each facility which then developed its own action plan. Environmental modifications were undertaken to reduce risk of falls and some equipment purchased to also reduce the risk of falls e.g. high-low beds and hip protectors.
<b>Main intended outcomes</b>	Reduced rate of falls and fall related injuries for residents in participating facilities. Improved knowledge of falls prevention amongst residents. Improved access to falls prevention training. Improved knowledge of falls prevention by falls resource nurses. Improved falls prevention practices within participating facilities. Reduced environmental hazards that may contribute to residents' falling. Improved safety culture within participating facilities.
<b>Examples of changes implemented</b>	Individual and group exercise programs. Regular review of sensory aids (hearing and sight). System for purchasing appropriate footwear for residents. Use of vitamin D and calcium supplements. Increased use of physiotherapy.
<b>Project evaluation</b>	Evaluation included pre and post intervention (scoping) audits of falls prevention activities and falls injury prevention activities; pre and post knowledge testing for a falls resource nurse training day; interviews with facility managers and falls resource nurses; and use of a safety culture survey, sustainability model questionnaire and Revised Professional Practice Environment survey. Data on falls and falls injury rates were collected for four six-month periods: the six months prior to project commencement and the first 18 months of the project. It was intended to undertake an economic evaluation but this did not eventuate.

## Appendix 4: South Australian Dental Service oral health project

<b>Project title</b>	<b>Better oral health in residential care.</b>
<b>Leader</b>	Anne Fricker, South Australian Dental Service, Central Northern Adelaide Health Service, South Australia.
<b>Consortium partners</b>	Department of Human Services, Victoria. Centre for Oral Health Strategy, NSW Department of Health, New South Wales. Australian Research Centre for Population Oral Health, Adelaide University, South Australia.
<b>Participating facilities</b>	Six facilities in South Australia, Victoria and New South Wales, including the most remote facility in either Round 1 or Round 2 at Coober Pedy, run by Umoona Aged Care Aboriginal Corporation.
<b>Sources of evidence implemented by the project</b>	Pearson A & Chalmers, J (2004) <i>Oral hygiene care for adults with dementia in residential aged care facilities</i> , Joanna Briggs Reports, 2: 65–113. Joanna Briggs Institute (2004) <i>Oral hygiene care for adults with dementia in residential aged care facilities</i> , Best Practice: Evidence Based Practice Information Sheets for Health Professionals, Adelaide, Joanna Briggs Institute, 8(4): 1-6
<b>Model of change for implementing the evidence</b>	The model of change for this project included the recognition and emphasis of four key processes to ensure improved oral care, and their alignment to the relevant skills and roles of those working in aged care: oral health assessments by general practitioners and registered nurses; care planning by registered nurses with possibly general practitioner and dental professional involvement; daily oral hygiene by personal carers; and dental treatment by dental professionals (e.g. dentists, dental hygienists, and dental technicians). This was supported by the development and implementation of an oral hygiene education program which included educational tools and resources that could easily be adapted for the relevant audiences.  Agreements were reached with public dental services that residents referred for dental treatment would receive priority treatment.
<b>Main intended outcomes</b>	Improved oral hygiene. Oral health assessment of approximately 80% of residents in participating facilities. Improved access of residents to dental services. Improved use of oral hygiene products. Staff will be confident in administering oral health assessments. Staff will be confident in addressing oral health needs of residents. Staff will be using oral care plans. The behaviour of staff towards oral health care will have changed. The facilities meet Accreditation Standard 2.15 (oral and dental care). Raise the profile of oral health care in participating facilities.
<b>Examples of changes implemented</b>	The changes had six key components: <ul style="list-style-type: none"> <li>▪ Brushing teeth morning and night.</li> <li>▪ Using high fluoride toothpaste on teeth.</li> <li>▪ Using a soft toothbrush on gums, tongue and teeth.</li> <li>▪ Using an antibacterial product (in the form of a gel) after lunch.</li> <li>▪ Keeping the residents' mouth moist.</li> <li>▪ Reducing sugar intake.</li> </ul>
<b>Project evaluation</b>	There were two components to the evaluation. The first included pre and post-

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<b>Project title</b>	<b>Better oral health in residential care.</b>
	intervention oral health and hygiene behaviour surveys and evaluation of the oral health education program. In addition, eleven focus groups were undertaken: five comprising nursing staff, four comprising personal carers, one group of general practitioners and one group of residents. The second component involved evaluation of the education and training program, and the oral health care plans.



## Appendix 5: Drugs and Therapeutic Information Service prn medications project

<b>Project title</b>	<b>Time for Evidence based Action around prn Medicines in Aged Care (TEAM Aged Care project)</b>
<b>Leader</b>	Debra Rowett, Drug and Therapeutics Information Service, Repatriation General Hospital, Adelaide, South Australia.
<b>Consortium partners</b>	Australian Medicines Handbook Pty Ltd. National Prescribing Service, New South Wales. General Practice Network South, South Australia. Pathways Health and Education Consultants, Wodonga, Victoria.
<b>Participating facilities</b>	Ten facilities were involved, some within the sphere of influence of a participating local division of general practice and a small number in regional Victoria.
<b>Sources of evidence implemented by the project</b>	An extensive literature search was undertaken to develop the evidence base for the three learning modules delivered by this project (pain, behaviours of concern, sleep). The Aged Care Companion to the Australian Medicines Handbook was the key resource for this project.
<b>Model of change for implementing the evidence</b>	<p>The project used an evidence-based behaviour change strategy involving 1:1 education (known as educational visiting or academic detailing) to influence the use of PRN (from the Latin 'pro re nata' meaning 'when necessary') medications in residential aged care. Academic detailing is well established within the medical sector, particularly in regard to impacting on general practitioners' prescribing practices, but this was the first project of its kind to systematically test the approach within residential aged care to influence the drug administration practices of nurses. The project built on work previously undertaken by the Drug and Therapeutic Information Service, including authoring of the <i>Aged Care Companion to the Australian Medicines Handbook (AMH)</i>.</p> <p>Three educational modules were developed and delivered sequentially, which enabled the reinforcement of key messages, resources and approaches referred to in earlier modules. This facilitated the opportunity for reflective practice which was an important component of the training.</p>
<b>Main intended outcomes</b>	<p>Analgesia is tailored to meet the individual residents needs through regular and PRN use to improve resident pain control.</p> <p>The needs of residents with challenging behaviour are managed effectively in line with Aged Care Accreditation Standard 2.13.</p> <p>Residents are able to achieve natural sleep patterns.</p> <p>Residents are assessed for effectiveness and adverse effects of medicines to reduce potential harm from the targeted PRN medications.</p> <p>Residents and their families/carers have improved understanding of the management of pain and sleep.</p> <p>Improved staff confidence in the use of PRN medications through increased knowledge and skills relating to PRN medications.</p> <p>Improved staff competency in the use of PRN medications.</p> <p>Increased awareness of evidence based resources that they can access to inform medication management decisions and generally find information about medicines.</p> <p>Provides education to enhance the confidence and competence of all aged care staff with respect to PRN medicine use according to the role and scope of practice of the staff member.</p> <p>Educational training at a time convenient to their staff in the workplace, minimizing the need for staff travel, backfill of staff or the need to attend training out of work hours.</p> <p>Improved staff skills, knowledge and attitudes with regard PRN medicines - to improve resident outcomes and reduce potential harm from under and overuse of PRN medicines.</p>

<b>Project title</b>	<b>Time for Evidence based Action around prn Medicines in Aged Care (TEAM Aged Care project)</b>
	Quality improvement activity valued by staff.
<b>Examples of changes implemented</b>	<p>Regular use of paracetamol to improve pain management, rather than giving paracetamol when requested by residents.</p> <p>Use of alternatives to sedatives to promote sleep e.g. giving residents Milo or warm milk to drink at night instead of tea/coffee.</p> <p>Delaying the use of night time sedation until the night shift, when the medication is only given if needed.</p> <p>Reduced use of antipsychotics for behaviours of concern.</p>
<b>Project evaluation</b>	<p>The evaluation tested the use of educational visiting by considering the impacts of the intervention at a number of levels, including drug utilisation, staff confidence and competence, and resident knowledge and understanding. The evaluation was not designed to measure clinical outcomes for individual residents but rather to see how drug utilisation had changed, with some qualitative data about how practices had changed, based on the assumption that if practices improve (e.g. increased use of regular panadol) then resident outcomes will improve (e.g. decreased pain).</p> <p>The evaluation was comprehensive, with data collected on 750 residents using relevant industry assessment tools such as drug use evaluations developed by the National Prescribing Service. The Medication Appropriateness Index (MAI) tool, which measures the appropriateness of prescribing for elderly patients using 10 criteria for each medication prescribed, was undertaken at project beginning and project end on a random sample of 20% of all residents. Staff were asked to complete questionnaires at project beginning, project end and after each training module.</p> <p>Evaluation of the impact on staff included an assessment of staff self-rated skills and competence at project beginning and project end which included consideration of staff confidence, competence, knowledge and behaviour with regards to medication management, in particular PRN medications. The questionnaire included five questions on competency and five questions on confidence. Unfortunately, no data regarding staff competency and confidence were included in the project final report.</p> <p>Reports for individual facilities on evaluation data were not envisaged at the outset of the project, however were subsequently incorporated, resulting in 30 additional reports (one for each of the three modules for each of the 10 facilities).</p>

## Appendix 6: Queensland University of Technology wound management project

<b>Project title</b>	<b>Creating champions for skin integrity.</b>
<b>Leader</b>	Professor Helen Edwards, School of Nursing & Midwifery, Institute of Health and Biomedical Innovation, Queensland University of Technology, Brisbane, Queensland.
<b>Consortium partners</b>	Nil
<b>Participating facilities</b>	Seven facilities, six in Queensland and one in New South Wales, of which five were from two organisations (Blue Care and Masonic Care Queensland). Facility size ranged from 20 to 495 beds.
<b>Sources of evidence implemented by the project</b>	The Australian Wound Management Association <i>Standards for Wound Management</i> (published in 2002 and updated in 2010) formed the basis for the evidence but the standards are very broad. For more detailed evidence the project drew on a wide range of other sources, including published guidelines. The evidence was synthesised into 2-3 page evidence summaries for individual topics that could be used during implementation - wound assessment and management, skin tears, pressure ulcers, arterial leg ulcers, venous leg ulcers, diabetic foot ulcers and maintaining general skin integrity. The evidence summaries were used as the basis for 'tip sheets' and flow charts to provide simple messages about wound management.
<b>Model of change for implementing the evidence</b>	<p>The project used multiple change management approaches which strongly accord with what is known about how best to change the practices of clinicians: education, audit and feedback, use of internal champions and external link nurses, establishment of wound care networks in each facility, use of decision support tools and reminder systems. This was well thought out following a review of the evidence about how to implement evidence-based practice undertaken at the beginning of the project. The Champions for Skin Integrity in each facility either volunteered or were chosen by facility management and have not necessarily been the staff with the greatest interest in wound management, resulting in the project being 'championed' by a mix of formally appointed 'champions' and 'informal champions'.</p> <p>The project used an action research approach which is similar in many ways to Plan-Do-Study-Act quality improvement cycles i.e. one cycle (of audit and feedback) at the beginning of implementation and another cycle at the end of implementation. It was anticipated that facilities might undertake their own Plan-Do-Study-Act cycles during the process of implementation, based on doing their own audits, but this did not eventuate in a consistent way.</p> <p>The project used a staggered approach to implementation whereby implementation in each facility commenced one after the other, rather than all at the same time.</p>
<b>Main intended outcomes</b>	<p>Improved skin integrity for residents.</p> <p>Improved wound healing.</p> <p>Improved communication between facility staff, residents and family on skin integrity.</p> <p>Improved knowledge and understanding of evidence based management of wounds.</p> <p>Enhanced knowledge, skills and attitudes of care staff towards skin integrity assessment, prevention and management.</p> <p>Improved awareness of evidence based wound management.</p> <p>Improved resources to facilitate implementation of evidence based wound management.</p> <p>The development of an evidence-based model of practice for wound management.</p> <p>Improved documentation of evidence based prevention, assessment and management of wounds.</p> <p>Development of a Wound Management Education and Self-evaluation Resource Package that can be used by all residential aged care facilities.</p>
<b>Examples of changes implemented</b>	Implementation generally consisted of a lot of small changes rather than big changes, mostly to prevent wounds e.g. using soap-free body wash rather than soap, moisturising

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<b>Project title</b>	<b>Creating champions for skin integrity.</b>
	the skin of residents after showering, protective padding on wheelchair footplates, use of pressure relieving mattresses. What was implemented varied between facilities depending on local needs and priorities.
<b>Project evaluation</b>	The project evaluation used an action research approach including audits and feedback, surveys and meetings with staff. The evaluation had a particular focus on the factors that facilitate or hinder the implementation of evidence-based wound management. Collection of pre- and post-implementation data including skin integrity surveys and audits, staff wound care surveys, feedback questionnaires for education materials and sessions and surveys with open-ended questions for use in interviews and focus groups; interviews with residents, families, project leaders, project staff, facility managers, key clinicians, champions; and focus groups with key project participants.

## Appendix 7: PivotWest infection control project

Project title	The infection control collaborative
<b>Leader</b>	No one individual could be considered the leader of this project. Various staff from PivotWest provided project leadership over the two years of the project. PivotWest is a division of general practice based in the western suburbs of Melbourne.
<b>Consortium partners</b>	Aged Services Management Unit, Victoria University, Melbourne, Victoria (evaluator) Improvement Foundation Australia, Adelaide, South Australia. MarJen Education Services, Eltham, Victoria.
<b>Participating facilities</b>	Eight facilities in the western suburbs of Melbourne, of which one withdrew from the project in early 2010. A positive aspect of the project is that it included a higher proportion of private 'for profit' facilities. Private facilities were generally under-represented across the EBPRAC program.
<b>Sources of evidence implemented by the project</b>	Australian Government Department of Health and Ageing (2004) <i>Infection Control Guidelines for the Prevention and Transmission of Infectious Diseases in the Health Care Setting</i> .
<b>Model of change for implementing the evidence</b>	The project built on previous work undertaken by Improvement Foundation Australia as part of the Australian Primary Care Collaboratives Program which aims to improve a range of health indicators in general practice. The project used a quality improvement approach to implementation, based on the Collaborative Methodology. There are different versions of the methodology but the basic concept is that 'every system is perfectly designed to give the result that it gives' and hence the focus is on changing systems to achieve improvements. Key features of the methodology included an expert reference panel which set the aims and measures for the Collaborative; local teams in each facility; three learning workshops where the local teams came together to share what they had learnt; action periods using Plan-Do-Study-Act (PDSA) cycles to bring about change; setting targets and monitoring improvements and using a set of change principles. An infection control handbook was developed to guide the facilities in what they did and education provided to facility staff on infection control.
<b>Main intended outcomes</b>	Reduced infections and better quality of life. To have up-to-date information and knowledge in infection control within aged care facilities. Reduce infections by 30% within 18 months (1 April 2009 to 30 September 2010). Spread what has been learnt to other residential aged care facilities beyond the project's initial catchment area.
<b>Examples of changes implemented</b>	Reducing overloading of linen skips (to reduce the incidence of soiled linen touching staff clothing). Encouraging visitors to wash their hands when entering a facility. Chest physiotherapy for resident with signs of infection. Reinforcing the wearing of hairnets by staff in the kitchen.
<b>Project evaluation</b>	Each facility collected their own data on the ten clinical indicators. Collection of the data was as much a part of the intervention as the evaluation.  The qualitative component of the evaluation was intended to consist of observing on-site education of facility staff; focus groups in each facility with staff, residents and family; and semi-structured interviews with staff, residents and families. Involvement of residents and families in this component of the evaluation is described in the project final report as 'very informal and low key', with involvement of staff described as 'similarly low key'. Only one focus group (with staff) was undertaken, with no semi-structured interviews. Various reasons are given for this in the report - the difficulty of obtaining consent, frailty of the residents, staff with low levels of literacy.  The project evaluators intended to conduct an economic evaluation. This has not been

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<b>Project title</b>	<b>The infection control collaborative</b>
	<p>done. The justification for not doing so is that it was not possible to collect any cost data during the project but there are no reasons given for why this was not possible.</p> <p>The project final report states that the Collaborative methodology ‘could not be independently evaluated’ by the evaluator from Victoria University.</p>



## Appendix 8: Murrumbidgee General Practice Network palliative care project

<b>Project title</b>	<b>Encouraging best practice palliative care in residential aged care facilities from rural communities within NSW, South Australia and Victoria.</b>
<b>Leader</b>	Dr. Keith McDonald, Murrumbidgee General Practice Network, New South Wales.
<b>Consortium partners</b>	Mallee Division of General Practice, Victoria. Murray Plains Division of General Practice, Victoria Riverland Division of General Practice, South Australia. Discipline of General Practice & Mater Centre for Primary Health Care Innovation, University of Queensland.
<b>Participating facilities</b>	Fourteen facilities in twelve locations, ranging in size from 19 - 100 beds and incorporating a mix of high and low care facilities in rural New South Wales, Victoria and South Australia.
<b>Sources of evidence implemented by the project</b>	Australian Government Department of Health and Ageing (2006) <i>Guidelines for a palliative approach in residential aged care - enhanced version</i> . Canberra. Palliative Care Outcomes Collaboration benchmarking tools. Brisbane South Palliative Care Collaborative and Lyell McEwin End of Life Care pathways.
<b>Model of change for implementing the evidence</b>	The change management activities undertaken by the project included using audit and feedback, the introduction of end-of-life care pathways and promotion of advance care planning, supported by specific resource development and training opportunities in different aspects of the project (e.g. advance care planning, end-of-life care pathways). The project also included the development of a minimum data set based on Palliative Care Outcomes Collaboration benchmarking tools which were modified for residential aged care. Palliative care clinical competencies were developed for facility staff, general practitioners, and other visiting health and social service providers.
<b>Main intended outcomes</b>	Improved quality of palliative care provided in rural residential aged care facilities. A multi-professional evidence-based framework for coordinated end-of-life care. Up skilling through access to competency-based training. Advance care plans systematically implemented. End-of-life care pathways systemically implemented. Minimal data sets consistent with relevant Palliative Care Outcomes Collaboration recommendations.
<b>Examples of changes implemented</b>	The division of general practice from South Australia implemented one end-of-life care pathway as part of a state-wide roll-out across all sectors. The other three divisions of general practice involved in the project implemented another end-of-life care pathway which was the same one used by the other two EBPRAC palliative care projects (the Brisbane South Palliative Care Collaborative End of Life Care pathway). Two models of advance care planning were implemented, both adaptations of the well-recognised Respecting Choices Program. Pre-implementation audits revealed that most facilities had advance care plans in place for many residents. Post-implementation audits showed an increase in some facilities, and decrease in others. The minimum data set was used for the project evaluation but nurse managers said that they would not implement the minimum data set due to concerns regarding 'overloading staff already under stress due to staff shortages' (project evaluation report, p 40). There was no change in the proportion of residents who had a case conference, and phase of palliative care did not influence whether care preferences were recorded or whether a case conference took place. The project evaluation report did note, however, that there were a greater percentage of residents transferred to hospital in the deteriorating or terminal phases of palliative care, which was interpreted to mean an increased awareness

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<b>Project title</b>	<b>Encouraging best practice palliative care in residential aged care facilities from rural communities within NSW, South Australia and Victoria.</b>
	by staff of symptoms that may respond to treatment, and the overall limited availability of general practice services out-of-hours.
<b>Project evaluation</b>	An independent evaluator was employed to conduct baseline and post-implementation chart audits; semi-structured interviews, focus groups and surveys of staff and key stakeholders, relatives/carers of residents; and document reviews.

## Appendix 9: North East Valley Division of General Practice palliative care project

<b>Project title</b>	<b>A good death in residential aged care: optimising the use of medications to manage symptoms in the end-of-life phase.</b>
<b>Leader</b>	Alison Sands and Melanie Rayner, North East Valley Division of General Practice Victoria.
<b>Consortium partners</b>	<p>La Trobe University (lead partner and evaluator).</p> <p>Two divisions of general practice in South Australia (Adelaide North East Division of General Practice, General Practice Network South).</p> <p>Two Melbourne-based community palliative care services (Banksia Palliative Care Service, Melbourne City Mission Palliative Care Service).</p> <p>Drug and Therapeutics Information Service, Repatriation General Hospital, Adelaide, South Australia.</p> <p>National Prescribing Service.</p> <p>Department of Health, Victoria.</p>
<b>Participating facilities</b>	14 participating facilities (at 13 different locations), nine from Victoria and five from South Australia.
<b>Sources of evidence implemented by the project</b>	<p>The project was designed around two main evidence-based guidelines:</p> <p>Australian Government Department of Health and Ageing (2006) <i>Guidelines for a palliative approach in residential aged care - enhanced version</i>. Canberra.</p> <p>Therapeutic Guidelines: Palliative Care, 2005 and 2010</p> <p>The education modules included material from other sources of evidence, including the <i>Australian Medicines Handbook</i> and the <i>AMH, Drug Choice Companion: Aged Care</i>.</p> <p>The end-of-life care pathway implemented was the one developed by the Brisbane South Palliative Care Collaborative.</p>
<b>Model of change for implementing the evidence</b>	<p>An action research approach was used at the project level (i.e. between the project evaluators and project team). A pilot was conducted to introduce the care pathway in three facilities and refine the evaluation tools and training materials. Change management focused on improving the knowledge and skills of general practitioners and facility staff; establishing policies, procedures and end-of-life care pathways; and promoting collaboration between general practitioners, pharmacists and facility staff. This included audit and feedback and use of link nurses in South Australian facilities. Some facilities established palliative care committees or special interest groups to promote collaborative practice.</p> <p>The Change Management Framework was used at project commencement to identify current practice and develop strategies to improve that practice. The Framework facilitated review of four domains related to end-of-life care - resident outcomes, policies and processes, education and clinical support.</p> <p>Education on medication management primarily used 1:1 education (academic detailing) with two modules (one on pain and one on agitation, breathing difficulties and mouth discomfort). In some instances education was conducted in small groups rather than 1:1. Education on use of end-of-life care pathways was delivered in South Australian facilities with a 'train the trainer' model - facility staff were trained by link nurses who had themselves been trained by the project team. Education in Victoria was delivered by the project team. Existing educational programs e.g. Program of Experience in the Palliative Approach program, were actively promoted during the project.</p>
<b>Main intended outcomes</b>	<p>Enhanced and consistent provision of symptom management at the end of life, that is informed by best practice.</p> <p>Improved communication and support for informed choice by residents and families.</p> <p>Improved clinical skills &amp; confidence including: recognition, assessment and monitoring</p>

<b>Project title</b>	<b>A good death in residential aged care: optimising the use of medications to manage symptoms in the end-of-life phase.</b>
	<p>of symptoms and knowledge of medicine use at the end of life.</p> <p>Enhanced ability to conduct conversations with families about symptom management and medicine use at the end of life, including access to printed resources.</p> <p>Improved systems &amp; processes to support anticipatory planning and the use of medicines for symptom management at end of life, in particular the successful implementation of an end of life care pathway.</p> <p>Improved collaboration with general practitioners, palliative care services and pharmacists.</p> <p>Improved systems and processes to support anticipatory planning and the use of medicines for symptom management at the end of life, in particular the successful implementation of an end of life care pathway.</p> <p>Improved staff capacity/skills.</p> <p>Improved medication supply chain.</p> <p>Improved relationships with residents, families, general practitioners, pharmacists &amp; specialist palliative care services.</p>
<b>Examples of changes implemented</b>	Implementation of end-of-life care pathway.
<b>Project evaluation</b>	Data collection included a resident chart audit, an Institutional Audit Tool (to collect data about participating facilities); telephone interviews with general practitioners; post-education questionnaires which included self-assessments of knowledge, skills and confidence; and telephone interviews with staff to collect data on their experiences with the project. Deaths and use of end-of-life care pathways were audited during the project.

## Appendix 10: University of Queensland palliative care project

<b>Project title</b>	<b>Implementation of a comprehensive evidence based palliative approach in residential aged care (CEBPARAC).</b>
<b>Leader</b>	Associate Professor Deborah Parker, University of Queensland / Blue Care Research and Practice Development Centre, Brisbane, Queensland.
<b>Consortium partners</b>	Brisbane South Palliative Care Collaborative, Queensland. Southern Adelaide Palliative Care Service, South Australia. Cancer and Palliative Care Network, Department of Health, Western Australia.
<b>Participating facilities</b>	Nine facilities across three states, of which two provided a mix of high and low level care, and seven provided high care. Facilities included not-for-profit, private and government-operated, in metropolitan and rural areas.
<b>Sources of evidence implemented by the project</b>	Australian Government Department of Health and Ageing (2006) <i>Guidelines for a palliative approach in residential aged care - enhanced version</i> . Canberra. Australian Pain Society (2005) <i>Pain in residential aged care facilities: management strategies</i> . Brisbane South Palliative Care Collaborative End of Life Care Pathway.
<b>Model of change for implementing the evidence</b>	Implementation was based on the Registered Nurses' Association of Ontario <i>Toolkit: implementation of clinical practice guidelines</i> published in 2002, which is a well-recognised approach for those seeking to achieve evidence-based practice.  Change management strategies included education, use of link nurses, and translation of evidence into more 'user friendly' formats to focus on the key processes involved in a palliative approach to care – advance care planning, care planning (end-of-life care pathway) and review of the care required by residents (palliative care case conferences and monthly reviews). In most, but not all, facilities this was supported by involvement of local community palliative care services who played an important role in palliative care case conferences and monthly reviews. The work developing the role of link nurses built on the expertise of the project team in previous projects using the link nurse model. The project took a broad palliative approach to care, with a focus on one aspect of that broad approach (end-of-life care).
<b>Main intended outcomes</b>	Palliative care case conferences convened for residents with a prognosis of less than six months. End-of-life care pathways implemented for residents who require terminal care. Changed work practices in relation to palliative care. Increased knowledge and skills of clinicians. Increased capacity of organisations to provide palliative care.
<b>Examples of changes implemented</b>	Palliative care case conferences for residents with a prognosis of less than six months. Monthly reviews of palliative residents by specialist palliative care nurses. Use of end-of-life care pathways for residents who are terminally ill. Promotion of advance care planning.
<b>Project evaluation</b>	Data was collected pre and post intervention using a stakeholder assessment tool, a tool to assess organisational readiness, telephone interviews with carers, chart audits, a survey of staff knowledge and a palliative care self assessment tool. The first two of these tools were developed by the Registered Nurses' Association of Ontario and are designed to identify who the key stakeholders are and possible barriers and facilitators for the implementation of evidence-based practice.

## Appendix 11: University of Technology Sydney behaviour management project

<b>Project title</b>	<b>The EN-ABLE project: developing and testing a toolkit for the implementation and evaluation of person-centred evidence-based responses to need driven behaviours associated with dementia.</b>
<b>Leader</b>	Professor Lynn Chenoweth, University of Technology, Sydney, New South Wales.
<b>Consortium partners</b>	Australian Centre for Evidence Based Aged Care, La Trobe University, Melbourne, Victoria.  Dementia Collaborative Research Centre – Carers and Consumers, Queensland University of Technology, Brisbane, Queensland.
<b>Participating facilities</b>	Six facilities participated in the project; two each in New South Wales, Victoria and Queensland, situated in metropolitan, regional and rural areas.
<b>Sources of evidence implemented by the project</b>	Kitwood T. (1997) <i>Dementia reconsidered. The person comes first (rethinking ageing)</i> . Buckingham: Open University Press.  Algase D, Beck C, Kolanowski A, Whall A, Berent S, Richards K. & Beattie E. (1996) <i>Need-driven dementia-compromised behavior: an alternative view of disruptive behavior</i> . American Journal of Alzheimer's Care & Related Disorders, 77(6):10-19.
<b>Model of change for implementing the evidence</b>	Supervised application of focused, evidence-based knowledge delivered via a participatory action methodology. This involved implementing a staff training program which combined person-centred care and needs driven behaviour models 'actualised' using a modified action methodology called Translation of Evidence into Aged care Methods (TEAM). This included: <ul style="list-style-type: none"> <li>▪ Local 'champions', who were change agents supported by project staff.</li> <li>▪ Use of a clinical audit tool to identify barriers and enablers to practice improvement.</li> <li>▪ Meetings to obtain agreement about process indicators to be audited, developing local change plans, identifying barriers and developing strategies to overcome the barriers.</li> </ul>
<b>Main intended outcomes</b>	Reduced incidence of symptoms of distress for the four Need-driven Dementia-compromised Behaviours - anxiety, apathy, aggression and risky wandering.  Reduced severity of symptoms of distress for the four Need-driven Dementia-compromised Behaviours - anxiety, apathy, aggression and risky wandering.  Improved indicators of resident well-being and quality of life.  Improved resident assessment and care planning.  Improved skills in the recognition and assessment of the four Need-driven Dementia-compromised Behaviours - anxiety, apathy, aggression and risky wandering.  Improved understanding of Need-driven Dementia-compromised Behaviours by staff.  Improved staff capacity to respond to Need-driven Dementia-compromised Behaviours.  Provide evidence-based education resources for nursing, care and therapy staff and family carers
<b>Examples of changes implemented</b>	Changes to the environment in dementia units, initially using colour, pictures, and murals.  Regular use of behaviour charts.  Development of individualised behaviour intervention/care plans.  Use of positive communication strategies by staff.  Completion of cognitive assessment tools on admission.  Review of personal history when a resident exhibits a Need-driven Dementia-compromised Behaviour.



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<b>Project title</b>	<b>The EN-ABLE project: developing and testing a toolkit for the implementation and evaluation of person-centred evidence-based responses to need driven behaviours associated with dementia.</b>
<b>Project evaluation</b>	The project evaluation used a suite of assessment tools to undertake baseline and post-implementation data collection, targeting the residential aged care environment/context in which care was delivered, as well as the impacts of the intervention on residents (quality of life, agitation, aggression, apathy, risky wandering and pain), family/friends of residents, quality of care and care staff. The evaluation was oversighted by an expert advisory committee of Australian and international academics.

## Appendix 12: Hammond Care behaviour management project

<b>Project title</b>	<b>Improving behaviour by working with staff, families and the environment.</b>
<b>Leader</b>	Richard Fleming, Hammond Care, Sydney, New South Wales.
<b>Consortium partners</b>	Nil
<b>Participating facilities</b>	Seven facilities in New South Wales and Victoria, situated in rural, regional and metropolitan areas.
<b>Sources of evidence implemented by the project</b>	<p>Fleming R, Crookes P &amp; Sum S (2008) <i>A review of the empirical literature on the design of physical environments for people with dementia</i>. Primary Dementia Collaborative Research Centre, University of New South Wales.</p> <p>Hallberg IR, Norberg A &amp; Erikson S (1990) <i>Functional impairment and behavioural disturbances in vocally disruptive patients in psychogeriatric wards compared with controls</i>. International Journal of Geriatric Psychiatry. 5(1): 53-61.</p>
<b>Model of change for implementing the evidence</b>	<p>The approach to reducing behaviours of concern comprised four elements:</p> <ul style="list-style-type: none"> <li>▪ Modifying the physical environment.</li> <li>▪ Training staff regarding the causes and possible remediation strategies for behaviours of concern.</li> <li>▪ Establishing a safe psychological environment for staff to explore their feelings and discover new ways to approach people with behaviours of concern.</li> <li>▪ Family support groups.</li> </ul> <p>The main vehicle for change was the process of mentoring. Mentors were highly skilled clinical educators who worked closely with nominated individuals in each facility, delivered education and training in both clinical aspects as well as change management techniques, and supported these individuals to train others, change care practices, and facilitate the family/carer support groups.</p>
<b>Main intended outcomes</b>	<p>Reduced number and severity of behaviours of concern.</p> <p>Improved recognition of resident preferences as they relate to behaviours of concern.</p> <p>Increased quality of life for residents with behaviours of concern.</p> <p>Improved care planning for residents with behaviours of concern.</p> <p>Decreased level of stress amongst staff and family/carers.</p> <p>80% of staff participated in 2-day training course.</p> <p>Increased use of evidence based practice in care planning processes.</p> <p>Enhanced knowledge and skills of direct care staff.</p> <p>Improved relationships between staff and carers/family members – to assist them to engage in the care of their family members.</p> <p>Improved understanding of the culture of each facility (from an audit of nature of family support being provided).</p> <p>Improved contribution of the physical environment to reducing behaviours of concern.</p> <p>Greater understanding by staff and management of the relationship between environment, staff and family/carers when caring for residents with behaviours of concern.</p>
<b>Examples of changes implemented</b>	<p>Environmental audits were undertaken early on, resulting in small changes to improve personal, social and open spaces within facilities, and reduce distracting/unnecessary stimulation for residents.</p> <p>Through the provision of mentoring, staff were provided with education and training, as well as professional and personal support. This included regular sessions with staff in a quiet and ‘psychologically safe’ place, where staff were able to voice their concerns regarding the care of residents and work collaboratively to identify strategies to reduce</p>

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<b>Project title</b>	<b>Improving behaviour by working with staff, families and the environment.</b>
	behaviours of concern. The changes in practice that arose out of these mentoring sessions were individual to each resident.
<b>Project evaluation</b>	The evaluation used a range of methods, including audits, validated assessment tools, surveys and focus groups, focusing on the main components of the project's interventions – environment, staff and family/carers - and the impact on residents. This included identifying the impact of the project on behaviours of concern and staff knowledge. The opinions were sought of managers and families about the impact of the project. The overall evaluation was conducted by independent evaluators.

## Appendix 13: Monash University behaviour management project

<b>Project title</b>	<b>Addressing Behaviours of Concern in the Bush: Sustainable evidence-based practice in rural and regional residential aged care.</b>
<b>Leader</b>	Dr Sandra (Sam) Davis, Palliative and Supportive Services, Flinders University (at project commencement working in the School of Rural Health, Monash University).
<b>Consortium partners</b>	Bendigo-Loddon Primary Care Partnership, Bendigo, Victoria. McCarthy Psychology Services, Eltham, Victoria.
<b>Participating facilities</b>	Seven facilities participated in the project from rural Victoria, a mix of small stand-alone aged care facilities, as well as aged care settings within multi-purpose services run by the Victorian Department of Health.
<b>Sources of evidence implemented by the project</b>	Alzheimer's Australia Quality in Dementia Care documents. Dementia Friendly Environments in Residential and Respite Settings, Department of Health, Victoria. Dementia Care Mapping, Bradford University, United Kingdom.
<b>Model of change for implementing the evidence</b>	The change management framework comprised a number of processes to target philosophy, management support, leadership, skilled staff and the environment, with three main elements: <ul style="list-style-type: none"> <li>▪ Introduction of a person-centred care philosophy to underpin care provision and understand the needs of people with dementia.</li> <li>▪ Modifying the built environment to support residents and staff providing care.</li> <li>▪ Using the physical and social environments to address behaviours of concern, and prevent their development.</li> </ul> <p>The main vehicle for change was the identification, education and support of 'best practice champions', who were resourced to provide a leadership role in their local facility. This included convening environmental modification working groups; participating in and facilitating face-to-face and e-learning educational sessions and 'micro-training' sessions. Dementia Care Mapping was used to identify and develop strategies to address behaviours of concern, using a needs-based problem solving approach.</p>
<b>Main intended outcomes</b>	Reduced incidence of depression, anxiety and agitation for residents. Improved quality of life of residents. Improved orientation and training of staff. Create a dementia-friendly physical and social environment. Increased capacity of facilities to provide appropriate assessment and care for older people with behaviours of concern.
<b>Examples of changes implemented</b>	Increased use of resident life histories and well-being checklist. Use of needs based problem solving to address behaviours of concern. Improvements to the physical environment. Reduction in the use of psychotropic medications.
<b>Project evaluation</b>	The evaluation comprised a pre- and post-implementation study design, which targeted the following groups using various measures: <ul style="list-style-type: none"> <li>▪ Staff: levels of education, attitudes, perceptions and practices, which were measured by surveys which looked at measures of individualised care, perceptions, levels of personal distress and work disruption due to behaviours of concern.</li> <li>▪ Families: satisfaction with care provided, information, level of involvement in decision making and perceptions regarding individualised care.</li> </ul>

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Project title	<b>Addressing Behaviours of Concern in the Bush: Sustainable evidence-based practice in rural and regional residential aged care.</b>
	<ul style="list-style-type: none"><li data-bbox="427 280 1385 398">▪ Residents: general well-being as measured by clinical data (incidents, behaviours of concern, medication use); quality of life using standardised measures and Dementia Care Mapping. Conversational interviews with a sample of residents were also conducted over the course of the project.</li><li data-bbox="427 421 1362 450">▪ Physical environment: audit of the environment using an environmental audit tool.</li><li data-bbox="427 472 1334 530">▪ Policy and procedure audits were also undertaken, to determine the information management systems required to sustain person-centred care.</li></ul>

## Appendix 14: Lead organisations – essential ingredients for success

The following table includes the answers given by project leaders in response to the question - are there any essential ingredients for success (the ‘must have’ or ‘must do’) of the project? Each row in the table summarises the responses for one project over the course of the four progress reports submitted by that project.

Essential ingredients for success
<p>Must understand the health literacy of the workforce and the environment in which they work.</p> <p>Ability to engage interested people with a variety of skills (multidisciplinary team) who have trust and willingness to work together.</p> <p>Project team must have a service philosophy which is underpinned by enthusiasm and a collaborative team approach.</p>
<p>Trust and good communication between the key staff.</p>
<p>Sound governance structures.</p> <p>Regular, clear lines of communication at all levels of the project.</p> <p>Committed project officers with a sound knowledge of facility procedures and issues faced.</p> <p>Key drivers to engage project participants, maintain momentum and lead change.</p> <p>An evaluation team who appreciate the limitations of the project and can adapt evaluation to suit the project.</p> <p>Identify evidence-based processes and tools that are readily available, user-friendly and have intuitive logic in their application (i.e. find and use the best bet that provides the best fit).</p> <p>Adequate time and resources are necessary to plan, implement and assess the impact of new strategies to subsequently drive change.</p>
<p>The funded champion position is essential not only in terms of their role within the organisation and the consortium activities, but also as a demonstration to the organisation that having such a role, even with a minimal .2 EFT can be effective in implementing change and how it can be cost effective for organisation to write such a role into key staff position descriptions to ensure sustainability.</p> <p>The champion position must be supplemented by assistants as a risk management strategy in larger facilities. A stand alone position leaves organisations open to significant risk of not being able to manage the implementation process in their organisation.</p> <p>It is essential to have a dedicated driver within the organisation to implement best practice. However, we also feel it is essential to have a clear directive identifying tasks and responsibilities for others in the organisation to support the Champion and effect change that sustainable. We see this clearly sitting with the Quality Manager or the individual responsible for quality improvement and should include a multidisciplinary best practice group representing all levels of staff.</p>
<p>Regular communication, reporting and documentation between all partners within the project.</p> <p>Support from management is critical.</p> <p>Also, it appears important that managers of facilities have volunteered to be involved as this appears to lead to greater involvement and uptake of activities than in facilities where a health service has volunteered one of their facilities to participate, without consulting the actual facility and the manager in much discussion about what the project will involve. Having an enthusiastic and dedicated resource nurse also appears to be critical.</p>
<p>Regular communication between all members of the project consortium (both within each organisation and between the different consortium members)</p> <p>A committed and enthusiastic senior member of the aged care staff to facilitate uptake of the learning initiatives amongst all staff (loyalty to the team leader seems to engender better training outcomes and greater compliance with the project goals)</p> <p>More broadly, the goodwill and commitment of the residents to be ready to undertake change and assist staff in providing best evidence based options is an absolute requirement.</p> <p>A committed and knowledgeable project team who are experienced in the delivery of training and evaluation activities within the specific context of residential aged care is an important requirement and also seems to influence outcomes (this is currently being examined as the level of experience and specific knowledge in pain management varied between the clinical nurse educators/project officer across the different facilities).</p> <p>Sufficient funding to help cover the increased workload associated with the implementation of a new quality improvement initiative.</p>
<p>Project team - commitment and team work; effective communication between all team members; access to relevant expertise.</p> <p>Participants - committed leadership within facilities; effective communication and team work; commitment to providing evidence-based practice and care</p>
<p>Ensure the delivery of information, presentations, feedback and training is appropriate for target audiences within facilities, due to</p>



<p>cultural and linguistic diversity among staff members.</p> <p>Remuneration to the facilities needs to be more generous.</p>
<p>High level of communication and engagement with direct care staff and management and provision of information and educational materials. Need to develop ways of informing residents and family about changes in treatments.</p> <p>Recruit a supportive team with leadership and change management skills.</p>
<p>The engagement of the aged care sector and all consortium partners is the essential ingredient for success. The partnership approach has paid dividends.</p> <p>We have presented academic focused best practice in simple and user friendly messages using a minimum of terminology.</p>
<p>To achieve success the project must:</p> <ul style="list-style-type: none"> <li>be adequately resourced and administered</li> <li>be supported by credible, known local leaders</li> <li>allow time for development of collaborative, trusting and collegial working relationships</li> <li>allow time for development of understanding of what each partner wants and needs, ability and willingness to negotiate to achieve this</li> <li>engage all levels of facility staff, residents and carers</li> <li>assist facility staff to identify areas of need and opportunities for practice involvement</li> <li>provide resources and avenues for facilities to act on areas of need</li> <li>provide continuous feedback on planning and progress towards goals</li> <li>maintain good communication all along the way – and perseverance to achieve this.</li> </ul>
<p>At this point the key ingredients include:</p> <ul style="list-style-type: none"> <li>collaboration with the facilities at early inception of the project and as the project is conducted.</li> <li>management support that is evident to staff for the project</li> <li>frequent support and encouragement from the project team to all levels of staff</li> <li>appointment of project liaisons as one point of communication</li> <li>reporting back successes to all levels of staff</li> <li>clarity on how implementing evidence based practice will benefit the residents and their families.</li> <li>engagement with key stakeholders both within the organisation and those external such as general practioners, specialist palliative care services and other health professionals who provide expert consultancy.</li> <li>appointment and training of link nurses to be the key change agents and drivers of palliative care</li> <li>enough link nurses to cover all shifts/days of the week including holiday relief.</li> </ul>
<p>Effective communication between the project team and the facility managers, champions and the project trainers.</p> <p>Collegiality, respect for one another's contributions, patience and commitment to achieving the project goals.</p> <p>Ensuring all staff are ready for change, including the champions, the service and care managers and the staff, i.e. agreeing to the need for looking more deeply into services and their impacts on the organisation, residents, families and staff; and agreeing to putting in some effort into reviewing and improving some services, and being open to suggested improvements in a range of services for the benefit of residents.</p>

## Appendix 15: Factors influencing implementation of evidence-based practice – results from EBPRAC national workshops

### *Round 1 workshop March 2009*

At the second Round 1 workshop conducted in March 2009 a session using a modified Nominal Group Technique was held for those attending from facilities. Participants were asked ‘what factors influence the implementation of evidenced-based practice in residential aged care based on your experience with the EBPRAC project and any similar projects or attempts to change practice that you have been involved in?’

Participants self-selected into two groups, with 12 opting to answer ‘what helps’ and 23 opting to answer ‘what hinders’. Each group was facilitated by a member of the evaluation team. In total, participants identified 102 descriptions of what helped or hindered which were then entered into an Excel spreadsheet to be sorted and analysed. Descriptions of what helps or hinders essentially represented ‘two sides of the same coin’ e.g. adequate resources helps, inadequate resources hinder; a receptive context helps, a non-receptive context hinders. The most frequently cited factors were the context for change (37% of the total), resources (26%), staff with the necessary skills (11%) and engagement of stakeholders (10%). The availability of resources was identified most frequently as a factor helping implementation (29% of ‘helping’ factors) and context most frequently as a factor hindering implementation (46% of ‘hindering’ factors).

### *Round 2 workshop February 2010*

A similar session to the one undertaken at the March 2009 workshop took place at the equivalent Round 2 workshop in February 2010. Participants were asked ‘what factors influence the implementation of evidence-based practice in residential aged care?’ However, rather than being asked to identify ‘what helps’ and ‘what hinders’, they were asked to apply a ranking to the eight factors identified in the literature review plus one other factor (leadership) which has emerged as a factor over the course of the evaluation. Up until then leadership had been subsumed into the working definition of context.

Participants were given a form listing the factors and asked to allocate 100 points across the factors i.e. to give an indication of what they thought was the relative importance of the factors. The factors were listed alphabetically. Options for allocation of points potentially ranged from all 100 points allocated to one factor to 100 points allocated equally across all factors. Participants also had the option of identifying additional factors and allocating points to those factors. Sixty people working in facilities completed the exercise and the results are summarised in the table below.

### *Factors that influence implementation of evidence-based practice*

<b>Factor</b>	<b>Average score</b>
Adequate resources	25.0
Leadership	18.7
Demonstrable benefits of the change for residents or staff	12.3
Stakeholder engagement	12.1
Staff with the necessary skills	8.9
Receptive context for change (other than leadership)	7.2
Systems in place to support the use of evidence	6.0
Model for change/implementation	5.1
The nature of the change in practice	3.1

Other factors	1.3
Total	99.7

‘Other factors’ (as written by participants) included ‘clinical issue – responsibility’, ‘accreditation’, ‘skill mix needed to meet resident care’, ‘defining role and clinical competence requirements’. The results for five participants did not sum to 100, with total scores of 102, 101, 109.5, 115 and 50. Adjusting the scores that these participants assigned to individual factors to sum to 100, while maintaining the relative importance of each factor identified by the participant, had no impact on the ranking of the factors and little impact (maximum change of 0.3) on the average scores.

Both groups identified adequate resources and stakeholder engagement as important factors. Adding the scores for ‘receptive context for change’ and ‘leadership’ in the second of these sessions identifies the importance of context in a similar way as the first session did. The main difference between the two sessions is the importance placed on ‘demonstrable benefits’ by the second group. Of the eight factors from the initial literature review three were identified as relatively unimportant by both groups – the nature of the change in practice, model for change/implementation and systems in place to support the use of evidence.

## Appendix 16: Comparison of processes of care and resident outcomes

The following table summarises changes in resident care and resident outcomes for the EBPRAC projects. The former are those changes that influence resident care in some way e.g. environmental changes are included because such changes can influence the experience of care for residents. Four projects did not evaluate resident outcomes, but rather focused on evaluating changes in practices. This was entirely appropriate and in accordance with the original funding submission for each project.

Project title	Changes in resident care (primarily changes in processes)	Resident outcomes
<b>NARI pain</b>	Major improvements in compliance with a set of 27 standards developed for the project, with 21-24 of the standards being met by the facilities at project end (compared to 6-12 pre implementation). Improved uptake of standardised pain assessment tools in some facilities.  Increase in appropriate use of analgesic medications for management of persistent pain and greater utilisation of non-pharmacological approaches.	Considerable variability in resident outcomes at different facilities. Some facilities reported a reduction in observer rated pain, whereas most facilities found no change or even a slight increase in reported pain.
<b>UN nutrition</b>	Different changes in practice implemented in each facility, none of which were measured to identify extent of changes.	Mixed picture for changes in the nutritional status. Between baseline nutrition assessment and final nutrition assessment the level of nutrition improved for 16% of residents, was maintained at a good level of nutrition for 26% of residents, maintained at a poor level of nutrition for 24% of residents and deteriorated for 33% of residents. No significant change in Body Mass Index. No clear pattern for quality of life scores with most facilities having a mean change close to zero.
<b>NARI falls</b>	Of the 16 areas of falls prevention interventions that were measured, all eight facilities reported improving practice in at least four areas and six facilities reported improvements in at least ten areas.	9% increase in rate of falls. No consistent pattern in individual facilities with falls rates either declining or increasing. Reduction in fall related injuries.
<b>SA dental</b>	Use of oral health assessments. Project focused on six ways of maintaining a healthy mouth: brush teeth morning and night; high fluoride toothpaste on teeth; soft toothbrush on gums, tongue and teeth; antibacterial product after lunch; keep the mouth moist; cut down on sugar. Extent of changes not measured directly but residents reported improved practices.	Improvement in oral health status (as measured by oral health assessments). Resident's own rating of oral health improved. Need for dental referral decreased. No significant change in residents' self-rated general health, or the percentage of those who reported problems in eating and enjoying food. Oral health-related quality of life did not change significantly.
<b>DATIS meds</b>	Increased use of panadol on a regular basis. Decreased use of prn benzodiazepines. Increased use of alternative strategies to deal with pain, behaviours of concern and sleep issues.	Not measured.
<b>QUT wounds</b>	Increased use of pressure reducing strategies, other strategies to prevent pressure ulcers and strategies to prevent other wound types. Increased use of pressure risk assessment on admission. Improved	Decreased prevalence and severity of wounds, including pressure ulcers, leg ulcers.

<b>Project title</b>	<b>Changes in resident care (primarily changes in processes)</b>	<b>Resident outcomes</b>
	documentation of wound assessments and wound management. Significant increase in the use of an emollient or soap alternative for bathing residents. Residents reported appreciation of the opportunity to take control and be able to implement preventative strategies and appropriate wound care themselves.	
<b>PW inf control</b>	Different changes in practice implemented in each facility. The changes were not measured.	None of the ten clinical indicators showed a pattern of improvement, including the four indicators for infections.
<b>MGPN pall care</b>	Increased discussion with residents and families regarding advance care planning. There is no evidence of consistent changes in work practices.  End-of-life care pathways introduced but extent of use not measured (most facilities expressed an intention to adopt pathways). No change in proportion of residents who had a case conference. Poor uptake of palliative care assessment tools.	Not measured.
<b>NEVDGP pall care</b>	Use of end-of-life care pathway in 43% of instances where it could have been used, with use highly variable between facilities. Increased provision of written information to residents and families. Fewer residents transferred to hospital and subsequently returned to facility prior to death.	Not measured.
<b>UQ pall care</b>	Improvements in documentation of advanced care planning, end-of-life care (with use of end-of-life care pathway) and symptom assessment. Improved use of assessment tools. Improved pharmacological treatment of depression and referral to specialist services. Use of palliative care case conferences.	Not measured.
<b>UTS behav</b>	Increase in positive social interaction between staff and residents. Mixed results for changes in number of psychoactive drugs administered. Changes to physical environment, including improved signage.	Mix of results for number of reported incidents (decrease in one facility, increase in four facilities). No change in level of apathy experienced. Reduction in aggression. Improvement in agitation scores. Decline in risky wandering in four facilities. Little change in quality of life. Mixed results for measure of well-being, with some small improvements.
<b>HC behav</b>	Fortnightly mentoring meetings involving mentor and staff caring for residents with challenging behaviour. Improvements to the physical environment.	Steady decline in agitated behaviour and psychiatric symptoms. Reduction in depression.
<b>MU behav</b>	Increased use of resident life histories and well-being checklist. Use of needs based problem solving to address behaviours of concern. Increased proportion of staff saying they knew the resident as unique individuals. Increased personal enhancers and decreased personal detractors of person-centred dementia care. Improvements to the physical environment. Reduction in use of psychotropic medications.	Improvement in resident autonomy. Reduction in behaviours of concern e.g. verbal disruption, physical aggression, socially inappropriate behaviour, wandering or intrusiveness. Reduction in day-time sleep. No change in overall quality of life. More meaningful occupation of residents.

## Appendix 17: EBPRAC resources and generalisability of those resources

Project title	Resources developed	Comments regarding generalisability
<b>NARI pain</b>	The clinical nurse educators involved in the project developed a range of educational materials including PowerPoint presentations and a <i>Principles of pain management and assessment workbook</i> , one for nurses (45 pages) and one for personal carers (35 pages).	The project has a page on the Australian Centre for Evidence Based Aged Care website that includes the workbook and other resources. People are free to select what they want to use.
	The project developed a tool for ascertaining the current level of compliance of any facility against 27 key standards for the provision of best practice pain management.	Assessment using the tool is quite a complex task requiring good knowledge of pain management. The tool could be simplified for more general use but this would require further development. The simplified tool could be used to assess quality of care and identify areas for improvement.
<b>UN nutrition</b>	Developed a <i>Tool Kit for Best Practice Nutrition and Hydration in Aged Care</i> based on experience over the course of the project. The Tool Kit has a focus on screening, assessment and measurement, including how to screen for nutritional risk, calculate Body Mass Index and energy intake, and assess plate wastage. It contains a set of 'myth busters' and a mix of information sheets, case studies and various charts/forms that can be used by facilities.	There is no reason why the Toolkit couldn't be used extensively
<b>NARI falls</b>	Developed a web-based resource which provides a guide to implementing falls prevention interventions - <i>Working together to prevent falls in residential aged care: resource package</i> . The package includes 'useful links' to other websites and is intended to provide a guide for any facility hoping to implement a falls prevention program.	The resources are already available on the National Ageing Research Institute website.
<b>SA dental</b>	Developed three educational resource portfolios accompanied by a series of posters, resident information and an oral health resource kit. One portfolio is for general practitioners and registered nurses and focuses on oral health assessment, oral health care planning and dental treatment; one is for facilitators (whose job it is to train staff) and one is for facility staff.	This material formed the foundation for the national training package implemented as part of the Oral and Dental Health Care Plan for residential aged care.
<b>DATIS meds</b>	Developed a complete set of resources for each of the three educational modules used in the project, including an educational visiting training module and background folder, 'detailing' or education visiting cards, resident brochures, flow chart, information sheet and evaluation questionnaires.	The resources are designed for a particular approach to education (academic detailing) and should be used for that purpose.
<b>QUT wounds</b>	The <i>RACF Wound Management Education and Self-evaluation Resource Package</i> includes evidence based guideline summaries, tip sheets, flow charts, brochures for health professionals and brochures for residents on various aspects of wound management, including skin care,	The brochures and tip sheets can be used as stand-alone aids. Using the evidence summaries to translate the evidence into practice would require a person with some expertise in wound management to provide appropriate education to support the evidence



Project title	Resources developed	Comments regarding generalisability
	<p>skin tears, venous leg ulcers, arterial leg ulcers, diabetic foot ulcers, pressure ulcers, wound care and assessment. A one-page audit form that can be used for ongoing assessment of wound management is also included. There is a Dressings Resource Folder on appropriate dressing types, an interactive CD with 8 self-directed education modules, a self guided quiz at the completion of each module, and links to all the project resources to complete the Wound Management Education and Self Evaluation package. A Champions for Skin Integrity Resource Folder includes the majority of the resources in addition to information on roles and processes, links for further information and tools to assist implementation.</p>	<p>summaries e.g. some form of 'champion' role.</p> <p>The modules on the DVD are designed for people with at least a Certificate III to learn independently but would benefit from some guidance about specific roles and responsibilities (which may vary from one facility to another) and need for skills development.</p>
<b>PW inf control</b>	<p>An <i>Infection Control Collaborative Program Handbook</i> was developed at the beginning of the project. The Handbook provides information about the Collaborative methodology used by the project team, as it can be applied to infection control.</p>	<p>The Handbook is specific to infection control and the Collaborative Methodology i.e. not generalisable</p>
<b>MGPN pall care</b>	<p>Developing new resources was not a focus of this project. Instead, existing resources were adapted for use in the project, including tools to assist with data collection, and inform staff (using folder and DVD) about how to conduct multidisciplinary team meetings. A pamphlet was developed on 'ten things to know about grief'.</p>	<p>The resources used in the project were adapted to the local context and hence are not widely generalisable.</p>
<b>NEVDGP pall care</b>	<p>Audit tools for self-assessment of use of end of life care pathway. Two education modules, (one on pain and one on agitation, breathing difficulties and mouth discomfort) designed for delivery using academic detailing. Each module is adapted for use with three audiences – general practitioners, nurses and personal carers.</p>	<p>The educational modules are designed for a particular approach to education (academic detailing) and should be used for that purpose.</p>
<b>UQ pall care</b>	<p>The <i>Palliative Approach Toolkit</i> is a comprehensive 85-page document which provides practical tools for implementing a palliative approach in residential aged care. The Toolkit includes three modules, one for managers; one on the key processes in a palliative approach (advance care planning, palliative care case conferences, end of life care pathways); and one on five domains of clinical care – pain, dyspnoea, nutrition and hydration, oral care and delirium. The Toolkit is supported by three self-directed learning packages for nurses (introductory and advanced) and personal carers; two educational DVDs (entitled <i>Suiting the needs</i> and <i>All on the same page</i>) and five in-service educational flipcharts targeting personal carers.</p>	<p>The Toolkit could be made widely available 'in tandem' with the release of the updated palliative care guidelines for residential aged care.</p>
<b>UTS behav</b>	<p>The <i>EN-ABLE Toolkit</i> is comprehensive and contains the following sections: introduction,</p>	<p>The EN-ABLE Toolkit has been designed for use as an integrated package. This limits the</p>

Project title	Resources developed	Comments regarding generalisability
	<p>education program, champion's guide, resident assessment guide, implementation and evaluation guide, and a guide to available resources. Also included are CDs which provide electronic versions of presentations and tools used during the project. The education section includes sections about dementia; person-centred care and communication; Need Driven Behaviours and behaviour assessment; a person-centred approach to Need Driven Behaviours; and evidence-based practice and implementing change. Each section of the Toolkit is bound and included in a box file for the participating facilities.</p>	<p>generalisability of the toolkit to those organisations with the resources to train the champions and staff according to the EN-ABLE approach.</p> <p>The toolkit is constructed in such a way that components could be used separately. Additional material in the toolkit would assist those with some elements of the model in place who would like to select components of the toolkit to suit their particular needs.</p>
<b>HC behav</b>	<p>The project assembled a toolkit which includes information about environmental auditing, staff training (student handbook, trainers manual, and presentations), mentoring, family support and evaluation of outcomes. The toolkit will include a DVD produced by the Aged Care Channel and a booklet about the experiences of the project mentors.</p>	<p>The audit tool can be used to audit the environment, identify areas of need and develop action plans. It would be preferable that this occur with some specialist input.</p> <p>The educational materials can be used in all facilities.</p> <p>The use of the material on mentoring will be dependent on the availability of a suitably qualified mentor.</p> <p>The material on the establishment of family groups can be used in most facilities, preferably with a mentor involved.</p>
<b>MU behav</b>	<p>Two interactive e-learning CDs for provision of in-house education by facilities. The first CD includes information on dementia care and needs-based problem solving. The second CD (also available as an audiotape) includes 20 'micro-training' topics, each consisting of a one minute video message followed by a question which staff can try and answer as a group for another minute or two. The CDs are supported by various documents, including a well-being checklist and policy audit tool.</p>	<p>The resources can be taken up and used by others without the expertise available to the project team i.e. the resources are generalisable.</p>