Field testing a protocol to facilitate the involvement of pharmacists in community based palliative care

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Abstract

Background

Most palliative care patients and their carers will interact with a pharmacist, particularly when obtaining medication during their illness. Pharmacists working in the community do not have a formal role in the care of patients who are receiving palliative care.

Objective

The aim of this study was to field test a protocol to coordinate a formal medication management review of palliative care patients by an accredited pharmacist.

Methods

Eligible patients resident in the community were recruited by a palliative care nurse. Patients consented to a formal review of their medication by an accredited pharmacist. The request for the review was endorsed by the patient's doctor. One accredited pharmacist, from a list of 18 accredited pharmacists who had attended a short course on palliative care and who had access to an experienced palliative care pharmacist, reviewed the medication at the patient's residence. The pharmacist then reported their recommendations to a project manager who passed them back to the doctor. Patients and relatives were able to consult the pharmacist if they required further help for a number of weeks post-review.

Results

Forty patients and 13 pharmacists participated over a four month period. Between two and 30 days elapsed from patient consent to the pharmacist's report to the referring doctor ($M = 10.6$ days, $SD = 6.0$). Thirteen pharmacists conducted 0–9 reviews each and made 145 recommendations. Only three pharmacists recorded post-review patient interactions in diaries. Out of all interactions that took place between these three pharmacists and corresponding patients, almost half were initiated by the pharmacist. These were used mainly to share or request information, although two resulted in medication changes. Experts in palliative care and the patients were generally very positive about the results of the medication review.

Conclusions

An innovation that builds on the existing system for Medication Management Review to engage with patients in palliative care is valuable. This project was an important first step in developing a suitable protocol. In this case the protocol was only partially successful although the project contributes to existing knowledge and understanding in this area.

Background

Palliative care is defined as:

An approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual.[1]

As the focus of palliative care is on the alleviation of symptoms, most patients will be taking prescribed medicines to manage these symptoms.[2] As such, the community pharmacist is likely to encounter palliative care patients and their carers and to be providing medication to patients receiving home-

based palliative care, particularly as many palliative care patients have complex medication regimens, involving off-label or off-license prescribing that increases their risk for drug-related problems.[3] Despite this regular contact with palliative care patients and their carers, community pharmacists are rarely active members of community-based palliative health care teams. Yet the community pharmacist's potential contribution is clear. It includes providing information regarding the management of medications and their effective use; support for self-managed care and disease specific care management information; patient assessments; systematic medication reviews; and patient counselling.[4,5] One way of providing this input is the use of medication management reviews by trained, accredited pharmacists serving palliative care patients in the community.

Currently in Australia 'accredited' pharmacists can claim a fee for conducting a review of a patient's medication and can make recommendations on the receipt of a formal signed referral from the patient's doctor.[6] However, for such reviews to be conducted routinely, the process of ordering and conducting a review must be practical and adequately rewarded for the required time commitment.[7] This study examined a protocol to formally invite the pharmacist to be involved in the palliative care team to conduct a medication management review, focusing on their skills and knowledge about medications, side effects, interactions and modes of administration.

Framework

The evaluation of the protocol reported in this paper was designed with reference to a recognised framework for the development and evaluation of complex interventions.[8] This framework requires preliminary attention to specific details including the scope to recruit patients and collect data in the primary care setting.[9] In the primary care setting interventions often involve the interaction of multiple stakeholders and require co-operation across a variety of disciplines.[10] There is an established case for development work and integration of process and outcome evaluation.[11,12] We aim to explore whether pharmacists' involvement in palliative care could be facilitated through a modified process of 'home medication review'. This study set out to field test a protocol that requires involvement of a nurse, doctor and a researcher to coordinate the Medication Management Review (MMR) by pharmacists.

A recent paper suggests that three factors be taken into account in the planning of the implementation of innovation in primary health care:

1. staff expectations
2. assessment of the perceived need for the innovation to be implemented, and
3. its potential compatibility with existing routines.[13]

Although it is clear that there is scope for the pharmacist to be involved with palliative care patients, the current system of care requires modification. Firstly patients in palliative care are not identified to the pharmacist unless (s) he can work out that the patient is terminally ill from their list of prescribed medications. Secondly, the pharmacist will require further training in palliative care, and thirdly, there is no scope to remunerate practitioners for opportunity cost in offering advice without formally commissioning a medication management review. In developing the protocol for the medication management reviews several assumptions were made:

1. Medical practitioners have unknown opinions about the role of pharmacists in palliative care and cannot be assumed to be keen on ordering a medication management review in these circumstances.
2. The process of requesting an MMR involves the filling of forms that may be a hindrance to medical practitioners.[14]
3. Pharmacists may require additional support when conducting MMRs in what is considered a specialist area.
4. Accredited pharmacists who are registered to conduct an MMR are geographically dispersed and their input would need to be coordinated.

Methodology

The project was approved by WA Country Health Service (Board) Research Ethics Committee (WACHSBREC), the Curtin Human Health Research Ethics Committee and the Silver Chain Research Ethics Committee.

Setting and recruitment

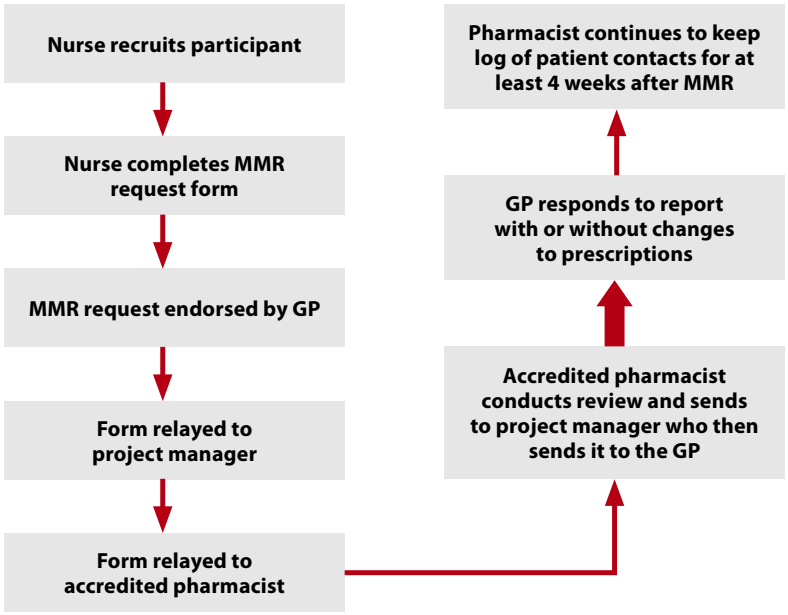
Participants were palliative care clients of a community-based palliative care service in metropolitan Perth who were resident at home at the time of the study and deemed to be within six months of end of life. Patients were excluded if they were within days of death or were considered to have a cognitive impairment. Over a period of four months palliative care nurses recruited eligible patients and completed a palliative care MMR (PCMMR) referral form which was subsequently endorsed by the primary doctor (i.e. the palliative care general practitioner [GP] or the patient's GP or family physician). Eligible patients were:

1. receiving palliative care
2. using five or more medications, and
3. able to give informed consent to participate.

Figure 1 illustrates the procedure. A copy of the referral and a request for basic medication records (e.g. prescription history) were sent to the primary doctor and their community pharmacist. The 18 accredited pharmacists who participated in the trial completed a two-day course on palliative care in the weeks before participating in the study. The course was presented by local experts and included the philosophy of palliative care, communications skills, symptom management and medications used in palliative care. Case studies and role plays with actors were used. The accredited pharmacists also had access to an experienced palliative care pharmacist as their mentor and access to members of the research team. Patients' allocation to an accredited pharmacist was based on their area of residence and the nearest available accredited pharmacist. The accredited pharmacist conducted the PCMMR at the patient's home.

The accredited pharmacist prepared a report detailing their findings and recommendations, and forwarded the report to the project manager who then sent a copy to the referring GP. The accredited pharmacists were also

Figure 1. Steps in the protocol for the PCMMR feasibility study.



(GP= General practitioner)

invited to keep a formal diary of ongoing contact with each patient for a follow-up period of between four weeks and three months after the PCMMR. The pharmacist documented the reason for each contact and their recommendations.

Pharmacists' recommendations

Five experts on the project team (two GPs and three pharmacists – including two university-based academic tutors and a specialist palliative care pharmacist) rated the clinical significance of each recommendation in the reports and the overall clinical significance of the report, based on a seven-point scale ranging from -3 (negative – not useful) to 3 (positive – useful). A final rating was calculated for each report and each recommendation by taking the mean of the experts' ratings for each part.

Patient evaluation of the PCMMR

A form was generated for patients' evaluations of the medication reviews; it had two parts. First, the patients were presented with seven statements about the medication review. For example, one statement read, 'I feel more comfortable about taking my medications'. For each statement the patient rated how much he or she agreed (or disagreed) using a 5-point Likert scale ranging from 1 – 'strongly disagree' to 5 – 'strongly agree', where 3 was 'neutral.' In the second part of the evaluation, patients were asked to provide comments about the review.

Results

PCMMR completions

The project manager received a total of 48 PCMMR referrals. Patients were aged between 8 years and 85 years (M = 65.7 years, SD = 14.5) and were experiencing up to seven common palliative care symptoms at the time of referral. Three patients died before their PCMMR could be scheduled, two patients withdrew from the study before their review due to a deterioration in their health, and a further two patients withdrew before their review without stating a reason. Another referral did not provide sufficient information, leaving a total sample of 40 patients who completed the study. Of the 18 eligible accredited pharmacists, 13 conducted PCMMRs. The 13 pharmacists each conducted between one and nine reviews (M = 3.1, SD = 2.3) and made a total of 145 recommendations. The trial was designed to ensure rapid delivery of the PCMMR service. However, between two and 30 days elapsed from when the patient signed the referral consent form, to when the pharmacist's report was provided to the referring GP (M = 10.6 days, SD = 6.0). Some reviews were delayed because the patient's health deteriorated or the review was conducted after the need for advice had lapsed; other reasons were delays in the administrative process, limited endorsement of the referral process by GPs, inadequate information provided in the referral form (including a telephone contact number for the patient), and by delays due to the unavailability of a nurse at the recruiting site.

Pharmacists' recommendations

The pharmacists provided between nil and nine recommendations per patient in their reports to the doctor. In total, there were 145 recommendations. The majority (93%) of the ratings for the overall reports were positive, 4% were negative and 3% were rated as neutral. The mean ratings for the individual recommendations ranged between -1.0 to 2.7 (mean = 1.2, standard deviation = 0.69). The majority of the mean ratings (95%) were positive; two (1%) were negative and six (4%) were neutral. The combined ratings of the reports were typically positive; however there was a lack of consensus on the value of individual recommendations between the raters.

Patient evaluations

In total, 25 evaluations were returned (of 48, 52%). Table 1 shows the patients' responses to each of the seven statements. In short, the patients were generally very positive about the medication review with the mean responses falling between '*agree*' and '*strongly agree*' on the rating scale.

The small ranges for statement 2, statement 6 and statement 7 highlight that all patients felt comfortable talking to the pharmacist, able to ask questions of the pharmacist and willing to contact the pharmacist in the future if need be. For the remaining statements, some of the lower responses came with comments emphasising that

Table 1. Patients' ratings of evaluation statements

Statement	Mean (SD)	Range
1. The pharmacist provided me with information about my medications.	4.36 (0.86)	1 – 5
2. I was able to ask the pharmacist questions about my medications.	4.72 (0.46)	4 – 5
3. The pharmacist helped me to understand my medications better.	4.36 (0.91)	1 – 5
4. I feel more able to manage my medications.	4.20 (0.87)	1 – 5
5. I feel more comfortable taking my medications.	4.16 (1.03)	1 – 5
6. I felt comfortable talking to the pharmacist.	4.80 (0.41)	4 – 5
7. I would contact the pharmacist again to ask questions about my medication if I needed to.	4.64 (0.49)	4 – 5

people felt they already understood their medications; these ratings may have been more a reflection that some patients were already very well informed rather than a reflection of unsatisfactory input from the pharmacist.

The final question on the evaluation asked patients whether they had any comments about the review. Of the 25 responses received, 18 provided comments (72%). The comments were coded into one of five pre-determined categories:

1. positive
2. neutral
3. negative
4. providing information, or
5. making a suggestion for improvement.

In total, 15 comments (83%) were coded as positive. For example, one comment read, '*It was very comforting to have someone actually sit down with me and go through my meds.*' One comment was coded as providing information, as it simply provided a description of the outcome of the review and doctor's subsequent intervention. One comment was a suggestion, '*It would have been helpful to receive a post meeting letter reviewing the meeting and advising of further steps/options.*' The final comment was coded as neutral. This comment read, '*We don't have any issues with our medications. We have been on the same ones for 15 months. We know if we have a problem we can contact a pharmacist.*'

In summary, the medication reviews generally seemed to be a positive experience for patients and, for the vast majority, left patients feeling more informed and better able to manage their medications.

Pharmacists' interaction records

Only three pharmacists formally recorded their patient interactions post PCMMR; with most reporting that they did not use the diaries. A total of 17 patient interactions involving 13 patients were reported during the follow-up period. Eight interactions were initiated by the accredited pharmacists (47%), seven were by GPs and two by carers. The contact was used mainly for sharing or requesting information, however two of the interactions resulted in a change in medication. We cannot confirm from these data that patients did not contact their pharmacist in the follow up stage because of the lack of compliance with the diary keeping by the majority of pharmacists.

Discussion

The protocol to formally involve pharmacists in the care of patients in palliative care in a community setting had limited success. The process of ordering the review involved the patient, a nurse, a doctor and a project manager. The delays in conducting the reviews, in some cases up to 30 days from the patient requesting a review, suggest that each step introduced further risk of delay to the process. There were a number of practical problems including the speed of the review and the amount of relevant information passed to the pharmacist.

The Promoting Action on Research Implementation in Health Services (PARIHS) framework suggests that implementation success is a function of the nature and type of evidence, the qualities of the context, and the way the process is facilitated.[15] The flow of relevant and timely information was a major shortcoming in this study. A key issue was the need for more efficient relay of relevant information.

An important factor in designing strategies for new models of health care is how to obtain behavioural change among health care providers. Rogers describes behavioural change as an innovation-decision process that leads either to adoption (i.e. to make full use of an innovation) or rejection (i.e. not to adopt). This process occurs on an organisational level and on an individual level.[16] It was clear in this study that both individuals and organisations had the scope to moderate the potential for patients to benefit from engagement of pharmacists in palliative care. In this case we recommend greater dialogue between the representative bodies representing the stakeholder groups. Within general practice this includes the practices and their representative body, including the Divisions of General Practice, and in pharmacy this includes the pharmacies and their peak bodies. A review of the literature suggests that the primary role for community pharmacists in palliative care is the safe administration of medication and to act as a source of advice for patients. With appropriate arrangements, pharmacist can also deliver a service to the patient's home, and enable those in the terminal phase to remain at home for as long as it is practical.[17] Systems need to be developed so that community pharmacies have the mechanisms to work in close consultation with the medical and nursing team caring for the patient. Pain and symptom management are also central issues in palliative care; frequently nurses consult with distressed patients and family members about pain management. When they do so they act simultaneously to relieve pain but also counsel distressed people.[18] The multi-faceted nature of palliative care requires professionals working with terminal patients to have a greater capacity for empathy, the ability to address psychosocial

needs, a sophisticated knowledge of medical ethics, and excellence in communication skills.[18] These issues were extensively reviewed in the full report on this project.[19] Although many of these skills are addressed in medical and pharmaceutical training, research indicates that many health care professionals are poorly prepared for the complexities of palliative care.

Exemplary health systems assimilate the input of physicians, pharmacists, nurses and psychosocial carers in a holistic framework and foster increased confidence in delivering excellent palliative care.[20] At the same time it is important to acknowledge that in Australia the fee for service model of care that is an integral part of the primary care service is extended to include all members of the team. To facilitate the PCMMR it may also be that the process would be better supported if both nurses and GPs were able to claim a fee for making the referral.[7] This is not currently permitted under the rules.

In addition, there needs to be a mechanism for actively encouraging referrals and closer collaboration among palliative care doctors, GPs and accredited pharmacists. There was limited evidence for this in our study. This might be expected given the short duration of the study; collaboration is built on a shared understanding which may develop over time. There is also a need for accredited pharmacists to be formally inducted as members of a multidisciplinary palliative care team.[20]

Conclusion

Overall pharmacists are capable of providing this service and, with training and further support, implementation of this service is viable. Patients have found this service beneficial. However the study identified a number of problems with the protocol used; some were unique to the delivery of the PCMMR service and others are generic to medication management review models operating in Australia. There needs to be support at the organisational and policy levels to ensure that the process is simple and efficient, and also at the individual level to nurture collaboration between all health professionals involved in care at the end of life.

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PRODUCT NEWS

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