Using focus groups to develop the curriculum for a palliative cancer care online educational programme for community pharmacists.

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Summary
This paper reports on the use of focus groups to develop the curriculum for an online palliative cancer care educational programme for Australian community pharmacists. Focus groups using the Nominal Group Technique were carried out with expert stakeholders to: validate, enhance and refine the findings of a literature review and mail survey previously conducted to determine the palliative cancer care educational needs of community pharmacists; and to determine the modules and key messages for the programme. The final programme comprised 11 modules containing three to seven key messages. The focus groups validated, enhanced and refined earlier findings, and the Nominal Group Technique was found to be a reliable research method for conducting the focus groups. It is hoped that the findings of this study will increase the confidence of other researchers in using focus groups employing the Nominal Group Technique to aid decision-making related to curriculum design.

Abstract
Aim: To develop a curriculum for a flexible/online palliative cancer care educational programme for Australian community pharmacists using expert stakeholders.

Method: Focus groups with pharmacists ($n = 7$), doctors ($n = 6$) and nurses ($n = 12$) were conducted utilising the Nominal Group Technique. Participants considered a draft of the programme, listing other modules that needed to be included, and three key messages for each module.

Results: The results of each focus group were amalgamated, resulting in a list of 22 modules with multiple key messages. These findings were combined with those from a literature review and pharmacist survey, to arrive at the final programme structure which comprised 11 modules, each containing three to seven key messages.

Conclusion: The focus groups validated, enhanced and refined the findings from the literature review and survey.

Keywords: *Community pharmacists, cancer, education, focus groups, Nominal Group Technique, palliative care*

Introduction

The educational needs of Australian community pharmacists in the area of palliative cancer care were identified using three consecutive methods: literature review, a mail survey and focus groups prior to the development of a flexible, online educational programme. The findings of one method informed the next as part of the iterative process. Systematic collection and analysis of information about the educational needs of participants reportedly enhances the success of an educational programme, and a comprehensive needs analysis is more likely to lead to more sustainable learning outcomes for the participants (Rossett and Arwady, 1987; Mager, 1988).

As part of this process described above the literature review identified 18 palliative cancer topics of potential educational interest to pharmacists. The mail survey of community pharmacists from urban and rural areas in Australia confirmed that surveyed pharmacists felt that all 18 topics were important to learn about and their level of knowledge of most topics was poor (Hussainy, Beattie et al., 2006). Focus groups, utilising various groups of health professionals, were

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therefore considered a suitable methodology to finalise the curriculum topics for the education programme.

Focus groups are a method of group interview that explicitly include and use group interactions to generate qualitative data (Kitzinger, 1995; McDaniel and Bach, 1996; Greenhalgh and Taylor, 1997). Focus groups can interpret, explore and validate previously obtained results such as obtained from a survey (Crawford and Acorn, 1997; Chestnutt and Robson, 2001), and generate new ideas, concepts and research hypotheses that can be further explored using quantitative approaches (Chestnutt and Robson, 2001). They are especially appropriate for discussing issues in a supportive environment, and are a quick, economic and efficient method of obtaining relevant information (Beyea and Nicoll, 2000).

The Nominal Group Technique (NGT) allows participants to meet face-to-face, is not time-consuming or costly to conduct, and produces immediate results (Delbecq, Van de Ven et al., 1975; McMurray, 1994; Carney, McIntosh et al., 1996). There is increased opportunity for each individual to assure that their ideas are part of the group's frame of reference, which leaves participants feeling more satisfied at the end of the meeting. In terms of the average number of unique ideas and the quality of ideas, using the four distinct phases of the NGT is superior to brainstorming and the Delphi Technique and produces the lowest percentage of error or variability of estimations (Delbecq, Van de Ven et al., 1975). The Nominal Group Technique (NGT) was therefore chosen to conduct the focus groups in this study.

This paper reports on the process and results of using the NGT for focus groups conducted with doctors, nurses and pharmacists in Victoria, Australia, to validate, enhance and refine the findings from a literature review and mail survey to develop a curriculum for an educational programme for community pharmacists in Palliative Cancer Care. The specific aims were to:

1. Elicit new ideas for the content of the educational programme;
2. Seek consensus regarding the modules to be included as well as the key messages to be covered in each of those modules, with a view to focusing the educational programme writers on the content material to cover.

Methods

The Monash University Standing Committee on Research in Ethics and Humans and the Mercy Health and Aged Care Research Ethics Committee approved the study. Written consent was obtained from participants prior to commencement of each focus group.

Participant selection and recruitment for the focus groups
The participants of each focus group were selected based on commonality rather than diversity as the more homogenous the group in terms of social background, level of education, knowledge and experience, the more confident individuals are likely to be in voicing their opinion (Huber and Delbecq, 1972; Delbecq, Van de Ven et al., 1975). Diversity in

stakeholder groups was still required, however, and this was achieved between groups.

A stratified, purposive sample of expert health care practitioners was sought with the aim of capturing the views of various groups (doctors, nurses and pharmacists) from a variety of palliative care settings: specialists working in palliative care clinics and community services; community pharmacists; and hospital pharmacists working in association with other palliative care specialists.

Using a snowball sampling technique (Patton, 1990), key informants (doctors, nurses, and pharmacists from the Expert Reference Group, Peter MacCallum Cancer Centre, Victoria, the Pharmacy Guild of Australia [Victorian Branch], the Eastern Palliative Care Service and the Royal District Nursing Service servicing the Peninsula Hospice Service in Victoria) identified a number of general practitioners, palliative care specialists, and community and hospital pharmacists with expertise and an interest in palliative care. Contact information was publicly available through palliative care networks. Potential participants were invited by telephone or e-mail (with telephone follow-up) and the study was explained. Those who registered an interest in participation were sent an explanatory statement and consent form. Where possible groups were stratified by discipline, and both community and hospital practitioners included.

Conduct of the focus groups
Prior to the focus groups, each participant received a package containing information about the study which included: the aims of the educational programme; the results of the community pharmacists' mail survey (Hussainy, Beattie et al., 2006); a draft of the module structure for the educational programme (Table I); an explanatory statement; and a consent form. The NGT was piloted, and it was estimated that two hours would be sufficient to conduct each focus group. Remuneration was provided for time and travel.

The focus groups were conducted over a one and half week period by S.H. (facilitator) and J.B (observer/note-taker/audio-recorder) with the timing and venue of the meetings selected in an effort to meet the demanding schedules of the participants.

Introductory phase
The facilitator explained the importance of the group task and of each member's contribution, how the groups' output would be used and the NGT process. Participants were also reminded to put forward their suggestions in context of the total time (20 hours) allocated for pharmacists to complete the educational programme.

Presentation of the questions
After introducing themselves, participants were required to answer the following two questions:

1. Consider the draft (Table I) of the educational programme for community pharmacists; what modules do you think need to be included in the programme?
2. What are the three key messages that need to be addressed in each of the modules?

Table I: Draft module structure for the educational programme

Module number	Module	Estimated time (hours) allocated to complete the module
1	Palliative cancer care	1
2	Management of cancer pain	4
3	Common symptoms presenting to community pharmacists	4
4	Complementary and alternative medicines used by patients with cancer	1
5	Methods of drug administration and access to palliative cancer care medicines	1
6	Psychosocial care and communication with patients and families	1
7	Working in partnerships and conducting medication management reviews to enhance patient care	1
8	Using critical reflection to enhance patient care	1

Question 1

Participants first spent five to 10 minutes individually generating any new module ideas (the *nominal phase*). They then engaged in a 'round-robin' feedback session, where their ideas were recorded and numbered in no particular order for all participants to see. Each recorded new module was then discussed to obtain clarification and evaluation (the *structured discussion phase*). Where wording indicated the expression of the same idea, participants agreed to collapse these into one module heading. Discussions were audio-taped and later transcribed verbatim. The purpose of the transcript was for researchers to determine the perceived importance of participants' new module ideas and the reason for collapsing them.

From the numbered list of new modules generated, with the addition of the draft modules previously given (Table I), participants then privately chose eight modules they considered the most important (the *independent voting phase*) and ranked them from one (least important to learn about) to eight (most important to learn about). Repeating the round-robin process, each person's individual judgements were then recorded next to the number of the corresponding module on the flip chart. These were expressed mathematically by ordering items based on their aggregate score, to give participants a feel for the group priority. The results were then discussed by the group.

Question 2

For question 2, the same three phases of the NGT were carried out to identify the key messages for the eight most important modules selected by the group in response to question one. The process used for question two, however, was modified. The key messages were recorded under each of the modules, and participants discussed their ideas. They were also asked to state what they felt was the single most important message for the module.

Analysis and review of the focus group data

The *groups' decision phase* occurred after the focus groups. Here, S.H. and J.B. collated the module results for each group and calculated the mean value of each module based on the number of judgements made. The key messages were also recorded. Participants were then sent the results of their own group's findings for review and validation. Each group's results were then collated to arrive at the overall module findings.

Following validation by each group, thematic analysis of the key messages for each module was conducted independently by S.H. and J.B. This involved reading the key messages to gain an overview, and coding, collating and collapsing the responses using NVivo (QSR NUD*IST Vivo: version 2.0, QSR International) to avoid overlap of key messages. The researchers then compared analyses for similarities and differences.

To further assist in the development and the design of the educational programme curriculum an Expert Reference Group was formed comprising health professionals with expertise in palliative care, education and community pharmacy practice. The modules identified by the focus group participants and their key messages were sent to the Expert Reference Group for review. With a view to increasing face validity, the Expert Reference Group was asked to refine the 'form' (or wording) of the key messages. To guide this review, they were asked: "If you only had 10 minutes to get your message across to a community pharmacist about a module topic, what five key points/messages?" The final modules and their key messages were reviewed by the Expert Reference Group before being transferred to an Internet site.

Table II: Focus group characteristics: Areas of practice and experience (n = 25)

Areas of practice at the time of participation	Number
Pharmacists (2 male, 5 female)	
Hospital pharmacy	1
Hospital pharmacy (oncology/palliative care)	2
Community pharmacy	4
Average years of palliative care practice*	
Hospital pharmacists = 2.5 years (range 2 - 3 years)	
Doctors (4 male, 2 female)	
Palliative care specialist	4
General practice (GP)	2
Average years of palliative care practice*	
Specialists = 20 years (range 11 - 40 years)	
Nurses (0 male, 12 female)	
Palliative care community	10
General community	2
Average years of palliative care practice*	
Palliative care community nurse = 8.45 years (range 2 – 15 years)	

*Could not be determined for community pharmacists, general practitioners and general community nurses because of the irregularity of presentation of palliative care patients.

Results

Focus group stakeholder characteristics
Four focus groups were conducted with 25 health professionals, one with doctors (general practitioners and palliative care specialists), two with different groups of palliative care nurses from metropolitan Melbourne and one with pharmacists (community and hospital palliative care pharmacists).

Table II shows that health professional groups represented the gender balance of each profession (Australian Institute of Health and Welfare, 2003) except that no males could be recruited to the nurses group. The majority of practitioners other than pharmacists were experienced in palliative care.

Choice of modules and key messages

Table III: Overall module findings from the focus groups

Modules	Mean value (based on the number of independent judgements)
Introduction and principles of palliative care, including common cancers and their incidence and prevalence	7.04
Management of cancer pain	6.88
Management of non-pain symptoms and side effects	5.82
Nausea and vomiting*	5.20
Ethical issues	4.75
Chemotherapy and radiotherapy side effects*‡	4.33
Psychosocial care and communication	4
Care of the carer and palliative care worker/team*	4
Drug interactions and side effects‡	4
Access to palliative care medicines and methods of administration	3.66
Role of palliative care nurse in the community setting*	3.60
Using critical reflection to enhance patient care*‡	3.21
Where to go for help – resources*‡	3
Most common cancer drugs used and anything else coming up/side effects of medicines and disease states they impinge on‡	2.86
What community services provide and how pharmacists can access these*‡	2.67
Wound management*	2.50
Navigating palliative care options in cancer care*	2.33
Complementary and alternative medicines and therapies used by patients with cancer (and interactions)	2.31
Nutrition*	1
Familiarisation of well-utilised resources*‡	1
Associated pathologies*‡	1

* embedded into another module
‡ embedded throughout the programme

The focus groups' priorities for the most important modules and key messages are presented in Table III. Twenty-two modules were identified, and their mean values ranged from 1 to 7.04. The five highest scoring modules were 'introduction and principles of palliative care' (7.04), 'management of cancer pain' (6.88), 'management of non-pain symptoms/side effects' (5.82), 'nausea and vomiting' (5.20), and 'ethical issues' (4.75). Multiple key messages emerged for each of the 22 modules (Table IV).

Final modules and key messages
The final module structure of the educational programme (Table IV) was developed by analysing and combining the data from the literature review, community pharmacists' mail survey and focus groups. The final programme comprised 11 modules, each containing from three to seven key messages and various activities. During review, the modules were collapsed, for example by including 'nausea and vomiting' in the 'management of non-pain symptoms and side effects of treatment' module and embedding 'diet and nutrition' throughout the programme where relevant (Table III). This was done with a view to adhering to the time allocated for pharmacists to complete the programme and to the presentation of the programme content according to a hierarchical structure, so that pharmacists could explore modules and their various topics in a non-linear fashion using the online links that were to be included.

Some modules were separated because it was felt that having certain modules together would overburden pharmacists with information and thus prevent them from remaining focussed whilst learning. For example, 'methods of drug administration' and 'access to palliative cancer care medicines' were initially combined in the draft module structure (Table I), but were separated for the final programme. The programme content was also refined in that 'using critical reflection to enhance practice' was originally a separate module (Table I), but was subsequently embedded throughout the programme to underpin the content of the modules and activities as a result of feedback from the focus groups. 'Getting the most from the programme' was added in place of 'using critical reflection to enhance practice' to introduce participants to the programme aims, resources and timelines.

Discussion

The focus groups validated, enhanced and refined the findings from the literature review and mail survey (Hussainy, Beattie et al., 2006) regarding the topics/modules to be included in the palliative cancer care programme and identified the key messages to be included in each of the modules as shown in Table IV. The NGT was therefore a valid and reliable research method for conducting the focus groups aimed at generating ideas and making decisions. As previous studies have reported, the NGT was also cost-effective, time-efficient, generated diverse ideas, permitted the expression of individual views and facilitated the development of group identity (Scott and Deadrick, 1982; O'Neill, 1983; Lloyd-Jones, Fowell et al., 1999). The NGT has also been shown to

Table IV: The modules and key messages in the flexible/online palliative cancer care educational programme

Modules	Key messages
Module 1: Getting the most from the programme	Finding your way around. Resources within the site. Resource folder. Critical reflection and analysis of practice. Finding the time. Recommended reading resources.
Module 2: Introduction: Principles of palliative cancer care	Palliative care: is holistic care, is about symptom control and not cure, involves multidisciplinary care. Suffering encompasses more than physical pain. Palliative care encompasses more than cancer care; it includes a variety of end-stage illnesses. Palliative cancer care involves navigating through the changing goals of care. Palliative care involves managing the self as well as the patient and carer/family. Palliative care is experience- and practice-based; this is reflected in the types of evidence used.
Module 3: Management of cancer pain	Pain relief is a human right. The approach to pain management should be aetiological and individualised. Patient involvement in their own pain management is crucial and requires education. Good pain management is based on thorough assessment of the pain. Strong pain requires strong analgesia. Opioid side effects can be minimised and well managed. Pain management needs to be systematised and coordinated.
Module 4: Management of non-pain symptoms and side effects of treatment	Recognising, monitoring and managing common symptoms will decrease distress. Non-pharmacological and pharmacological management of common symptoms are both important. Common symptoms that palliative care patients might present with to community pharmacists are: nausea and vomiting, anorexia and cachexia, constipation, diarrhoea, fatigue, dyspnoea, mucositis/stomatitis, dry mouth, dysphagia, anxiety, depression, delirium, fungating wounds. Patients may present with multiple co-morbidities. Community pharmacists may help prevent palliative care emergencies.
Module 5: Complementary and alternative medicines used by patients with cancer	Pharmacists need to: Know what CAM their patients are using. Monitor the effectiveness of complementary and alternative medicines, including dietary supplements in palliative cancer care. Recognise that there are complementary and alternative therapies that may assist pain relief, symptom control, and increase the comfort of patients. Base advice on current evidence. Refer patient/carers to the appropriate health care professional(s).
Module 6: Methods of medication administration	Pharmacists need a working knowledge of how palliative cancer care medicines can be administered and used in the home. The pharmacist's background in the pharmacology and pharmacokinetics of medicines can facilitate the use of optimal dosage forms (formulations) and routes of administration in palliative care medicine. An adequate supply of appropriate products, equipment and information for the delivery of palliative cancer care medicines, by a variety of routes, needs to be provided. Pharmacists need to be able to advise the patient and carer/family on the storage, safety and disposal of medicines and products.
Module 7: Access to palliative cancer care medicines	Ensure patients have timely access to required quantities of medicines. Communicate and collaborate with other members of the palliative care team to ensure access and uninterrupted supply of medicines, including those medicines prescribed off-label. Medication regimens may change frequently and may require 'urgent' supply of new medicines.
Module 8: Psychosocial care	Cancer creates or unmasks the threat of suffering and death, both of which have significant psychosocial sequelae on the patient and the carer/family. Patients and families with cancer have a higher incidence of: depression, anxiety, existential concerns, guilt, anger, grief, suicide. Family members also experience anticipatory grief and bereavement. Many primary carers express satisfaction with their role; however, others experience caring as a burden. Some cancer patients are at an increased risk of delirium and the carer/family usually suffers along with the patient. The patient's social and cultural background influences the psychological response. The pillars of care are: active listening, psycho-pharmacology, effective triage.
Module 9: Communication with patients, carers and families	Effective communication can positively affect the psychological and physical status of the patient and their carer/family. Communicating effectively with the patient and their carer/family assists health care practitioners to understand and obtain a 'complete picture' of the patient's physical and psychosocial health status. In palliative cancer care there is often the need to 'speak the unspeakable'. Effective communication refers both to the technique of communication and the content of the communiqué.
Module 10: Ethical issues	The principles of human health care ethics provide background guidance, rather than discreet answers to ethical questions in clinical practice. Ethical questions require consideration of the unique aspects of the situation. The process of communication is the most important tool in working toward a resolution of a clinical dilemma. With good communication, the varying perspectives and concerns of each party can be understood and acceptable solutions explored. Personal values and beliefs affect ethical decision-making.
Module 11: Working in partnerships to enhance patient care	Working in multiple partnerships is akin to multidisciplinary care, and is integral to the philosophy and provision of palliative care. A partnership approach enhances patient care. Working in partnership means different things to different people. The pharmacist is a key member of the palliative cancer care team. The pharmacist has a role to play in contacting and responding to requests from other members of the health care and palliative cancer care teams. Review and assessment of the effectiveness of medicines is crucial. Reviewing one's own practice is important in evaluating the partnership approach.

be a valid method for curriculum development (O'Neill, 1983).

To ensure that the groups' decision accurately reflected each individual's preferences, the mean value based on the number of judgements was used to determine the relative importance of each module (Table III), rather than the mean value based on sample size. If the mean value based on sample size had been used, the judgements of those participants who did not assign a ranking to a certain module would have been included, biasing the results by giving the false impression that the module was of less importance.

Of all the modules that the focus groups added to the draft structure of the educational programme (Table I), 'ethical issues' was the only one that had not been uncovered by the literature review and mail survey. Providing information to community pharmacists on ethical issues in palliative cancer care was recognised as important, not just because it was the fifth highest scoring module, but also because pharmacists may be confronted with situations related to dispensing medicines or providing information where ethical dilemmas arise (e.g. diversion of opioids, end-of-life treatment such as sedation, double-effect). In such situations, pharmacists need to be able to decide what to do and realise in whose interest a decision should be made. They must also be aware that there is an inherent interaction between a professional's personal values and beliefs and their responses to various ethical questions, and that the process of communication is an important tool in working toward a resolution of a clinical dilemma (Doyle, Hanks et al., 1998).

It also made sense to include 'using critical reflection to enhance patient care' as a component of the activities in the programme rather than a separate module because the likelihood of pharmacists realising the importance of critical reflection in learning would be higher. Having pharmacists make a decision with regard to a specific real-life scenario presented in the activity and then re-consider that decision after some time was envisaged as being more useful than having participants read about critical reflection and then do a series of activities in the one module. Also, the activities in each module were planned so that pharmacists would either have to share their responses with their peers or save and print them for later reference. Thus, participants would be engaging in a form of journal writing which supposedly allows flexible peer reflection if shared with an electronic community (Champagne, 2000).

While limitations of using the NGT are acknowledged (Delbecq, Van de Ven et al., 1975), none of these was believed to interfere with conducting the focus groups in this study.

The NGT requires extended preparation to clearly identify the information desired from a group, and therefore it is not a spontaneous technique. In this study, however, the outcomes gained outweighed the time and effort required for preparation of the focus groups in using the NGT. Using other interactive processes such as brainstorming or the Delphi Technique may have engaged participants in spontaneous dialogue, but would have been less effective in identifying the expert individuals' preferences for the modules and key messages to be included in the programme, and in achieving consensus across the three stakeholder groups.

The NGT is time-consuming, as each phase requires verbal and/or written input from each participant. The recording of ideas during the various stages of the process is also time-consuming. To overcome this limitation, the facilitator in this study needed to be efficient in conducting the NGT, with a view to obtaining comprehensive and quick results without overburdening participants. The facilitator adhered to the two-hour timeframe; however, in doing so, asked participants to identify but not rank the key messages.

The NGT is generally limited to a single-purpose, single-topic meeting as inflexibility of its structured format makes it difficult to make adjustments or change topics during a meeting. The NGT also needs agreement from all group members to use the same structured method, which may be difficult or immediately uncomfortable for inexperienced participants. To address these limitations, participants in this study were provided with information on the aims of the focus groups before the meetings. They were also informed that the NGT would be used, and were comfortable with being involved in such a structured process. Providing this information allowed participants to focus their deliberations. Individuals were additionally briefed about the NGT at the beginning of the meetings.

Conclusion

The Nominal Group technique worked effectively as part of an iterative process for determining the content of an educational programme for Australian community pharmacists. Despite identified limitations, this process was able to synthesise the views of a variety of groups to obtain consensus regarding the educational programme curriculum. A flexible/online palliative cancer care educational programme based on this curriculum was subsequently developed to address the identified educational needs of Australian community pharmacists in this area. It is hoped that the findings of this study will increase the confidence of other researchers, particularly healthcare educators, in using focus groups employing the NGT, to aid decision-making related to curriculum design.

Acknowledgments

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