Palliative Care for People at Home initiative
Pharmacist in community palliative care multidisciplinary team pilot project
Final Project Report, Victoria

June 2010
ACKNOWLEDGEMENTS

This project is an initiative of the Department of Health (formerly Department of Human Services) and funded by the Australian Government, Department of Health and Ageing, under the National Palliative Care Program.

Our appreciation is extended to both departments for the opportunity to demonstrate the value to both health professionals and patients and families of incorporating a pharmacist into the community palliative care services team.

The Project Manager and Project Pharmacist wish to acknowledge the support and input of the Community Palliative Care Service team members at Calvary Health Care Bethlehem; the Project Team and the Steering Committee. It also appreciates the support provided by the Clinical Supervisor and the External Evaluator.

Further it is important to acknowledge the medical staff and volunteers of Calvary Health Care Bethlehem who assisted in the development of the patient medication information and the patients and families who allowed us into their homes as part of the Community Services Palliative Care team.
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EXECUTIVE SUMMARY

Context
This is the Final Progress Report for the Palliative care for people at home initiative – Developing the role of a pharmacist in community palliative care multidisciplinary teams to improve outcomes for people at home and their carers (community pharmacist project).

Background
The background and approach to this project are provided in Progress Report 1, January 2009, Progress Report 2, June 2009 and Progress Report 3, January 2010 and are contained in a project summary (Appendix 1).

The project aimed to introduce the role of pharmacist into the Calvary Health Care Bethlehem (CHCB) Community Palliative Care Services team (CPCS). The role was to assist in improving knowledge of medications and their management for the health professionals within the team and for patients and their families. A major thrust was to minimise medication misadventure/error and, where possible, reduce hospital admissions and lower costs to the service system.

There was to be extensive stakeholder consultation, education and communication, both internally and externally, to ensure knowledge of the project was widespread and the benefits and findings of the pilot project were disseminated.

Tools were to be developed to assist the CPCS in terms of medication screening, referrals and the development of a care pathway.

Approach
The approach taken with this project was outlined in the original project brief and submission and it included a continual review and revision, as necessary, of the tasks, assigned times and evaluation markers.

To confirm the approach, a document developed for and by the National Palliative Care Program\(^1\) was explored in assessing the framework and processes that should be used to guide evaluation of this project. Throughout the project there was a constant monitoring of the process, impact and potential outcomes and the project plan and timetable adjusted where necessary.

A literature search and review (Appendix 2) of articles, websites and journals aided the direction of the project and highlighted aspects that should have a significant focus. It also provided models for the development of tools to be used in the project. There was little in the literature specifically related to palliative care patients and the role of pharmacist within the community team. The project has provided some evidence that this role is beneficial in terms of improved knowledge and management of patients.

Sustainability and capacity to duplicate the pilot was a key focus. Throughout the project each element was assessed to ascertain how, and if, it could be sustained at the conclusion of the pilot project and what the requirements would be for this to occur. The results are that several facets will be sustained including the availability of patient medicine information in English and seven other languages. Limited availability of mp3 files to increase accessibility is available on the CHCB website with links available Southern Metropolitan Region Palliative Care Consortium and Southcity GP Services.

A Toolkit was developed to assist in the elements of sustainability and to provide an approach to duplicating the role of pharmacist within the palliative care sector.

Evaluation
The evaluation was conducted internally throughout the project by the Project Manager and Project Pharmacist, in consultation with the External Evaluator, Dr. Safeera Hussainy. Evaluation terms of reference (ToR) were drawn up by the Project Manager for the external evaluator (Appendix 3). The ToR were based on an evaluation methodology of assessing the process, impact and outcomes of the project and its activities. In Phase 3 of the project, the External Evaluator conducted an extensive evaluation, including a focus group with the CHCB community palliative care service team members. A detailed report on findings by the external evaluator is included (Appendix 4).

Results
The project was on time and within budget. The consultation process (Appendix 5) with key stakeholders enabled the Project Manager and Project Pharmacist to gather a broad view of the sector and its capacity to assist in aspects of the project, including education and information increasing awareness of the project was also achieved. A second round of consultations and/or feedback to key stakeholders as the project concluded was incorporated into the process for communication.

The following patient groups and aspects of service have been highlighted as having the highest risk of medication misadventure in the recent report on Home Medicines Reviews (Campbell Report, 2008)\(^2\) commissioned by Department of Health and Ageing (DoHA):

- post hospital discharge
- Indigenous
- consumers in living in remote locations
- CALD consumers
- those receiving palliative care
- non-concordant consumers
- those who are transient or homeless

This latter component was important and warranted exploration as people from non-English speaking backgrounds and also older people are amongst the highest rate of people with non-concordance in terms of medication management. The literature provided evidence that these groups are more at risk of hospital admissions and non-concordance with medication regimes. Thus it was decided to produce some patient information leaflets about medications (Appendix 8) used in palliative care in seven language groups. Additionally, limited audio files have also been produced and both are accessible through the websites of CHCB and links from Southern Metropolitan Region Palliative Care Consortium (SMRPCC) and Southcity GP Services.

An additional group is people with inadequate or poor health literacy. Although this aspect was not reported upon in the literature review, some of the literature was explored as a reference for the project. There is much in the literature around this subject, with new findings being reported upon regularly. Health literacy should always be taken into account when developing materials. Some of the processes undertaken in this project incorporated consideration of inadequate language.

The communication strategy for the Project Team (Appendix 6) ensured all team members were consulted and aware of all aspects of the project work.

The pathway, protocols and tools that were developed were continually reviewed and revised by the Project Pharmacist with the view to providing a pro-forma set of tools for use by other palliative care services at conclusion of the pilot project.

An increase in numbers of referrals occurred as awareness of the role of the Project Pharmacist and the benefits that her knowledge and experience could bring to patient medication management.

\(^2\) Home Medicines Review Program Qualitative Research Project Final Report. Prepared for Department of Health & Ageing Medication Management & Research Section Canberra DECEMBER 2008 by CAMPBELL RESEARCH & CONSULTING PTY LTD, CLIFTON HILL, VICTORIA 3068
As mentioned above, patient medicine information was developed for use by health professionals to assist patients and carers in understanding palliative care medications. These were evaluated by a volunteer group (many ex-carers) and by medical and allied health professionals; their valuable feedback was incorporated into the final project. As with all such information, it should not be just provided to patients without discussion and clarification from the health professionals.

This material is considered to be one of the sustainability aspects of the pilot project.

Education (Appendix 7) of the Calvary Health Care Bethlehem (CHCB) Community Palliative Care Service team (CPCS) team and other palliative care services with the SMRPCC has been undertaken. Information and education sessions have also been held with a Division of GPs in the Southern Metropolitan Region and health professionals in Sale and Lakes Entrance with the Gippsland Palliative Care Consortium.

Discussion and Conclusions

The care pathway developed provided a focus and framework for the Project Pharmacist and the CHCB CPCS. The tools developed and/or adapted became familiar within the organization and referrals increased with one of the key messages from the CHCB Medication and Safety Governance Committee being to provide timely referrals to the Project Pharmacist. All patients were screened on admission to the CPCS by the Project Pharmacist to evaluate triggers for home visits and a more extensive medication review.

The presence of the Project Pharmacist within the CPCS Team enabled ongoing education and consultation which has proved invaluable. Liaison with community pharmacists and GPs mainly occurred in the Southern Metropolitan Region and was beneficial to both patients and the health practitioners. Provision of education to health professionals also occurred in Gippsland.

As the project progressed, it became obvious that some of the evaluation markers required review and revision and they were, in consultation with the Victorian Department of Health (DH), revised to be more relevant to the context of the project and the outcomes required.

The project demonstrated that the inclusion of a pharmacist into CPCS team assists in:

- increasing the knowledge of team members of medications used in palliative care and their management
- leads to improved knowledge of potential problems with medications and how to manage them
- leads to a change of practice for the benefit of patients
- enables ongoing education and support from the pharmacist to the team members
- allows for inservice education to be provided, as and when required
- assists in improving contacts with the general practitioners and palliative care service for the benefit of the patient and family
- assists the patient and family to better understand the medications, and

Although the timeframe of the project and the capacity to measure the benefits was limited, it was recognised that the inclusion of a pharmacist could also lead to:

- a reduction in medication error by both health professionals and patients/families
- an increase in medication concordance
- reduced hospital admissions due to medication errors
- an increase in confidence by patients/families in the use of medications

A Toolkit (Appendix 26) has been developed and will be freely available for other community palliative care services. Patient medicine information on several palliative care medications was developed and, translation of some of the material into seven languages is available on the CHCB website. MP3 files in English and in some of the languages for the morphine information are also available.

The project has enabled the development of tools and processes that will allow for sustainability and potential duplication, while having met timelines, fulfilled tasks and budget requirements.
RECOMMENDATIONS

It is important to recognise that while one of the proposed aims of this project was to reduce the number of hospital admissions and/or cost of medication, it was difficult to explore this in great depth during the project. In fact, hospital admissions are sometimes required to improve medication and symptom management and can, ultimately prevent future hospital admissions as the patient’s condition deteriorates.

Throughout the project, sustainability and capacity for duplication were always a consideration.

To sustain the project outcomes in any significant way, the following needs to be considered by both State and Federal Government Departments of Health, community palliative care services, divisions/networks of GPs, community/accredited pharmacists and pharmacy peak bodies:

1. That funding for a specialist pharmacist to be placed in each palliative care service within Victoria (see Appendix 25).

2. That an agreement between palliative care services could be negotiated within the palliative care consortia to fund a pharmacist position to support these services:
   a. To improve medication management for their patient group (Appendix 25)
   b. To improve knowledge of palliative care medications and their management within their community palliative care teams

3. That funding of current and extension of the Outreach Pharmacy Services within public hospitals to include palliative care patients (Appendix 24.2)

4. That funding/support for divisions/networks of general practice to include the role of a specialist palliative care pharmacist within their division/network.

5. That the Community Fourth Pharmacy Agreement Community Pharmacist in Palliative Care Project education module be offered to community and accredited pharmacists throughout Australia.

6. That the project add its support to the findings of the National Prescribing Service Ltd. and Palliative Care Australia Report Achieving quality use of medicines in the community for palliative and end of life care: September 2009 for a greater involvement of pharmacists in palliative care services.

7. That in addition to inclusion on the CHCB website, the Toolkit should be added to the Department of Health website for use by community palliative care services.

8. That further research should be undertaken into:
   a. The prescribing and dispensing of emergency ‘just in case’ medications to prevent duplication and wastage
   b. Cost savings that could be achieved by the decrease in hospital admissions
   c. Cost savings that could be achieved by interventions resulting from home medication reviews of palliative care patients (The PROMISe Project)
   d. Development of a leaflet for patients/carers on emergency ‘just in case’ medications

9. That new business rules being developed between Department of Health and Ageing and pharmacy peak body organizations (PGA, PSA, SHPA) as part of the Fifth Community Pharmacy Agreement be monitored for their relevance and impact on palliative care practice with regard to Home Medicine Reviews.

10. That improvements in prescribing and dispensing emergency (‘just in case’) medications could be achieved by:
    a. Palliative care services developing a document (relevant to their service) to be sent to GPs that includes emergency medications form, strength, dose, PBS availability and cautions
    b. Development of a check list for nursing staff on the process of ordering medications, including follow-up processes
    c. Improved communications from palliative care services to GPs and patients re use of appropriate medications e.g. emergency/“just in case” medications
11. That Palliative Care Australia explore including a pharmacist within the community-based services in the next edition of *Palliative Care – Service Provision in Australia: A Planning Guide*.

Other aspects of sustainability that could be achieved however, these would need some commitment to funds to support maintenance of the processes and materials:

12. Improved and/or structured communication processes between palliative care, hospital, general practice and community/accredited pharmacists

13. Improved education/training of community palliative care providers in the medications and medication management for their patient group

14. Improved communications from palliative care services to GPs and patients re use of appropriate medications e.g. emergency/"just in case" medications
CONTEXT

This is both feedback on Phase 3 and the final progress report for the *Palliative care for people at home initiative* – Developing the role of a pharmacist in community palliative care multidisciplinary teams to improve outcomes for people at home and their carers (community pharmacist project). This progress report provides details on elements of the project and the approach for commencing and completion of tasks as outlined in the project brief.

BACKGROUND & OVERVIEW OF PROJECT PROGRESS

The background and approach to this project were provided in the Progress Reports 1, January 2009; 2, June 2009 and 3, January 2010 (Appendix 1). A preliminary project brief was submitted and this was developed into a series of processes that comprise a more comprehensive project plan. This was continuously reviewed and monitored for progress against the original KPIs and revised where deemed appropriate.

The elements that continued in final phase - Phase 3 - of the project were:

- communication strategy (internal and external)
- further exploration and review of literature
- use and review of the Project Tools, with a view to use in other settings and sustainability
- use and review of the care pathway, with a view to use in other settings and sustainability
- education strategy
- documentation of interventions and patient screening
- patient medicine information
- evaluation: internal and external

The first phase of the communication strategy was broad and encompassed all the major stakeholders identified at commencement of the project. Throughout the project there was a review process to identify other relevant groups and/or those requiring more concentrated communication e.g. Southern Metropolitan Region Palliative Care Consortium (SMRPCC). There was ongoing communication with relevant groups and a second stage developed to ensure feedback was provided to each of the key stakeholders.

The consultation process developed was reviewed throughout the project and, where necessary, further consultation occurred in the final phase of the project. Where further consultation was not required, a feedback process through newsletter articles, letters or other relevant modes occurred.

The education strategy and the communication strategy were intertwined in some instances. These included both in-service education for CHCB, other palliative care consortia, divisions of GPs and community and accredited pharmacists. Further information was provided via presentations and posters at seminars and conferences.

An important facet of the project was the development of an evaluation framework. The initial brief outlined the components that required evaluation and what were the evaluation markers to be assessed. During the project, all facets of the project, including the evaluation markers, were reviewed and revised where necessary. Consultation with DH resulted in agreement for modification and deletion of some of the original evaluation markers and has resulted in an improved process and more meaningful outcome measures for the project. Terms of reference were developed and the external evaluation was completed by Dr. Safeera Hussainy (Appendix 4) in Phase 3 of the project.

Engagement of the project team members was important in providing advice and support on the project progress and it enabled a smooth inclusion and involvement of the Project Pharmacist in the CHCB CPCS teams.

The support and feedback from the Steering Committee and the Project Team was invaluab
DELIVERABLE

Required by Project Plan

Work continued on the deliverables within the original project plan.

The agreed deliverables in Phase 3 of the project were:

- Continuation of Pharmacist role within the Community Palliative Care Service team

- Literature Review – finalisation
  
  Continuous review and evaluation in the use:
  - of clinical forms
  - of internal operation protocols, pathways and guidelines

- Continued use of:
  - referral/feedback pathways for Project Pharmacist
  - evidence-based patient medicine information
  - evidence-based training materials

- Ongoing development and delivery (where applicable) of:
  - A listing of where to source evidence-based education and reference material
  - Evaluation – (internal and external)
  - Communication strategy to key stakeholders (internal and external)
  - Education strategy to health care professionals (internal and external)
  - Patient screening
  - Medication reviews
  - Documentation of interventions
  - Patient held medication list
  - Continued implementation of model of care

- Preparation and submission of Final Project Report
**APPROACH**

The project methodology was clearly detailed in the project proposal and the Methodology, Evaluation and Timelines are in Table 1 & 2. The main facets of the methodology in Phase 3 were:

- Continue the literature search & review (Appendix 2)
- Review and revise evaluation framework (if required)
  - Continue internal evaluation and,
  - Commence evaluation processes with external evaluator
    - Finalise Terms of Reference for external evaluator (Appendix 3)
    - Focus Group – CPCS team conducted by external evaluator
- Continue communication strategy for all stakeholders as required
- Report on project progress to all relevant stakeholders and other relevant staff as appropriate
- Continue use of developed/adapted tools during project
- Identify any other stakeholders both internal and external to CHCB who are important to inform about outcomes of the project
- Continue the delivery of the education/training
- Translate and develop limited audio files for patient medicine information (Appendix 8)
- Provide a sustainable forum for disseminating patient medicine information by incorporating into websites of:
  - CHCB [www.bethlehem.org.au](http://www.bethlehem.org.au)
  - SMR Palliative Care Consortia [www.smrpalliativecare-consortium.org.au](http://www.smrpalliativecare-consortium.org.au)
- Implement and continuously review referral/feedback pathways, protocols and guidelines for the Project Pharmacist and Community Palliative Care Service team
- Final review and revision of the model of care/care pathway
- Audit of emergency medications (Appendix 24.2)
- Continue to submit abstracts for Presentations or Posters at conferences and seminars (Appendices 19 and 19.1)
- Provide feedback to stakeholders in communication and consultation strategies
RESULTS
EVALUATION

Background

The community pharmacist project required an evaluation framework to be developed to enable appropriate decision making and policy development by government and CHCB regarding the benefits of an ongoing role of a pharmacist in community palliative care services into the future.

Evaluation of the project was grouped into three categories:

- Process
- Impact
- Outcomes

Process

During Phase 1 and 2 of the project, there was the development and implementation of a communication strategy for internal and external stakeholders. This enabled those stakeholders to gain an understanding of the project and its parameters, and to gauge what areas of assistance could be rendered by them and/or by the project team for the benefit of the pilot project and its intended outcomes.

Daily informal interaction occurred, along with more formal and planned periodic education sessions. Although, after initial assessment of the project the ‘development of education’ KPI was deleted, this was incorporated again to recognise that the Project Pharmacist:

- was a member of the Expert Group, Therapeutic Guidelines, Palliative Care, Version 3
- had reviewed and written some components of the online training modules being developed as part of the Community Pharmacy in Palliative Care Project under the Fourth Community Pharmacy Agreement

Although the original concept of the development of a specific education package emanating from community pharmacist project will not occur, the Project Pharmacist met the requirements of this KPI by involvement in both of the above.

To evaluate the impact of the role of the Project Pharmacist a cross-sectional survey was developed and administered, giving respondents the opportunity to complete it either in hard copy or online. (Appendix 20) During Phase 3 the Project Manager continued to evaluate each step of the pilot project and an external evaluation was conducted by Dr. Safeera Hussainy (Appendix 4 – Evaluation Findings).

During this final phase of the project, there was a consolidation of the pharmacist activities, review and revision of the tools used and completion of these to be incorporated into the Toolkit. The Toolkit was designed to assist sustainability and will leave some guidance for other palliative care services.

Impact

The assessment of the impact and significant value of the role of the Project Pharmacist have been demonstrated by the results of the survey for:

- patients and families
  - by application of the Medication Review Screeening Tool (MRST) when patients are admitted to the service
  - a comprehensive review of all medication by a pharmacist to improve:
    - medication management
    - symptom control
    - knowledge of medications being taken and why they are being taken
- the CPCS team
  - improved knowledge of non-palliative care medications available for use with palliative care patients
  - better knowledge of medications being taken by patients and why they are being taken
• improved opportunity to receive ongoing information and advice from a pharmacist on management of patients symptoms through medication
• improved advice on adverse affects of medications/treatments, including chemotherapy
• increased awareness of potential problematic symptoms and how to manage them
• increased awareness of the benefits of a medication review

• the Hospital Pharmacist/s
• highlighted a significant decrease in calls to the Hospital Pharmacist for information about medications
• available medication list can be provided in patients’ history if a medication review has been undertaken by Project Pharmacist is advantageous if a patient is admitted to CHCB

• general
• successful evaluation of the project
• development of a Toolkit to assist sustainability of the outcomes of the project

The number of times that the Project Pharmacist was contacted in a three month period was illustrated (details below) in a survey of the CPCS team members that was carried out in November 2009.

As the project progressed, the impact lead into the outcomes and this will be discussed in the next section of the report.

Outcomes

The outcomes can, in part, be measured by the survey responses from the CPCS Team, specifically by the number of times the Project Pharmacist was been contacted, the type of interactions and the considered value of the role within the team. The CPCS has approximately 32 members, including non-clinical staff, and a 62% survey response rate was achieved. Some members of the team are non-clinical and would be unlikely to contact the pharmacist. The outcomes of incorporating the pharmacist into the CPCS team are also illustrated in the Focus Group results to be discussed later in this report.

Impact and Role of Pharmacy in Community Palliative Care - Evaluation

<table>
<thead>
<tr>
<th>How many times during the past three months have you interacted with the Project Pharmacist for advice/assistance?</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7-10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10+</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| answered question | 20 |
| skipped question  | 0  |
The one response in the above chart that indicated ‘never’ was from a non-clinical staff member who would be unlikely to need this type of contact.

The survey requested information on the type of interactions that the CPCS team members had with the Project Pharmacist:
An important outcome of the project that has been:

- the increased knowledge that the CPCS team now has of medications and medication issues for palliative care patients
- the subsequent changes in practice by 60% (of respondents to the survey) of the CPCS team.

This has been well illustrated in the responses to a question on whether the Project Pharmacist role has been helpful.
The vast majority of respondents to the survey (95%) said they would be more likely to discuss patients who had potential medication issues with the Project Pharmacist. When asked about how they found out information prior to the role of the Project Pharmacist within the team, the majority ‘found it out themselves and/or approached the CHCB Chief Pharmacist’.
Since the commencement of the project, the Chief Pharmacist indicated that she (or her staff) rarely, if ever, receives requests now from the CPCS team for information on medications or medication management/ issues. This has been a saving in time and money to this area of the hospital operations. This is not able to be quantified as previous requests for assistance varied in number and complexity, 'interruptions' to the usual role of these pharmacists also varied depending on whether they were in the Pharmacy at the time of the request and so information was 'at hand' or whether they were on a ward and had to leave the task in hand and return to the Pharmacy to seek (in the case of more complex requests) information to assist.

In addition, the Chief Pharmacist has said the role of the Project Pharmacist within the CPCS team “has lessened the anxiety” that they felt when providing advice for patients who were deemed to be part of an ‘invisible ward’ i.e. patients who they had not seen but it was expected they were to provide information and advice on their medications/treatments for symptom management. Overall, it has simplified the role for this component of service within CHCB and, most importantly for the project and the community’ patients, it has provided greater certainty and accuracy around medication management advice and information that is directly related to the individuals concerned.

The recent Home Medicines Review Program Qualitative Research Project Final Report (Campbell 2008) identified the following patient groups have the highest risk of in appropriate medication management:

- post hospital discharge
- Indigenous
- consumers in living in remote locations
- CALD consumers
- those receiving palliative care
- non-concordant consumers
- those who are transient or homeless

It was reported that the largest gap in the home medicine review (HMR) process was for patients on multiple medications in the period post hospital discharge period.

The report indicated the HMR process is considered a valuable tool for the following reasons:

- reassurance
- information provision
- encouragement of continued concordance
- positive feedback
- de-mystification of the reason for medication

In the palliative care patient, the report found that the current HMR GP referral model can be inadequate due to the unpredictable and short time period which may occur between the terminal and dying phase.

As a consequence, the Project Pharmacist highlighted the need for referrals for community palliative care patients who have been recently discharged from hospital.

Patients in the community are able to access the Home Medicine Review (HMR) Program via a GP referral. An aim of the project was to facilitate an HMR. The medication review screening tool (MRST) cab facilitate this process.
**Medication review screening** (MRST - Appendix 9)

The original proposal was for the screening to be undertaken by the nursing staff at admission. After commencing the project, it was decided that it was more appropriate for the screening to be undertaken by the Project Pharmacist after the nursing admission because:

- admission process is complex and time-consuming
- following presentation at team meeting a fuller picture of the patient’s issues and home circumstances is available
- it was more appropriate for the pharmacist to conduct the screening because of expertise, knowledge of medications and capacity to recognise potential problems

After the patient is admitted to the community palliative care service, and presented to the weekly team meeting, the Project Pharmacist has applied the Medication Review Screening Tool. The basis of the tool developed was the Home Medicine Review (HMR) referral, which the General Practitioner (GP) uses to facilitate a HMR for a patient in their home.


- currently taking 5 or more regular medications
- taking more than 12 doses of medication/day
- significant changes made to the medication regimen in the last 3 months
- medication with a narrow therapeutic index or medications requiring therapeutic monitoring
- symptoms suggestive of an adverse drug reaction
- sub-therapeutic response to treatment with medicines
- suspected non-compliance or inability to manage medication related therapeutic devices
- (consumers) having difficulty managing their own medicines because of literacy or language difficulties, dexterity problems or impaired sight, confusion/dementia or other cognitive difficulties.
- (consumers) attending a number of different doctors, both general practitioners and specialists
- recent discharge from a facility/hospital (in the last 4 weeks)

The MRST was developed to capture other risk factors of medication misadventure than those listed above as the majority of palliative care patients would be eligible for a HMR based on the above criteria.

The following articles were also informative for formulating the tool:

- Improving medication management for older adult clients available at [www.guideline.gov](http://www.guideline.gov)
- A Guide to Medication Review 2008 available at [www.npc.co.uk/mm/publications](http://www.npc.co.uk/mm/publications)

The screening tool was, over the course of several months, modified to take into account the more common subcategories that emerged while piloting the tool (Appendix 9.1).

The components for the final version of the MRST are included below:

- **Medication use**
  - Taking 5 or more medications, or more than 12 doses of medication per day
  - Significant changes to medication treatment regimen in the last 3 months
  - Started new medication in the last 4 weeks
  - Taking medication not commonly used in primary care
  - High alert medication
  - Use of alternative health care products
  - Enteral feeding tube in-situ
  - Symptoms suggestive of an adverse drug reaction
- Medication plan is not current
- Suspected non-adherence or inability to manage medication
- Other
  - Literacy or language difficulties, confusion/dementia or other cognitive difficulties
  - Other co-morbidities or lifestyle practices [e.g. alcohol, tobacco, illicit drugs] which affect pharmacodynamics and pharmacokinetics
  - Living alone or in Supported Residential Services, poor carer support or carer concerns
  - Recent discharge from a hospital (in the last 4 weeks)
  - Attending different healthcare providers e.g. general practitioner, specialist
  - Diagnosis
  - Allergy/adverse drug reactions
  - Renal function
  - Hepatic function

MRST screening was conducted from March 2009 to April 2010 on 380 patients. Approximately another 50 patients who were admitted to the CPCS were not screened, as prior to presentation at the weekly team meeting, they had died, or been admitted to hospital for terminal care.

<table>
<thead>
<tr>
<th>Risk factors for medication misadventure</th>
<th>No. of Patients With risk factor</th>
<th>Percentage of Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taking 5 or more medications, or more than 12 doses of medication per day</td>
<td>316/380</td>
<td>83%</td>
</tr>
<tr>
<td>Significant changes to medication treatment regimen in the last 3 months</td>
<td>126/380</td>
<td>33%</td>
</tr>
<tr>
<td>Started new medication in the last 4 weeks</td>
<td>103/380</td>
<td>27%</td>
</tr>
<tr>
<td>Taking medication not commonly used in primary care</td>
<td>62/380</td>
<td>16%</td>
</tr>
<tr>
<td>Taking medication requiring monitoring, has a narrow therapeutic index or is high risk [e.g. opioid, insulin, chemotherapy]</td>
<td>294/380</td>
<td>77%</td>
</tr>
<tr>
<td>Enteral feeding tube in-situ</td>
<td>13/380</td>
<td>3%</td>
</tr>
<tr>
<td>Symptoms suggestive of an adverse drug reaction</td>
<td>7/380</td>
<td>2%</td>
</tr>
<tr>
<td>Medication plan is not current</td>
<td>19/380</td>
<td>5%</td>
</tr>
<tr>
<td>Suspected non-adherence or inability to manage medication</td>
<td>16/380</td>
<td>dysphagia 4%</td>
</tr>
<tr>
<td>Literacy or language difficulties, confusion/dementia or other cognitive difficulties</td>
<td>71/380</td>
<td>19%</td>
</tr>
<tr>
<td>Other co-morbidities</td>
<td>238/380</td>
<td>62%</td>
</tr>
<tr>
<td>Carer concerns</td>
<td>22/380</td>
<td>6%</td>
</tr>
<tr>
<td>Living alone, SRS or poor carer support</td>
<td>74/380</td>
<td>19%</td>
</tr>
<tr>
<td>Recent discharge from a hospital (in the last 4 weeks)</td>
<td>208/380</td>
<td>55%</td>
</tr>
<tr>
<td>Attending different healthcare providers e.g., general practitioner, specialist</td>
<td>224/380</td>
<td>59%</td>
</tr>
<tr>
<td>Allergy/adverse drug reactions; Recorded routinely since October</td>
<td>no known allergies 44/185</td>
<td>24%</td>
</tr>
<tr>
<td></td>
<td>not recorded 58/185</td>
<td>31%</td>
</tr>
<tr>
<td></td>
<td>recorded 83/185</td>
<td>45%</td>
</tr>
<tr>
<td>Renal function; Recorded routinely since December</td>
<td>recorded 57/116</td>
<td>49%</td>
</tr>
</tbody>
</table>

In summary, the MRST developed can be used by community palliative care services, to identify and document risk factors for medication misadventure in the palliative care patient.
Home visits to patients were made by the Project Pharmacist on an ‘as needs’ basis to provide a medication review. This was often undertaken with another team member to minimise the impact of multiple visits from the CPCS team.

**Medication review summary (Appendix 16)**

A selection of medication review reports is included in Appendix 16 and below is the rationale for selection of these examples.

Reports are sent to the patient’s general practitioner and community pharmacy where possible. The following points explain why the medication reviews included in the report were chosen.

1. An example of liaison with the community pharmacist and the patient’s family to organize a dose administration aid (DAA). This review did not involve a home visit, as the community senior medical officer had referred to the Project Pharmacist after she had been to see the patient. A follow up phone call was made to the patient’s home after initiation of the DAA to check if its use was advantageous.
2. Patient was recently discharged from hospital, therefore classified as at risk of medication-related adverse events. Attended with community social worker, who was organizing a carers allowance with the patient’s daughter. Symptom issues of pain, constipation and nausea/vomiting which later required hospital admission. During the hospital admission, the patient was rotated to a medication for nausea/vomiting which had been suggested in the medication review.
3. Patient recently discharged from hospital, but with complex social history. Attended with community social worker. Patient not adherent with medication, and had previously discussed the use of a dose administration aid (DAA). Organized DAA. Report also sent to the Alfred Hospital Outreach Pharmacy Service and Palliative Care Unit. Liaison with the Alfred Hospital Outreach Pharmacy has continued.
4. Patient on many medications, including insulin. His ongoing symptoms, including epigastric pain were discussed with the community medical officer and nursing staff, with a resultant admission to hospital for symptom management.
5. Patient recently discharged from a long inpatient stay in two hospitals. Attended with the community nurse to admit the patient to the community service.
6. Follow up visit to patient 5. Patient’s wife had been unable to access midazolam injection in the community, therefore provided from the hospital pharmacy to minimise carer strain.
7. Visited patient as was experiencing an increase in frequency of Restless Legs Syndrome (RLS) which may be an adverse effect of medication. Patient has recently used medication for nausea/vomiting as was receiving chemotherapy, which may exacerbate RLS. Report also sent to the Medical Oncology Unit.
8. Attended with community medical officer and nurse on admission to community service to ascertain medication regime as was also taking supplementary medicines. Patient also considering a trial of chemotherapy that may require discontinuing the supplements.
9. Follow up visit to patient 8, five months after admission, with community medical officer. Have also followed up with phone calls, as patient non-adherent with pain medication regime and requires ongoing support.
10. Attended with community nurse on admission to the service. The patient had also been referred to the Alfred Outreach Pharmacy Service, and after discussion, it was decided that I would visit. Report also sent to the Alfred Outreach Pharmacy Service.

The interventions that the Project Pharmacist recommended in the medication reviews have been classified using the D.O.C.U.M.E.N.T. system (Appendices 11 and 17)

The external evaluator made the following comment on tools:

- The medication review reports provided a useful summary of the Pharmacists’ recommendations, which potentially decreased medication misadventure and lead to other improvements in patient care (e.g. improved communication between team members and satisfactory clinical outcomes for patients). However, there needs to be a mechanism in the future to detect and record whether GPs “accept” pharmacists’ recommendations outlined in medication review reports, as presently this is a gap in care.
In the community, acceptance of pharmacists’ recommendations from HMRs, appear in the patient’s management plan. If, in the future, palliative care services were to include the role of a pharmacist, then this aspect of patient management should be developed.

The evaluator further commented on the development and use of a referral form, however, since the introduction of iPM to CHCB, this has been made obsolete. There was a hard copy referral form was available to the CHCB inpatient staff and in CPCS through the Project Pharmacist.

Outcomes Summary

The outcomes of the project can be demonstrated by:

- the increase in external contacts with divisions/networks of GPs in the Southern Metropolitan Region
- improved education and knowledge of the CPCS team members in:
  - medications used in palliative care
  - management of medications
  - greater knowledge of potential problems with symptom management
  - greater understanding of the benefits of using the MRST for all patients on the CPCS program
  - an improvement in recognising patients who would benefit from a home visit for a medication review
    - lessened the ‘anxiety’ the hospital pharmacists have felt when giving advice to patients who they have not seen
- improved interprofessional learning for both the CPCS and the Project Pharmacist
- development of patient medicine information to be available on the CHCB website, including some translations and mp3 files
- compilation of a Toolkit to be available to CHCB and other palliative care services as requested
### Table 1: Overview of Timelines and Tasks for Pilot Project

<table>
<thead>
<tr>
<th>ID</th>
<th>Task Name</th>
<th>Start</th>
<th>Finish</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Database for compliance</td>
<td>20/03/2009</td>
<td>29/03/2009</td>
<td>3 wks</td>
</tr>
<tr>
<td>2</td>
<td>Literature review</td>
<td>20/03/2009</td>
<td>30/06/2009</td>
<td>17 wks</td>
</tr>
<tr>
<td>3</td>
<td>Develop &amp; evaluate clinical forms</td>
<td>20/03/2009</td>
<td>04/06/2009</td>
<td>15 wks</td>
</tr>
<tr>
<td>4</td>
<td>Key aims</td>
<td>20/03/2009</td>
<td>28/03/2009</td>
<td>12 wks</td>
</tr>
<tr>
<td>5</td>
<td>Develop patient’s information for consented information</td>
<td>20/03/2009</td>
<td>29/03/2009</td>
<td>12 wks</td>
</tr>
<tr>
<td>6</td>
<td>Develop medicine-based education</td>
<td>20/03/2009</td>
<td>29/03/2009</td>
<td>12 wks</td>
</tr>
<tr>
<td>7</td>
<td>Develop &amp; implement communication strategy for key stakeholders (Ph &amp; Pa)</td>
<td>20/03/2009</td>
<td>30/03/2009</td>
<td>12 wks</td>
</tr>
<tr>
<td>8</td>
<td>Final patient’s information for consented information</td>
<td>20/03/2009</td>
<td>30/03/2009</td>
<td>12 wks</td>
</tr>
<tr>
<td>9</td>
<td>Final project progress &amp; evaluation framework</td>
<td>20/03/2009</td>
<td>30/03/2009</td>
<td>12 wks</td>
</tr>
<tr>
<td>10</td>
<td>Evaluation framework developed</td>
<td>20/03/2009</td>
<td>01/06/2009</td>
<td>8 wks</td>
</tr>
<tr>
<td>11</td>
<td>Develop &amp; update education strategy to health care staff (Ph &amp; Pa)</td>
<td>20/03/2009</td>
<td>21/06/2009</td>
<td>12 wks</td>
</tr>
<tr>
<td>12</td>
<td>Development of evaluation</td>
<td>20/03/2009</td>
<td>29/03/2009</td>
<td>12 wks</td>
</tr>
<tr>
<td>13</td>
<td>External Evaluation</td>
<td>20/03/2009</td>
<td>29/03/2009</td>
<td>12 wks</td>
</tr>
<tr>
<td>14</td>
<td>Finalise DMT model of care</td>
<td>20/03/2009</td>
<td>07/06/2009</td>
<td>8 wks</td>
</tr>
<tr>
<td>15</td>
<td>Implement model of care</td>
<td>16/04/2009</td>
<td>20/11/2009</td>
<td>36 wks</td>
</tr>
<tr>
<td>16</td>
<td>Final project progress &amp; evaluation framework</td>
<td>20/03/2009</td>
<td>30/06/2009</td>
<td>12 wks</td>
</tr>
<tr>
<td>17</td>
<td>Project progress &amp; evaluation framework</td>
<td>17/01/2009</td>
<td>20/03/2009</td>
<td>12 wks</td>
</tr>
<tr>
<td>18</td>
<td>Review project progress &amp; evaluation framework</td>
<td>20/03/2009</td>
<td>30/06/2009</td>
<td>12 wks</td>
</tr>
<tr>
<td>19</td>
<td>Final project progress &amp; evaluation framework</td>
<td>20/03/2009</td>
<td>30/06/2009</td>
<td>12 wks</td>
</tr>
<tr>
<td>20</td>
<td>Develop &amp; update education strategy to health care staff (Ph &amp; Pa)</td>
<td>20/03/2009</td>
<td>21/06/2009</td>
<td>12 wks</td>
</tr>
<tr>
<td>21</td>
<td>Development of evaluation</td>
<td>20/03/2009</td>
<td>29/03/2009</td>
<td>12 wks</td>
</tr>
<tr>
<td>22</td>
<td>External Evaluation</td>
<td>20/03/2009</td>
<td>29/03/2009</td>
<td>12 wks</td>
</tr>
<tr>
<td>23</td>
<td>Final project progress &amp; evaluation framework</td>
<td>20/03/2009</td>
<td>30/06/2009</td>
<td>12 wks</td>
</tr>
<tr>
<td>24</td>
<td>Review project progress &amp; evaluation framework</td>
<td>20/03/2009</td>
<td>30/06/2009</td>
<td>12 wks</td>
</tr>
<tr>
<td>25</td>
<td>Final project progress &amp; evaluation framework</td>
<td>20/03/2009</td>
<td>30/06/2009</td>
<td>12 wks</td>
</tr>
<tr>
<td>26</td>
<td>Final project progress &amp; evaluation framework</td>
<td>20/03/2009</td>
<td>30/06/2009</td>
<td>12 wks</td>
</tr>
</tbody>
</table>

**Notes:**
- **Developed & ongoing**
- **Review & adjust**
- **Tasks completed to meet Phase 3 objectives**
Deliverables achieved in Phase 3

The deliverables achieved in Phase 3 of the project were:

- Pharmacist role continued within the Community Palliative Care Service team
- Literature Review – finalised
- Review and evaluation continued in the use:
  - of clinical forms
  - of internal operation protocols, pathways and guidelines
- Continued use of:
  - referral/feedback pathways for Project Pharmacist
  - evidence-based patient medicine information
  - evidence-based training materials
- Ongoing development and delivery (where applicable) of:
  - a listing of where to source evidence-based education material
  - evaluation – (internal and external)
  - communication strategy to key stakeholders (internal and external)
  - education strategy to health care professionals (internal and external)
    - CHCB
    - SMR Palliative Care Consortia
    - Gippsland Palliative Care Consortia
    - Loddon Mallee Palliative Care Consortia (planned but due to unexpected changes in Bendigo this did not occur)
    - Southcity GP Services (included GPs and accredited pharmacists)
  - patient held medication list – investigated throughout project
  - implementation of model of care
- Internal and External Evaluation completed
- Sustainable elements comprehensively reported upon to stakeholders and funder
- Tool kit for use by community palliative care services
- Patient medicine information:
  - translated into seven language groups
  - limited mp3/audio files have been developed
  - the above will be attached to websites for:
    - CHCB
    - SMR Palliative Care Consortia
    - Southcity GP Services
- Conference papers, presentations and posters for (Appendix 23 & 23.1):
  - Pharmaceutical Society of Australia (PSA) (presentation)
  - National Medicines Symposium (poster)
  - Centre for Culture, Ethnicity and Health Conference (paper)
  - Palliative Care Victoria Conference (paper)
- Preparation and submission of final progress report
- Financial acquittal of pilot project
### Table 2: Project Methodology, Evaluation & Timeframes

This project will be implemented over 3 interrelated phases: 1) Project Development, 2) Project Implementation and 3) Project Evaluation. The timelines indicated for Phase 1 in the table below are overlapping and flexible with elements of Phases 2 and 3.

<table>
<thead>
<tr>
<th>Phase 1 Development</th>
<th>Evaluation Framework (Performance Indicators)</th>
<th>Progress on tasks to be completed by end May 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHCB to:</td>
<td>Position Descriptions agreed</td>
<td>Completed</td>
</tr>
<tr>
<td>Develop Project Manager position description</td>
<td>Project Manager and Project Pharmacist employed</td>
<td>Completed</td>
</tr>
<tr>
<td>Develop Project Pharmacist position description</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHCB to advertise, interview and recruit positions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepare and submit Progress report # 1</td>
<td>Progress Report # 1 submitted</td>
<td>Completed</td>
</tr>
<tr>
<td>Undertake literature review (Appendix 2)</td>
<td>Literature review completed</td>
<td>Written up and will be added to if/when further literature is discovered in Phase 3</td>
</tr>
<tr>
<td>Develop and evaluate clinical forms including:</td>
<td>Screening Tool – developed</td>
<td>Tools developed and being used – will be reviewed &amp; revised if necessary</td>
</tr>
<tr>
<td>Screening tool (Appendix 9)</td>
<td>Medication Review Report - developed</td>
<td></td>
</tr>
<tr>
<td>Patient report form/Medication Review Report (Appendix 10)</td>
<td>Intervention form – developed</td>
<td></td>
</tr>
<tr>
<td>Intervention form (Appendix 11)</td>
<td>Protocols, pathways and guidelines agreed</td>
<td>Have been developed and will be refined in Phase 3</td>
</tr>
<tr>
<td>Develop and evaluate internal operational protocols, pathways and guidelines</td>
<td>Pathways and guidelines agreed</td>
<td>Developed &amp; will be reviewed and refined as necessary in Phase 3</td>
</tr>
<tr>
<td>Develop referral/feedback pathways for HMR accredited pharmacist</td>
<td>Pathways and guidelines agreed</td>
<td></td>
</tr>
<tr>
<td>Develop evidence based patient information:</td>
<td>Evidenced based patient information developed</td>
<td>CPCS – consulted</td>
</tr>
<tr>
<td>Complete literature review</td>
<td></td>
<td>Reviewed by CPCS volunteers and CHCB doctors</td>
</tr>
<tr>
<td>Piloting for face and content validity with CHCB community palliative care patients/carers, CHCB multidisciplinary team members, local GPs, community pharmacists, and other community palliative care providers.</td>
<td>Literature review – will be added if more relevant literature is discovered</td>
<td></td>
</tr>
<tr>
<td>Develop a resource list of evidence based training material:</td>
<td>Evidenced based training material for health care professionals developed</td>
<td>Compiled resources:</td>
</tr>
<tr>
<td>Complete literature review</td>
<td></td>
<td>Caresearch</td>
</tr>
<tr>
<td>Piloting for face and content validity with CHCB multidisciplinary team members, local GPs, community pharmacists, and other community palliative care providers.</td>
<td></td>
<td>Palliative Care Victoria (PCV)</td>
</tr>
<tr>
<td>Develop or be involved in the development of evidence-based training/education material</td>
<td>Involvement in the development of evidence-based training/education material</td>
<td>Project Pharmacist has reviewed and written some of the components of the online training modules being developed as part of the Community Pharmacy in Palliative Care Project under the Fourth Community Pharmacy Agreement</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Develop and implement evaluation tools including: Project Progress - Expert Review Panel Form</td>
<td>Evaluation tools developed and implemented (^4)</td>
<td>Processes for evaluating progress developed &amp; will be reviewed and refined as necessary throughout project</td>
</tr>
<tr>
<td>Evaluation framework developed</td>
<td>Evaluation framework agreed – in original proposal but needed modification</td>
<td>Met with evaluator Dr. Safeera Hussainy – will review Progress Report 2</td>
</tr>
<tr>
<td>Develop and implement communication strategy to key stakeholders (internal and external) (Appendices 5, 6 &amp; 7) Focus groups Newsletters Professional websites Emails Professional special interest groups</td>
<td>Communication strategy implemented to key stakeholders: Internal – community pall care patients/carers, CHCB community multidisciplinary pall care team members External – local GPs, community pharmacists, HMR accredited pharmacists, (^1)st round of stakeholders completed: See consultation/communication appendices CPCS staff Carex – presented April 2009 PCV – newslettersPCA Conference –Sept. 2009 Conpharm ’09 – presented</td>
<td></td>
</tr>
</tbody>
</table>

\(^4\) Review of Dr. Safeera’s Hussainy’s thesis provided a direction for development of the evaluation tools.
<table>
<thead>
<tr>
<th>Task</th>
<th>Achievements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop and implement education strategy to health care professional</td>
<td>Education strategy implemented health professionals: Internal – CPCS Team External – local GPs, community pharmacists, HMR accredited pharmacists, relevant pharmacy peak bodies, SMR Palliative Care Consortium members, other community palliative care providers</td>
</tr>
<tr>
<td>Education Inservices</td>
<td>Ongoing – Project Pharmacist &amp; manager presented/will present at &amp;/or written newsletter articles: Carex '09 - presented April 2009 Conpharm 09 – presented May 2009 Pharmacy Guild – Educ. Session (to be negotiated early 2010) SHPA National bulletin GPDV – undertaken to do this Discussions to be held with South City Division of GPs Feb. 2010 CPCS inservices</td>
</tr>
<tr>
<td>Newsletters</td>
<td></td>
</tr>
<tr>
<td>Professional websites</td>
<td></td>
</tr>
<tr>
<td>Emails</td>
<td></td>
</tr>
<tr>
<td>Professional special interest groups</td>
<td></td>
</tr>
<tr>
<td>Develop Project Pharmacist activity database</td>
<td>Database established – ongoing Ongoing – will be maintained throughout project</td>
</tr>
<tr>
<td>Develop patient held medication record system</td>
<td>Patient held medication list format/content agreed iPharmacy Medication Chart Patient Medication Profiling Program</td>
</tr>
<tr>
<td>Finalize model of care</td>
<td>Initial Model of care finalized In progress – will need to be reviewed and refined as</td>
</tr>
<tr>
<td>Task</td>
<td>Completion Details</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Prepare and submit mid progress Report # 2</td>
<td>Submit Progress Report # 2</td>
</tr>
<tr>
<td><strong>Commencement of Phase 2</strong></td>
<td></td>
</tr>
<tr>
<td>Implement model of care/care pathway</td>
<td>Use of developed or adapted forms</td>
</tr>
<tr>
<td></td>
<td>Use of care pathway for CPCS Team at CHCB</td>
</tr>
<tr>
<td></td>
<td>Survey of CPCS to ascertain awareness of Project Pharmacist role</td>
</tr>
<tr>
<td><strong>Review project progress and evaluation framework. If necessary, implement adjustments.</strong></td>
<td>Review completed and adjustments implemented (where necessary)</td>
</tr>
<tr>
<td><strong>Ongoing implementation of communication strategy to key stakeholders (internal and external):</strong></td>
<td>Communication strategy implemented to key stakeholders:</td>
</tr>
<tr>
<td>Focus groups&amp;/or surveys</td>
<td>Internal – community palliative care patients/carers, CPCS</td>
</tr>
<tr>
<td>Newsletter articles</td>
<td>External – local GPs, community pharmacists, HMR</td>
</tr>
<tr>
<td>Emails</td>
<td>accredited pharmacists, relevant pharmacy peak bodies, DH, Steering committee, SMR</td>
</tr>
<tr>
<td>Professional special interest groups</td>
<td>Palliative Care Consortium members, other community palliative care providers</td>
</tr>
<tr>
<td><strong>Patient information – consultation and development completed for inclusion on SMR and Calvary Health Care Bethlehem website</strong></td>
<td>Patient evaluated information available (print &amp; weblink)</td>
</tr>
<tr>
<td><strong>Compile and make available Resource List</strong></td>
<td>Draft compiled</td>
</tr>
<tr>
<td><strong>Complete Literature search &amp; review</strong></td>
<td>Literature search ongoing</td>
</tr>
<tr>
<td><strong>Update Project Pharmacist Activity Database</strong></td>
<td>Activity database reviewed</td>
</tr>
<tr>
<td><strong>Prepare and submit Progress report # 3</strong></td>
<td>Progress report # 3 submitted by end January 2010</td>
</tr>
<tr>
<td><strong>Phase 3 – Project Evaluation: February – June 2010</strong></td>
<td>Review project progress and</td>
</tr>
<tr>
<td><strong>Phase 3 – Project Evaluation</strong></td>
<td></td>
</tr>
<tr>
<td>Activity</td>
<td>Status/Details</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Data collection and analysis</strong></td>
<td>Data collected and analyzed</td>
</tr>
<tr>
<td><strong>Ongoing implementation of communication strategy to key stakeholders</strong></td>
<td>Communication strategy implemented to key stakeholders: Internal – community pall care patients/carers, CHCB community multidisciplinary pall care team members External – local GPs, community pharmacists, HMR accredited pharmacists, DHS, steering committee, SMR Palliative Care Consortium members, other community palliative care providers Conference abstracts submitted and accepted for several conferences and seminars</td>
</tr>
<tr>
<td><strong>Ongoing education and information sessions</strong></td>
<td>Education/information sessions provided to palliative care consortia, divisions of GPs</td>
</tr>
<tr>
<td><strong>Final report preparation</strong></td>
<td>Final report reviewed by External Evaluator, Project Team and Steering Committee</td>
</tr>
<tr>
<td><strong>Budget acquitted</strong></td>
<td>Budget acquittal approved</td>
</tr>
<tr>
<td><strong>Continuation or cessation of project assessed with DHS</strong></td>
<td>Project continuation or cessation approved</td>
</tr>
<tr>
<td><strong>Final Report Submitted</strong></td>
<td></td>
</tr>
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</table>
The project outcomes and objectives:

<table>
<thead>
<tr>
<th>Project Outcomes/Objective</th>
<th>Project Methodology (Tasks/Activities)</th>
<th>Actions/Evaluation Framework (Performance Indicators)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finalise Phase 1 tasks and commence Phase 2 – Project Implementation: Feb 09 – June 2010</td>
<td>Prepare and submit mid progress Report # 2</td>
<td>Progress Report # 2 submitted</td>
</tr>
<tr>
<td>Implementation of model of care</td>
<td>Implement model of care</td>
<td>Model of care established</td>
</tr>
<tr>
<td></td>
<td>Patients referred - commenced and ongoing</td>
<td>Monitor increase in patient referrals</td>
</tr>
<tr>
<td></td>
<td>Patient medication reviews – commenced and ongoing</td>
<td>Maintain register of medication reviews</td>
</tr>
<tr>
<td></td>
<td>Consultancy services/advice to other health care professionals – commenced and ongoing</td>
<td>Continue Project Pharmacist activity database</td>
</tr>
<tr>
<td></td>
<td>Project Pharmacist service activity data - commenced and ongoing</td>
<td></td>
</tr>
<tr>
<td>Project Progression &amp; Evaluation</td>
<td>Review &amp; revise project progress</td>
<td>Complete patient medicine information and print/weblink layout</td>
</tr>
<tr>
<td></td>
<td>Review Project Plan and adjust if necessary</td>
<td>Continue to update literature search &amp; review</td>
</tr>
<tr>
<td></td>
<td>Review &amp; revise evaluation markers as necessary</td>
<td>Continue education program</td>
</tr>
<tr>
<td></td>
<td>Maintain Project Pharmacist activity database</td>
<td>Adjust project plan to encompass any changed evaluation markers</td>
</tr>
<tr>
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<td>Review &amp; continue education strategy</td>
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<td>Complete patient medicine information &amp; prepare for printing &amp; circulation</td>
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<td>Continue sourcing education information</td>
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<td>Evaluation data collection – commenced and ongoing</td>
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<td>Continuation of Education Strategy</td>
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<td>Review &amp; revise approach for education strategy as necessary</td>
<td>Palliative Care Australia (PCA) Conference – poster Sept.’09</td>
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<td>Abstract submission for conferences/seminars as opportunities arise</td>
<td>Abstracts submitted as opportunities arise</td>
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<td>Newsletter articles where relevant</td>
<td>Pharmacy Guild newsletter</td>
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<td>Presentations at relevant stakeholder group meetings</td>
<td>PCV Newsletter</td>
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<td>Education sessions for Pharmacists &amp; GPs</td>
<td>SHPA State Branch n’letter</td>
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<td>Pharmacy Society Australia</td>
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<tr>
<td>Communication Strategy</td>
<td>Ongoing implementation of communication strategy to key stakeholders (internal and external): Focus groups Newsletters Professional websites Emails Professional special interest groups Present at Conferences/seminars Develop plan &amp; schedule for 2nd round of consultations with stakeholders</td>
<td>Communication strategy implemented to key stakeholders: Internal (ongoing) – community pall care patients/carers, CPCS team External (ongoing) – local GPs, community pharmacists, HMR accredited pharmacists, relevant pharmacy peak bodies, DH, Steering committee, SMR Palliative Care Consortium members, other community palliative care providers Meeting to discuss sustainability of project outcomes with Southcity Division of GPs</td>
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<tr>
<td>Project Progression &amp; Evaluation</td>
<td>Review project progress and evaluation framework. If necessary, implement adjustments. Confirm with external evaluator framework for evaluation process</td>
<td>Review completed and adjustments implemented (where necessary)</td>
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<tr>
<td>Progress Report</td>
<td>Prepare and submit Progress report # 3</td>
<td>Progress Report 3 submitted – January 2010</td>
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<tr>
<td>Phase 3 – Project Evaluation Feb – June 2010</td>
<td>Review project progress and evaluation framework. If necessary, implement adjustments.</td>
<td>Review completed and adjustments implemented (where necessary)</td>
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Education session April 2010 (aprox. 15 pharmacists in SMR)
Several education sessions in Gippsland for nurses, GPs, community & hospital pharmacists
Other presentations/articles as opportunities arise.
COMMUNICATION STRATEGY

In the development of the communication strategy it was recognized that there was a need for a communication strategy for the Project Team, a broader strategy for communication and education within CHCB and the consultation process for external key stakeholders.

A Consultation Process for key stakeholders was developed (abridged version below):

and a Communication Plan was developed and updated as necessary for the Project Team (Appendix 6).

The communication strategy for meeting with internal and external stakeholders was drawn up and during Phase 1 all key internal and external stakeholders were consulted.

A review of the literature, specifically the Campbell Report 2008, highlighted the ‘at risk’ nature of people from non-English speaking backgrounds and this was considered for the development of the patient medicine information. Investigation of translation of patient medicine information for this group is underway took place and it was decided to include some translations and mp3 files. The process required review and repetition in some aspects as the project progressed.

All key external stakeholders were keen to hear of progress of the project and, where applicable, indicated a willingness to circulate information about the project through publications, emails, and at information sessions. Through the consultation process, the education strategy commenced and the opportunity to participate in education sessions of GPs, pharmacists and at conferences and seminars arose. The consultation process for external stakeholders is detailed in Appendix 5.

The Project Manager and Project Pharmacist met with each of the key stakeholders to discuss the project, how their network or organisation might be used to facilitate further communication via email, newsletter, articles and to provide, where relevant, education to their members. The evaluator, Dr. Safeera Hussainy was consulted in the process of review and revision of the original communication strategy and the evaluation framework.

In meetings with a number of the Pharmacy peak bodies, it was found there were projects that would provide benefits to the Pharmacist in community palliative care multidisciplinary team pilot project e.g. the 4th Community Pharmacy Agreement Research and Development Program - Palliative Care Project ID No. 2007/08/06.
This project is intended to:

- Identify palliative care needs of palliative care pharmacy clients and their families
- Develop an education package for community pharmacists to provide enhanced care to palliative care clients
- To develop medication management reviews that incorporate palliative care.\(^5\)

The education package has been designed to enhance the palliative care knowledge of pharmacists.

The project is funded until June 2010 and it is envisaged that this online education package should fulfill the KPI requirements for the Pharmacist in community palliative care multidisciplinary team by developing evidenced-based education for community pharmacists. Hence the KPI within the project has been, in discussion with DH, changed to reflect that there will be the development of a resource list of evidence-based education.

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EDUCATION STRATEGY

Phase 1 was the developmental component of the project and thus the education strategy has been limited. However, education in terms of creating an awareness of the project and its aims has been quite widespread with each of the major stakeholders visited during this phase (as per the consultation process shown in Appendix 5). This component as the Project Pharmacist implemented the model of care/care pathway and commenced using the developed/adapted Project Tools. The number of medication management reviews increased during this phase of the project and these were used as a tool in educating the CPCS. The reviews will also be useful for education of pharmacists commencing employment at CHCB.

The most important aspects of education during this Phase of the project have been within CHCB CPCS. This process has occurred via:

- daily interactions with the CPCS
- daily interactions with the CPCS doctors
- regular Team Meetings
- in-service education sessions (as required) with team and individuals as the need arises

Further information/education/promotion of the project has taken place through conference presentations/posters and newsletter articles (see Table 2: Project Methodology, Evaluation & Timeframes).

The Project Pharmacist has:

- presented at conferences & seminars
- maintained links with Medication Management Review Facilitators of The Pharmacy Guild
- supported and assisted the CPCS Team
- supported and assisted pharmacists in the community providing service to CHCB patients on the CPCS Program
- provided support and advice to GPs when required for patients on the CHCB CPCS Program
- developed links with other pharmacists who have participated in the DoHA Program of Experience in the Palliative Approach (PEPA) program
- supported clinical placement for a Masters of Clinical Pharmacology student, University of Queensland
- been a resource for new hospital pharmacists on palliative care medications and their use in this setting
- participated in education sessions to several groups in Gippsland region by CHCB Community Senior Medical Officer, Dr. Liz Whyte (Appendix 15)

Those in attendance for the sessions in Gippsland were palliative care nurses, GPs, allied health professionals, general nurses, hospital and community pharmacists. In the several sessions held, case studies were presented to cover the following education and information:

- Gastric carcinoma
  - Role of parenteral nutrition
  - End of life care
With a view to providing education to GPs and pharmacists, there had been consultations with GP divisions and networks in the SMR.

An education/information session was held in May at Southcity GP Services and well attended by approximately 40 clinicians – GPs, nurses from RACFs and pharmacists. The session was well received with a formal evaluation being undertaken. (Appendix 23.2 Education for the presentation and evaluation results)

The results of the Focus Group (Appendix 4) conducted by the external evaluator supported the positive findings of the survey conducted (Appendix 20) with the CPCS team members on the Impact of the Role of the Pharmacist in the CPCS where it was found that 100% of the respondents had improved their knowledge of medications used in palliative care and their management, including potential adverse reactions.
**Master of Clinical Pharmacy student placement** (Appendix 21)

Supervision of the clinical placement for University of Queensland, Master of Clinical Pharmacy Student, was undertaken in February 2010 for one week.

During this time, the student attended:

- two team meetings
- an inservice, that the Project Pharmacist gave to the community nurses
- accompanied the Project Pharmacist on two home visits

The student reviewed some of the community patient’s medication histories in order to produce a Pharmaceutical Care Handbook. This handbook is to be used as a teaching tool about palliative care for new pharmacists in the hospital setting.

The Project Pharmacist also assessed the case presentation that the student delivered to pharmacy staff at the Angliss Hospital (Ferntree Gully, Melbourne) in April 2010.

**Emergency “Just in Case” Medications Audit (Appendix 24.2) and Survey (Appendix 20)**

One of the issues often highlighted in community palliative care is access to emergency medications when required in the patient’s home. The Project Pharmacist undertook an audit of existing patients admitted to the CPCS to ascertain whether they had been prescribed emergency medications. The appropriateness for the patient was determined by the Senior Medical Officer. Reasons for not having emergency medications were also looked at.

The audit will be the basis of an education tool for CPCS staff and community health professionals, in particular GPs and community pharmacists on why, when and what emergency medications are required.

**Interprofessional Learning** (Appendix 22)

An important aspect of the project has been the interprofessional learning of both the Project Pharmacist and the CPCS team:

**Patients and Carers**

Patients and carers were not specifically surveyed with respect to their increased knowledge. Often, by the time the pharmacist had screened medications and/or visited the patient, their condition had deteriorated to the extent that such surveying would have been an imposition.

Occasionally patients had died before the pharmacist had a chance to undertake a home visit.
Following discussion with the Chief Pharmacist, it was considered that the Project Pharmacist had considerable experience and expertise in palliative care and thus limited clinical supervision of the Project Pharmacist was required. Discussion was undertaken with the CPCS Senior Medical Officer who undertook this component of the project.

Some of the aspects of clinical supervision that covered are:

- Joint community visits, particularly when complex issues have been identified
- Follow up of patient/carers adherence to newly implemented medications/changes subsequent to this
- Education of carers/patients
- Advice regarding suitable drug formulations (e.g., PEG fed residents, those with swallowing difficulties etc)
- Post medication review discussions (when Project Pharmacist has undertaken review independently)
- Informal discourse and discussion that has led to positive influences on clinical decisions
- Development of resource charts (e.g., benzodiazepine charts)
- Auditing of current CPCS medication regime (e.g., has drug list been recorded accurately/been updated in last month, issues of adherence noted. Need for review of current process and form of record)
- Interprofessional learning
- Auditing of process of requesting emergency medications from the GP (e.g., need for anticipatory prescribing to manage symptoms on 24 hr "Emergency" basis and need to have these medications available in the home (Appendix 24.2)

One aim is to develop charts that will act as a guide for GPs which are specifically annotated for each patient with the aim of maximising continuity of care and maintaining GP in care loop, this will also act as an informal education tool. Different charts will be developed as necessary (e.g., for renal failure, neurological conditions etc)
DISCUSSION OF ELEMENTS OF THE PROJECT

Literature Search (Appendix 2)

Within the literature search, there was little found on pharmacy interventions with respect to palliative care patients and limited literature on other aspects of the project as it was scoped. A decision was made to continue to search and include reviews of other articles or papers as they are discovered and/or as studies progress e.g. VALMER Study\(^6\). The literature search has informed development of the tools used in the project. It also led to the use or adaptation of existing tools during the project.

In addition to previous searched and reviewed literature, information on non-English speaking background groups and those with poor health literacy was reviewed and included. This group are well known to be at risk of medication misadventure or non-concordance and the importance of including this element cannot be understated. The Campbell Report 2008 has provided further evidence in this regard.

Tools (Appendices 10-14)

Patient-held medication list
The development of a new patient medication record was put on hold as the Project Pharmacist explored existing documents. It was originally thought that for Phase 2 of the project the NPS document would be used with a view to development of a new patient medication record or modification or adoption of this currently available tool for the future. CHCB installed UNITi® software in CPCS and preliminary discussions were held with the developers about costing and scoping to improve the software’s medication component to meet the requirements for the project and ongoing use. This would have been of limited cost and potentially quite beneficial. However, since that time Calvary Health Care (as a national organisation) is now upgrading its iPM software (inpatient medication management) and so no further action was taken on UNITi®.

In the meantime, the Project Pharmacist (mainly) used the CHCB Pharmacy iPharmacy medication list. This is also routinely placed in the patient’s nursing folder (this is what the nurse carried on a home visit). It is still suggested that patients carry the NPS medication list, but this can be harder to read as it is a handwritten, rather than computer-generated listing.

The Pharmacy Guild of Australia also has a Patient Medication Profile Program running. These developments will be reviewed as they progress.


The report below is from an ‘unofficial’ survey conducted by Auspharm to assist the CHCB Pharmacy Project in determining whether community pharmacy is using this existing program. It is not an official Pharmacy Guild survey but indicates that PMP is not fully embraced by pharmacists. The poll had a lower than usual response rate and it was considered that this was because some potential participants were unsure what the PMP was about.

Approximately two thirds of respondents offered the service but were only doing so to their ‘funded’ (i.e. patients enrolled in the PMP Program) patients and apart from ‘funded’ patients it

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appears that pharmacists were not charging/being paid for the service. The following is a copy of the ‘unofficial’ survey responses:

Survey results used with permission of Mark Dunn, AusPharm

The Project Pharmacist also canvassed The Alfred, RMH, St Vincents and Western Hospital/Pivot West GP Outreach/HARP pharmacists on what patient medication lists they use. The following were some examples:

- hospital pharmacy programs, which may be from the dispensing software [ipharmacy, merlin]
- other software programs that the pharmacy department may have e.g. Medipal (this was not further explored by the Project Pharmacist as it is not being updated any longer)
- St Vincents staff do carry NPS medication lists to either supply to fill in for patients
- Royal Melbourne Hospital (RMH) staff carry the NPS Medimate brochure [http://www.nps.org.au/consumers/tools__and__tips/medimate/brochures/medimate]

Queensland Health Enterprise-wide Liaison Medication System (eLMS)

Queensland Health has a state designed and enterprise distributed product called "eLMS" that links with iPharmacy but essentially is a medication profile that records drug, form dose, frequency (linked to breakfast, lunch evening meal and bedtime) and indication (in patient language) and any changes to be made e.g. temporary withheld until post surgery.

This is printed for a patient at discharge, but is also available electronically across the state to all hospital pharmacists.

If a patient is seen in an outpatient clinic, the pharmacist can take a medication history and record that in eLMS. That information then becomes available, should the patient be admitted, as a snapshot medication profile at the point of time in the clinic.

This history is different to that recorded in the dispensing system because the latter only records what has been supplied to the patient and does not record complementary and alternative medicines (CAM) use or adverse drug reactions/allergies and tolerance histories.
There were a number of tools developed/adapted and used in the context of the project. Some of these were evaluated by two GPs, with valuable feedback incorporated into the evolution of the final tools used.

It is important to note that some of the impact of the tools may not be specifically evident. The external evaluator sought clarification from CPCS team members through discussion and the evaluation focus group. They indicated that the tools were easy to use, although the Intervention Tool was little used as it was found not to be suitable for "recording multiple discussions".

The evaluator has suggested that the MRST would be suitable for accredited pharmacists but may require some modification if it is to be used within community palliative care service without a pharmacist attached.

There is still a need for a hand-held/patient-held medication record. Throughout the project this aspect was investigated and, as with many others trying to resolve this issue, there seemed to be no 'perfect solution'. The NPS Medication List is an example that can be used by patients to hand to their nurses/health professionals to complete. This would, however, require updating every time their medication changed.

The Patient Medication Profile (PMP) Program could also be used although this has had little support through accredited/community pharmacists and thus, many would be unfamiliar with its format.
Evidence-based Education

The task of developing an evidence-based education program was discussed and existing or developing resources explored. Subsequently, the project plan has been amended to read “Develop a resource list of evidence based training material”. This change was discussed with DH following exploration by the Project Manager and Project Pharmacist and discussions held with Assoc. Prof. Michael Dooley at the Alfred Hospital regarding an online education module being developed as part of the 4th Pharmacy Agreement (http://www.guild.org.au/research/4cpa_project_display.asp?id=1871).

This online course will fulfill the requirements for pharmacists on medication management reviews that were originally within the scope of ‘our’ project.

There are also a number of other sources of information and education available and it would be a duplication of tasks to put time into the ‘development’ of this aspect of the project when other projects with significantly greater levels of funding have already commenced this task. The abovementioned online education is due to be available by end June 2010 – the same timeframe for completion of the Pharmacist in Community Palliative Care Project.

Exploration by the Project Pharmacist has indicated that the information available on both the Palliative Care Victoria http://www.pallcarevic.asn.au and CareSearch http://www.caresearch.com.au/caresearch/ websites (updated regularly) as a good source of education and information for pharmacists.

Evidence-based patient medicine information (Appendix 8)

Some preliminary patient medicine information has been developed and/or adapted from previous work. The leaflet information was evaluated by a volunteer group (this group included past carers - including an ex-pharmacist from a non-English speaking background who highlighted aspects of the information that could be problematic for this group of people), and medical and allied health professionals. The patient medicine information was adjusted to take account of this valuable feedback.

The review, development and implementation of further information will continued throughout the project. Preliminary discussions took place with Palliative Care Victoria (PCV) about the possibility of the patient medicine information being developed into the PCV format for their ‘about…’ series of leaflets’. This format is now a well recognised and successful and initially the Project Manager and Project Pharmacist thought it would provide sustainability and duplication of some elements of this project into the future. However, when artwork was completed with this format, all (including the Steering Committee) agreed the new PCV leaflet colours do not work well for the information the community pharmacist project has developed and made it difficult to read as well as going against the advice in the literature about format and colouring. It was thus decided to provide the leaflet in a format that can be linked on the SMRPCCwebsite, the CHCB website and thus the information could then be linked to from the PCV website.

For the majority of the patient medicine information, translation into seven languages has occurred. Audio files in the form of mp3 files have also been made of the morphine information in English (via Vision Australia) and in the seven other languages (via All Graduates Interpreting and Translating). The decision on the languages was based on information from SMR Palliative Care Consortium. It could not cover all language groups within the region but it is anticipated that

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7 Palliative Care Victoria resources — http://www.pallcarevic.asn.au/resources--links/resources
these languages will provide significant coverage within the region and across the state for other services if they wish to access the material.

The rationale for producing mp3 files is that it covers people who:

- can understand English but are not literate in English
- inadequate or poor health literacy
- are not literate in their own language and/or have limited comprehension of more complex language
- have a reading disability
- are vision-impaired

**Evaluation (Appendices 3 & 4)**

The project plan and evaluation framework were previously agreed to with the DH and CHCB. Planning included a ‘review and revise’ approach to the project. This enabled ongoing adjustments and any necessary negotiations with the funder to take place in a timely manner.

During each phase of the project review, revision and evaluation has been undertaken on a regular basis by the Project Manager, Project Pharmacist and the Project Team. The external evaluator, Dr. Safeera Hussainy, reviewed the Progress Reports, literature review and documentation provided in each Progress Report and provided advice and support throughout the project.

An external review was undertaken in March 2010 and the findings are reported provided in more detail in section on Evaluation and in Appendices 3 and 4.
CONCLUSION

This report has built upon information provided in previous Progress Reports. As the project progressed it was deemed important to review the evaluation markers for their relevance. They were reviewed and revised in September/October 2009 and Phase 2 of the project progressed satisfactorily in accordance with the Project Plan timelines.

The benefit of reviewing more than 380 patients on the CPCS alone can justify the ongoing role of a pharmacist within community palliative care services. Inculcation of this role into the team and other palliative care services would require a considerably longer timeframe than allowed for in this project. Referrals to the Project Pharmacist increased as the project progressed and the team became more familiar with the role, expertise and benefits of having a pharmacist review medications, improve symptom control and minimise medication errors.

During the Focus Group held by the external evaluator the following comments were made by CPCS team members:

“Great resource in pharmacology for post graduate study by providing useful website links.” (P6)
“Great resource and help especially when there’s a problem in the home. Can pick up the phone and ask her [about] e.g. unfamiliar drug, doses, calculations”. (P5)
“[Feel confident] to ask questions because others are asking them too.” (P5)
“Looks deeper and has knowledge” (P4)
“Referrals from hospital/GPs were passed by the Pharmacist to identify things to address immediately e.g. a dr and nurse were in the home, the patient had taken three times the opioid dose, they weren’t sure when it would be a huge problem. The Pharmacist informed them of the timeframe, danger and options to deal with the situation. [This built] confidence and reassurance in carrying out roles and improving patient outcomes”. (P4)
“Arranged a Webster pack for a patient, arranged liaison with the community pharmacy.” (P3)
“Accessible.” (P3)
“[Was a] huge-learning curve, opened up discussion for cross-pollination of knowledge, broadened your horizons.” (P3)
“[Would] field questions that are not related to your expertise and can be followed up, adds to integrity of the team, realise what huge gap there was without a pharmacist.” (P2)
“[The] validity of trying to get across recommendations and rationale for certain medicines, in the absence of not having a pharmacist, is more difficult. It helps clarify in doctors’ minds about medicines and doses”. (P2)
“Walking, talking MIMS…can bounce ideas off her and what [the information] means in practice.” (P1)
“On a home visit the patient’s medicines were locked up, noone knew, if I went out by myself I wouldn’t have picked that up.” (P1)
These comments illustrate that the role of the pharmacist has ‘added value’ to the CPCS in terms of education, knowledge, enhanced skills and practical suggestions and actions and the team members now have a better understanding of palliative care medications and their use in symptom control. The momentum of this should not be lost into the future.

The limited ability to improve awareness of the role and benefits of medication reviews within the wider accredited and community pharmacists during the timeframe of the project should diminish as *The Community Pharmacy in Palliative Care Project*, under the Fourth Pharmacy Agreement is completed in June 2010. A component of this project is the development of an online palliative care education unit that will provide an impetus of its own in this group of practitioners. The project will be complementary to the work undertaken in this CHCB project.

The outcomes of the VALMER Study will also be released at the end June 2010.

The National Prescribing Service Ltd. (NPS) report supported the potential influence of role of pharmacists and it should be anticipated that the projects mentioned above will assist this process.

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**Achieving quality use of medicines in the community for palliative and end of life care**: Palliative Care Australia, September 2009 p.13

Pharmacists are also in a position to be more influential. Community pharmacists are often not included in communications between care providers, and are at present an under-used resource. The role of consultant pharmacists conducting formal medication reviews (HMRs, RMMRs) has great potential in palliative care. Hospital pharmacists working with palliative care services have a significant role, particularly in communicating care plans and liaising with health professionals about medicines after discharge. It is also recognised that greater interaction between community and hospital pharmacists would be beneficial.

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There is no doubt that the qualitative evidence, and the more limited quantitative evidence, of improvements in:

- knowledge of medicines for use for palliative care patients
- improved knowledge of how and why these medicines are used by CPCS team members
- changes in the practice of the CPCS Team members, and
- improvements in managing of medication for patients/families

have both provided positive outcomes for the CPCS team members and for patients and their family from this project.

The project has provided facets of sustainability and the capacity to duplicate components of the project. It has provided recommendations of how the positive outcomes of the project could be sustained into the future.

The infiltration of the role, impact and value of the pharmacist in community palliative care has only just begun and it will be important to track its development into the future.
CONSIDERATIONS FOR THE FUTURE

The role of the pharmacist has proven to be beneficial to the CPCS team, patients and families as evidenced throughout this report. The continuation of this role could provide significant benefits to both CHCB and the wider community palliative care service system and should be carefully thought out as to how to proceed. (Appendix 25) These considerations have been written around the project recommendations.

A pharmacist employed in a single palliative care service may have a different role and structure from other employment models e.g. compared to employment by a palliative care consortium or within a division/network of GPs. It is not a ‘one size fits all’ role and should be clearly seen in the context of location and requirements.

The tasks as undertaken by the Project Pharmacist have greatly enhanced day-to-day practice because the pharmacist was able to participate in:

- team meetings
- one-on-one information and advice
- inservice education
- home visits to undertake medication reviews
- telephone advice and assistance to GPs and community pharmacists
- participate in conferences and seminars and thus ‘spread the knowledge’

From the perspective of CHCB, it has had the opportunity to provide a niche market service with the incorporation of this role. It has alleviated the demands upon the hospital pharmacists by having many of the queries answered by the Project Pharmacist in the community service. The exploration of cost savings has only just begun and should be followed through e.g. the audit of emergency medications has highlighted some aspects of potential cost saving. This would assist continuation of the ‘value-add’ and lessons learned from this pilot project across the sector.

Inclusion in the palliative care service would provide timely access to expertise, education and advice as well as improving patient medication management and symptom control.

The connections between CHCB and the wider community of GPs, community pharmacists and outreach pharmacy services has been taking shape. It takes time to build relationships with these groups and to work out the framework for interaction and mutual support. This is now in train and it would be beneficial to both CHCB and its patient group for this to be continued.

In Appendix 25 there are some very limited considerations for how to shape the role into the future and this is also included in the Toolkit for local palliative care services to consider.

Practically, there are few pharmacists available (at this point in time) with the specific skills and knowledge of palliative care and the medications used. CHCB has been particularly fortunate to

Recommendation 1:

That funding for a specialist pharmacist to be placed in each palliative care service within Victoria (See Appendix 25)
have that the Project Pharmacist has extensive knowledge and skills in palliative care, possibly unique. Hopefully, into the future the Community 4th Pharmacy Agreement Community Pharmacist in Palliative Care education unit being developed for community and accredited pharmacists will see more pharmacists acquiring palliative care knowledge and skills.

**Recommendation 2:**

That an agreement between palliative care services could be negotiated within palliative care consortia to fund a pharmacist position to support these services:

- To improve medication management for their patient group (See Appendix 25)
- To improve knowledge of palliative care medications and their management within their community palliative care teams

The role of pharmacist placed within a consortia would need to incorporate all the skills required within a single service but broadened out in terms of actual tasks undertaken and service operation, for example:

- capacity to manage the varying demands of the services within a region
- capacity to build an education and information portfolio to support the above demands
- a willingness to travel across the region
- ensuring current knowledge of changes in the Home Medicine Review referral process with relevance to palliative care patients.

Community palliative care services will, realistically, say that they cannot (without additional funding) incorporate a pharmacist into their services because of the cost and this would mainly be true. However, it is not unrealistic to either incorporate the role - with some additional funding OR with a negotiated agreement to share the cost – into the palliative care consortia

This is only a broad outline and it would be necessary for negotiation and a framework for the role to be worked out between partners within a consortium.

**Recommendation 3:**

That funding of current and extension of the Outreach Pharmacy Services within public hospitals to include palliative care patients (Appendix 24.2)

Outreach Medication Reviews are available at major metropolitan hospitals for patients at risk of medication misadventure after discharge from hospital. The Outreach Pharmacist provides counselling on medication and disease state management in the patient’s home or specialist outpatient clinic. After a home visit, a report is sent to the patient’s general practitioner and community pharmacist.

The extension of the capacity of Outreach Pharmacy Services could provide an avenue for palliative care patients to obtain a medication review in a timely manner after discharge from hospital.
The role would also be different if located within a division/network of GPs although much of the above would be required, and it could be assumed that the tasks would be broader than palliative care.

Inclusion in this forum would allow for improved collaboration between hospitals and community palliative care services within these network areas.

**Recommendation 5:**

That the Community Fourth Pharmacy Agreement Community Pharmacist in Palliative Care Project education module to be offered to community and accredited pharmacists throughout Australia.

This impact of this recommendation will only be felt if there is encouragement and support from the Commonwealth Department of Health and Aging, The Pharmacy Guild of Australia, The Pharmaceutical Society of Australia and The Society of Hospital Pharmacists for community and accredited pharmacists to complete this training.

Building of relationships with local palliative care services should also be encouraged.

Together with this, the role of the pharmacist in palliative care needs to be supported to "provide valuable patient care, contribute to a growing literature base of knowledge, and participate in the education of patients, families and fellow professionals.”¹


The possibilities for the future of the role of pharmacist in community palliative care are exciting and should be further explored. The framework and how it would be incorporated more widely into community palliative care will vary.

Whether additional funding is received or not, the momentum of this role has commenced and it should continue to roll on and evolve. The lack of funding is a deterrent, it should not stop exploration of models of co-operation across a region and/or regions that could spread the cost and consequently the benefits of the role of a pharmacist in community palliative care.

**Recommendation 6:**

That the project add its support to the findings of the National Prescribing Service Ltd. and Palliative Care Australia Report *Achieving quality use of medicines in the community for palliative and end of life care: September 2009* for a greater involvement of pharmacists in palliative care services.
Considerations for the Future

The NPS and PCA report:

Pharmacists are also in a position to be more influential. Community pharmacists are often not included in communications between care providers, and are at present an under-used resource. The role of consultant pharmacists conducting formal medication reviews (HMRS, RMMRs) has great potential in palliative care. Hospital pharmacists working with palliative care services have a significant role, particularly in communicating care plans and liaising with health professionals about medicines after discharge. It is also recognised that greater interaction between community and hospital pharmacists would be beneficial.

has highlighted the fact that pharmacists can be far more influential than is the current practice. Improved communications between palliative care services, GPs and pharmacists are important in achieving an improvement in patient care and a greater understanding by all parties as to the medications used in palliative care and improved knowledge and understanding for patients/carers in how, what and when to use these medications, especially the ‘just in case’ medications. A greater responsibility should be taken to improve the current situation and assist patients in achieving an increasing expressed desire to die at home.

**Recommendation 7:**

That in addition to inclusion of the CHCB website, the Toolkit should be added to the Department of Health website for use by community palliative care services.

The Toolkit will be included on the CHCB website and there will be links to that site from SMR Palliative Care Consortium and Southcity GP Services. Inclusion of the Toolkit on the Department of Health website will make it available to the wider palliative care community both in Victoria and across Australia.

**Recommendation 8:**

That further research should be undertaken into:

- a. The prescribing and dispensing of emergency ‘just in case’ medications to prevent duplication and wastage
- b. Cost savings that could be achieved by the decrease in hospital admissions
- c. Cost savings that could be achieved by interventions resulting from home medication reviews of palliative care patients (The PROMISe Project)
- d. Development of a leaflet for patients/carers on emergency ‘just in case’ medications

Further research arising from the project could be undertaken on emergency medications and how they should be prescribed and distributed to ensure there is a reduction in duplication and wastage of resources. The research should incorporate some aspects of patient education and awareness of these medications, including how and when to use them. This could take the form of a leaflet for patients/carers to improve understanding of these ‘just in case’ medications should be developed.
This increased awareness may result in a reduction in unnecessary hospital admissions and allowing the patient to die at home if desired.

**Recommendation 9:**

That new business rules being developed between Department of Health and Ageing and pharmacy peak body organizations (PGA, PSA, SHPA) as part of the Fifth Community Pharmacy Agreement be monitored for their relevance and impact on palliative care practice with regard to Home Medicine Reviews.

The VALMER Study report is due for release at end of June 2010 and is assessing the economic value of HMRs. This report should be studied carefully for any implications for the outcomes of this Pharmacy Project and how these medication reviews should be conducted into the future.

**Recommendation 10:**

That improvements in prescribing and dispensing emergency (‘just in case’) medications could be achieved by:

1. Palliative care services developing a document (relevant to their service) to be sent to GPs that includes emergency medications form, strength, dose, PBS availability and cautions
2. Development of a check list for nursing staff on the process of ordering medications, including follow-up processes
3. Improved communications from palliative care services to GPs and patients on use of appropriate medications e.g. emergency/"just in case" medications

The development of:

1. documentation and processes relevant to the structure and operations of individual community palliative care services should be developed for GPs, including all the parameters of emergency medications that are to be prescribed for patients.
2. a checklist for nursing staff on processes for ordering medications
3. improved communications from palliative care services to GP and patients on how and when to use their medications, including the emergency (‘just in case’) medications

will provide increased confidence for patients/carers in their use of palliative care medications and a clearer line of communication between the service providers/GPs and their patients. The improved understanding of what are ‘just in case’ medications, how to use them and when could lead to a reduction in hospital admissions and the capacity for patients to die at home if they desire.

A study of this process could lead to improvements in patient care, communication lines and reductions in costs for patients, government and service providers.
When developing the next edition of the PCA Palliative Care – Service Provision in Australia: A Planning Guide, inclusion of a pharmacist role within community-based palliative care services should be seriously considered. Exploration of this role and its benefits could be based on the findings of this report and the audit of emergency ‘just in case’ medications and any subsequent research.

Improved communications between palliative care services, GPs, hospitals and community/accredited pharmacists will results in improved patient care in terms of medications and medication management and in the capacity for the patient to die at home if desired.

Increased knowledge of these medications and their management by health professionals will reduce medication error and improve concordance, resulting in improved patient care and potentially reductions in costs through a decreased demand on the PBS, reductions in hospital admissions.

**Recommendation 11:**

That Palliative Care Australia (PCA) explore the inclusion of a pharmacist within the community-based services in the next edition of Palliative Care – Service Provision in Australia: A Planning Guide.
**EVALUATION**

The Evaluation Framework (Table 2) provided earlier in this report outlines the approach being taken for this project. The project has set timeframes for reviewing and revising, where necessary, each element of the project as it progresses. As the project has progressed the evaluation framework and markers were reviewed by the Project Manager and Project Pharmacist. It has become obvious that some of the original evaluation markers were not measurable or, not measurable in any meaningful way at this point in time and thus it was negotiated with DH to change, modify or delete some of the markers.

As originally outlined in the evaluation framework, there is a need to consider both the internal and external elements of the project and this will continue throughout the project. Some of the processes/tasks developed as part of the project plan that need evaluation are:

**The Project Team Communication Plan**

Process:
Internal – tasks in the PROCESS

- Development of Communication Plan for Project Team
- Development and implementation of an internal plan for communication & education within CHCB about the project and changes in practices
- How, where and what to include when conducting in-service education
- Facilitation of Project Pharmacist role within CPCS team
- Pharmacist Activity Database
- Development of tools/protocols/pathways and guidelines
- Literature Search & Review

External – tasks in the PROCESS

- Development and implementation of a Consultation Process for key stakeholders
- How, what and where to provide education of GPs/pharmacists/community palliative care services
- Progress reports to Department of Human Services (DH)
- Development of sustainability and replicable elements of the project

As the project progresses, other aspects of project will require assessment and evaluation, including the impact and outcomes of the interventions by the Project Pharmacist on:

- medication management
- information for patients/carers
- the effectiveness of the documentation (patient medicine information and tools and pathway) that has been developed
- whether the documentation requires amendment and/or redevelopment
- processes to implement the documentation into organisational documents, rather than Project Tool Templates
- what are the various cost factors in moving this project into an ongoing program
- how sustainable are the outcomes of the project
- how transferable or replicable are the elements of the project to other community palliative care services.
To continue the ongoing review of tasks and outcomes of the project, the Project Pharmacist assessed the timeframe and tasks required to meet the project tasks e.g. how much time visiting and reviewing medications, completing documentation, attendance at team meetings, and so on.

In addition, evaluation of the documentation and reporting format and content was undertaken in consultation with two of the doctors at CHCB who have GP experience. Their feedback provided improvements in the process and content.

Review, assessment and evaluation continued alongside implementation of Phase 3 of the project. At several points throughout the project, the Project Manager was in contact with the external project evaluator on processes and content.

The *Hierarchy of Program Evaluation Evidence* (Suvedi & Morford) developed Natural Resources Program Managers in Canada, was useful in providing a quick glance and the *program levels* and *indicators* used in the original document were adapted to provide a snapshot of processes and achievements of the project:
### Program Levels and Indicators

#### END RESULTS - What long-term changes occurred as a result of the project?
- Improved knowledge of how/where to access information medications/management by CPCS team
- Increased knowledge of palliative care medicines and their use – this needs to be reinforced to CPCS nursing
- Development of patient medicine information – available on the CHCB website (incl. translations & mp3 files)
- Care pathway developed
- Medication Screening Review Tool (MRST) developed
- Toolkit for use by other palliative care services

#### CHANGES IN PRACTICE AND BEHAVIOUR - How did practice change as a result of project participation?
- Acceptance of the role of a pharmacist within the team
- Use of medication sheets in nursing folder for chemotherapy and other medicines
- Documentation & process of obtaining emergency medications - reviewed as part of audit

#### CHANGES IN KNOWLEDGE, ATTITUDE, SKILLS AND ASPIRATIONS (KASA) - How did participants’ knowledge, attitudes, skills and aspirations change as a result of project participation?
- Increase in knowledge & skills of CPCS team
- Increased knowledge, confidence in team with respect of medications and their management.
- Increased knowledge on complexity of patient’s medications regimes

#### REACTIONS - How did participants and clients react to the project activities?
- Project Pharmacist accepted as part of allied health team within CPCS
- CPCS team very positive – see Evaluation Findings – external evaluator Focus Group results Appendix 4
- Clients accepting of the pharmacist as part of the CPCS team

#### PARTICIPANTS - Who participated and how many?
- 380 patients were screened using the Medication Review Screening Tool (MRST)
- 52 home visits to patients for medication review
- All involved in consultation & communication strategies
- CHCB and CPCS staff
- Project Team & Steering Committee
- External Evaluator

#### ACTIVITIES - In what activities did the participants engage through the project?
- Inservices to CPCS staff
- Education & information sessions to SMR PC consortium members, Southcity GP services, Gippsland PC consortium & communityGPs & pharmacists
- Medication screenings using the MRST and medication reviews in patient’s homes
- Conferences & seminars
- Consultation with key stakeholders
- Newsletter articles

#### INPUTS - Which personnel and other resources were used during the project?
- Steering Committee/Project Team/Project Manager/Project Pharmacist
- CHCB staff: Allied Health Manager, Director of Clinical Services, Nursing, Allied Health, Pharmacy
- CPCS staff
- Clinical supervision & support
- Volunteers – assistance with reviewing and critique of patient medicine information (morphine)
- Liaison with:
  - Outreach pharmacists
  - Clinical trial pharmacists
  - Key stakeholders
LIST OF RESOURCES DEVELOPED/ADAPTED/SOURCED

The following is list of resources developed and/or adapted from existing material:

- Medication Review Screening Tool (MRST) (Appendix 9)
- Medication Review Report (Appendix 10)
- Intervention Tool (Appendix 11 – with permission from Andrew Stafford, University of Tasmania “D.O.C.U.M.E.N.T for Medication Review” from the VALMER study, aPROMISE
- CPCS Project Pharmacist letter to:
  - GPs (Appendix 12)
  - Community Pharmacists (Appendix 13)
- Medication Management Pathway & guidelines (Appendix 14)
- Patient Medication List – initially using a variety of medicines lists e.g. National Prescribing Service Medicines List (Appendix 18) and iPharmacy medication list
- Patient Medicine Information – (Appendix 8)
- List of resources, including weblinks and journals (References)
- Sources of education for pharmacists that are regularly updated are available on websites for:
  - Palliative Care Victoria
  - CareSearch

A number of these resources will form the basis of a tool kit that will be available for other community palliative care services at the conclusion of the project.
DISSEMINATION

Dissemination of information and tools is to be provided through a ToolKit for the community palliative care services available on the CHCB website and/or through CHCB CPCSwith links from Southern Metropolitan Regional Palliative Care Consortium (SMRPCC).

Throughout the project, there was dissemination of information about the project and tools as follows:

- communication with key stakeholders:
  - internal
  - external, including Bayside Division of GPs and Southcity GP Services
- newsletter and/or journal articles
- conference/seminar presentations/posters (Appendices 23 and 23.1)
- reporting back to the Project Team as scheduled
- reporting to the Steering Committee as scheduled
- reporting to CHCB Staff Fora
**Sustainability and Duplication**

From the beginning of the project sustainability and capacity for duplication was considered and explored.

The framework, pathways, protocols and tools can assist other services to incorporate, at the very least, elements of the pathway and the positive outcomes of the project. To undertake all aspects of the pathway would require the inclusion of a pharmacist within the community palliative care services and/or the development of a framework to work with the community and accredited pharmacists within other geographic locations where an accredited pharmacist was not incorporated into the community palliative care service.

It is important to recognise that accredited pharmacists working within a hospital cannot undertake - and be paid for - medication management services in the community under existing Medicare arrangements. This aspect of the project duplication would need to be considered if a community palliative care service is co-located/managed by a local hospital.

Development of a resource list of evidence-based education and evidence-based patient/patient medicine information would need to be maintained into the future to remain relevant and to meet the project requirements for sustainability and improvement in patient care with respect to medication management. The references used for this project, including websites and journals, provide a good resource for other services and have been incorporated into the Toolkit.

Preliminary exploration was held with PCV to ascertain if the patient/patient medicine information could be formatted and included in the suite of leaflets that are now very familiar across Victoria and the rest of Australia. It was thought this would ensure that access to this information is simple and follows an already familiar format and path for community palliative care services and other groups within our Victorian community. However, the current colour and format does not lend itself to easy reading, especially for people who are ill and with possible difficulties in comprehending such information. It was agreed that a more suitable approach for this information was to have the information put into a format that for inclusion on the CHCB website, with links from the SMRPC Consortium and it will be made available via link to the websites of some of the divisions/networks of GPs. In addition, for the English version of all patient medicine information produced and the morphine leaflet in seven languages, mp3 files have been produced. This will assist people who:

- can understand English but are not literate in English
- inadequate or poor health literacy
- are not literate in their own language and/or have limited comprehension of more complex language
- have a reading disability
- are vision-impaired

Thus the capacity to replicate and sustain, at least some elements of the project is promising:

- patient medicine information leaflets, including translations and mp3 files
- resource list of available education/training for accredited and community pharmacists – through other projects currently being undertaken in the community
- framework for a model of care
- pathways, protocols and tools
RECOMMENDATIONS

It is important to recognise that while one of the proposed aims of this project was to reduce the number of hospital admissions and/or cost of medication, it was difficult to explore this in great depth during the project. In fact, hospital admissions are sometimes required to improve medication and symptom management and can, ultimately prevent future hospital admissions as the patient’s condition deteriorates.

Throughout the project, sustainability and capacity for duplication were always a consideration.

To sustain the project outcomes in any significant way, the following needs to be considered by both State and Federal Government Departments of Health, community palliative care services, divisions/networks of GPs, community/accredited pharmacists and pharmacy peak bodies:

15. That funding for a specialist pharmacist to be placed in each palliative care service within Victoria (see Appendix 25).

16. That an agreement between palliative care services could be negotiated within the palliative care consortia to fund a pharmacist position to support these services:
   a. To improve medication management for their patient group (Appendix 25)
   b. To improve knowledge of palliative care medications and their management within their community palliative care teams

17. That funding of current and extension of the Outreach Pharmacy Services within public hospitals to include palliative care patients (Appendix 24.2)

18. That funding/support for divisions/networks of general practice to include the role of a specialist palliative care pharmacist within their division/network.

19. That the Community Fourth Pharmacy Agreement Community Pharmacist in Palliative Care Project education module be offered to community and accredited pharmacists throughout Australia.

20. That the project add its support to the findings of the National Prescribing Service Ltd. and Palliative Care Australia Report Achieving quality use of medicines in the community for palliative and end of life care: September 2009 for a greater involvement of pharmacists in palliative care services.

21. That in addition to inclusion on the CHCB website, the Toolkit should be added to the Department of Health website for use by community palliative care services.

22. That further research should be undertaken into:
   a. The prescribing and dispensing of emergency ‘just in case’ medications to prevent duplication and wastage
   b. Cost savings that could be achieved by the decrease in hospital admissions
   c. Cost savings that could be achieved by interventions resulting from home medication reviews of palliative care patients (The PROMISE Project)
   d. Development of a leaflet for patients/carers on emergency ‘just in case’ medications

23. That new business rules being developed between Department of Health and Ageing and pharmacy peak body organizations (PGA, PSA, SHPA) as part of the Fifth Community Pharmacy Agreement be monitored for their relevance and impact on palliative care practice with regard to Home Medicine Reviews.
24. That improvements in prescribing and dispensing emergency ('just in case') medications could be achieved by:

a. Palliative care services developing a document (relevant to their service) to be sent to GPs that includes emergency medications form, strength, dose, PBS availability and cautions
b. Development of a check list for nursing staff on the process of ordering medications, including follow-up processes
c. Improved communications from palliative care services to GPs and patients re use of appropriate medications e.g. emergency/“just in case” medications

25. That Palliative Care Australia explore including a pharmacist within the community-based services in the next edition of Palliative Care – Service Provision in Australia: A Planning Guide.

Other aspects of sustainability that could be achieved however, these would need some commitment to funds to support maintenance of the processes and materials:

26. Improved and/or structured communication processes between palliative care, hospital, general practice and community/accredited pharmacists

27. Improved education/training of community palliative care providers in the medications and medication management for their patient group

28. Improved communications from palliative care services to GPs and patients re use of appropriate medications e.g. emergency/“just in case” medications
**FINANCIAL REPORT**

The project budget has been expended in line with the original agreement.

Attached as a separate document is a financial report acquittal.
## Glossary

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<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>A/H</td>
<td>After Hours</td>
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<tr>
<td>AP</td>
<td>Accredited Pharmacist</td>
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<td>AJP</td>
<td>Australian Journal of Pharmacy</td>
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<tr>
<td>CALD</td>
<td>Culturally and Linguistically Diverse Consumers</td>
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<tr>
<td>CAM</td>
<td>Complementary and Alternative Medicines</td>
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<tr>
<td>CE</td>
<td>Continuing Education</td>
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<td>CEO</td>
<td>Chief Executive Officer</td>
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<td>CHCB</td>
<td>Calvary Health Care Bethlehem</td>
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<td>CP</td>
<td>Community Pharmacist</td>
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<td>CPCS</td>
<td>Community Palliative Care Service</td>
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<td>CPD</td>
<td>Continuing Pharmacist Development</td>
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<td>DH</td>
<td>Department of Health</td>
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<td>Department of Health &amp; Ageing</td>
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<td>EPC</td>
<td>Eastern Palliative Care</td>
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<tr>
<td>GP</td>
<td>General Practitioner</td>
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<td>GPDV</td>
<td>General Practice Division Victoria</td>
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<td>HMR</td>
<td>Home Medication Review</td>
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<td>IPP</td>
<td>Interprofessional Practice</td>
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<td>IPW</td>
<td>Interprofessional Working</td>
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<td>MMR</td>
<td>Medication Management Review</td>
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<td>MMSE</td>
<td>Mini-mental state examination</td>
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<td>MRST</td>
<td>Medication Review Screening Tool</td>
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<td>NPS</td>
<td>National Prescribing Service</td>
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<td>Palliative Care Australia</td>
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<td>Palliative Care Victoria</td>
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<td>PEPA</td>
<td>Program of Experience in Palliative Approach</td>
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<td>PM</td>
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<td>Project Pharmacist</td>
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<td>PSA</td>
<td>Pharmacy Society of Australia</td>
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<td>RACFs</td>
<td>Residential Aged Care Facilities</td>
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<td>RDNS</td>
<td>Royal District Nursing Service</td>
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<td>RLS</td>
<td>Restless Legs Syndrome</td>
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<tr>
<td>RMH</td>
<td>Royal Melbourne Hospital</td>
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<td>SEPC</td>
<td>South East Palliative Care</td>
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<td>SHPA</td>
<td>Society of Hospital Pharmacists of Australia</td>
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<td>SIG</td>
<td>Special Interest Group</td>
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<td>SMRPCC</td>
<td>Southern Metropolitan Region Palliative Care Consortium</td>
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<td>The Guild</td>
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<td>ToR</td>
<td>Terms of Reference</td>
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AACP Procedures & Resources Manual: Australian Association of Consultant Pharmacy (AACP)
www.aacp.com.au

Accessing Care of Vulnerable Elders www.rand.org/health/projects/acove/

Achieving quality use of medicines in the community for palliative and end of life care: A consultation report produced by National Prescribing Service Limited and Palliative Care Australia, September 2009

Always read the leaflet – Getting the best information with every medicine
www.mhra.gov.uk/home/groups/pl-a/documents/publication/con2018041.pdf


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http://www.fda.gov/CDER/GUIDANCE/7139fnl.htmDK,

Consumer Medicine Information (CMI) search site: National Prescribing Service www.nps.org.au


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Improving medication management of palliative care patients: enhancing the role of community pharmacists http://www.guild.org.au/research/project_display.asp?id=262


Medication review: patient selection and general practitioner’s report of drug-related problems and actions taken in elderly Australians.


MPES Pictogram Project: International Pharmaceutical Federation, June 2009


PIL for every ill? Patient Information Leaflets (PILs): a review of past, present and future use

Potentially inappropriate prescribing among Australian veterans and war widows/widowers.


Reducing Medication Errors and Increasing Patient Safety: Case Studies in Clinical Pharmacology, Benjamin, David M. PhD, FCT, Department of Pharmacology & Experimental Therapeutics, Tufts University School of Medicine, Boston, Massachusetts, USA Sorensen L, Stokes J, Purdie D, Woodward M, Roberts M. Age and Ageing 2005; 34:626-632.
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Palliative Care Journals referenced or consulted during the project:

BMC palliative care
Journal of pain and symptom management
Journal of palliative care
Palliative and supportive care
Palliative Care: Research and Treatment
Palliative Medicine
Progress in Palliative Care Journal
Supportive Care in Cancer
The Internet journal of pain, symptom control and palliative care

Other Journals consulted:

Australian Pharmacist
British Medical Journal
Journal of Clinical Oncology
Medical Journal of Australia
The Pharmaceutical Journal

Websites used during the course of the project:

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Australia Association of Consultant Pharmacy  www.aacp.com.au
Centre for Palliative Care Research and Education  www.health.qld.gov.au/cpcre
National Prescribing Service  www.nps.org.au

The Pharmacy Guild of Australia  www.guild.org.au
The Society of Hospital Pharmacists of Australia  www.shps.org.au
VALMER  www.pharmacy.utas.edu.au/VALMER
Overseas

Canadian Hospice Palliative Care Association  www.chpca.net
Gold Standards Framework  www.goldstandardsframework.nhs.uk
M D Cancer Centre  www.mdanderson.org
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National Institute for Health and Clinical Excellence  www.nice.org.uk
National Prescribing Centre  www.npc.co.uk
Palliative drugs  www.palliativedrugs.org
Plain English Campaign  www.plainenglish.co.uk
RAND Health  www.rand.org/health/projects/acove
The Cochrane Library  www.thecochranelibrary.com
U.S. Food and Drug Administration  www.fda.gov