

Intervene Phase 2:

Multi-disciplinary collaboration to support the implementation of best practice pain management for older people living with dementia



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ACKNOWLEDGMENTS

The project which forms the basis of this report, Best practice pain management in residential aged care (Full title – *Multi-disciplinary collaboration to support the implementation: A participatory action research study in Australian Residential Aged Care Services*), was undertaken by Associate Professor Colm Cunningham and the research team at the Dementia Centre between 2016 and 2018. The project was approved by the University of New South Wales, Human Research Ethics Committee (HC16960).

The researchers would like to thank the Cognitive Decline Partnership Centre (CDPC) and partner organisations for their support during the project. In particular, we would like to acknowledge the contribution of the Consumer Advisory Group members. Their lived experience of dementia and how this affects our understanding and management of pain was invaluable. Their insights concerning complex issues such as cultural differences, the role of family and advocacy in pain management helped to shape key activities and outcomes of the project.

We would also like to thank the many research participants – people living with dementia, their family members, managers and staff of participating residential services— whose involvement has been critical in this work.

This study is supported by funding provided by the National Health and Medical Research Council (NHMRC) Partnership Centre on Dealing with Cognitive and Related Functional Decline in Older People (grant no. GNT9100000). The contents of the published materials are solely the responsibility of the Administering Institution, Dementia Centre HammondCare, and the individual authors identified, and do not reflect the views of the NHMRC or any other Funding Bodies or the funding partners.



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GLOSSARY OF TERMS

ACT:	Alberta Context Tool
CALD:	Culturally and Linguistically Diverse
COM-B:	'capability', 'opportunity', 'motivation' and 'behaviour'
E-B:	Evidence based
EN:	Enrolled Nurse
L&L:	Lifestyle and Leisure staff
MDT:	Multidisciplinary Team
OT:	Occupational Therapist
PAR:	Participatory Action Research
PAS:	Psychogeriatric Assessment Scale
PCA:	Personal Care Assistant
POAKS:	Pain in Older Adults Knowledge Survey
PRN:	from the Latin "pro re nata", meaning as required
RAC:	Residential Aged Care
RN:	Registered Nurse
SEM:	Standard Error Mean
SD:	Standard Deviation
TL:	Team Leader

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EXECUTIVE SUMMARY

Over a decade of research has highlighted that pain is often unrecognised and frequently undertreated in people with dementia.

Over a decade of research has highlighted that pain is often unrecognised and under treated in people living with dementia. In residential aged care there is often a gap between what is described as best practice and day to day practice in pain management.

A preceding project, Intervene Phase 1 aimed to identify factors which affect implementation of best practice pain management for older Australians living in residential aged care (RAC). This project was conducted in collaboration with three residential aged care providers over eight residential aged care sites. Methods of data collection included a literature review, staff focus groups, audit of care documentation, resident review and a staff knowledge questionnaire.

Intervene Phase 1 findings revealed persistent problems in the identification, assessment and management of pain in people living with dementia in RAC services which were associated with site-specific systemic and cultural barriers.

The current project, Intervene Phase 2 was devised as a follow up project to address these key issues of concern identified in Phase 1. This included addressing organisational cultural barriers that:

1. reduce the ability of Personal Care Assistants (PCAs), who provide the most direct and constant care to people living with dementia, to effectively engage in pain management processes, and

2. constrain development of a culture that supports evidence-based pain management.

Intervene Phase 2 project looked to address these barriers by using a Participatory Action Research (PAR) approach.

Researchers worked in partnership with Multi-Disciplinary Teams (MDTs) at four RAC sites, to develop strategies targeting individual, group and organisational behaviours which would facilitate the development of a culture that prioritises evidence-based pain management. Integral to this objective is the empowerment of Personal Care Assistants (PCAs) as central stakeholders in pain identification, assessment and management. The project findings led to the development of a generalisable MDT Pain Management Model, designed to support RAC services to translate evidence-based pain management into practice, and thus improve the lives of people living with dementia and experiencing pain.

Findings from data collected at the commencement of the project revealed that pain is a taken-for-granted part of RAC practice and there can be a lack of explicit communication about pain. Care staff reported high levels of involvement in pain identification, but variable use of formal pain assessment scales. Inconsistent knowledge of how to conduct formal pain assessment scales was identified as an area requiring improvement. Staff also reported that they lacked a clear decision-making pathway that would support them in applying a structured approach to pain management within the scope of their roles.

EXECUTIVE SUMMARY

The development of interventions by the MDTs was informed by baseline data information. Awareness of the project was raised through posters, followed by the roll-out of a series of education videos, pocket reference cards and one to one support provided by MDT members to all staff.

Additionally, it was found that engaging multi-disciplinary teams to drive change in staff behaviours and pain management processes improved staff confidence and involvement in the day to day pain management of people living with dementia.

Interviews with family carers of people living with dementia in residential aged care highlighted a lack of consensus understanding of how their family member experiences pain.

Overall, the study was successful in achieving the set objectives, but this varied between the four pilot sites as it was underpinned by the local context.

A distillation of findings from this study which can be adopted by RAC homes have been summarised as the “MDT Pain Management Model.” This is a resource that will enable organisations to implement evidence based pain management for their residents.

Recommendations developed as a result of this project include that:

- RAC homes should recognise direct care staff as central to the success of pain management by extending their roles to include proxy identification, assessment, management and evaluation of pain, and
- RAC homes should provide training in evidence-based pain management for people living with dementia which is standardised, in an accessible format and with a focus on using formal pain assessment tools.

We also recommend future research focused on initiatives at the interface between culturally and linguistically diverse (CALD) staff and CALD residents, and the role of family members in developing pain management strategies for residents in RAC.

By leveraging the expertise of multi-disciplinary teams at four residential aged care services, this study revealed unclear pain management decision-making pathways, incomplete documentation of the discrete pain management stages and poor communication in general between aged care staff (including General Practitioners and allied health) were key barriers to implementing evidence-based pain management practices for people living with dementia in RAC.

1 INTRODUCTION

1.1. PAIN MANAGEMENT IN RESIDENTIAL AGED CARE

It is estimated that one in five Australians live with chronic pain (McLean and Higginbotham, 2002) and this increases to nearly one in three people over the age of 65 (Blyth et al. 2001). Furthermore, it is widely accepted that pain is a common symptom experienced by older people living in Residential Aged Care (RAC) services (Takai et al. 2010).

For well over a decade, research has highlighted that pain is under recognised and frequently under treated in people living with dementia, despite this group of people having similar painful conditions to people without dementia (Katz, 2015; Herr, Bjoro & Decker, 2006; Gibson 2007). As people living with dementia become less able to effectively verbally communicate their pain or pain related needs (Pautex et al. 2006), there is an increased risk of the pain going undetected. The consequences of untreated pain include impaired physical function, decreased mobility, and psychological problems, including depression and anxiety (Horgas & Dunn, 2001; Won, et al. 1999). Additionally, pain is a significant source of distress, and can contribute to behavioural and psychological symptoms of dementia (Cohen-Mansfield 2001; Husebo et al. 2011). Hence there is an imperative to address deficiencies in the identification, assessment and management of pain, to improve the quality of life for people living with dementia.

People with dementia in RAC are often in more advanced stages of dementia and as such are at a higher risk of being unable to communicate pain.

Despite the development of Best Practice Strategies for Pain Management in Residential Aged Care Settings (APS 2018), and an associated implementation Toolkit (McConigley et al. 2008), the translation of evidence into practice remains variable in Australia and overseas (Savvas et al. 2014; Wall & White 2012).

Development work undertaken by the Dementia Centre research team during a previous project, Intervene Phase 1 (Cunningham et al. 2016), found the use of validated tools (verbal or non-verbal) to assess pain in people living with dementia was suboptimal in eight Australian RAC settings. This finding is consistent with extant literature (Zwakhaleh, et al. 2006). Intervene Phase 1 also demonstrated through an audit of 109 aged care files of residents living with dementia, that only 25% of residents had a documented pain assessment conducted within the last month, despite the fact that just over half (53%) were known to have a chronic painful condition. The documentation audit in Intervene Phase 1 also revealed that:

- the monitoring of pain was largely informal, and appeared to be linked to the fulfilment of regulatory requirements rather than any best practice approaches,
- pharmacological and non-pharmacological treatment of pain was ad hoc, and
- there was a notable absence of multi-disciplinary input to pain management.

This has serious implications as it may contribute to inadequate pain identification and assessment practices which are considered to contribute to the under-treatment of pain in people living with dementia who may be unable to express that they are in pain (Zwakhaleh et al. 2006).

While best practice documents (APS 2018; McConigley et al. 2008) also emphasise the importance of multidisciplinary approaches to pain assessment and management, in reality, such engagement is often difficult to achieve (Savvas et al. 2014; Peisah et al. 2014).

Hence, there is a continued pressing need to address the evidence-practice gap between what is described as best and actual practice in pain management in Australian RAC services.

1 INTRODUCTION

This report summarises findings of the Intervene Phase 2 implementation project.

Unlike more ‘standard’ intervention research, this PAR project involved iterative development of methods and implementation. The report reflects this complexity and reflects the developmental nature of the project methodology. It details the creation of multidisciplinary teams at four residential aged care sites to drive behaviour change and ultimately improve pain management practices over the two year duration of the project. It also provides a summary of key project outputs and recommendations for similar future implementation projects.

“Pain is everybody’s business. So if you observe a change, consider pain.”

1.2 PROJECT AIM AND OBJECTIVES

1.2.1 Aim

The Intervene Phase 2 study aimed to modify cultural conditions that shape the practices of aged care staff to encourage a proactive approach to pain management. Through creation of a collaborative engagement with multidisciplinary teams (MDTs) at four RAC homes, the project supported the implementation of evidence-based pain management strategies to improve quality of life for people living with dementia.

1.2.2 Objectives

Three objectives were outlined for the Intervene Phase 2 project.

1. To establish MDTs comprised of staff members at each RAC home to co-create and implement behaviour change strategies through a series of action cycles.
2. To develop inter-organisational networks between MDTs at the four project sites for enhanced knowledge transfer between services and decreased professional isolation of the MDT.
3. To develop an “MDT Pain Management Model” largely informed by outcomes of the first two objectives.

2 PROJECT DESIGN

2.1. METHODOLOGY

This project used a novel combination of two theoretical frameworks to achieve the stated objectives. These are ‘Participatory Action Research’ (PAR) and the ‘Capability Opportunity Motivation – Behaviour’ (COM-B) model.

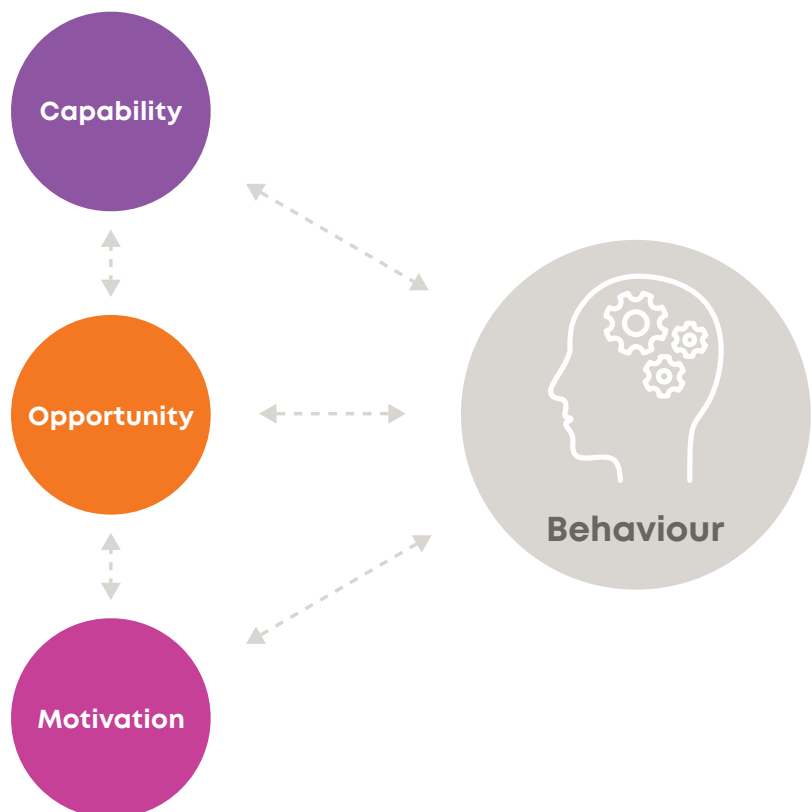
First, using a PAR approach, each MDT functioned as an action group and worked through a series of three-step action cycles of reflection, observation and action to critique the conditions and taken-for-granted assumptions that shape current practice and then develop and implement interventions to address identified deficiencies in practice at their RAC service.

PAR was selected for its explicit focus on collaboration between local stakeholders; in this case, the MDT at the project sites; in partnership with researchers from HammondCare.

PAR encourages empowerment and democratic engagement of staff in MDTs, thereby leveraging local stakeholders’ expertise and knowledge relevant to the problem being addressed (Reason & Bradbury 2001; Crane & O’Regan, 2010).

Second, the Capability, Opportunity and Motivation domains of the Behaviour Change Wheel were used to articulate what factors need to change to achieve the desired shift in behaviour. This is termed the COM-B system (Michie et al. 2011; Michie et al. 2014) and represents behaviour as resulting from interaction of the three components (Figure 1).

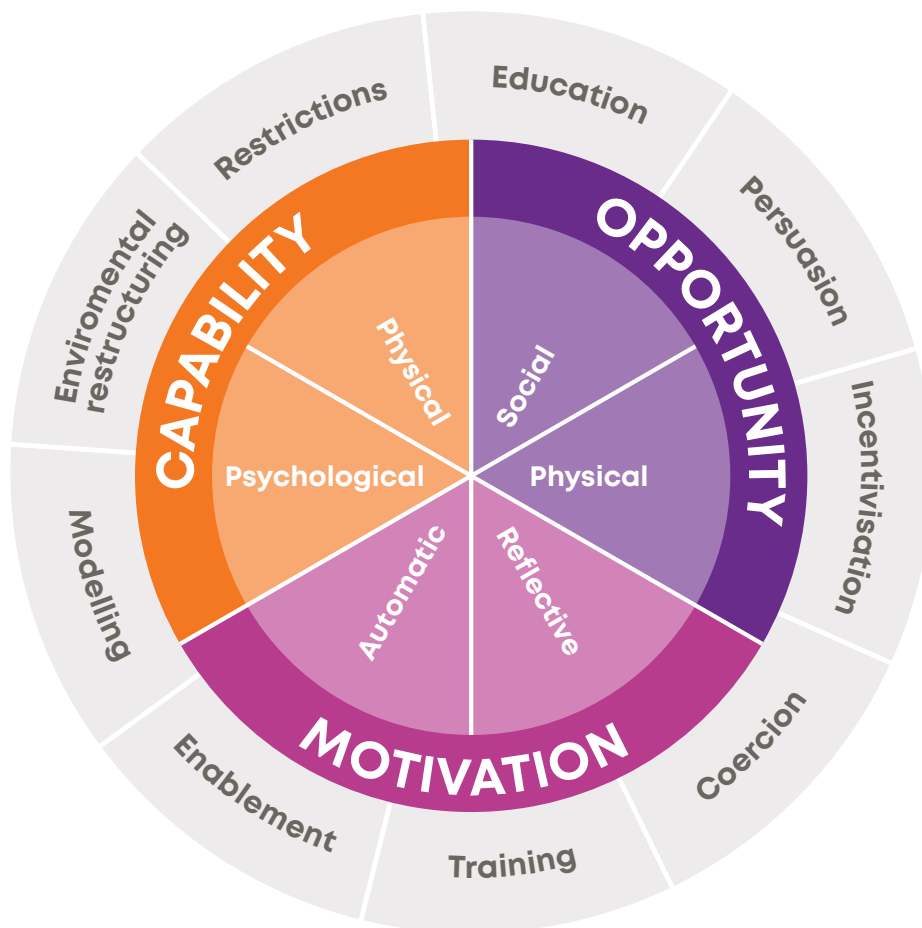
Figure 1: The COM-B system



The design of the intervention for this project draws on the nine intervention functions which can be mapped to the COM-B analysis (Michie et al. 2011; Michie et al. 2014). This forms the central part of a wider framework known as the Behaviour Change Wheel (Figure 2). This Framework was selected because it supports implementation best practice approaches by targeting staff behaviours that impact on aspects of care.

Skills development of MDTs in this area was central to the success of the project and to the sustainability of outcomes. Researchers and MDT members were trained in PAR and behaviour change (COM-B) techniques throughout their engagement in the project. This was accomplished through a series of workshops and meetings with the teams.

Figure 2: Behaviour Change Wheel

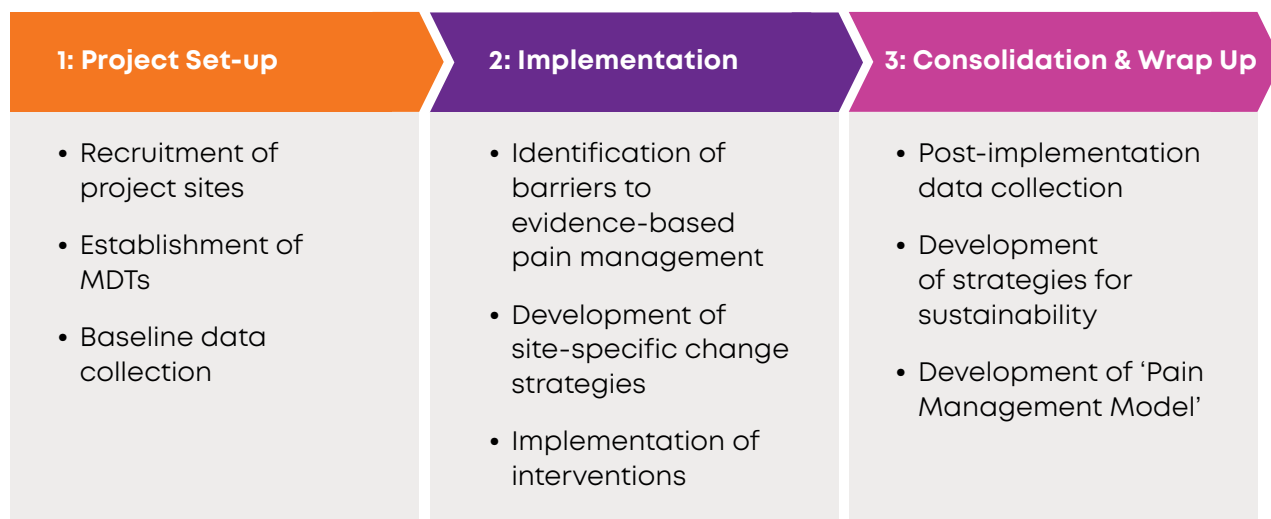


Adapted from Michie et al. 2011

PROJECT STAGES

The project was carried out over three main stages with specific milestones at each stage, detailed in Figure 3.

Figure 3: Project Outline



Regular meetings of MDTs were planned fortnightly for each site. A project officer from the research team assisted in supporting the meetings. Meetings were used to:

- Define barriers to pain management in their local setting,
- Develop strategies to improve practice, and
- Provide feedback on the progress of implementing the strategies.

Three workshops involving all sites were conducted with the MDTs at each stage of the project (Appendix I).

These workshops were used to:

- Collate information that would inform the subsequent stage of the project,
- Provide support for the MDT as they transitioned from one stage to the next, and
- Provide the participating sites with an opportunity for inter-organisational collaboration.

The following section describes the three stages of the Intervene Phase 2 project in detail.

2.2.1. RECRUITMENT OF PROJECT SITES

2.2.1.1. Recruitment of project sites

Candidate RAC services were recommended by members of the research team. The selection criteria were that the aged care home was either a dementia-specific service or had a dementia-specific care unit, and management at the site agreed to participate for the duration of the project.

Four sites operated by three providers met the selection criteria and participated. An equal number of metropolitan and regional sites were recruited.

2.2.2. Establishment of Multidisciplinary Teams (MDTs)

At each project site, a group of staff members interested in improving pain management practices, referred to as a multidisciplinary team (MDT) was established.

To recruit MDT members at each site, letters of invitation to participate in the MDT were sent to all staff providing direct care to people living with dementia. Participation was voluntary and interested staff sent in expressions of interest for the role.

Role descriptions for MDT membership were developed collaboratively with the participating RAC site management.

In order to establish a MDT that was likely to be stable and have the capacity for regular engagement throughout the project, the following inclusion criteria were applied.

- Members needed to have worked at the facility for more than 3 months,
- Allied health, such as physiotherapists, occupational therapists or other visiting allied staff needed to work at the facility for a minimum of 3 days per fortnight,
- Personal Care Assistants (PCAs), nursing staff, lifestyle and leisure staff – needed to be employed either full time or part-time for a minimum of six shifts per fortnight, and
- General Practitioners or other medical practitioners needed to demonstrate regular attendance at the facility, making at least one visit per week.

Forty six expressions of interest (EOI) were received from staff who all met the inclusion criteria. Thirty eight applicants were progressed to membership with the assistance of site management. Each MDT comprised between 8-11 staff members with occupational membership that was representative of the workforce at that RAC home. (Table 1). None of the medical staff who were approached returned an EOI.

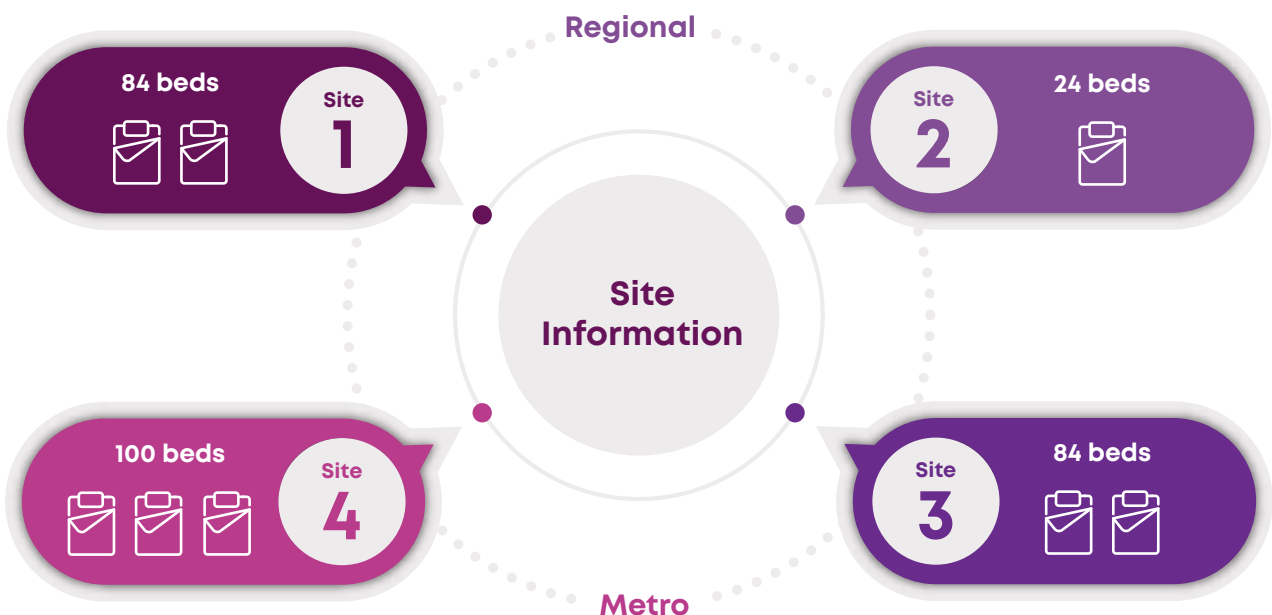


Table 1: MDT membership at participating sites

Site	MDT Membership	Features of Staffing at RAC Service
1	N=9 2xRN, 2xEN, 4xPCA, 1xOT	<ul style="list-style-type: none"> • Service has 5 days per week coverage shared between Occupational Therapist (OT) and Physiotherapist (PT). • GPs from four practices visit residents.
2	N=11 4xRN, 3xPCA, 1xPT, 1xOT, 1xL&L	<ul style="list-style-type: none"> • Service has approximately 5 days coverage per week between OT and PT who visit the service.
3	N=8 7xPCAs, 1xRN	<ul style="list-style-type: none"> • This service has a contracted physiotherapist, no regular visiting OT. • This site is predominantly staffed by personal carers. • Two RNs were on site during the day – Manager and Assistant Manager.
4	N=11 2xRN, 7xPCA, 1xL&L	<ul style="list-style-type: none"> • This service has a contracted physiotherapist service. • Does not have a regular visiting OT or other allied health involved in pain management.

Key EN: Enrolled Nurse; GP: General Practitioner; L&L: Lifestyle and leisure; OT: occupational therapist; PCA: Personal Care Assistant; PT: Physiotherapist; RN: Registered Nurse

SUMMARY OF THE MDT'S ROLE

Collaborative partnerships between MDT members and project researchers were used to promote multi-directional dialogue and a “bottom-up” approach to translating knowledge into practice in all phases of this project. The rationale for this was that personal carers have frequent and intimate contact with residents while helping them with their daily personal care requirements such as getting out of bed, toileting, showering and meals. This contact ideally positions them to identify residents’ pain and initiate intervention strategies to address pain. In addition, the proportion of PCAs in RAC continues to grow, currently accounting

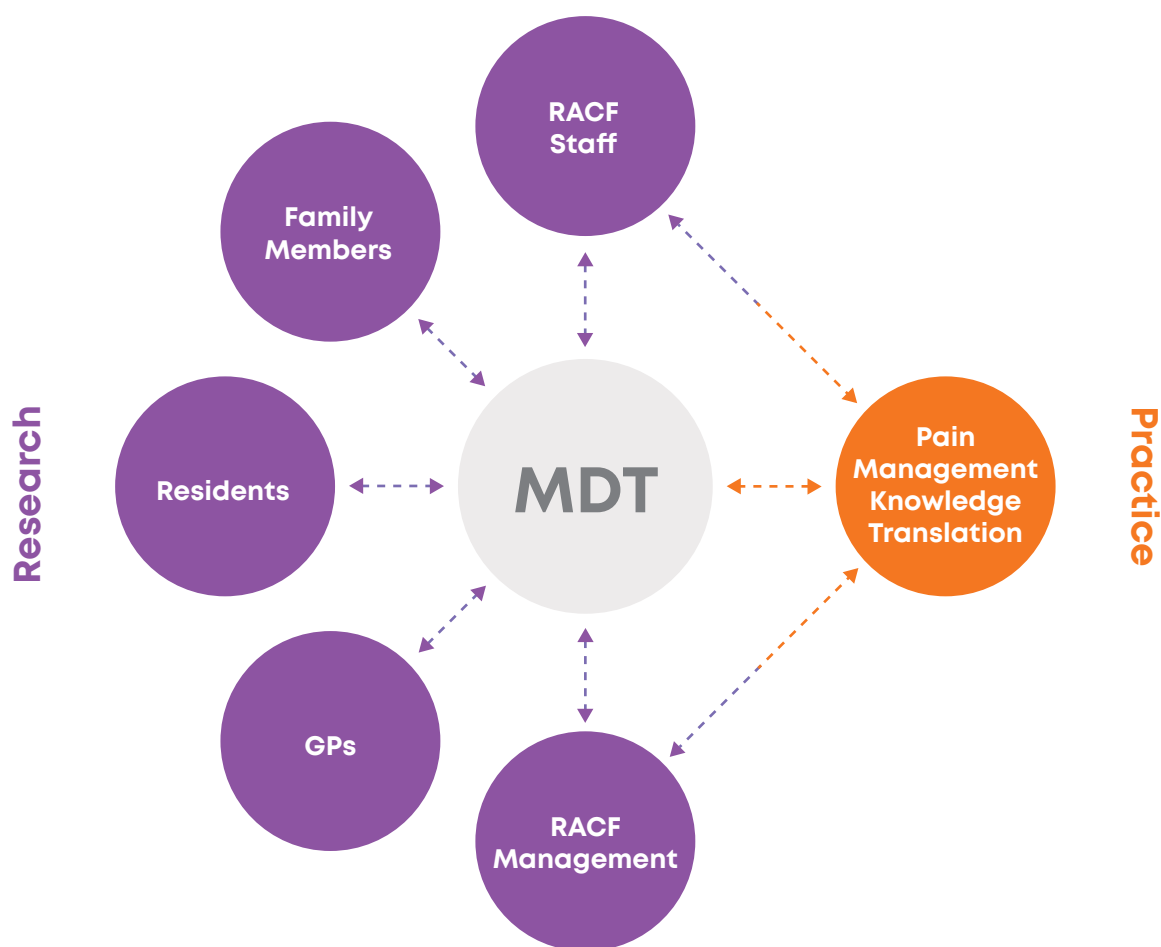
for over 70% of the aged care workforce (The aged care workforce, 2016), accompanied by a decrease in the number of nurses across the sector (Mavromaras et al., 2017). As such, their engagement in the MDT was of paramount importance.

In recognition that MDT members are experts in their local setting, the guiding principle of interaction was that the research team would work “with” rather than “on” the MDT members.

This approach embraces the understanding that people have a right to be involved in decision- making and in the development of knowledge that is about them and affects them (Reason & Bradbury 2001, p.10).

The centrality of the MDT role is shown schematically in Figure 4.

Figure 4: Diagrammatic representation of MDT role



2.2.3. Baseline Data Collection

At commencement, audits of resident documentation, facility documentation and four staff surveys were conducted to gather baseline data.

Staff were surveyed to gain an understanding of staff demographic characteristics, perceptions of RAC service (leadership and culture) at each site as well as their confidence, involvement and understanding of pain management at each site.

Family interviews were also conducted to capture the perceptions of family members about their relative's pain management.

Audit of Resident Documentation (Progress notes and Pain Assessment Forms)

Service managers at the four participating sites were asked to provide consent for the lead researcher and project officer to access the resident documentation for the audit. An information sheet and consent form was provided.

Site managers were asked to identify residents who meet the inclusion criteria for the audit, which were:

- a resident with a formal diagnosis of dementia by medical practitioner, or
- a resident with documented suspected dementia or cognitive impairment in care notes with a Psychogeriatric

Assessment Scale (PAS) score of 4 or greater, or

- documentation by a clinical staff member indicated that a PAS could not be undertaken due to severe cognitive impairment, and
- a permanent resident of the service with at least six months residency prior to the audit period.

For sites with a mix of residents living with and without dementia, the managers were asked to provide a list of residents that met the inclusion criteria of the audit.

Two auditors (research team members) reviewed resident notes and medication charts of three months prior to the audit period. Each audit consisted of basic demographics, information of whether the resident had chronic or acute pain or both. Two pain episodes were randomly audited per resident to look at the quality of documentation of pain identification, assessment, treatment and management. The completeness of documentation of the records was defined as documentation of pain information along the entire pain management pathway (identification, assessment, intervention and evaluation).

The data was de-identified and was entered into an audit tool (Appendix 6), specifically developed for the project by members of the project team who had expertise in pain medicine, aged and dementia care nursing and expertise in audit development.

Ten resident files were selected at random (at each RAC service) and independently audited by two reviewers to ensure at least 90% accuracy with data extraction.

Facility Documentation Audit

Service providers were asked to provide consent for the lead researcher and project officer to access the organisation's pain related policy and procedure documents for the audit. The service managers were also provided with a participant Information sheet and consent form.

Staff Demographic Survey

This survey collected data on staff demographics (e.g. gender, level of education, country of birth, occupational background and years of experience) role and perceptions of pain management. These were:

- pain education within the last year,
- knowledge and use of reference of best practice pain management strategies,
- staff understanding of facility-specific procedures and involvement in pain related care, and
- staff opinion on the proportion of residents with pain needs not being met.

Staff Confidence and Involvement – Responding to resident pain.

An 18-item, 0-10 Likert scale measured perceptions of staff's confidence, skills and involvement in pain management for people with dementia, where 1 represents very low confidence/involvement and 10 represents high confidence/involvement in their pain management.

The Pain in Older Adults Knowledge Survey (POAKS) for staff

The POAKS (Fetherstonhaugh et al, 2016) is a 24-statement survey using closed ended questions that assesses basic knowledge of staff related to the identification, assessment and management of pain in older people, including people living with dementia. The response options are "True", "False" and "Don't Know."

The Alberta Context Tool (ACT) for staff

The ACT (Estabrooks, 2007) is a validated instrument that assesses ten modifiable aspects which define healthcare organisational context which is considered important to the provision of evidence-based care.

It is a 59-item, 1-5 Likert scale survey used to measure how staff members feel about their organisational context (culture, leadership, staffing and time availability).

It is expected that staff who perceive more positive organisational context would have more successful project outcomes.

Family Carer Interviews

The research team sent out an invitation with a proxy consent form for family members to participate in interviews regarding the pain management of their relatives in care.

To be eligible, family carers had to be aged 18 years or above and be documented as the 'person responsible' for making health decisions for the person living with dementia at the RAC home. Their relative living with dementia had to be a resident at the RAC home during the time period being audited.

Semi-structured telephone interviews were conducted with 14 family members/ carers of people living with dementia, in the participating residential aged care services. Participation in the interviews was voluntary and family members were able to register their interest in being interviewed by returning an expression of interest form to the research team. Following receipt of written consent, a member of the research team then made a follow-up phone call, and answered any questions of the potential participant.

The researcher was responsible for confirming consent at the beginning and the end of the interview, ensuring that the family member understood their decision did not incur any adverse consequences to them or their relative in care at the RAC service. Prior to commencing the interview, the family member confirmed that they were happy to proceed, and completed a consent form.

Using qualitative methods, the interviews explored family members' understandings of dementia, changes that having dementia may have had on the ability to feel pain, as well as perceptions of pain management for their relative at the RAC service. The interview questions were probing and open-ended, and were used to explore emerging themes

as the interviews progressed, enabling participants to share their experiences.

Data were collected using semi-structured, audio-recorded individual interviews lasting between 20 and 60 minutes. For consistency, all data collection was undertaken by one member of the project team. Interviews were transcribed verbatim by a third party transcription service and checked by a member of the research team.

All data collected in stage 1 of the project contributed to identifying evidence-practice gaps and provided baseline measures for evaluation of change at an organisational, occupational group and resident consumer level.

2.3. Stage 2: Development and Implementation of Interventions

The second stage of the project consisted of three successive action cycles carried out with each of the four MDTs.

This was accomplished in fortnightly meetings between the MDT members at each site. A research team member facilitated the meetings. The data collected through MDT meetings was digitally recorded, transcribed, and de-identified by assigning a code to each participant.

Three action cycles were undertaken by the MDTs as outlined in Figure 5.

2.3.1. Action Cycle 1: Identification of barriers to evidence-based pain management

Using site specific baseline data and the COM-B framework of the 'Behaviour Change Wheel', MDTs moved through the first action cycle to identify problems and barriers to pain management practices at their sites.

MDT as action groups



Figure 5: MDT Action Cycles

Defining the problem

- MDTs defined key problems and barriers of current pain management practices at their services.
- These discussions drew on reflections from their own practices and workplace, reference to earlier research and consideration of the baseline survey, audit and interview data.

Specify desired behavior change & develop interventions

- MDTs specified which staff behaviours would need to be targeted to improve pain management at their services, and how these behaviours needed to change.
- MDTs performed an in depth analysis of the target behaviours using the Capability, Opportunity Motivation – Behaviour (COM-B) system (Michie et al. 2011; Michie et al. 2014) and developed interventions using this framework.

Implement an improved or changed strategy

- MDT implemented developed interventions using insights from cycle 2.

2.3.2. Action Cycle 2: Development of site-specific change strategies

MDTs developed key interventions to enhance knowledge, practice and a culture of pain management. These interventions were:

- Posters targeting staff to raise awareness about pain in people with dementia,
- A pain management protocol (Appendix 8), providing a clear step-by-step process of managing pain,

- Supporting educational videos based around the pain management protocol, and
- A pocket reference card to be used by all staff as reminders of key aspects of pain management as highlighted by the educational videos.

Interventions designed by MDTs were targeted at improving pain management practices of frontline staff who provide direct care to people living with dementia at the service.

Specifically, the interventions aimed to improve pain assessment, documentation and communication between staff about resident pain.

MDTs requested education videos that covered pain management and the use of pain assessment tools, with a specific focus on the Abbey Pain Scale (Appendix 7). All participating sites had used the Abbey Pain Scale in their RAC service. The five part education series was designed to be delivered over a few weeks. Each video was 5-7 minutes long.

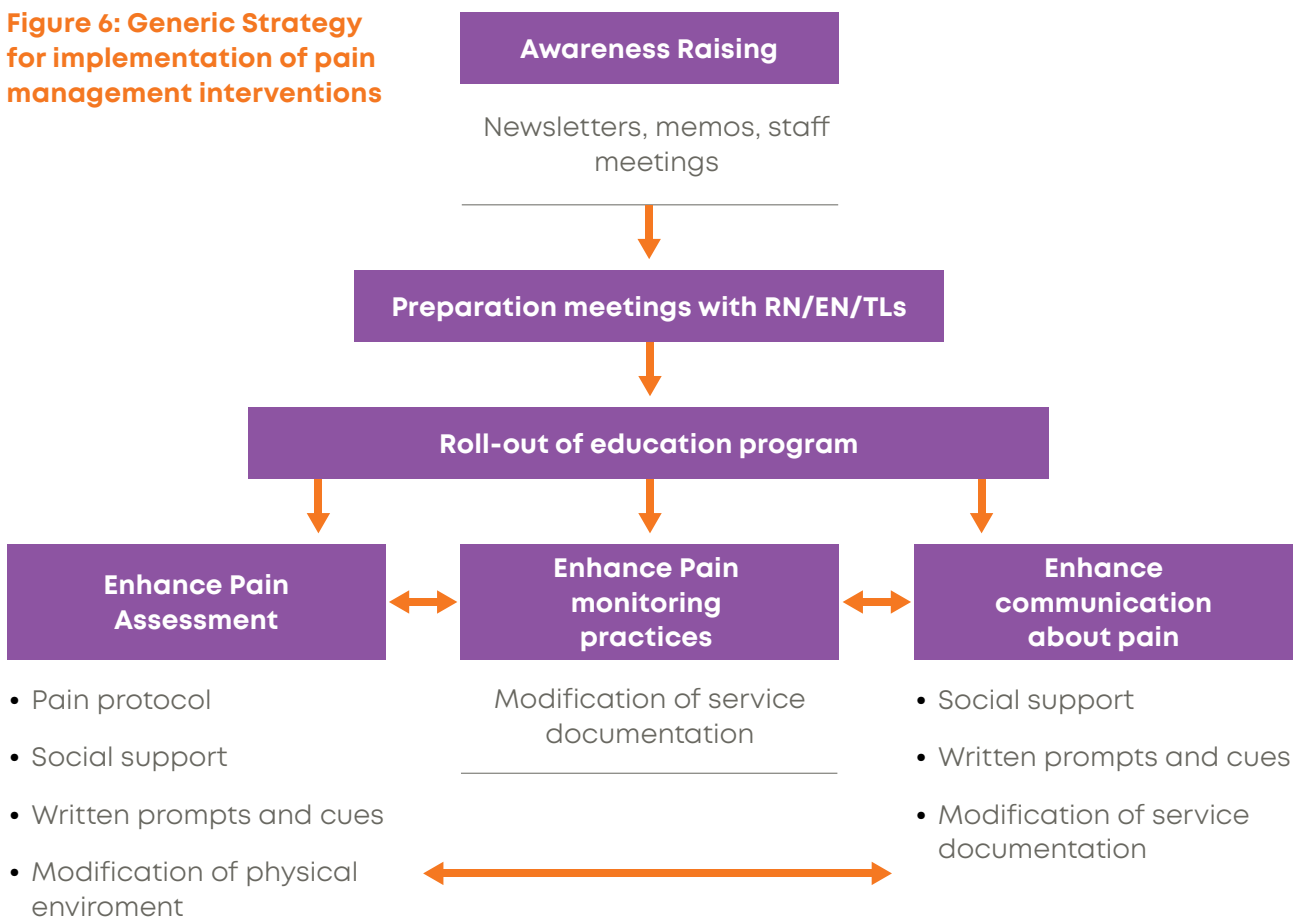
N.B. The full details of the interventions are found in Section 5.

2.3.3. Action Cycle 3: Implementation of interventions

Action Cycle 3 focused on implementing the interventions the MDTs designed in Action Cycle 2.

The research team supported the MDTs in designing implementation strategies to roll-out the interventions at each site. Figure 6 shows the generic strategy that was modified as needed to accommodate site-specific requirements.

Figure 6: Generic Strategy for implementation of pain management interventions



The implementation of interventions occurred over a period of approximately six months. The MDTs chose to initiate the roll-out of the implementation in units of the RAC homes where there was support of a MDT member to champion the process.

The education program was delivered in the manner of regular training practices at each site. Except for site 4, where an external facilitator was asked to deliver education sessions, the education was facilitated by MDT members. The educational video series covers key stages of pain management (identification, assessment, monitoring as well as pain management strategies). Each video was 4-6 minutes long. As part of the education, the staff also practised completing an Abbey Pain Scale.

2.4. STAGE 3: POST-IMPLEMENTATION

Post implementation data were collected with the aims of:

- Determining the effectiveness of implemented interventions,
- Identifying factors which affect implementation of best practice pain management, and
- Informing the development of a transferrable pain management model. Methods included review of the literature, MDT meetings and workshops, staff surveys, audit of care documentation and family carer interviews.

The post-implementation data collection included follow-up staff surveys, and repeated documentation audits using the same method as undertaken at baseline. Some of the data collected at baseline served only an exploratory function for the intervention development and was therefore not collected post-implementation.

The research team also sought and collated MDT member feedback as an additional source of data.

2.5. DATA COLLECTION AND ANALYSIS

Qualitative and quantitative data collected at baseline, implementation and post-implementation from the four participant sites throughout the project were analysed as outlined below.

2.5.1. Qualitative data

Qualitative data were collected through audio recordings of MDT Meetings and family interviews. In all cases, data was transcribed verbatim with identifiers removed.

MDT data was used as a record to inform changes in working relationships, language used, communication and structures related to pain management practice. These transcripts were also used to triangulate results from staff surveys and residents' documentation audits.

Family interviews were also transcribed verbatim with identifiers removed at the point of transcription. Thematic analysis was used to identify themes or patterns within the data. Transcripts were read and manually ascribed codes to text with similar meaning, followed by arrangement of codes into themes with similar meanings. Two members of the research team separately analysed four interviews then compared the themes derived for inter-rater reliability.

2.5.2. Quantitative data

Exploratory, descriptive analyses were conducted. Frequencies were calculated for all categorical data. For resident demographic and pain profile data (Section 1 of the audit), the mean and standard deviation were presented for normally distributed continuous data (resident age and total number of medical diagnoses).

DOCUMENTATION OF PAIN EPISODES: AUDIT OF RESIDENT NOTES

When analysing the quality of pain documentation post-implementation (Section 3 of the audit tool), pain assessment and evaluations of pain interventions were classified as either evidence-based (E-B) or non-evidence-based (non-E-B) for the purposes of analysis and reporting. The E-B assessments and evaluations employed tools or measurement scales that are considered to be reliable, valid and reflective of best-practice, according to the Australian Pain Society Guidelines (2005).

Documentation completeness was defined as pain episodes that had detail about the identification, intervention, assessment and evaluation of the pain episode. The analysis of documentation completeness was defined by the proportion of pain episodes where the problem/identification, E-B assessment, intervention and E-B evaluation were all documented.

The percentage of staff who documented across all the points of the pain protocol was calculated across three groupings – RN/EN, PCA and Other. The 'Other' category staff included Occupational Therapists, Physiotherapists, General Practitioners, Podiatrists, Leisure and Lifestyle workers. Data from these staff were combined together, as the number of individuals in these professions and occupations were too small to justify separate groupings.

All quantitative analyses were performed using the software package Microsoft Excel (Microsoft® Office® Professional Plus 2016, Version 16.0.4738.1000).



3 FINDINGS

3.1. DEVELOPMENT AND IMPLEMENTATION OF INTERVENTIONS

This section presents the findings of the development and implementation of interventions to address pain management practices by the MDTs.

This study's success was largely contingent on the recruitment and sustained engagement of MDT members. Hence, at project commencement, the research team encouraged the MDTs to raise awareness and promote visibility of the project at their sites, as this could also be instrumental in ensuring the sustainability of the changes.

David is a MDT member from one of the project sites. He has worked in residential aged care as a care worker for over 5 years. David takes pride in his role and the impact it has on the lives of the people for whom he cares. He has been a true champion of the Intervene Phase 2 project, often going in to work to attend the MDT meetings even on his days off. The reason behind his motivation: 'I am dedicated to the improvement of pain management for the people I care for...'

During the development and implementation of interventions, there were over 17 hours of MDT meeting time in total, with average attendance rates ranging between 59%–77% across the four sites.

During the meetings, MDTs combined their perceptions of practice and organisational culture, with findings from baseline data to critique the pain management practices at

their services and to co-design interventions that addressed site specific issues. Baseline data allowed staff to attend to specific deficits of pain management processes. For example, one MDT member shared:

'The gap in pain management is at documentation. This means that staff can't put the pieces of the individual's pain story together...' MDT member

The MDTs developed interventions targeted at improving day to day pain management practices. Table 2 over-page shows how interventions were mapped as functions of the COM-B theoretical domains.

Table 2: Mapping of Intervention functions to the COM-B domains

Behavioural Analysis		Intervention Mapping	
1. Issue	2. COM-B component	3. Intervention function	4. Intervention activities
<p>Staff have inconsistent understanding on how to use the Abbey Pain Scale, why and when to use it.</p> <p>Data sources: MDT meetings, Documentation Audit; Survey Data</p>	Capability	Education	<ul style="list-style-type: none"> • Education video addressing domains of the Abbey Pain Scale and demonstrating how to administer the Scale
<p>Staff do not have easy access to copies of the Abbey Pain Scale.</p> <p>Data sources: MDT meetings</p>	Opportunity (physical)	Environmental restructuring	<ul style="list-style-type: none"> • Restructure environment so hard copies of Abbey Pain Scale is in the nurses' office with easy access. • Provide staff with pocket reference cards that contains Abbey Pain Scale domains.
<p>Care staff lack a clear decision making pathway that would support them to apply a structured approach to pain management within the scope of their role.</p> <p>Data sources: MDT meetings; organisational documentation review</p>	Capability and Opportunity (physical)	Environmental restructuring and training	<ul style="list-style-type: none"> • Pain protocol document that guides staff through the pain assessment and management pathway.
<p>Lack of feedback on outcomes of pain assessments reduce staff motivation to complete pain scales.</p> <p>Data sources: MDT meetings</p>	Motivation	Incentive	<ul style="list-style-type: none"> • RN/TL provide feedback to staff on outcomes of pain assessments during handover.
<p>Care staff currently do not undertake Abbey Pain assessments – not a “norm” of practice.</p> <p>Data sources: MDT meetings</p>	Opportunity (Social)	Enablement	<ul style="list-style-type: none"> • RN/EN/TL prompt care staff to complete and Abbey Pain Scale when a change is reported or a PRN is requested.

3.2. IMPACT OF THE EDUCATION PROGRAM ON COMPLETING THE ABBEY PAIN SCALE

To evaluate the impact of educational videos on staff capability in assessing pain using an Abbey Pain Scale, the staff were requested to assess pain in four actor-based clinical scenarios of someone in pain of varying pain intensity. The exercise was completed in video 1 then a follow on assessment with the same scenarios in video 3 after some education regarding the Abbey Pain Scale (pre and post education). The Abbey Pain Scale (Appendix 7) has four ratings for pain severity and three options for whether the pain is chronic, acute or acute on chronic.

One hundred and two residential aged care staff participated in the educational activity and completed the Abbey Pain Scale. Overall, scores appear to be similar before and after the staff had completed the education.

The mean total score and standard deviation for pre and post-education (post-education reported in parentheses) for the video illustrating no pain was 3.7 ± 3.23 (3.52 ± 3.25). Allowing for standard deviation, this was within the expected range of 0-2 scoring for a scenario of no pain.

Likewise, staff also scored the agitation, mild pain and severe pain within the expected ranges of 0 - 14+, 3 -7 and 14+ respectively.

- agitation 11.62 ± 2.70 (11.28 ± 3.44),
- mild pain 9.25 ± 3.50 (9.29 ± 3.52), and
- severe pain 13.37 ± 2.81 (13.64 ± 3.20).

Sixty five per cent of participants were able to define the type of pain as acute, chronic or acute on chronic over all the scenarios presented in the videos. However, 17 respondents commented that they were unable to indicate the type of pain due to lack of information.

Overall, thirteen respondents marked a total score and graded pain intensity accordingly. Four reported the inability to give a total score or grade due to lack of clinical context.

3.3. FAMILY MEMBER/CARER REPRESENTATIVES' PERCEPTION OF PAIN MANAGEMENT FOR THEIR RELATIVES

*Direct quotes are provided in this section. Note that [...] denotes pseudonyms assigned to participants in order to protect their true identity.

Fourteen of a potential 110 family representatives that were approached expressed interest in participating in the study and were interviewed. Owing to the low response rate, this data is presented as thematic analysis of the whole group and not at the individual site level. Furthermore, there were no follow-up interviews with the family members post-implementation, as there had been no family interventions used in this project.

Overall family members reported that the staff delivered a good service in the care of their relatives, where pain management was concerned. The family members expressed confidence in the staff's capabilities to manage their relative's pain.

'Staff are proactive in identifying suspected pain.' [Landon]

'Yes they do a pretty good job of managing the pain.' [Priti]

'Yes, and the doctor's good.' [Dominique]

However, they felt that there was poor communication between themselves and the staff.

Three key themes regarding pain management of their relative were revealed from the interviews:

- Uncertainty about how people living with dementia experience pain
- Poor communication between family members and staff at the RAC service
- Uncertainty about a clear pain management pathway in the care of their relative

3.3.1. Theme 1: A lack of consensus about how people living with dementia experience pain

Family members' responses from all the interviews demonstrated uncertainty of how their relative experiences pain. [Pam] expressed the importance of observation in determining whether her relative was in pain or not:

'Yes without question, it's just that their ability to communicate with you... is different from say you or I.'

You have to be really aware and watch them to see the signs and then prompt them and ask them, and not in a fly by way.'

In contrast to the above statements, [Matteo] expressed that he was unsure if people living with dementia experience pain the same way:

'I assume that it would be (the same), but I'm not that sure.'

3.3.2. Theme 2: Poor communication between family members and staff

Family members raised a number of concerns regarding communication with staff. They suggested that communication between staff at the service and family could be enhanced by:

- providing staff with more time,
- providing more staff training,
- increasing communication between all internal parties,
- giving family a designated contact person for any concerns, queries, and observations,
- providing support in navigating new relationships with aged care home and family members around pain management, and
- using regular email updates; e.g. 'GP visited', with an outcome or change in medications to keep family informed about their relative.

The interviews also showed that family members engaged in limited dialogue with aged care staff about pain management for their relative, citing a lack of clarity on

who their one point of contact is as a key reason for this. As a result, the default is for the family members to approach the facility management.

[Alina] states:

'If I want to seriously communicate something I go straight to the manager.'

[Costanza] explained that she was perplexed as to why staff members were not more proactive in approaching her to talk about her mother's pain management:

'...it's not being volunteered to us. It's not being kept from us but if we were to say how's mum's pain then whoever is on will get the file out ... we also get frustrated with the GP because she's (mum) been in a lot of pain, a lot and we also wrote to the GP... to just talk about it...'

[Luka] expressed dissatisfaction about some poor communication regarding his mother's sunburn: *'There was a total lack of communication within staff structure and me, the first point of contact. The staff thought mum had an allergy when it was sunburn. When I arrived a week later, mum is still exceedingly swollen, she's got blisters. She had only been given her 2 Panadol PRN and no additional pain medication for the sunburn.'*

3.3.3. Theme 3: Uncertainty about a clear pain management plan in the care of their relative

Only two of the fourteen family members interviewed were aware of a pain management plan in place for their relative in care. If they were aware of one, they did not feel that it was sufficient to meet their needs for pain management and considered it more as an ad-hoc process than a plan.

'I wouldn't really call it a pain management plan. It's Panadol as needed, that's really it.'

[Pete], family member of resident in RAC

Furthermore, there was a sentiment that if the family member did not specifically request a plan, one was not shared proactively. It was unclear if the responsibility for this lay with either party.

No I don't know if there is [a pain management plan] and no-one has [discussed it with me]... I could find out I have just never asked that question and no-one has ever spoken to me about that, a plan specifically.'

[Karina], family member of resident in RAC

Finally, the family members were unsure if it was important to have such a plan in place unless there was a severe change to the pain that their relative experienced.

'...this may be more likely to happen if there is a severe change.'

[Karina], family member of resident in RAC

3.4. FINDINGS FROM STAFF SURVEYS AND AUDIT OF DOCUMENTATION

Findings from staff surveys and audit of documentation are presented as pre-post-implementation findings. The data is organised to show effectiveness of interventions across five domains:

- Demographics,
- Staff knowledge and awareness of pain management,
- Staff confidence and involvement in pain management,
- Staff perceptions of organisational leadership and culture, and
- Documentation of pain episodes.

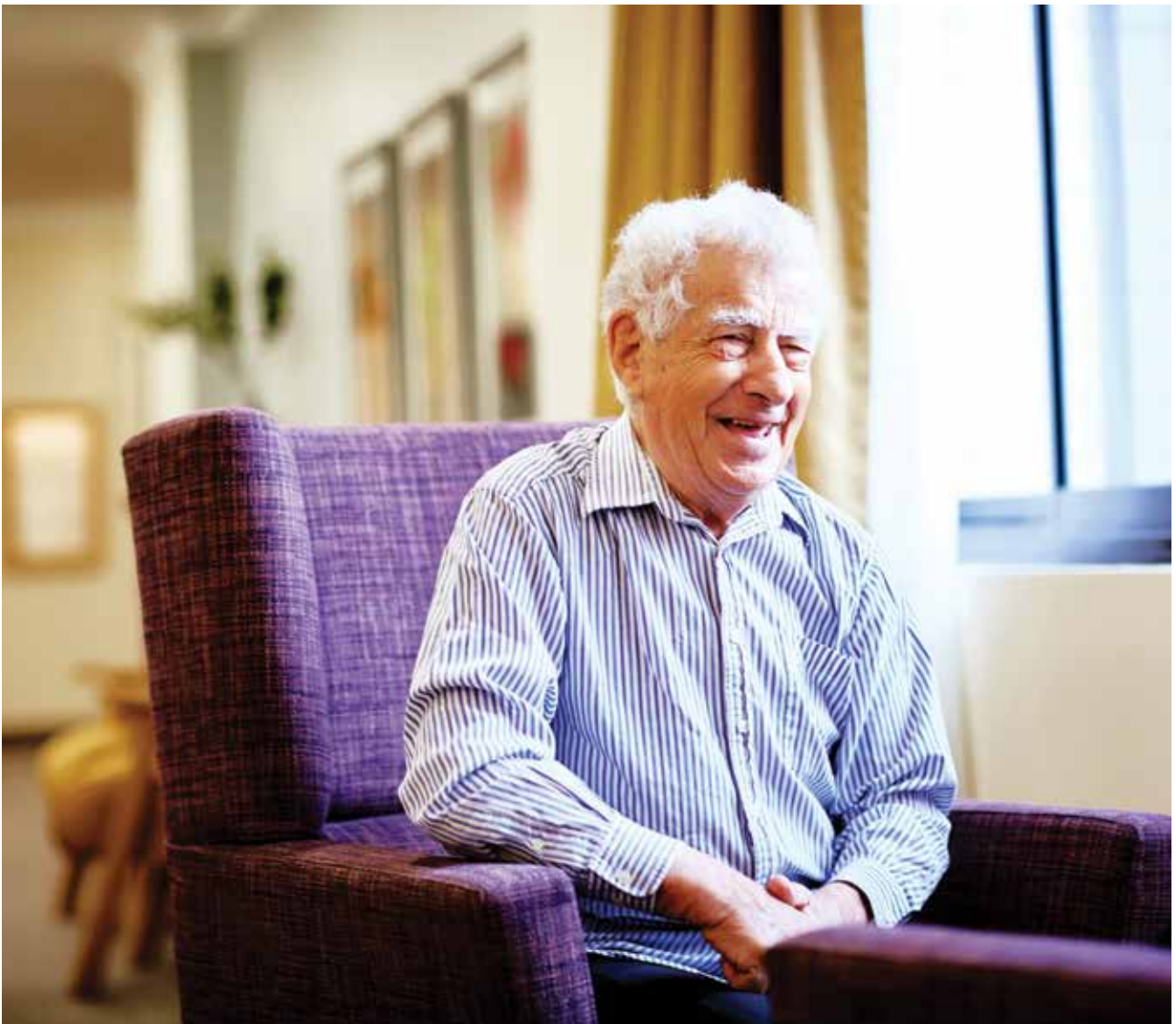


Table 3: Characteristics of project sites, staff survey and audit of resident documentation

Characteristics of RAC homes

Site	1	2	3	4
Location	Regional	Regional	Metro	Metro
Dementia-specific beds*	80	24	84	100
Manager changes during project	0	0	3	2
Staff turnover	Low	Low	High	High

Staff turnover was recorded as ‘low’ or ‘high’ primarily based on staff report of their perception of staff changes at the post-implementation workshop. A perception of high changes or turnover by staff if accompanied by loss of 50% or more original MDT members (through resignation or reassignment), 50% or more of original staff failing to complete the post survey data, or change of management at post data collection were reported as ‘high’ turnover. Actual numbers of staff turnover were not recorded.

Data collection information

Site	1		2		3		4	
Data set (pre/post intervention)	Pre	Post	Pre	Post	Pre	Post	Pre	Post
MDT members pre & post	9	7	11	8	8	5	11	3
Staff survey respondents to staff	44	14	26	7	33	17	66	6
Nurse respondents to survey	11	2	13	5	0	3	8	1
PCA respondents to survey	29	6	11	2	32	14	54	5
Average age of residents (years)	86	86	87	80	86	85	86	84
Number of resident records	22	14	21	11	49	27	22	13
Number of resident pain episodes audited	34	28	22	21	85	53	28	12

Data is presented both in aggregate and separately. In this case, group findings may not necessarily be reflective of the variability in findings across the four research sites.

Staff at the four project sites were surveyed to provide an indication of staff knowledge of pain management in older adults, staff confidence and involvement in pain management and to measure their organisational context.

Mean scores of responses to the questions were used. Table 3 shows the characteristics of the sites data sets.

3.4.1. Demographics

Out of the 169 respondents to the staff survey at baseline, 44 participated in the post-implementation survey. Approximately 67% of respondents were carers with an average group age of 43 at baseline and 41 post-implementation.

3.4.2. Staff Knowledge and awareness of pain management

In general, staff answered an average of 80% of the questions on the POAKS correctly. This was consistent before and after the project interventions.

The two questions that were incorrectly answered by more than 50% of staff were reverse scored questions. These were Questions 4 and 21 as below.

Please circle whether the following statements are true or false

Question 4: Blood pressure, heart rate and respiration are not always reliable physiological indicators of pain intensity in older people.

Question 21: Assessment of pain in older people when they are at rest indicates whether pain is present at other times.

For the full POAKS refer to Appendix 5.

Except for site 3, all sites indicated increased awareness of pain management (6%-33% increase) after the introduction of project interventions. The same sites also felt that they received adequate training in pain management (6%-26%) when compared to baseline. Twenty per cent of staff at site 3 expressed a need for more training.

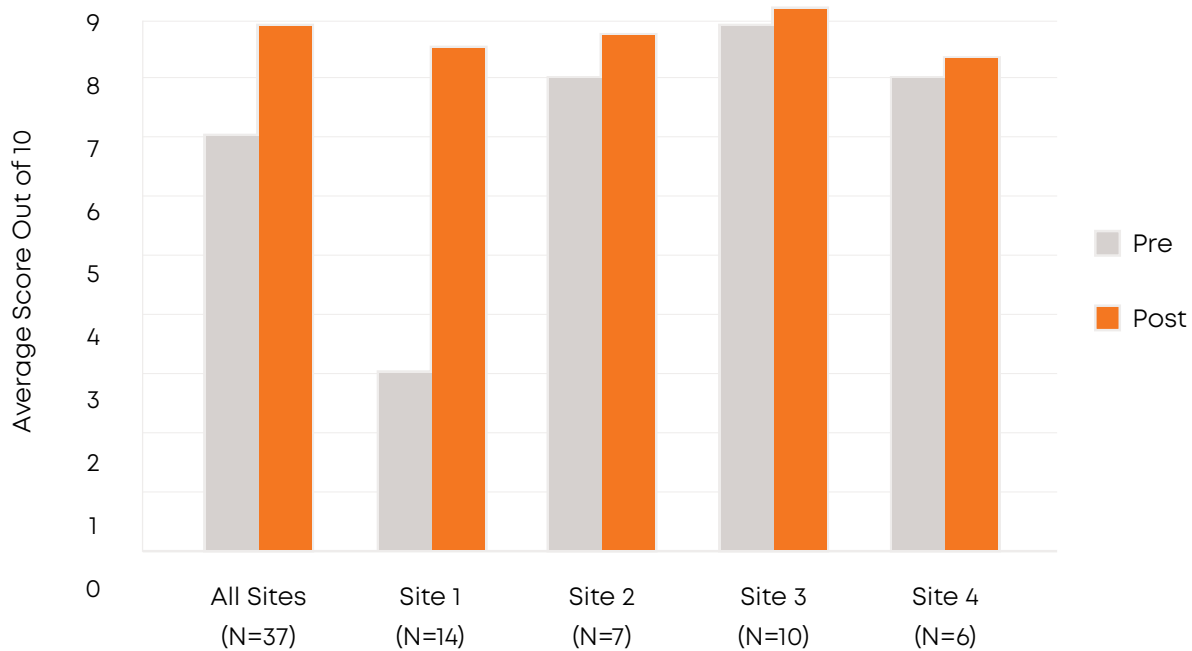
After the intervention, staff perceived that a higher proportion of resident pain needs are not adequately met. Staff also indicated an increased understanding of their facilities' procedure and approach to dealing with pain for people living with dementia. Site 3 remained unchanged, at 90%, the other three increased by a range of 6-30%.

3.4.3. Staff confidence and involvement in pain management

Overall, staff showed high levels of perceived confidence, skills and involvement with regard to identifying, reporting and acting on pain in residents living with dementia at baseline and after the interventions.

Figure 7 shows pre and post data for self-reported staff involvement in pain management at baseline and post intervention. When considering all sites, there appears to be no real impact on staff involvement between the baseline and post-intervention. Interestingly, when looking at the sites individually, staff at site 1 showed low involvement at baseline and an increase of 67% post-intervention. While this is a large increase, it only brings the mean involvement score of staff at site 1 within the range observed for the other three sites.

Figure 7: Mean levels of perceived staff involvement in pain management



3.4.4. Staff perceptions of their organisational context

Staff rated perceptions of their organisation's leadership, culture, communication, availability of adequate staffing and time to provide resident care and share best practice knowledge on a scale of 1 to 5, low to high staff perception respectively.

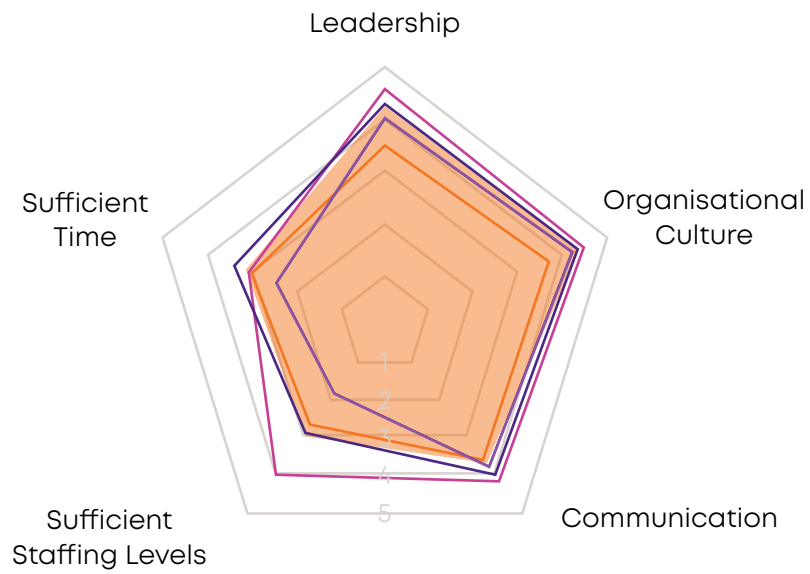
Overall, staff at all project sites have a positive perception of their formal leadership, organisational culture and communication pre and post project intervention as reflected by the high scores for these domains (Figure 8).

Conversely, when considering the average scores for all sites, staff perceive that they have constraints in the time they have to deliver care as well as the perceived impact of staffing. A look at the site specific data shows that this is most relevant for site 3 and is consistent between pre and post time points for this site. However, site 1 staff perceive that they have sufficient staffing levels to deliver care to their residents.

Figure 8: Staff perceptions of their organisational context

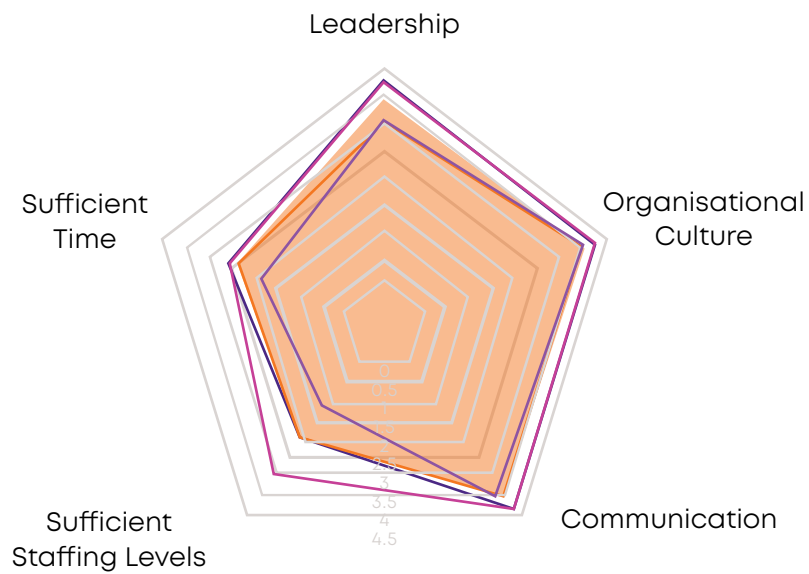
Pre-implementation

Site 1 Site 2 Site 3 Site 4 All sites



Post-implementation

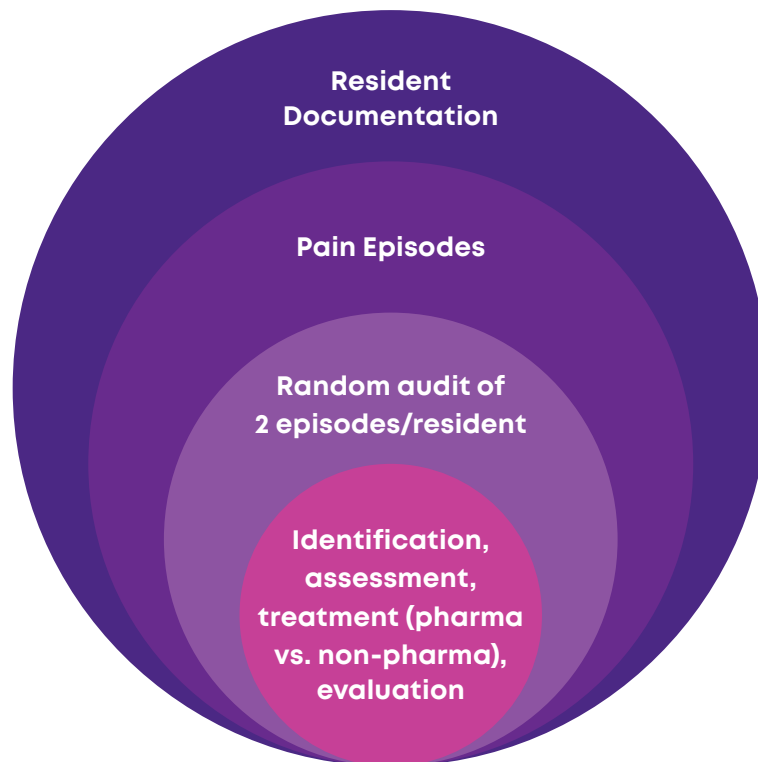
Site 1 Site 2 Site 3 Site 4 All sites



3.4.5. Documentation of Pain Episodes

Audits of resident files were conducted for the quality of documenting pain episodes. A total of 65 of the 114 residents who had their documentation audited at baseline, were also audited post implementation. The rest of the resident cohort passed away before post-implementation data collection commenced. The arrangement of resident audit data is shown in Figure 9.

Figure 9: Arrangement of resident data



Of the pain episodes audited, audits were reviewed only where there was completeness of documentation, i.e. documentation along the whole pain management pathway of identification, assessment, treatment and evaluation of treatment.

Overall, when considering the means of data from all sites, there was a 48% increase in the completeness of documentation post-intervention (Table 4), in particular at sites 1 and 3; with a 42% increase at site 1 and an 85% increase at site 3. Completeness of documentation at sites 2 and 4 remained low and relatively unchanged pre and post project interventions.

Table 4: Completeness of documentation

Site	Pre-total episodes	Pre - % complete	Post-total episodes	Post-% complete doc.
All Sites	169	22 (13%)	114	70 (61%)
1	34	16 (47%)	28	24 (89%)
2	22	3 (14%)	21	0 (0%)
3	85	2 (2%)	53	46 (87%)
4	28	1 (4%)	12	0 (%)

The audit of resident notes demonstrated substantial changes in the use of both formal (PAINAD, Abbey, resident self-report (Uni-D rating)) and informal pain assessment tools in identifying pain for all sites post implementation of interventions (Tables 5 & 6).

As shown in Table 5, there was a more than 10% increase in the number of episodes where formal pain tools were used post intervention. However, this largely reflected large increases at sites 1 and 2. In contrast, sites 3 and 4 demonstrated a decrease in the use of formal pain assessment tools post-intervention.

Table 5: Use of formal pain assessment tools pre and post project interventions

Site	Pre-total episodes	Pre-% use of formal assessment tools	Post-total episodes	Post-% use of formal assessment tools
All Sites	169	24 (14.2%)	114	29 (25.4%)
1	34	20 (58.8%)	28	26 (92.9%)
2	22	0 (0%)	21	2 (9.5%)
3	85	3 (3.5%)	53	1 (2%)
4	28	1 (3.6%)	12	0 (%)

Across all sites, there was relatively no change in the proportion of episodes where informal assessment tools were used (Table 6). This did not reflect the substantial increase in use of informal assessment observed at site 3.

Table 6: Use of informal pain assessment tools pre and post project interventions

Site	Pre-total episodes	Pre-% use of informal assessment tools	Post-total episodes	Post-% use of informal assessment tools
All Sites	169	67 (39.6%)	114	47 (41%)
1	34	1 (3%)	28	0 (0%)
2	22	1 (4.5%)	21	0 (0%)
3	85	39 (46%)	53	46 (87%)
4	28	3 (7%)	12	1 (8%)

Except at site 4, all sites increased documentation of medication administered as required (PRN) after the project interventions, with site 3 showing the highest increase of 20.4%. Of relevance, was a decrease in the documented anti-psychotics administered PRN; from 4% to 0% pre and post-intervention respectively.

There was no change in the level of documenting regular pharmacological treatment administered for pain, post-intervention.

3.5. SUSTAINABILITY OF INTERVENTIONS

MDTs also discussed what they perceived as key risks or barriers to sustainability and ongoing engagement and brainstormed some mitigation strategies for these.

Table 7: Risks to sustainability and suggested mitigation strategies

Risk	Suggested mitigation strategy
Staff orientation	Incorporating improved pain management strategies into staff orientation process
Competing operational priorities	Secure management buy-in and support to plan for sustained change
Staff resistance to changes	Develop a communication plan with management
Loss of momentum and engagement with changes	Engage staff members to 'champion' the process

4 DISCUSSION

The overarching aim of the project was to modify cultural conditions that shape the practices of aged care staff by changing their behaviour towards a more vigilant approach to pain management.

Overall the intended objectives were achieved with variable success.

This section outlines how successfully these objectives and aim were achieved based on the findings of staff surveys, audits of documents, family interviews and MDT meeting data. Specifically, we explore how the MDT interventions impacted on capability, opportunity and motivation to drive behaviour change (Michie et al. 2014). Strengths and limitations, as well as the sustainability of the interventions implemented in this project are also addressed.

4.1. RESEARCH OBJECTIVE 1: ESTABLISHING MDTs OF STAFF AT EACH RAC HOME TO CO-CREATE AND IMPLEMENT BEHAVIOUR CHANGE STRATEGIES

MDTs comprised of staff members were successfully established at four RAC homes and a 'MDT pain management model' was developed.

In establishing MDTs, the intention was to have representation from the different professions in RAC services. However, there was minimal allied health and no GP involvement due to their contractual arrangements with RAC homes and the time commitment required to participate in this project.

The Australian Pain Society (2017) highlights that a multidisciplinary approach to pain management is considered best practice. In this regard, this project may have benefited

from the involvement of more allied and medical staff, especially physiotherapists who already have an integral role in pain management of residents owing to their training and work function.

All this considered, the differing proportions of professional representation allows us to observe a realistic representation of the RAC landscape and the complexities therein.

The make-up of the MDT may have had a bearing on findings made throughout the study. For example, site 1 achieved better outcomes across some aspects of the study and this may reflect the more multidisciplinary nature of the MDT at this site.

Site 3 had a larger representation of PCAs on the MDT. While this input is to be encouraged, it may have resulted in more internal resistance to implementing change, owing to the existing hierarchy within that organisation which typically renders PCAs at the bottom of the decision-making chain.

It is likely the two factors may be independent of each other, therefore, we have to consider several other underlying factors that could have impacted on outcomes, and that the differences observed may not be attributable to the MDT composition alone.

4.1.1. Effect of project interventions on staff knowledge and attitudes

Staff at all sites achieved high scores when surveyed for their knowledge of pain in older adults (POAKs), before and after the project interventions. One reason for no improvement on the score may be a 'ceiling effect' for the improvement in scoring this survey.

Furthermore, the double negative framing of questions 4 and 21 may make it difficult for staff to respond accurately when responding under the constraints of time. Indeed, staff indicated that they may have experienced survey fatigue owing to the extensive nature of the four part survey.

The project interventions implemented by the MDT were focused on improving day to day staff behaviour in pain management and not specifically improving scores of the POAKs. Therefore it may be expected that there was no improvement in the scores. However, other aspects of pain management that may not be measured using a POAKs score could have been improved.

While there was no improvement in the score, the fact that scores attained by staff were high even before interventions were introduced confirms a good basic understanding of pain management and may indicate that staff hold a sufficient knowledge base to recognise pain. What is unclear is whether the scores attained in this study are within expected average ranges for this survey, as we were unable to verify what other staff would score globally.

Findings also demonstrated an improvement in staff confidence and involvement in pain management. This supposes that the project interventions may have had a positive impact on staff in this regard.

Staff at site 1 showed a marked improvement in involvement in pain management but interestingly the involvement had been notably lower than the other sites to begin with. MDT meetings at this site revealed that most documentation regarding pain management was performed by one staff member before project interventions. At post-intervention data collection, this staff member had left the service, providing the other

staff with more opportunity to be involved in documentation of pain management. This highlights a single point of failure associated with staff turnover when the responsibility lies predominantly with one staff member. It also means we are unable to infer with surety, that the interventions directly contributed to improved staff involvement at this site.

4.1.2. Staff perceptions of their organisational context pre and post intervention

As per our findings from the Alberta Context Tool, there was no notable change in staffs' perceptions of their organisational context between pre and post intervention. This is as expected, provided that the interventions developed by the MDTs were targeted at staff behaviours in day to day practice and not organisational context. Furthermore, the organisational context is more realistically influenced from the management level.

Nevertheless, the organisational 'context' is relevant, as it is widely considered to be a crucial factor in the success of implementation of evidence into health settings. For this project, we hypothesised that staff who perceive a more positive organisational context, would have more successful project outcomes. This was reflected to some extent in our project findings. However, it is interesting that in one site, there was a substantial increase in the use of pain assessment tools and documentation completion rate, despite a strong perception at this site of lack of staff resources and time. Therefore, while organisational context is undoubtedly an important factor, it suggests that staff knowledge and engagement can lead to changes in behaviour, despite a perceived lack of support.

Proxy indicators of perceptions of leadership may include how engaged the site management was with the project with actions such as allocating the MDT time for their meetings during work hours and all staff to complete the surveys.

We observed that management support ensured that the project was regarded as a priority:

One manager was highly engaged with the project over the two years, allocating time for staff to attend project-related workshops, meetings and to complete staff surveys during work hours. Regular staff meetings were used as an opportunity to raise staff-wide awareness of the project and to ask any questions regarding the project. Over and above this, the management encouraged all staff to engage with improving pain management at their site because 'Pain is everyone's business.' As such, staff were capable of performing pain management, were motivated by management and had the opportunity to engage in pain management practices. Not surprisingly, this site rated high on scores of staff's perception of their management and culture and most importantly achieved the most success in implementing their interventions and changing staff behaviour.

In agreement with this, having consistency across all staff (frontline and managers), with a low turnover was recognised as highly desirable for project, success by staff, while high turnover was observed to impact staff morale and motivation. Specifically, where there was a change in management over the course of the project such as at sites 3 and 4, there was a direct impact on the continuity of and consistent support for the project, despite survey findings showing relatively unchanged staff perceptions of their organisational context.

Given the competing priorities for staff who provide direct care to residents, less staff availability renders them less likely to engage with the project. MDT staff also asserted that staff turnover increases the requirement and frequency of staff training and induction. This is an added challenge in a context which already has resource constraints and thus impedes continuity and the improvement of day to day practices, pain management included.

Conversely, sites where staff perceived sufficient staffing levels and had long-serving staff as at site 1, reported high engagement with the project.

4.1.3. The impact of project interventions on the documentation of pain episodes

Interventions implemented by the MDT may have improved the overall completeness of documentation demonstrated from findings of resident documentation. However, these changes were site-specific with two sites demonstrating substantial increases in the proportion of completeness of documentation and two sites having extremely low rates which remained unchanged post-intervention. It is difficult to attribute this disparity between the sites to any specific factors but it is interesting to note that it does not seem to be related to availability of time for the staff to deliver routine care. In fact, the site where staff reported the lowest ratings for staffing and available time both pre- and post-intervention had the largest increase in documentation completion rate.

The education videos articulated a clear pain management pathway for staff and highlighted the importance of using validated pain assessment tools. As such, the overall use of assessment tools was seen to increase post-intervention. As small sample sizes challenge the reliability of the data, staff feedback was sought to validate our findings. General consensus from verbal staff feedback was that the intervention of education videos was significant to their understanding and development.

The video education intervention had no impact on improving staff capability to complete the Abbey Pain Scale. One reason for this may be that in most cases, the entire five series of videos were viewed in one sitting. By design, the education program was to be delivered over several weeks, but staff reported that time constraints and staff availability did not make this possible. Delivering the education in one sitting may have impacted on the staff's ability to assimilate their learnings into practice before performing the follow on assessment of completing an Abbey Pain Scale.

Use of formal assessment tools remained relatively unchanged post-intervention and were still only used in 25% of episodes overall. Implications of limited use of formal assessments include an inconsistency

of assessing pain and subsequently delayed initiation and effectiveness of pain interventions. Furthermore, where evaluations of the effectiveness of the pain treatment are documented in qualitative terms (e.g. good effect; some effect), this could be prone to subjective interpretation.

After the intervention, staff perceived that a higher proportion of resident pain needs are not adequately met. While it is possible that this may be a true indication of a deficiency in meeting the residents' requirements, we propose that this may be indicative of heightened awareness and capability in identifying residents' pain following the education and interventions of the study.

In support of this, staff indicated an increased understanding of their facilities' procedure and approach to dealing with pain for people living with dementia.

4.1.4. Family perceptions of pain management for their relatives

As dementia progresses, it becomes more challenging to assess pain for people living with dementia, especially with a decline of cognitive skills and the ability to self-report pain. This highlights the importance of involving family members as proxies who know the residents best and can better inform pain management strategies that will be suitable for them. Staff feedback demonstrates that they recognise the involvement of family members as critical in developing a pain management strategy that is suitable for their family member in care.

While there was a low response rate to family interviews, findings obtained from the 14 respondents may provide useful insights into the perceptions and involvement of family members in the management of their relative's pain.

For example, family members indicated uncertainty about a clear pain management pathway in the care of their relative and a lack of consensus understanding about how people living with dementia experience pain. This may indicate that the family members are either disinterested or disempowered where the care of their loved

one is concerned. Further findings from the interviews suggests the latter.

Overall, family members believed that the staff delivered a good service in the care of their relatives. However, they felt that there was poor communication between themselves and the staff.

In particular, family members raised that they were unable to identify who their one point of contact at the RAC home was. They suggested that communication between staff at the service and family could be enhanced by:

- providing staff with more time,
- providing more staff training,
- increasing communication between all internal parties,
- giving family a designated contact person for any concerns, queries, and observations,
- providing support in navigating new relationships with aged care home and family members around pain management, and
- using regular email updates; e.g. 'GP visited', with an outcome or change in medications to keep family informed about their relative.

While no MDT interventions were focused on the role of family members in pain management of their relatives, the issues raised by family highlight the gaps for future consideration.

4.2. RESEARCH OBJECTIVE 2: DEVELOPMENT OF INTER-ORGANISATIONAL NETWORKS BETWEEN MDTs AT THE FOUR PROJECT SITES

The development of inter-organisational networks between MDTs at the four project sites proved to be more challenging to achieve.

During the project, MDT participants discussed the most effective strategies to maintain networks between the MDTs at the four sites. A range of approaches were discussed such as "Google Hangouts", teleconferences, Facebook group, email

group and video-conferencing. Though the groups achieved one successful cross-site meeting via video-conference, this was limited by poor network connections, the technology know-how and requirements and having all MDT members available at the same time. MDTs decided that using phone calls between individual members of the project would be easier to sustain. The MDTs did not independently arrange any follow up inter-organisational meetings outside of the workshops.

While the benefits of the inter-organisational networks was acknowledged, it was also the least successful objective of the project, owing to these logistical complexities.

4.3. RESEARCH OBJECTIVE 3: DEVELOPMENT OF A 'MDT PAIN MANAGEMENT MODEL'

From our observations, where staff's perception of their organisation's culture was seen to improve, confidence and involvement of the staff were also seen to improve. This was the case for site 1. This may suggest a possible linkage between these factors and was validated from verbal feedback provided by staff at the post-implementation workshop.

A person-centred approach is important to ensure that the resident receives appropriate care. To support this on a long term basis, which spans beyond the duration of this study, there needs to be a systemic framework in place. As such, a strategic approach that espouses key factors which impact on pain management is important. Most importantly, it is the interplay of all these factors that has further informed the model.

To this end we have developed a pain management model which brings all these factors into consideration. The model has been validated with staff.

4.4. SUSTAINABILITY OF INTERVENTIONS

Overall, findings demonstrate some immediate success in achieving the project objectives. However, the longevity of project outcomes is still to be determined.

Each of the four MDTs worked on developing a plan for ongoing engagement upon the cessation of the project. These ideas were brought to a one day MDT workshop and further developed through a collective reflection exercise.

MDTs suggested that to achieve sustained strategies, the changes needed to be simplified, accessible and time efficient.

A number of core elements for sustainability identified by the MDTs included:

- Having a designated pain champion or "go-to person" at each shift, for an opportunity to review or discuss cases of pain management. It was suggested that this may be particularly helpful for new staff members,
- Continued staff education; continuing to empower care staff and consolidating staff understanding could foster a shared aim amongst staff for putting the changes into practice is required. Staff education includes compliance to the processes such as the pain protocol,
- Having regular review dates for pain management frameworks and processes in order to maintain currency of information,
- Despite its limited success during the project, inter-organisational collaboration for enhanced knowledge sharing and reduced professional isolation was viewed as an activity that could also promote sustainability, and
- MDTs identified that it would be useful to embed and strategically integrate the changes into existing formal organisational processes. This could assist in building a culture of awareness of evidence-based pain management.

An example of how the MDTs intended to sustain change:

MDTs suggested that the education program (videos and completion of formal pain assessments) and the ability to complete an Abbey Pain Scale could be incorporated as part of compulsory staff orientation training and signed off as a required competency for all staff. This positions the change as standard practice rather than an additional activity. There was a general consensus across the groups that the back page of the Abbey Pain Scale was not of much use for their requirements and using only the front page would improve its use by staff. Plans for the longevity of using the Abbey Pain Scale beyond the project were affirmed by MDT members at site 1:

“A percentage of staff would continue [to], and have increased knowledge. We want to put the [pain education] activity on our orientation program and make it core knowledge. We have refined the pain management process. Reinforcing when and how to fill in the Abbey Pain Scale has been helpful.”

MDTs proposed that for changes to be sustainable, internal structures and processes must support their successful integration. This may influence internal policies and procedures and therefore would need approval from site management and leadership. Securing management buy-in at the commencement of the project had a bearing on the long-term sustainability of the changes that MDTs implemented during the project. Therefore, ongoing support and engagement from the managers was recognised as a prerequisite for sustainability in order to achieve desired outcomes and to mitigate for identified risks.

Ultimately, a level of flexibility with the proposed changes is also needed to support sustainability as rigid frameworks can be difficult to apply to changing contexts and priorities (Perez et al., 2016).

4.5. STRENGTHS AND LIMITATIONS OF THE STUDY

The study was strengthened through the use of mixed qualitative and quantitative methods. We are able to compare, integrate and triangulate our findings from the different data sets to help interpret and qualify each other as well as provide more context.

To our knowledge, there is no other study on pain management in RAC which combines the use of the two methodologies PAR and COM-B. The use of these two methodologies provided a robust framework to underpin and support the implementation agenda for the MDTs.

An additional strength of our study is the inclusion of various perspectives from frontline staff and consumers. In contrast to researcher-led interventions, staff ‘on the floor’ generated and implemented change at their sites. The inclusion of four sites run by three different providers also builds on this strength offering a variety of contexts from which to consider the challenge of pain management in RAC.

Furthermore, our Expert Advisory Panel brings consumer and advocacy perspectives to the project, which are essential for developing solutions that are fit for purpose and that aptly address the issues of pain experienced by people in care.

Our study was limited by a significant decline in participant sample sizes between baseline and post-intervention implementation. This was the case for staff who were surveyed. Of the remaining staff, their response rates post-implementation were less than 30% relative to 50% observed at baseline of the study. This contributed to a significantly reduced comparative sample size of the staff cohort between pre and post implementation.

In the case where some of the staff who left the service during the project were MDT members, their discontinued participation and feedback may have directly impacted on the study outcomes. Therefore it may be difficult to validate or generalise project findings.

It is inevitable that when working with a population of elderly people living with dementia in care, some of the participants will die, or possibly move to another facility, particularly if it is considered to provide a higher level of care needs. This has occurred throughout this project, with an attrition rate of just over 50%. This again presents a challenge of a limited comparative sample for the study and generalisability of findings.

Another possible confounding variable when examining the findings of post-intervention pain documentation, is the deteriorating health of some participants over time, which may affect the results, such as inflating recorded accounts of documentation of pain episodes.

Insights from the family surveys were regarded as important by the MDT staff. However, the time-frame of the project and degree of complexity associated with implementing certain interventions meant that MDTs were unable to design and conduct family-focused interventions. Instead, MDTs focused on developing interventions that directly address aspects related to their day

to day practice. However, the significance of the relatives' contributions to the residents' care is not underestimated and the data from the baseline interviews is considered informative.

Other events which may also have had some implications on the findings may have run concurrently with data collection. For example, a review of an RAC service's accreditation standards immediately prior to the period of the audit of resident documentation may have attracted a more rigorous documentation process.





5 PROJECT OUTPUTS

A number of project outputs were developed during the project. These are detailed in this section.

A number of project outputs were developed during the project. These are detailed in this section. A webpage has been developed to house project outputs. Additional relevant information regarding bicultural tools and translation services has also been included on this page. The page can be accessed via the address:

<https://www.dementiacentre.com/intervene>

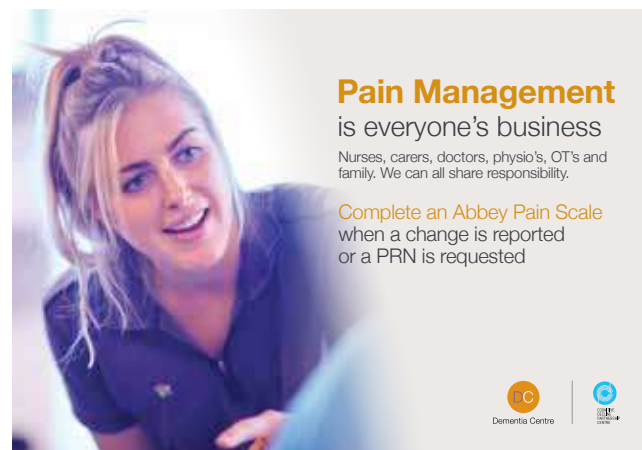
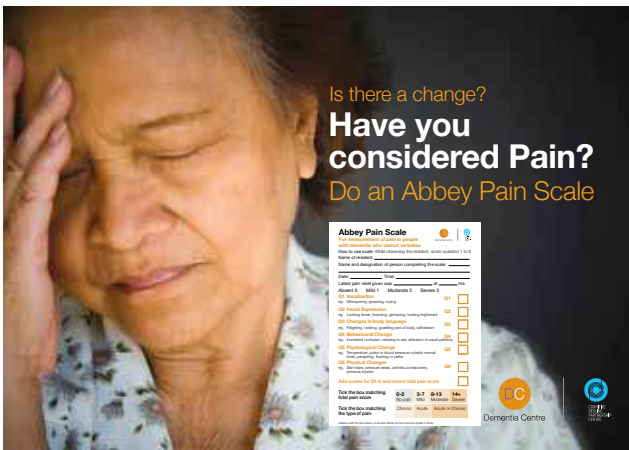
All outputs can be accessed via the Intervene web page.

5.1.MDT-DRIVEN OUTPUTS

5.1.1. Awareness-raising posters

Prior to rolling out the education video series, two poster designs, shown in Figure 10, were co-developed by the research team and MDTs and displayed at the RAC service. The MDTs were responsible for displaying these in their respective RAC.

Figure 10: Awareness-raising posters for the Intervene Phase 2 Project



5.1.2. Education Videos

Pain education videos were developed with an aim to articulate a clearly defined pathway for the management of pain and to address an inconsistent understanding of how to use the Abbey Pain Scale for the identification of pain. The content of the education videos was developed by the lead researcher, and two pain specialists and validated with RAC staff. The videos were 4-6 minutes in length each and addressed topics of:

1. Pain and dementia,
2. Identification of pain,
3. Assessment of pain,
4. Pain management strategies, and
5. Re-assessment and monitoring of pain.

Staff were asked to complete an Abbey Pain Scale to assess pain on four short scenarios illustrating various degrees of pain (Figure 11). The exercise was repeated before the video education and a follow up assessment of the same four short scenarios after the education.

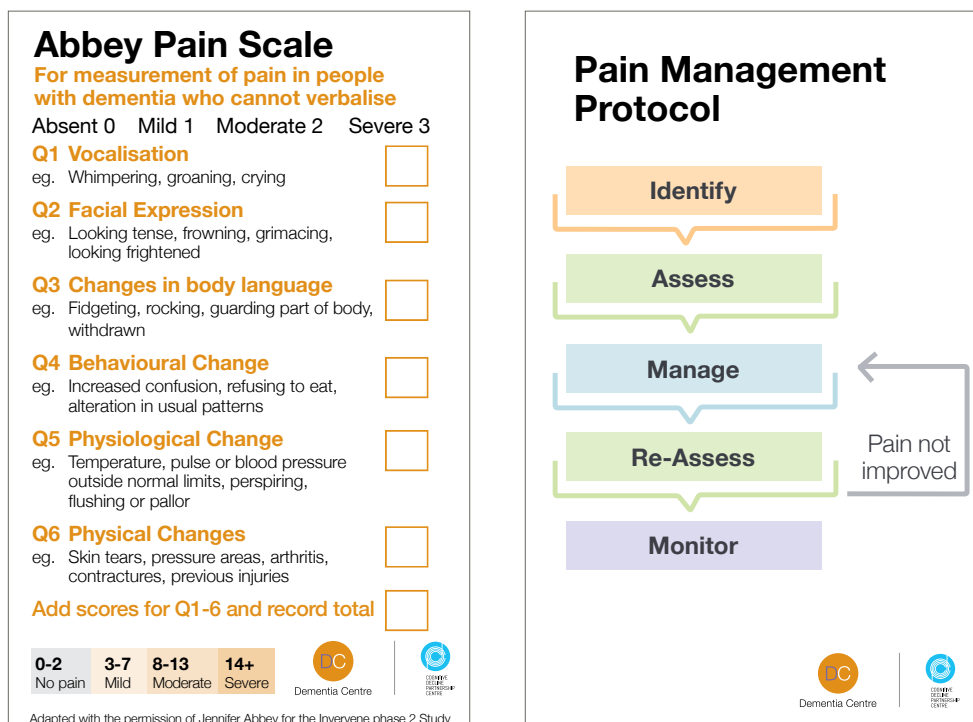
5.1.3. Pocket Reference Cards

Each staff member who completed the video education series received a pocket reference card (Figure 12) with abridged versions of the pain management protocol (side 1) and Abbey Pain Scale (side 2). The staff attached the pocket reference card to their keys, or lanyards and used it as a reminder for pain management processes.

Figure 11: Scenarios from education videos



Figure 12: Pocket reference cards



5.2. OUTPUTS TO DISSEMINATE PROJECT FINDINGS

5.2.1. Flipchart for residential aged care

A flipchart was designed as a resource which staff in RAC can use for reference information for pain management. The chart is a 10 page resource with content derived from the Intervene Phase 2 Project.

The content of the flipchart will cover various areas of pain management:

- The Pain Management Model,
- The Pain Management Protocol,
- How to identify pain,
- Communication between individuals of cultural and linguistically diverse backgrounds,
- Treatment of pain, and
- Information of how to access additional relevant resources related to pain management.

This flipchart was not part of the original scope of Intervene Phase 2 Project, so it is in development at the time of completion of this Report.

5.2.2. The MDT Pain Management Model

The pain management model results from the synthesis of existing and emergent information from this project. The model is centred on the role of the MDT in driving behaviour change for improved pain management practices at the organisation (Figure 13).

The model contains:

- A synthesis of evidence and useful resources related to pain management,
- Guiding principles for the development of action-oriented MDTs,
- A defined network and pathway that supports integration of the MDT to facilitate best practice identification, assessment and treatment of pain,
- A compilation of behaviour change strategies and evaluation processes that MDTs can utilise to support the development of a proactive evidence-based pain management culture, and
- Core requirements for the successful implementation of the model.

Feedback provided by the MDTs informed and validated the model.

The information put forward in the model does not directly translate into success that can be implemented “as is” by RAC services. Instead, it represents principles that can be used to guide decision-making in implementing pain management practices at a service.

As such, we envisage that the model could guide aged care services through a systematic process of multi-disciplinary collaboration to support contextually specific behaviour change that responds to local need, and is sustainable in the aged care setting to improve pain management for people living with dementia.

Figure 13: Pictorial representation of the MDT pain management model



Throughout the project, the research team delivered presentations, developed journal articles for publication and the project was featured in industry articles. These are summarised in Table 6.

Table 8: Dissemination of results

Output	Date	Project Team Member/s involved
National Dementia Australia Conference	October 2017	Presented by Dr. Sharon Andrews
Dementia Centre's International Dementia Conference – Poster Presentation	June 2018	Presented by Linda Ferguson
IASP Conference – Poster Presentation	September 2018	Presented by Dr. Raj Anand
CDPC Annual Meeting	October 2018	Presented by A/Prof. Colm Cunningham
Pain Australia Newsletter Article https://www.painaustralia.org.au/email/f78416d0-42ee-4409-a9d9-7ca08f96f006/449a87b5-8553-4fc6-bc6e-f8cc859225a5	July 2018	Dementia Centre team
Lecture at the Australian Physiotherapy Association	23 October 2018	Presented by Ms. Rumbidzai Tichawangana and Ms. Sabrina Chao
Intervene project featured in Hesse Rural Health Annual Report https://www.parliament.vic.gov.au/file_uploads/Final_proof_Hesse_Annual_Report_2016-17_2_mGPvCHKL.pdf	2018	Intervene Phase 2 Project team
An exploration of pain documentation for people living with dementia in aged care services	Accepted in January 2019	Lead author Dr. Sharon Andrews
Development of interventions to improve evidence-based pain management practice for people living with dementia in Australian Residential Aged Care Facilities	2019	Lead author Dr. Sharon Andrews
The impact of educational videos on pain assessment in people with dementia and behavioural changes using the Abbey Pain Scale	2019	Lead author Dr. Raj Anand
Article on family interviews	2019	Lead author Dr. Meredith Gresham

6 RECOMMENDATIONS

Overall, the findings of this study suggest a need for change to how pain is managed in RAC.

This requires RAC homes to prioritise continuous improvement of pain management practices at their sites and most importantly to assume a more proactive approach that espouses all aged care staff, especially those on the frontline delivering direct care to residents.

Recommendations for future service delivery and research are outlined in this section. These recommendations are aimed at informing policy, process and the use of practical tools. Staff and CDPC stakeholders were consulted to validate recommendations.

Table 9: Recommendations for Aged Care Service Delivery

Recommendation	Action required
RAC homes should recognise direct care staff as central to the success of pain management by extending their roles to include proxy identification, assessment, management and evaluation of pain.	RAC homes should establish a core team of local multi-disciplinary professionals to drive continuous improvement in pain management strategies for residents in RAC.
All RAC homes should provide training in evidence-based pain management for people living with dementia which is standardised, in an accessible format and with a focus on using formal pain assessment tools.	RAC homes should make training in pain management a mandatory process at staff orientation procedures. Follow-up training on pain management and the use of pain assessment tools should be provided for all staff.
RAC homes should implement practical tools to support staff in pain management on a day to day basis.	Given that the goal is to create a culture where staff understand that it is everyone's role to be actively involved in the management of pain, staff should be provided with the appropriate tools to know that it is their responsibility (e.g. a pain management protocol).
An aged care funding model which supports the use of evidence to assess the care requirements of a person in permanent RAC as opposed to reporting of interventions is required.	

RECOMMENDATIONS FOR FUTURE RESEARCH

It is important that the sector is responsive to growing proportions of culturally and linguistically diverse (CALD) communities in Australia.

‘By 2021, more than 30 per cent of Australia’s older population will have been born outside Australia’

(Department of Social Services, 2012)

Currently, there are several bicultural tools which support staff in communicating with residents of diverse cultural and linguistic backgrounds. However, to our knowledge there is limited research at the interface of a culturally diverse aged care workforce and RAC population alike, particularly where evidence-based pain management is concerned. With a growing reliance on an overseas-born, casual aged care workforce with limited skills in the sector and an ageing migrant population, there is an imperative to research enhanced work practices across cultural groups. This is aligned with the objectives of the National Ageing and Aged Care Strategy for people from CALD backgrounds (Department of Social Services, 2012).

Further research can focus on gaining a greater understanding of family members’ understanding of how relative living in RAC experiences pain. The scope of research in this area could specifically focus on developing partnerships between family and staff in promoting shared communication and co-designing a clear pain management plan for people living with dementia in residential aged care. The use of technology could further enhance the potential of such research.



7 CONCLUSION

Each MDT at four project sites successfully critiqued existing pain management practices and planned behaviour change interventions underpinned by existing evidence-based guidelines (APS 2018), findings from Intervene Phase 1 and baseline data from their sites.

Despite the complexities of the project, the participatory action approach allowed for a modifiable process which was responsive to changes in the RAC service as they arose. It supported MDTs to drive the implementation of the interventions that targeted behaviours that were barriers to formal pain assessment, and improved communication across teams of staff at their local sites.

In summary, this project demonstrated the positive impact of MDT-driven interventions in improving pain management practices. It facilitated the development of new knowledge regarding how MDTs (at a facility level) can effectively foster the prioritisation of a pain vigilant and an evidence-informed culture for people living with dementia. All this considered, changing staff attitudes and ultimately long term work place culture reflected in day to day practice, requires more than knowledge of evidence-based pain management alone (Cunningham et al. 2016).

The process of establishing a pain vigilant culture in a RAC service requires regular iterations of interrogating current practice and a desire to ensure that the delivery of care is informed by evidence.

While the first degree of interaction for the people living with dementia is with staff, the existing socio-political and hierarchical climate within aged care poses challenges to our suggested pain management model. Over and above capability, confident and empowered staff with support from committed management may be more motivated to engage with improving pain management practices. This is in line with the COM-B model, which requires fulfilment of capability, opportunity and motivation in order to drive behaviour change (Michie et al, 2014).

This approach may provide the much needed rigour for RAC, in a sectorial climate undergoing structural changes which favour choice, quality and cost-effective solutions. On a global front, timely interventions and an improved quality of life for the person receiving care align with the World Health Organisation's (2019) 'Sustainable Development Goals' for 2050.

8 REFERENCES

Australian Institute of Health and Welfare (AIHW), 2017

Australian Pain Society, 2018, *Pain in Residential Aged Care Facilities: Management Strategies*, The Australian Pain Society, North Sydney.

Blyth, FM, March, LM, Brnabic, M, Jorn, LR, Williamson, M & Cousins, MJ, 2001, Chronic pain in Australia: A prevalence study. *Pain*, vol. 89, no. 1-2, pp. 127-134.

Cohen-Mansfield, J, 2001, Nonpharmacologic interventions for inappropriate behaviours in dementia: a review, summary, and critique. *Am. J. Geriatr. Psychiatry Off. J. Am. Assoc. Geriatr. Psychiatry*, vol. 9, pp.361-381.

Crane, P & O'Regan, M 2010, *On PAR: using Participatory Action Research to improve early intervention*, Department of Families, Housing, Community Services and Indigenous Affairs, Australian Government, URL: https://www.dss.gov.au/sites/default/files/documents/05_2012/reconnect_0.pdf

Cunningham, C, Kelly, J, Andrews, S, Moore, D & Forbes, R, 2016, *Intervene Stage 1 Report: Assessing Pain Prevalence and Pain Management Practices in Residential Aged Care*, HammondCare, Sydney.

Department of Social Services, Gibson, S, 2007, The IASP Global Year Against Pain in Older Persons: Highlighting the current status and future perspectives in geriatric pain, *Expert Reviews in Neurotherapeutics* vol. 7, pp. 627-63.

Herr, K, Bjoro, K, & Decker, S, 2006, Tools for assessment of pain in nonverbal older adults with dementia: a state-of-the-science review, *Journal of Pain and Symptom Management*, vol. 31, no. 2, pp. 170-192.

Horgas, A & Dunn, K, 2001, Pain in nursing home residents: Comparison of residents' self-report and NAs' perceptions *Journal of Gerontological Nursing*, vol. 27, no. 3, pp. 44-56.

Katz, B 2015, Understanding & treating pain in the elderly, *Pain Management Today*, vol. 2, pp. 10-12.

McConigley, R, Toye, C, Goucker, R & Kristjanson, L, 2008, Developing recommendations for implementing the Australian Pain Society's pain management strategies in residential aged care. *Australian Journal of Ageing*, vol. 27, pp. 45-49.

Michie, S, van Stralen, M & West, R 2011, The behaviour change wheel: anew method for characterizing and designing behaviour change interventions, *Implementation Science*, vol. 6, pp. 42 (EJ), URL: <http://www.implementationscience.com/content/6/1/42> (Accessed 09/04/16 2011)

Michie, S, Atkins, L & Wets, R 2014, *The behaviour change wheel: a guide to designing interventions*, Silverback Publishing, Great Britain.

Pautex, S, Michon, A, Guedira, M, Emond, H, Le Louis, P, Samaras, D, Michel, JP, Herrmann, F, Ginnakopoulos, P. & Gold, G., 2006, Pain in severe dementia: self-assessment or observational scales? *Journal of the American Geriatrics Society*, vol. 54, pp. 1040-1045.

Peisah, C, Weaver, J., Wong, L., Strukovski, JA. 2014, Silent and suffering: a pilot study exploring gaps between theory and practice in pain management for people with severe dementia in residential aged care facilities, *Clinical Interventions in Aging*, vol.9, pp. 1767-1774.

Reason, P & Bradbury, H, 2001, *The Handbook of Action Research*, Sage Publications, London.

Savvas, S, Toye, C, Beattie, E. & Gibson, S J 2014, Implementation of sustainable evidence-based practice for the assessment and management of pain in residential aged care facilities. *Pain Management. Nursing. Off. J. Am. Soc. Pain Manag. Nurses* vol. 15, pp. 819-825.

8 REFERENCES

Takai, Y, Yamamoto-Mitani, N, Okamoto, Y, Koyama, K, & Honda, A 2010, Literature review of pain prevalence among older residents of nursing homes, *Pain Management Nursing*, vol. 11, no. 4, pp. 209–223.

Wall, S & White, T 2012, Pain and dementia – an application to practice: an example. *International Journal of Older People Nursing*, pp. 227–232.

World Health Organisation, 2019, Healthy Ageing and the Sustainable Development Goals, retrieved via <https://www.who.int/ageing/sdgs/en/> on 6 March 2019.

Won, A, Lapane, K, Gambassi, G, Bernabei, R, Morv, & Lipsitz, L 1999, Correlates and management of non-malignant pain in the nursing home. *American Geriatrics Society*, vol. 47, no. 8, pp. 936–942.

Zwakhalen, S, Hamers, J, Abu-Saad, H & Berger, M, 2006, Pain in elderly people with severe dementia: A systematic review of behavioural pain assessment tools, *BMC Geriatrics*, 3 (EJ).

9 APPENDICES

APPENDIX 1: MDT MEETING AND WORKSHOP PLAN

Month of Project	Meeting Number	Details
STAGE 1		
May	Meeting 1	<ul style="list-style-type: none"> • Reflection on workshop and issues raised. • Group ground rules.
	Meeting 2	<p>Discussion about current pain management at the service.</p> <ul style="list-style-type: none"> • Discussion about communication with management and staff about the project.
STAGE 2		
June	Meeting 3	<ul style="list-style-type: none"> • Problem identification and barriers and enablers.
(problem identification)	Meeting 4	<ul style="list-style-type: none"> • Consideration of barriers at local level and reflection on MDT barriers analysis.
July (plan)	Meeting 5	<ul style="list-style-type: none"> • Identify what needs to change in terms of staff behaviours re: pain management and best practice (Worksheet 1). • Provide Survey data summaries.
August (plan)	Meeting 6 & 7	<ul style="list-style-type: none"> • Discussion about data summaries (survey results). • Continue discussion needs to change in terms of staff behaviours re: pain management (Worksheet 3).
September	Meeting 8	<ul style="list-style-type: none"> • Presentation of baseline data (audit summaries).
(Plan)	Meeting 9	<ul style="list-style-type: none"> • Workshop on intervention protocol (behaviour change and action planning). Discussions to identify behaviour change interventions and their functions (Worksheet 4 and AP Template).

October (plan)	Meeting 10	<ul style="list-style-type: none"> • Work with group on action plans and prepare for implementation. • Work with group on action plans and prepare for implementation.
	Meeting 11	<ul style="list-style-type: none"> • Finalise action plans and prepare for implementation.
November (do-implementation)	Meeting 12 & 13	<ul style="list-style-type: none"> • Discussion about implementation progress. • Report on implementation of interventions/action plans and discussion about progress.
December	Break	
January (study/act)	Meeting 14 & 15	<ul style="list-style-type: none"> • Meet to discuss progress of implementation. • Revision of action plans if needed.
February (P-D-S-A)	Meeting 16 & 17	<ul style="list-style-type: none"> • Report on implementation of interventions/action plans.
March (P-D-S-A)	Meeting 18 & 19	<ul style="list-style-type: none"> • Report on implementation of interventions/action plans.
April (P-D-S-A)	Meeting 20	<ul style="list-style-type: none"> • Report on implementation of interventions/action plans.
May (P-D-S-A)	Meeting 21	<ul style="list-style-type: none"> • Meet to discuss how to continue to embed change or revise/modify action plans.
STAGE 3		
June - October		<ul style="list-style-type: none"> • Meetings and processes for embedding change TBD by each MDT. • Workshop on sustaining changes and development of pain management model.

APPENDIX 2: BARRIERS TO EVIDENCE-BASED PAIN MANAGEMENT IDENTIFIED BY MDTs

	Site 1	Site 2	Site 3	Site 4
Pain Identification				
Need for education on how to identify pain			✓	✓
Need for increased staff knowledge on the mechanisms and impact of pain from a holistic perspective	✓	✓	✓	✓
Need for staff to consider pain as a possible cause of behaviour change early			✓	✓
Pain Assessment				
Need to improve PCA knowledge about how to use/administer a pain screen (ABBEY, PAINAD)	✓ (enhance consistency)	✓ (enhance consistency)	✓	✓
Education about how to correctly and consistently document findings of a pain assessment in resident files	✓ (enhance consistency)	✓ (enhance consistency)	✓	✓
Evaluation of treatment				
Need for staff to formally evaluate and provide feedback on interventions using appropriate assessment tools	✓ (enhance consistency)	✓ (enhance consistency)	✓	✓
Cultural Issues				
Support for staff to feel confident to prioritise pain assessment and management over task completion	✓		✓	✓
Need to support PCAs to seek feedback on resident pain	✓	✓	✓	✓
Need for different understanding of PCA role so that it includes aspects of evaluation and monitoring (not just pain identification)		✓	✓	✓
System Issues				
Need for a clearly articulated pain protocol to support regular and casual staff	✓	✓	✓	✓

APPENDIX 3: DETAILED STRATEGY FOR IMPLEMENTATION OF INTERVENTIONS AT PROJECT SITES

1. Awareness-Raising

- Project newsletter to all staff to inform them of the intervention via email and hard copy.
- Briefing information provided at staff meetings and after staff handover.
- Memos placed in memo folder.

2. Preparation meeting with RN/ENs

- Meetings to be held with the RN and ENs of the service to:
- Introduce the intervention components.
- Highlight the importance of RN/EN support in encouraging and prompting care staff complete pain assessments if there is a change in a resident's behaviour or pain is reported or a PRN medication is requested.
- Discuss documentation changes and role of RN/ENs in promoting communication about resident pain at handovers.
- Who can organise these staff meetings? Who should provide the information? (It needs to come from a trusted and credible source).

3. Roll-out of education program and pain protocol to care staff:

- The education program will be rolled-out through a facilitated approach.
- The roll-out will be led by the workplace trainer
- The roll-out will occur over a four week period with an additional two weeks to capture any staff who have either not completed, or not been able to attend their allocated sessions.
- The education will be implemented on unit first.

- The workplace trainers will use an approach which is similar to that used for elder abuse training – which was found to be successful.
- Small groups of staff will come off the floor, during their work hours, with the workplace trainer to complete the four short education sessions.
- All staff working on a specific unit will be allocated into small groups by the WP trainers based on their shift patterns. These small group will then and will complete the education program over a one week timeframe. Each staff member will attend four sessions of approx. 6-10minutes each across a one week period. (See Diagram 1 for the rollout plan based on an example of 40 staff).
- The workplace trainers will keep a record of those staff that have completed the education.
- At the completion of the last session, the workplace trainer will:
 - provide staff with a pocket reference card and a hard copy of the pain protocol,
 - inform staff that a MDT member will provide one to one support.
- MDT members will be provided with a list of staff names at the end of each week of education to follow up for one to one support the subsequent week.
- MDT members provide one to one support/mentoring for those staff that have completed the education program. This will involve meeting with the staff member at an agreed time during their shift to review their use of the protocol and pain checklist cards, to encourage staff to complete assessments and to reinforce key messages.
- Who will provide one to one support to clinical staff to encourage them to prompt care staff to complete assessments and use the pain protocol?

Increasing communication about pain at handover:

- Staff handover sheet will be amended so that it contains a column headed “pain” where staff can document assessments/PRNs/non-pharmacological interventions. Addition of the column will prompt staff to address resident pain at each handover.
- Does the RN have a handover sheet that they fill in which could address pain?

Who will be responsible for amending the handover sheet will make changes and master copy included on the unit?

4. Written information to prompt and cue staff:

- Posters developed in collaboration with the MDT
- “Observe change: Consider pain – Do an assessment”
- Don’t forget to talk about resident pain at handover!
- Laminated hard copies/posters of the pain protocol document will be placed in key locations in the nurses’ stations. These written materials will remind and support staff to do an assessment.
- Who will be responsible for ensuring that the posters and pain protocol are in the correct location?

5. Modification of the physical environment to ensure access to pain protocol and assessment forms:

- Hard copies of the Abbey Pain Scale and verbal pain inventory will be placed in a folder near all other assessment forms.

- Who will be responsible for ensuring this and monitoring that there are enough assessment forms?

6. Modification of service documentation

- Add a section on pain in the resident of the day documentation.
- For residents who cannot verbalise their pain, staff complete an Abbey Pain Scale during each shift - one at rest and one during movement.
- For residents who can verbalise their pain, staff complete a General Pain Assessment form.
- Who would be responsible for making the changes to the documentation?

APPENDIX 4: STAFF SURVEY: PAIN MANAGEMENT

Section A - Background Information

This section provides general background information about survey participants.

Please **tick boxes** below.

1. How old are you?

Please write in years

2. Are you female or male?

Please tick one box

Female

Male

3. Were you born in Australia?

If 'No', Please write the name of your country of birth on the line

Yes

No

4. Is English your first language?

Please tick one box

Yes

No

5. Do you identify as an Aboriginal or Torres Strait Islander?

Please tick one box

Yes

No

6. What is your current employment status?

Please tick one box

- Fulltime Part time Casual

7. What is your occupation?

Please tick one box or write in the space provided

- | | | |
|--|---|--|
| <input type="checkbox"/> Registered Nurse | <input type="checkbox"/> Enrolled Nurse | <input type="checkbox"/> Personal Care worker/
Assistant in nursing |
| <input type="checkbox"/> Occupational Therapist | <input type="checkbox"/> Diversional Therapist | <input type="checkbox"/> Physiotherapist |
| <input type="checkbox"/> Allied Health Assistant | <input type="checkbox"/> Administration
staff member | <input type="checkbox"/> Non-clinical health
care staff (including
management) |
| <input type="checkbox"/> Other: _____ | | |

8. Which shifts do you usually work?

Please tick one box

- AM PM
- Night duty
- Mixed shifts

9. How long have you worked in your current role:

Please write in years

10. How long have you worked in residential aged care overall?

Please write in years

11. What is your highest level of completed education?

Please tick one box or write in the space provided

- | | | |
|---|---|--|
| <input type="checkbox"/> Primary School | <input type="checkbox"/> High School (High School leaver certificate, e.g. HSC or IB) | <input type="checkbox"/> Certificate, Please specify:
_____ (e.g. cert 2, 3 or 4) |
| <input type="checkbox"/> Diploma | <input type="checkbox"/> University Degree (Bachelor Degree) | |
| <input type="checkbox"/> Higher University Degree (Honours, Masters, PhD) | <input type="checkbox"/> Other: _____ | |

12. Have you attended education in pain management for people living with dementia in the past 12 months?

Please tick one box

- Yes No (please go to Qn 15)

13. If you answered “Yes” to Question 12, how long was the pain management education?

(if you did multiple sessions across days please add up the total number of hours)

- | | | |
|--|--|--------------------------------|
| <input type="checkbox"/> In-service (approx. 1 hr in length) | <input type="checkbox"/> 2- 4 hour session | <input type="checkbox"/> 1 day |
| <input type="checkbox"/> 2-3 days | <input type="checkbox"/> Other: _____ | |

14. Are you aware of the Australian Pain Society Guidelines for Pain Management in Residential Aged Care Facilities?

Please tick one box

- Yes No (please go to Qn 17)

15. Have you read or referred to the Australian Pain Society Guidelines for Pain Management in Residential Aged Care Facilities as part of your role?

Please tick one box

- Yes No

16. Do you feel you have an adequate understanding of your facility's procedures for dealing with pain in residents who have dementia?

Please tick one box

Yes No

17. Do you feel that you have adequate training on how to manage pain in people with dementia?

Please tick one box

Yes No

18. In your current role, approximately how often do you report or take action to address pain for residents with dementia?

(DO NOT include time spent giving regular prescribed medication).

once per hour once every 2 hours once per shift
 twice per week once per week Other: _____
(specify)

19. In your opinion, what percentage of residents with dementia have pain needs that are NOT being met.

Write your response

_____ %

Section B - Identifying and Responding to Residents' Pain

The below questions ask you about your confidence, skills and level of involvement in pain management for people with dementia.

Please circle the number that best represents how you feel on the scale of 0 to 10.

When caring for PEOPLE WITH DEMENTIA I am CONFIDENT I can...

	Not at all confident										Extremely confident
Identify if a resident has pain	0	1	2	3	4	5	6	7	8	9	10
Ask a resident about their pain	0	1	2	3	4	5	6	7	8	9	10
Observe for common behaviours that could indicate pain	0	1	2	3	4	5	6	7	8	9	10
Report a resident's pain problem	0	1	2	3	4	5	6	7	8	9	10
Act on a resident's pain	0	1	2	3	4	5	6	7	8	9	10

When caring for PEOPLE WITH DEMENTIA I have the SKILLS to effectively...

	Not at all effective										Very effective
Identify if a resident has pain	0	1	2	3	4	5	6	7	8	9	10
Ask a resident about their pain	0	1	2	3	4	5	6	7	8	9	10
Observe for common behaviours that could indicate pain	0	1	2	3	4	5	6	7	8	9	10
Report a resident's pain problem	0	1	2	3	4	5	6	7	8	9	10
Act on a resident's pain	0	1	2	3	4	5	6	7	8	9	10

When caring for PEOPLE WITH DEMENTIA I am involved in:

	Never											Always
Identifying when the resident may be in pain.	0	1	2	3	4	5	6	7	8	9	10	
Reporting to my immediate supervisor when I suspect a resident has pain.	0	1	2	3	4	5	6	7	8	9	10	N/A
Providing pharmacological treatments (medications) for pain.	0	1	2	3	4	5	6	7	8	9	10	N/A
Undertaking a formal pain assessment (i.e the ABBEY Pain Scale, PAINAD) when a resident is suspected of having pain.	0	1	2	3	4	5	6	7	8	9	10	N/A
Providing non-pharmacological treatment (e.g. heat packs, massage).	0	1	2	3	4	5	6	7	8	9	10	
Evaluating the effectiveness of the treatment.	0	1	2	3	4	5	6	7	8	9	10	
Communicating the effectiveness of the treatment to my supervisor.	0	1	2	3	4	5	6	7	8	9	10	N/A
Ongoing monitoring either for pain or treatment effect.	0	1	2	3	4	5	6	7	8	9	10	

Section C – Individual Pain Management Skill Set

Instructions: This survey asks for your views about pain management. Your answers will help us to gather information about the current pain assessment and management procedures as seen through the eyes of the aged care staff. Answers given will be completely confidential and anonymous.

Answer every question by marking one of the boxes. If you are unsure about how to answer a question, please give the best answer you can.

PCA Div 1 Div 2 Other: _____

1. I am confident in my pain management skills	Strongly Agree	Mostly Agree	Mostly Disagree	Strongly Disagree
2. I am able to recognise when a resident is experiencing pain	Strongly Agree	Mostly Agree	Mostly Disagree	Strongly Disagree
3. I am able to recognise pain in those with dementia or non-verbal residents	Strongly Agree	Mostly Agree	Mostly Disagree	Strongly Disagree
4. I know and understand the Australian Pain Society Guidelines for Pain Management in Residential Care Facilities	Strongly Agree	Mostly Agree	Mostly Disagree	Strongly Disagree
5. I know and understand the facility procedures for dealing with pain	Strongly Agree	Mostly Agree	Mostly Disagree	Strongly Disagree
6. I am happy with the current facility procedures for dealing with pain	Strongly Agree	Mostly Agree	Mostly Disagree	Strongly Disagree
7. I know who to tell if I notice a resident is in pain	Strongly Agree	Mostly Agree	Mostly Disagree	Strongly Disagree
8. If I notice a resident is in pain I will always report this to the appropriate person	Strongly Agree	Mostly Agree	Mostly Disagree	Strongly Disagree
9. I believe I have had adequate training to enable me to assess if a resident is in pain	Strongly Agree	Mostly Agree	Mostly Disagree	Strongly Disagree
10. I am regularly involved in providing treatment for pain	Strongly Agree	Mostly Agree	Mostly Disagree	Strongly Disagree
11. I am confident in using a wide range of pharmacological and non-pharmacological therapies for pain management	Strongly Agree	Mostly Agree	Mostly Disagree	Strongly Disagree
12. I believe that the treatments provided for pain are effective	Strongly Agree	Mostly Agree	Mostly Disagree	Strongly Disagree

APPENDIX 5: PAIN IN OLDER ADULTS KNOWLEDGE SURVEY

Please indicate whether the following statements are true or false by placing a tick ✓ in the corresponding box. If you don't know the answer, please tick ✓ the 'Don't Know' box.

		True	False	Don't Know
1	Exercise, such as strengthening activities, may decrease the intensity of pain for some conditions in older people.			
2	Older people should not be given strong drugs such as morphine.			
3	Cultural background has no influence on how people express their pain.			
4	Blood pressure, heart rate and respiration are not always reliable physiological indicators of pain intensity in older people.			
5	If an older person can be distracted from their pain, you can assume that their pain is not severe.			
6	Research has shown that the majority of people with dementia are not likely to have pain.			
7	A combined treatment plan using pain medication and other therapies is more likely to relieve pain than a single treatment option.			
8	People with dementia are not able to let you know that they have pain.			
9	Short acting pain medication given before an activity (such as a wound dressing or a transfer from bed to chair) is not effective in reducing predictable pain in older people.			
10	Behaviours described as aggression, restlessness or resistiveness to care can be symptoms of pain in older people with dementia.			
11	Assessment of pain in older people should also include assessing how pain impacts on their activities.			

		True	False	Don't Know
12	Pain is less common in older people than younger people.			
13	The use of a pain assessment tool is recommended for thorough assessment of pain in older people.			
14	If an older person reports pain, then they should be believed.			
15	Pain in people who have dementia is commonly over treated.			
16	It is essential that the response to treatment for pain is recorded and communicated.			
17	Changes in appetite or sleep patterns can mean that the older person has pain.			
18	Grimacing and frowning can be signs of pain in older people.			
19	Observation of behavioural changes is the best way to assess pain in older people with dementia who cannot self-report.			
20	Vocalisations, such as sighing, whimpering or groaning, are common signs of pain in older people with communication difficulties.			
21	Assessment of pain in older people when they are at rest indicates whether pain is present at other times.			
22	Vocalising and guarding may be indicative of pain.			
23	Pain assessments with older people should also include assessment of pain when moving.			
24	Older people may use words other than "pain" to describe what they are feeling.			

APPENDIX 6: MEDICAL RECORDS AUDIT

Medical Records Audit

The following information will be collected from residents' documentation.

Demographics

1. Gender (please tick) Male Female

2. Age (years)/ DOB: _____

3. PAS score: _____ OR PAS not done due to severe cognitive impairment

Other: _____
(e.g. not located)

4. Length of stay (in days)/admission date: _____

5. Does the audit period fall within the ACFI reporting period for this resident?

Yes No

Medical Diagnoses

6. Record (tick) all relevant classifications for documented medical diagnoses

ICD I: Certain infectious and parasitic diseases

ICDII: Neoplasms

ICD III: Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism

ICD IV: Endocrine, nutritional and metabolic disease

ICD V: Mental and behavioural disorders

ICD VI: Diseases of the nervous system

ICD VII: Diseases of the eye and adnexa

- ICD VIII: Diseases of the ear and mastoid process
- ICD IX: Diseases of the circulatory system
- ICD X: Diseases of the respiratory system
- ICD XI: Diseases of the digestive system
- ICD XIII: Diseases of the muscular skeletal system and connective tissue
- ICD XIV: Diseases of the genitourinary system
- ICD XVII: Congenital malformations, deformations and chromosomal abnormalities
- ICD XVIII: Symptoms, signs and abnormal clinical and laboratory findings not elsewhere classified
- ICD XIX: Injury, poisoning and certain other consequences of external causes
- ICD XX: External causes of morbidity and mortality

Other: _____

7. Has the resident been identified as having a chronic painful condition or suffering from chronic pain?

- Yes No

Pain Recognition and Identification

8. Was a multi-dimensional pain assessment done at any time over the 12 months prior to audit period?

- Yes No

8a. Has the resident been affected by any pain in the 3 month audit period?

- Yes No

If yes, what was the pain duration? (tick the appropriate box below)

- Less than 3 months
- More than 3 months

8b. Was a pain assessment documented during the 3 month audit period?

Yes

No

If the resident has been affected by pain during the three month audit period, please complete the Audit of Pain Episode Form (see Page 3)

8c. What complex care APCI item was the resident on during the audit period?

3

4a

4b

None

Additional Comments

Outline any pain interventions

Audit of Pain Episode

Aim: to establish the quality of pain related documentation.

Procedure:

- Document the total number of pain episodes documented in the 3 month audit period in the below table.

	Date	Episode Details		Date	Episode Details
1			34		
2			35		
3			36		
4			37		
5			38		
6			39		
7			40		
8			41		
9			42		
10			43		
11			44		
12			45		
13			46		
14			47		
15			48		
16			49		
17			50		
18			51		
19			52		
20			53		
21			54		
22			55		
23			56		
24			57		
25			58		
26			59		
27			60		
28			61		
29			62		
30			63		
31			64		
32			65		
33			66		

8d. TOTAL number of pain episodes = _____

- Using the 'random number generator', select two pain episodes according to the numbers that are generated and document the numbers below..
- Complete audit sheet for the two pain episodes.

First Pain episode selected randomly (enter number): No. _____

Date of episode: _____

Identification

9a. Was the problem described:

Yes No

If Yes (please tick):

- Behaviour change observed by staff
- Change observed by family member
- Resident self-report
- Unspecified e.g. 'general discomfort'
- Change in physical health observed by staff
- Resident response to staff asking about pain
- Incident – i.e. fall or suspected fall
- Other: _____

Where was this documented?

Pain assessment form Progress notes Other: _____

Who was the problem documented by?

RN EN PCA OT Not Specified

Other: _____

Is there evidence of escalation of concern to the RN (complete for entries NOT made by RN)?

- Yes No N/A

Assessment

10a. Was a formal pain assessment documented?

- Yes No

If Yes (please tick):

- | | |
|--|--|
| <input type="checkbox"/> PAINAD | <input type="checkbox"/> Resident self-report (qual) |
| <input type="checkbox"/> Faces scale | <input type="checkbox"/> Informal staff rating – not using a formal tool |
| <input type="checkbox"/> Resident self-report (Uni-D rating) | <input type="checkbox"/> RBVPI |
| <input type="checkbox"/> Abbey Pain Scale | <input type="checkbox"/> Multi-D pain assessment |
| <input type="checkbox"/> Qualitative documentation by staff. e.g. _____ | |
| <input type="checkbox"/> Medical review of the resident relevant to the pain event | |
| <input type="checkbox"/> Other: _____ | |

Where was this documented?

- Pain assessment form progress notes Other: _____

Who was the problem documented by?

- RN EN PCA OT Not Specified
- Other: _____

Is there evidence of escalation of concern to the RN (complete for entries NOT made by RN)?

- Yes No N/A

Treatment/Intervention

11a. Was an intervention documented?

Yes No

If Yes:

- Pharmacological
- Regular medication given prior to pain episode
 - Regular medication given in response to pain (within 30-40mins of episode)
 - PRN (please specify type of medication):
 - Simple analgesia Anti-psychotic
 - Anti-inflammatory No PRNs available
 - Narcotic medication

And/Or

- Non-pharmacological
- Massage Heat pack
 - One-to-one/reassurance Diversion
 - TENS Walk
 - Repositioning **Other:** _____
(specify)

Who documented the intervention?

- RN EN PCA OT Not Specified
- Other: _____

Evaluation

12a. Was an intervention documented?

Yes No

If Yes (please tick):

- | | |
|---|--|
| <input type="checkbox"/> PAINAD | <input type="checkbox"/> Resident self-report (qual) |
| <input type="checkbox"/> Faces scale | <input type="checkbox"/> Informal staff rating – not using a formal tool |
| <input type="checkbox"/> Resident self-report (Uni-D rating) | <input type="checkbox"/> RBVPI |
| <input type="checkbox"/> Abbey Pain Scale | <input type="checkbox"/> Multi-D pain assessment |
| <input type="checkbox"/> Qualitative documentation by staff. e.g. _____ | |
| <input type="checkbox"/> Other: _____ | |

Where was this documented?

Pain assessment form Progress notes **Other:** _____

Who was the problem documented by?

RN EN PCA OT Not Specified

Other: _____

Additional Comments: _____

Second Pain episode selected randomly (enter number): No. _____

Date of episode: _____

Identification

9b. Was the problem described:

Yes No

If Yes (please tick):

- Behaviour change observed by staff
- Change observed by family member
- Resident self-report
- Unspecified e.g. 'general discomfort'
- Change in physical health observed by staff
- Resident response to staff asking about pain
- Incident – i.e. fall or suspected fall
- Other: _____

Where was this documented?

Pain assessment form Progress notes Other: _____

Who was the problem documented by?

RN EN PCA OT Not Specified

Other: _____

Is there evidence of escalation of concern to the RN (complete for entries NOT made by RN)?

Yes No N/A

Assessment

10b. Was a formal pain assessment documented?

Yes No

If Yes (please tick):

- PAINAD Resident self-report (qual)
- Faces scale Informal staff rating – not using a formal tool
- Resident self-report (Uni-D rating) RBVPI
- Abbey Pain Scale Multi-D pain assessment
- Qualitative documentation by staff. e.g. _____
- Medical review of the resident relevant to the pain event
- Other: _____

Where was this documented?

Pain assessment form Progress notes Other: _____

Who was the problem documented by?

RN EN PCA OT Not Specified

Other: _____

Is there evidence of escalation of concern to the RN (complete for entries NOT made by RN)?

Yes No N/A

Treatment/Intervention

11b. Was an intervention documented?

Yes No

If Yes:

- Pharmacological
 - Regular medication given prior to pain episode
 - Regular medication given in response to pain (within 30-40mins of episode)
 - PRN (please specify type of medication):
 - Simple analgesia
 - Anti-inflammatory
 - Narcotic medication
 - Anti-psychotic
 - No PRNs available

And/Or

- Non-pharmacological
 - Massage
 - one-to-one/reassurance
 - TENS
 - Repositioning
 - Heat pack
 - Diversion
 - Walk
 - Other:** _____
(specify)

Who documented the intervention?

- RN
- EN
- PCA
- OT
- Not Specified
- Other: _____

Evaluation

12b. Was an intervention documented?

- Yes
- No

If Yes (please tick):

- | | |
|---|--|
| <input type="checkbox"/> PAINAD | <input type="checkbox"/> Resident self-report (qual) |
| <input type="checkbox"/> Faces scale | <input type="checkbox"/> Informal staff rating – not using a formal tool |
| <input type="checkbox"/> Resident self-report (Uni-D rating) | <input type="checkbox"/> RBVPI |
| <input type="checkbox"/> Abbey Pain Scale | <input type="checkbox"/> Multi-D pain assessment |
| <input type="checkbox"/> Qualitative documentation by staff. e.g. _____ | |
| <input type="checkbox"/> Other: _____ | |

Where was this documented?

- Pain assessment form Progress notes **Other:** _____

Who was the problem documented by?

- RN EN PCA OT Not Specified
- Other: _____

Additional Comments: _____

13. Was there evidence of any other type of monitoring to pain?

- Yes No
- Daily monitoring of general pain status or site specific using an assessment tool
- Weekly monitoring of general pain status or site specific using an assessment tool
- Monthly monitoring of general pain status or site specific using an assessment tool

If a tool is being used what type is it?

- | | |
|--|--|
| <input type="checkbox"/> PAINAD | <input type="checkbox"/> Resident self-report (qual) |
| <input type="checkbox"/> Faces scale | <input type="checkbox"/> Informal staff rating – not using a formal tool |
| <input type="checkbox"/> Resident self-report (Uni-D rating) | <input type="checkbox"/> RBVPI |
| <input type="checkbox"/> Abbey Pain Scale | <input type="checkbox"/> Multi-D pain assessment |
| <input type="checkbox"/> Other: _____ | |

Additional Comments: _____

14. Were any of the below staff (staff other than care home staff) involved in the pain related care of this resident in the previous 12 months? (tick all that apply)

- | | |
|---|---|
| <input type="checkbox"/> General Practitioner | <input type="checkbox"/> Psychiatrist |
| <input type="checkbox"/> Geriatrician | <input type="checkbox"/> Pain specialist |
| <input type="checkbox"/> Nurse practitioner | <input type="checkbox"/> Occupational Therapist |
| <input type="checkbox"/> Physiotherapist | <input type="checkbox"/> Palliative Care specialist |
| <input type="checkbox"/> Other: _____ | |

Additional Comments: _____

Medication Audit

Is the resident prescribed any of the following medications? Please tick relevant categories.

M1. Regular Prescription:

- | | |
|--|--|
| <input type="checkbox"/> Simple analgesia | <input type="checkbox"/> Anti-depressant |
| <input type="checkbox"/> NSAIDs | <input type="checkbox"/> Anticonvulsant (for pain), eg pregabalin (Lyrica), gabapentin |
| <input type="checkbox"/> Opioid analgesia | <input type="checkbox"/> Benzodiazepines |
| <input type="checkbox"/> Anti-psychotic medication | <input type="checkbox"/> Other |

M2. As Necessary (PRN) Prescription:

- | | |
|--|--|
| <input type="checkbox"/> Simple analgesia | <input type="checkbox"/> Anti-depressant |
| <input type="checkbox"/> NSAIDs | <input type="checkbox"/> Anticonvulsant medication |
| <input type="checkbox"/> Narcotic analgesia | <input type="checkbox"/> Benzodiazepines |
| <input type="checkbox"/> Anti-psychotic medication | <input type="checkbox"/> Other |

M3. How many pain-related PRNs were given over the 3-month audit period?

Type	Number
Simple analgesia	
NSAIDs	
Opioid analgesia	
Anti-psychotic medication	
Anti-depressant	
Anticonvulsant (for pain), eg pregabalin (Lyrica), gabapentin	
Benzodiazepines	
Other (state which)	

Additional Comments: _____

APPENDIX 7: ABBEY PAIN SCALE

Name _____

Name and designation of person completing the scale:

(Name) (Date) (Time)

Latest pain relief given was _____ at _____
(Date) (Time)

1. Vocalisation

(eg. Whimpering, groaning, crying)

Absent 0 Mild 1 Moderate 2 Severe 3

2. Facial Expression

(eg. Looking tense, frowning, grimacing, looking frightened)

Absent 0 Mild 1 Moderate 2 Severe 3

3. Changes In Body Language

(eg. Fidgeting, rocking, guarding part of body, withdrawn)

Absent 0 Mild 1 Moderate 2 Severe 3

4. Behavioural Change

(eg. Increased confusion, refusing to eat, alteration in usual patterns)

Absent 0 Mild 1 Moderate 2 Severe 3

5. Physiological Change

(eg. Temperature, pulse or blood pressure outside normal limits, perspiring, flushing or pallor)

Absent 0 Mild 1 Moderate 2 Severe 3

6. Physical Changes

(eg. Skin tears, pressure areas, arthritis, contractures, previous injuries)

Absent 0 Mild 1 Moderate 2 Severe 3

Add scores for 1-6 and record

Total pain score

Tick the box that matches the total pain score

0-2 No Pain

3-7 Mild

8-13 Moderate

14+ Severe

Tick the box which matches the type of pain

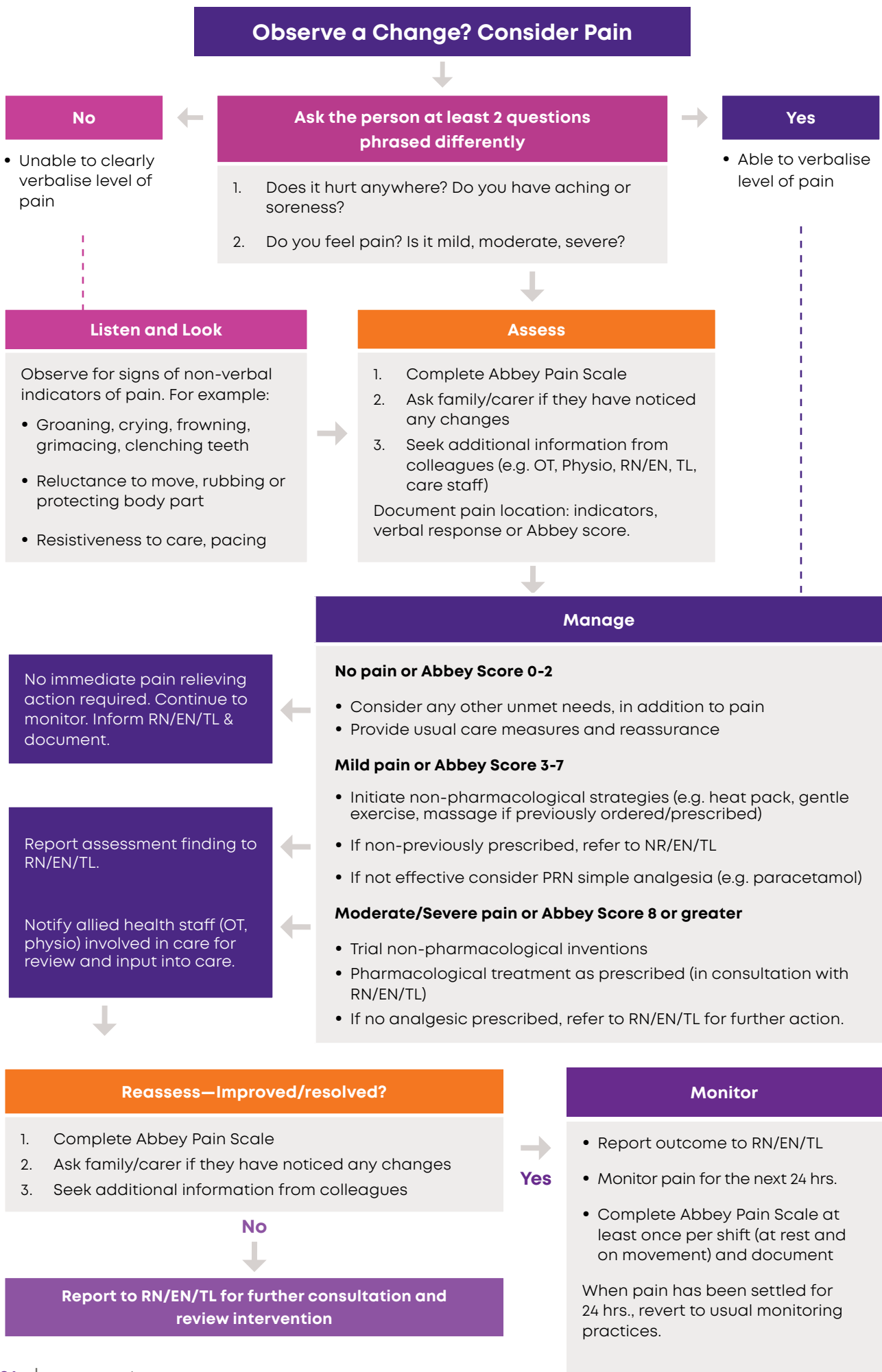
Chronic

Acute

Acute on chronic

Abbey, J. A., Piller, N., DeBellis, A., Esterman, A., Parker, D., Giles, L., Lowcay, B. (2004). The Abbey Pain Scale. A 1-minute numerical indicator for the people with late-stage dementia. *International Journal of Palliative Nursing*, 10(1), 6-13. (This document may be reproduced with this acknowledgement retained)

APPENDIX 8: PAIN MANAGEMENT PROTOCOL



The Dementia Centre.

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