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Title	Community pharmacists' opinions on their palliative care education needs and preferences of delivery of an educational programme, a qualitative study
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Publication date	2022-06-27
Original Citation	Flannery, M., Carmichael, A., Bermingham, M. and Murphy K. (2022) 'Community pharmacists' opinions on their palliative care education needs and preferences of delivery of an educational programme, a qualitative study', Pharmacy Education, 22(1), pp. 637-646. doi: 10.46542/pe.2022.221.637646
Type of publication	Article (peer-reviewed)
Link to publisher's version	https://pharmacyeducation.fip.org/pharmacyeducation/article/view/1574 - 10.46542/pe.2022.221.637646
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Download date	2026-11-03 00:43:49
Item downloaded from	https://hdl.handle.net/10468/13477



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Pharmacy Education (2022) 22(1) 637 - 646
https://doi.org/10.46542/pe.2022.221.637646

RESEARCH ARTICLE

Community pharmacists' opinions on their palliative care education needs and preferences of delivery of an educational programme, a qualitative study

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Keywords
Continuing education
Palliative care
Pharmacist
Professional development
Qualitative research

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Abstract

Background: The provision of medication and pharmaceutical care is an essential component of palliative care (PC). Lack of education in PC is a barrier to some community pharmacists providing care to PC patients. **Objective:** To explore community pharmacists' understanding of PC, their opinions of their PC education needs and to determine their preferences regarding delivery of a PC education programme. **Method:** This study used a qualitative approach by means of semi-structured face-to-face interviews. Convenience and snowball sampling were used to select the sample population. **Results:** Three main themes were identified when exploring PC education needs; (i) lack of knowledge about palliative care, (ii) role of community pharmacists in palliative care, and (iii) perceived barriers to accessing further education. Community pharmacists' preferences for the delivery of an education programme were influenced by perceived barriers to accessing further education. **Conclusion:** Community pharmacists' understanding of PC highlighted a knowledge deficit which may be improved with further education.

Introduction

The provision of medication and pharmaceutical care is an essential component of palliative care (PC), and pharmacists are pivotal in supporting all PC patients. Community pharmacists (CPs) have the potential to contribute to the care of those receiving PC. An independent multidisciplinary review team in the United Kingdom (UK) found that CPs who are appropriately trained and included as integrated members of the team can intervene effectively to improve the pharmaceutical care of PC patients (Needham *et al.,* 2002).

One of the barriers to CPs contributing to the care of PC patients may be a lack of education and training in the area. International and national health policies have highlighted the need to educate pharmacists in PC (World Health Assembly, 2014, Department of Health and Children, 2001; Gamondi *et al.,* 2013; All Ireland Institute of Hospice and Palliative Care, 2015). Several studies have indicated that CPs internationally lack knowledge in the area of PC (Hussainy *et al.,* 2006; Borgsteede *et al.,* 2011; O'Connor *et al.,* 2011; Akram *et al.,* 2012; O'Connor *et al.,* 2013; Savage *et al.,* 2013). CPs in Australia reported that effective communication was a key component of PC, stating a lack of education in this area as a reason for ineffective communication with PC patients (O'Connor *et al.,* 2011). Two studies have highlighted opioid conversions as an area of difficulty for community pharmacists (Borgsteede *et al.,* 2011; Savage *et al.,* 2013). In Scotland, CPs expressed they had limited knowledge or understanding of their role within the PC team (Akram *et al.,* 2012). An evidence-based, flexible online palliative cancer care programme was developed for CPs in Australia. Participants reported that this programme addressed their education needs, improved their knowledge and confidence, and positively impacted their practice (Hussainy *et al.,* 2010).

Currently, there is a paucity of literature regarding opinions of CPs on their PC education needs. Evidence from available studies is conflicting. In Australia, the majority of CPs said they would participate in an online

PC education programme, while in The Netherlands, the majority felt they had enough options for continuing education on the topic (Hussainy *et al.,* 2006; Borgsteede *et al.,* 2011). Currently, there is no educational programme to address the PC education needs of CPs in Ireland. Before developing an educational programme, the opinions of CPs in Ireland of their PC education needs and preferences should be ascertained.

Therefore, this study aims to explore the understanding of CPs of PC, ascertain CPs' opinions of their PC education needs, and determine their preferences regarding the delivery of a PC education programme.

Methods

Study design

A qualitative approach by means of face-to-face interviews was chosen to allow for flexible exploration of CPs' opinions and produce rich data for a deeper understanding of the phenomena.

Setting

The study took place in community pharmacies throughout the county of Cork, Ireland, in June and July 2019. The geographical location was limited because it was envisaged that the proposed educational programme would target CPs in this area.

Participants

The inclusion criteria were pharmacists registered with the Pharmaceutical Society of Ireland (PSI), practising in a community pharmacy in Cork city or county, and having a patient-facing role. The exclusion criteria were pharmacists who were not registered with the PSI or considered not fit to practise and pharmacists not practising in a community pharmacy with a patient-facing role in Cork city or county.

Convenience sampling and snowball sampling were the two sampling techniques used to select the sample population. CPs were invited via telephone or email to take part in the study. Before a participant agreed to take part in the study, an information sheet detailing the purpose of the study was provided to each participant by email. All participants provided written informed consent agreeing to take part in the study prior to the start of the interview. The initial sample size was ten participants. After ten interviews, three further interviews were conducted. Sampling ceased after data saturation was achieved, and no more new themes emerged from the empirical material in the last three interviews (Francis *et al.,* 2010).

Topic guide

Interviews were semi-structured and guided by a topic guide (Appendix A). The topic guide was developed based on the principal researcher's own experience of the subject area and a preliminary review of the literature. The topic guide was then peer-reviewed by two academic researchers, who are registered pharmacists, and by a CP with ten years of experience who could provide the perspective of an interviewee before the topic guide was finalised. A pilot interview was conducted with an academic pharmacist with ongoing community pharmacy experience to gain additional feedback on the topic guide. The topic guide was modified to reflect the feedback gained through the peer review and the pilot interview. The pilot interview was not included in the final data analysis.

Data collection

All interviews except one took place in the private consultation rooms of the community pharmacies where the participants were working. One interview took place in the principal researcher's workplace. Prior to the start of the interview, participants completed a short, written questionnaire to gather demographic data to aid analysis (Appendix B). During the interview, topics were introduced with broad, open-ended questions to allow participants to express their opinions. Appropriate probing questions (encouraging the participant to consider the question further) were used when necessary to prompt more in-depth views from the participants or if a participant was having difficulty answering a question or provided only a brief response. Participants were also given the opportunity to express additional views on the topic at the end of the interview. Interviews were recorded using a digital voice recorder, transcribed verbatim, and anonymised by the researcher. Field notes were taken during the interview and immediately after.

The principal researcher of this study is a pharmacist working in a specialist PC setting in a local hospice. All participants were aware of this prior to being interviewed. Although every effort was made to remain impartial during interviews, participants may have given opinions that were seen as favourable to the views of the researcher or to the hospice.

Data analysis

Braun and Clarke's method of thematic analysis for qualitative research was employed (Braun and Clarke, 2006). The researcher familiarised themselves with the data by reading and re-reading the transcripts. Transcripts were then coded and analysed for recurring

themes by the researcher. Analysis was facilitated by NVivo 12.

Ethical approval

Ethical approval was obtained from the Social Research Ethics Committee of the School of Pharmacy, University College Cork (Reference Number: 2019-004).

Results

A total of 13 CPs were approached, and all agreed to participate. Interviews were a mean length of 16 minutes (maximum = 34 minutes, minimum = 9 minutes). Participants' demographic data are summarised in Table I. Analysis of the data revealed three themes and seven categories (Table II). Supporting quotes from interviewees are provided in Table III for each theme and category.

Community pharmacists' lack of knowledge of palliative care

One main theme was identified, CPs' lack of knowledge of PC. This was evidenced by CPs' association of PC with end-of-life care only, their expressed need for PC education, and, in particular, their need for further education on medicines management and PC principles.

Palliative Care as End-of-Life Care

CPs associate PC with the care of patients at the end of their life. Participants expressed that PC was about offering patients comfort at the end of their life through relief of pain and other symptoms. Although some CPs recognised that PC might be in place for a length of time preceding a patient's death, the majority of pharmacists associated PC with the care of a patient whose death is imminent. CPs also associated PC with the care of a patient who is no longer receiving "active treatment". Medications that participants most associated with PC were those administered in a continuous subcutaneous infusion. Opioids, anticholinergics, antipsychotics and benzodiazepines in injectable formulations were cited most often. The condition most associated with PC was cancer, although some pharmacists recognised that other conditions might be associated with PC.

Need for education in palliative care

Community pharmacists expressed a need for further education to increase their knowledge in the area of PC. CPs felt that, by increasing their confidence when dispensing, a PC education course would positively impact the services they provide, thereby improving medication safety. However, others stated that such education would not change the services currently offered. CPs expressed a need for more PC education at the undergraduate level to improve the knowledge of newly-qualified pharmacists.

Table I: Participant demographics

Description		n
Gender	Male	2
	Female	11
Pharmacist grade*	Supervising pharmacist	9
	Support pharmacist	4
Number of years registered	0 - 5	2
	6 - 10	3
	11 - 20	7
	21 - 41	1
Location of undergraduate education	Ireland	7
	United Kingdom	6
Palliative care training	Undergraduate	3
	Postgraduate	0
	None	10
Previous employment	Hospital	4
	Hospice	0
	None	9
Pharmacy serving a nursing home	Yes	4
	No	9
Number of palliative care patients in past 12 months	1-10	6
	10 -20	2
	20-40	5

* In Ireland a supervising pharmacist is a pharmacist who is in whole-time charge of the operation of a pharmacy, and has at least three years' post-registration experience

Table II: Summary of themes and categories identified

Themes	Categories identified
Lack of knowledge about palliative care	• Palliative care as end-of-life care • Need for education in palliative care • Medication management education • Palliative care principles
Role of community pharmacists in palliative care	• Communication and support of patient, family and carers • Community pharmacists' role within the multidisciplinary team
Perceived barriers to accessing further education	• Perceived barriers to accessing further education

Table III: Themes, categories and illustrative quotes related to community pharmacists' views of their palliative care education needs

Theme	Category	Illustrative quotes
Lack of knowledge about palliative care	Palliative Care as end-of-life care	*"It's end-of-life care. So, if a patient's deteriorating, palliative care is usually anti-sickness meds and pain relief meds to make them comfortable. That's my understanding."* ***CP4***
		'Something that will make someone's passing a lot easier, that will make it more comfortable for them in the weeks, potentially months, maybe days before somebody passes, that it is something to keep somebody comfortable." ***CP1***
		"When there is no more active treatment that would be beneficial to them. You want to make them as comfortable as possible." ***CP6***
		"Usually the syringe drivers is the first thing that enters my head when I think of palliative care." ***CP10***
		"You would see it sometimes in other chronic illnesses, but mainly, the traditional one you would see is cancer or motor neurone disease or something like that sometimes." ***CP7***
	Need for education in palliative care	*"There definitely is a deficit there. It's something that isn't even covered too much in any CPD, journals or even courses."* ***CP8***
		"It would give me greater confidence, and it would mean that you know what you're giving out from a dosing point of view is 100%; it's in the right range, and it's the appropriate dose for the appropriate condition for treatment." ***CP12***
		"Certainly, it would make us better healthcare professionals if we knew more about what we're dispensing and supplying." ***CP8***
		"I'm not sure would it have a huge change in what we do. I think it would have some benefit, but I'm not sure would it have a huge change in what we do. Because you're still, at the end of the day just going to dispense." ***CP7***
		"This would be an important area that they could focus on when you're studying pharmacy. I hadn't a clue about it, not a notion until I went out into the working world, or even pre-reg. So, there could be a little module on it to train people on it." ***CP5***
	Medication management education	*"With regards to the medicines themselves, I'm fine with most of them. You can look it up. You can access information on the SPCs"* ***CP2***
		"You would be unsure, based on the doses. They're different to what's recommended in the BNF [British National Formulary] or whatever." ***CP10***
		"I've never even seen a syringe driver. That kind of stuff is very specialised and it's very important that you get it right." ***CP8***
		"Opioid conversion. It's so important, and we see some patients who are taken from… changed from patches, and I find that very tricky. I would be afraid… I've had to make a few phone calls about opioid patch conversions to oral." ***CP12***
		"Talking about the non-essential meds, what are they? When is that decision made to take people off? That would be an interesting. Talking about when that decision is made, how you make that decision" ***CP1***
	Palliative care principles	*"An awareness more around palliative care, what it actually means, the definition. Because I was actually speaking to somebody in Marymount [Hospice] another time. I assumed that patient was nearing end-of-life, and that patient wasn't. And she was like, 'Palliative care doesn't always mean death,' is what she said to me. 'It means helping them along while they're still here and helping them maintain their quality of life until a certain point comes.' And that for me was a revelation, because I always assumed that death's close."* ***CP2***
		"I don't know a lot about the structure of palliative care, who's the palliative care nurse and how that all works. We're often told, 'The palliative care nurse is coming in at four o'clock today.' But is that someone external? I don't know an awful lot about the actual structure of palliative care in Ireland." ***CP3***
		"At what stage do the doctors go or the team goes, 'This person is now palliative care. That is terminal.' That… how do they make that decision? I don't know how they make

Theme	Category	Illustrative quotes
		that decision. And I'd love to see it as in, that's my start point in the training. How do they make that decision that somebody is in palliative care and what are the next steps?" ***CP1***
Role of community pharmacists in palliative care	Communication and support of patient, family and carers	*"We often would have family members who would be really upset, and maybe just a little course on how the pharmacist could be a bit more empathetic towards the family."* ***CP3*** *"Sometimes the medication can be easy enough to research, but maybe the human side of it a little bit. As in, I know families or friends can go through a range of emotions, and just so that we'd have something about that, about what they might be going through."* ***CP13*** *"What kind of services are offered to the family in support? Just so you'd know what support that that person has available to them, because I know very little about that."* ***CP2***
	Community pharmacists' role within the multidisciplinary team	*"They're so experienced with using the syringe driver. They're dealing with it on a daily basis. They're usually on the ball. I've had very good contact with Marymount. I've found the nurses very helpful and very on the ball, I have to say."* ***CP10*** *"The nurses can talk me through what medications are needed, why they're needed. They'll generally talk about the doses, and that to me is worth its weight in gold, that somebody picks up the phone and rings the community pharmacy before the patient arrives."* ***CP1*** *"My first and foremost concern would be to make sure I have a stock for them. Because I have an appreciation that they're not alone in regards to administering and that they'll have a good support network from the hospice."* ***CP8*** *"It's very much, just dispense the script. That's all we do, is just dispense what's on the prescription. I don't have to think about anything else only dispensing"* ***CP3***
Perceived barriers to accessing further education	Perceived barriers to accessing further education	*"It would be much more valuable to have a health professional who has lived experience of it, who does this regularly, who can answer hard questions because they've come across it. So, meeting somebody with that level of experience who could go through it with you, a half day face-to-face would be much more valuable than a leaflet."* ***CP1*** *"You can have a live recording of the lecture and then put it online afterwards, so that the people who want to go and be there can be there."* ***CP13*** *"I learn better from reading, literally sit down and read it. That's how I learn better. I know a lot of people like oral presentations. I'm better in book form."* ***CP5*** *"I think a webinar is good. It's hard to try and get out with commitments in the evenings. It's probably the best way of learning, if you go to a live thing, but my situation at home at the moment, it's just not possible. I've a small child."* ***CP13*** *"I'd gladly go to one during the day, but I wouldn't be given the time off, so it would probably have to be out of hours."* ***CP2*** *"It can be difficult to get the time. That's why… especially if you're working in a late-night pharmacy, your evenings are precious enough as it is."* ***CP7***

Medication management education

CPs expressed different opinions on their knowledge of the use of medications in PC. Some pharmacists reported they had sufficient knowledge of the medicines used in PC, while others expressed the need for further education in the area of unlicensed medicines or off-label indications. CPs expressed the need for further education in specific areas of medication management associated with PC. One topic that was referred to frequently was the use of continuous subcutaneous infusions and the operation of syringe drivers; another was opioid conversion. Community pharmacists also felt they would like more education on the topic of deprescribing in PC.

Palliative care principles

CPs felt they needed more education regarding the principles of PC and expressed a need to increase their knowledge of the structure of palliative care in Ireland. One of the topics that were highlighted was the need for greater awareness of the journey of the patient through palliative care.

Role of community pharmacists in palliative care

The second theme that emerged was the role of CPs in providing palliative care.

Communication and support of patient, family, and carers

CPs expressed a need for more education and training in communicating with and supporting families through emotional times. They also reported a need to be able to signpost patients, families, and carers to other services to offer emotional support.

Community pharmacists' role within the multidisciplinary team

CPs continually cited the support of the local hospice when seeking information regarding PC or the care of a PC patient. CPs relied on the knowledge and expertise of PC nurses who were visiting the patients and considered them very experienced in the area of PC. CPs expressed an appreciation for PC nurses when given advance notice to allow them to order medication in a timely manner. They often viewed their role within the multidisciplinary team as limited solely to the supply of medication.

Perceived barriers to accessing further education

The final theme that emerged related to access to PC education. CPs expressed differences in the way they would like an educational programme to be delivered. Preferred methods of delivery included a face-to-face one-day course, face-to-face evening course, live online webinar, recorded webinar, and an information booklet which could be read independently. Methods of delivery were influenced by community pharmacists' personal preferences of learning as well as their perceived barriers to engaging with further education. Barriers cited included lack of time, working long hours, working in a busy pharmacy, and family commitments.

Discussion

In this qualitative study exploring opinions of CPs on their PC education needs and methods of delivery of an educational programme, CPs expressed a clear need for further education to increase their knowledge of PC, particularly in areas of medication management, communication, and emotional support of patients, families, and carers. CPs differed in their preferences for the delivery of this education.

The term 'end-of-life' refers to the point of receiving a life-limiting diagnosis through the months before death, up to and including the final hours, a continuum rather than a point in time (Irish Hospice Foundation, 2017b). Some pharmacists associated PC with the care of a patient no longer receiving active treatment. They also used the words death and dying when describing their understanding of PC. It appears from these associations that community pharmacists associate PC with the care of a patient who is dying. This finding highlights the need for CP education on the role of PC for patients with life-limiting conditions. Studies have shown that earlier PC involvement can result in better clinical outcomes for patients in terms of symptom burden, quality of life, prognosis, and end-of-life outcomes (Connor *et al.,* 2007; Higginson & Evans, 2010; Temel *et al.,* 2010; Howie & Peppercorn, 2013).

This study found that CPs mainly associated PC with patients who have cancer. However, patients with many non-malignant diseases have the capacity to benefit from PC services and have symptom profiles comparable to cancer patients (Irish Association for Palliative Care, 2019). The proportion of non-cancer patients in receipt of specialist PC in the community is increasing each year. In 2015, 29% of new PC patients in the community in Ireland had a non-cancer diagnosis (Irish Hospice Foundation, 2017a).

CPs expressed a need for further education to increase their knowledge in PC. This result is consistent with multiple international findings showing that CPs lack knowledge in the area of PC (Hussainy *et al.,* 2006; Borgsteede *et al.,* 2011; O'Connor *et al.,* 2011; Akram *et al.,* 2012; O'Connor *et al.,* 2013; Savage *et al.,* 2013). Although some welcomed the positive effect further education would have on their knowledge and confidence when dispensing medications, they did not think it would impact the services they provide to PC patients at present. The views of CPs in this study might be influenced by the current structure of pharmacy services in Ireland, where reimbursement is focused on the supply of medications rather than clinical interventions (HSE, 2006). A PSI report on the future of pharmacy practice in Ireland published in 2016 highlighted reimbursement of further services as a substantial enabler to the advancement of clinical pharmacy activities in community pharmacy (Pharmaceutical Society of Ireland, 2016). A study in the UK found that community pharmacists who are appropriately trained and included as integrated members of the team can intervene effectively to improve the pharmaceutical care of PC patients (Needham *et al.,* 2002).

PC education at the undergraduate level to improve the knowledge of newly qualified pharmacists was highlighted by CPs. This view is in line with a study involving pharmacy students in Southern India, which found almost 50% had no knowledge of the philosophy of PC (Sujatha & Jayagowri, 2017). A school of pharmacy

in the United States evaluated the effect of high-fidelity simulation on pharmacy students' attitudes and perceived competencies in providing end-of-life care in an interdisciplinary PC course. Pharmacy students reported improved knowledge regarding symptom management, communication about end-of-life issues, and overall end-of-life care (Gilliland *et al.,* 2012).

Further education in particular areas of medication management in PC were emphasised by CPs in this study, such as the use of continuous subcutaneous infusions, opioid conversion and deprescribing. The topic of continuous subcutaneous injections and opioid conversions has been previously highlighted as an area of difficulty. (Borgsteede *et al.,* 2011; Savage *et al.,* 2013). Deprescribing has not been previously reported as a PC education need amongst CPs. Some pharmacists expressed they had sufficient knowledge of the medicines used in PC, while others reported the need for further education in the area of unlicensed medicines or off-label indications. Education on evidence-based PC resources could address this need.

This study found that CPs would like more education and training in communicating with and emotionally supporting families. This finding demonstrates that CPs feel they are a part of the support network for PC patients and their families in the community. The suggestion of signposting patients, families and carers to other services to offer emotional support was also highlighted. In an Australian study, many CPs expressed a clear need for continual professional development in the area of communication and PC (O'Connor *et al.,* 2011). Additionally, challenges to effective communication were exacerbated after bereavement, and grief was difficult to deal with in the community. In two further studies, participants also reported dealing with emotions as a barrier to effective communication (Ise *et al.,* 2010; Savage *et al.,* 2013).

The positive impact of the role of the pharmacist in the multidisciplinary team in inpatient hospice PC and hospital settings has been demonstrated (Wilson *et al.,* 2011; Ise *et al.,* 2014; Duffy *et al.,* 2018). Previous research has shown that CPs are unsure of their role within the PC multidisciplinary team (Akram *et al.,* 2012), most of them feeling that their role is limited solely to the supply of medication. CPs also relied on the knowledge and expertise of PC nurses and their local hospice when seeking knowledge regarding PC or information regarding a particular patient or when planning for the timely supply of medication. They viewed PC nurses as experts in their field. The use of advance care planning in ordering medications has been highlighted in several studies (Akram *et al.,* 2012; Savage *et al.,* 2013). This collaborative planning reduces barriers concerning timely medication access for a PC patient. Further education may increase CPs' confidence to extend their role within the PC multidisciplinary team, as previously demonstrated in the UK (Needham *et al.,* 2002).

An Australian quantitative study found that 85% of CPs were willing to participate in an online PC education programme (Hussainy *et al.,* 2006). In contrast, the current study demonstrated that CPs differed in their preferences for the delivery of education. Preferred methods included face-to-face one-day courses, face-to-face evening courses, live online webinars, recorded webinars, and information booklets, which could be read independently. These individual preferences were associated with the pharmacists' perceived barriers to accessing further education.

Limitations

The geographical location of this study was limited to one region of Ireland. This region was chosen as it is planned to develop an educational programme for community pharmacists in this area. The region was also chosen as it is served by specialist PC services. The CPs in this study often highlighted these services when discussing their opinions. It is important to acknowledge that there is a lack of consistency in the availability and structure of specialist PC services both nationally and internationally. This may limit the generalisability of the results of this study.

Conclusion

This qualitative study found that CP's associate PC with end-of-life care of patients with cancer. CPs expressed a clear need for further education to increase their knowledge of PC, particularly education in medication management, palliative care principles, and communication with and psychological support of patients, families, and carers. A flexible education programme would be required to enable community pharmacists to participate in PC education.

Competing interests

No competing financial interests exist.

Acknowledgements

The authors thank all pharmacists who participated in this study for their time and contributions.

References

Akram, G., Bennie, M., McKellar, S., Michels, S., Hudson, S., & Trundle, J. (2012). Effective delivery of pharmaceutical palliative care: challenges in the community pharmacy setting. *Journal of palliative medicine*, ***15***(3), 317–321. https://doi.org/10.1089/jpm.2011.0262

All Ireland Institute of Hospice and Palliative Care. (2015). Position Statement on Palliative Care Education on the Island of Ireland. [Online]. Available: https://aiihpc.org/wp-content/uploads/2018/12/Palliative-Care-Education-Position-Statement-.pdf

Borgsteede, S. D., Rhodius, C. A., De Smet, P. A., Pasman, H. R., Onwuteaka-Philipsen, B. D., & Rurup, M. L. (2011). The use of opioids at the end of life: knowledge level of pharmacists and cooperation with physicians. *European journal of clinical pharmacology*, ***67***(1), 79–89. https://doi.org/10.1007

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, **3***, 77-101. https://doi.org/10.1191/1478088706qp063oa

Connor, S. R., Pyenson, B., Fitch, K., Spence, C., & Iwasaki, K. (2007). Comparing hospice and nonhospice patient survival among patients who die within a three-year window. *Journal of pain and symptom management*, ***33***(3), 238–246. https://doi.org/10.1016/j.jpainsymman.2006.10.010

Department of Health and Children. (2001). Report of the National Advisory Committee on Palliative Care. [Online]. Available: https://health.gov.ie/wp-content/uploads/2014/03/nacpc.pdf

Duffy, A. P., Bemben, N. M., Li, J., & Trovato, J. (2018). Facilitating Home Hospice Transitions of Care in Oncology: Evaluation of Clinical Pharmacists' Interventions, Hospice Program Satisfaction, and Patient Representation Rates. *The American journal of hospice & palliative care*, ***35***(9), 1181–1187. https://doi.org/10.1177/1049909118765944

Francis, J. J., Johnston, M., Robertson, C., Glidewell, L., Entwistle, V., Eccles, M. P., & Grimshaw, J. M. (2010). What is an adequate sample size? Operationalising data saturation for theory-based interview studies. *Psychology & health*, ***25***(10), 1229–1245. https://doi.org/10.1080/08870440903194015

Gamondi, C., Larkin, P. & Payne, S. (2013). Core competencies in Palliative Care: An EAPC White Paper on Palliative Care Education - Part 1. *European Journal of Palliative Care, **20**,* 86-91. http://hdl.handle.net/10147/325629

Gilliland, I., Frei, B. L., McNeill, J., & Stovall, J. (2012). Use of high-fidelity simulation to teach end-of-life care to pharmacy students in an interdisciplinary course. *American journal of pharmaceutical education*, ***76***(4), 66. https://doi.org/10.5688/ajpe76466

Higginson, I. J., & Evans, C. J. (2010). What is the evidence that palliative care teams improve outcomes for cancer patients and their families?. *Cancer journal (Sudbury, Mass.)*, ***16***(5), 423–435. https://doi.org/10.1097/PPO.0b013e3181f684e5

Howie, L., & Peppercorn, J. (2013). Early palliative care in cancer treatment: rationale, evidence and clinical implications. *Therapeutic advances in medical oncology*, ***5***(6), 318–323. https://doi.org/10.1177/1758834013500375

Health Service Executive. (2006). National Shared Services Primary Care Reimbursement Service Information and Administrative Arrangements For Pharmacists [Online]. Available: https://www.hse.ie/eng/staff/pcrs/contractor-handbooks/pcrs-handbook-for-pharmacists.pdf

Hussainy, S. Y., Beattie, J., Nation, R. L., Dooley, M. J., Fleming, J., Wein, S., Pisasale, M., Scott, W. J., & Marriott, J. L. (2006). Palliative care for patients with cancer: what are the educational needs of community pharmacists?. *Supportive care in cancer : official journal of the Multinational Association of Supportive Care in Cancer*, ***14***(2), 177–184. https://doi.org/10.1007/s00520-005-0844-1

Hussainy, S. Y., Marriott, J. L., Beattie, J., Nation, R. L., & Dooley, M. J. (2010). A palliative cancer care flexible education program for Australian community pharmacists. *American journal of pharmaceutical education*, ***74***(2), 24. https://doi.org/10.5688/aj740224

Irish Association for Palliative Care. (2019). What is Palliative Care? [Online]. Available: http://www.iapc.ie/about-us/what-is-palliative-care/

Irish Hospice Foundation. (2017a). National Summary of Patient Activity Data for Adult Specialist Palliative Care Services in The Republic of Ireland, 2012-2015 [Online]. Available: http://hospicefoundation.ie/wp-content/uploads/2017/12/National-Survey-of-Patient-Activity.pdf

Irish Hospice Foundation. (2017b). What is Palliative Care? [Online]. Available: https://hospicefoundation.ie/aboutus/hospice-palliative-and-end-of-life-care/what-is-palliative-care/

Ise, Y., Morita, T., Katayama, S., & Kizawa, Y. (2014). The activity of palliative care team pharmacists in designated cancer hospitals: a nationwide survey in Japan. *Journal of pain and symptom management*, ***47***(3), 588–593. https://doi.org/10.1016/j.jpainsymman.2013.05.008

Ise, Y., Morita, T., Maehori, N., Kutsuwa, M., Shiokawa, M., & Kizawa, Y. (2010). Role of the community pharmacy in palliative care: a nationwide survey in Japan. *Journal of palliative medicine*, ***13***(6), 733–737. https://doi.org/10.1089/jpm.2009.0362

Laaksonen, R., Duggan, C. & Bates, I. (2009). Overcoming barriers to engagement in continuing professional development in community pharmacy: A longitudinal study. *Pharmaceutical Journal, **282**,* 44-48. https://pharmaceutical-journal.com/article/research/overcoming-barriers-to-engagement-in-continuing-professional-development-in-community-pharmacy-a-longitudinal-study

Needham, D. S., Wong, I. C., Campion, P. D., & Hull and East Riding Pharmacy Developmnet Group (2002). Evaluation of the effectiveness of UK community pharmacists' interventions in community palliative care. *Palliative medicine*, ***16***(3), 219–225. https://doi.org/10.1191/0269216302pm533oa

O'Connor, M., Fisher, C., French, L., Halkett, G., Jiwa, M., & Hughes, J. (2011). Exploring the community pharmacist's role in palliative care: focusing on the person not just the prescription. *Patient education and counseling*, ***83***(3), 458–464. https://doi.org/10.1016/j.pec.2011.04.037

O'Connor, M., Hewitt, L. Y., & Tuffin, P. H. (2013). Community pharmacists' attitudes toward palliative care: an Australian nationwide survey. *Journal of palliative medicine*, ***16***(12), 1575–1581. https://doi.org/10.1089/jpm.2013.0171

Pharmaceutical Society of Ireland. (2016). Future Pharmacy Practice in Ireland: Meeting Patients' Needs [Online]. Available: https://www.thepsi.ie/Libraries/Pharmacy_Practice/PSI_Future_Pharmacy_Practice_in_Ireland.sflb.ashx

Savage, I., Blenkinsopp, A., Closs, S. J., & Bennett, M. I. (2013). 'Like doing a jigsaw with half the parts missing': community pharmacists and the management of cancer pain in the community. *The International journal of pharmacy practice*, ***21***(3), 151–160. https://doi.org/10.1111/j.2042-7174.2012.00245.x

Sujatha, R., & Jayagowri, K. (2017). Assessment of Palliative Care Awareness among Undergraduate Healthcare Students. *Journal of clinical and diagnostic research : JCDR*, ***11***(9), JC06–JC10. https://doi.org/10.7860/JCDR/2017/29070.10684

Temel, J. S., Greer, J. A., Muzikansky, A., Gallagher, E. R., Admane, S., Jackson, V. A., Dahlin, C. M., Blinderman, C. D., Jacobsen, J., Pirl, W. F., Billings, J. A., & Lynch, T. J. (2010). Early palliative care for patients with metastatic non-small-cell lung cancer. *The New England journal of medicine*, ***363***(8), 733–742. https://doi.org/10.1056/NEJMoa1000678

Wilson, S., Wahler, R., Brown, J., Doloresco, F., & Monte, S. V. (2011). Impact of pharmacist intervention on clinical outcomes in the palliative care setting. *The American journal of hospice & palliative care*, ***28***(5), 316–320. https://doi.org/10.1177/1049909110391080

World Health Assembly. (2014). Strengthening of palliative care as a component of comprehensive care throughout the life course. [Online]. Available: http://apps.who.int/gb/ebwha/pdf_files/WHA67/A67_R19-en.pdf

Appendix A: Topic Guide

1. What do you understand by the term palliative care?
   Prompt if required: what comes to mind when you hear the term palliative care?

2. What is your experience of palliative care?
   Prompt if required: Can you remember working with any palliative care patients?

3. What type of medicines do you associate with palliative care?
   Prompt if required: Any particular medicines that you think are used more often in palliative care?

4. When you need more information on palliative care, where do you seek your answers?
   Prompt if required: online, text, phone other pharmacists.

5. What information do you think you need to know about palliative care?
   Prompt if required: Anything in particular you feel you need to know regarding palliative care?

6. Describe how a palliative care education programme for community pharmacists would impact the service you provide to palliative care patients.
   Prompt if required: positive, no change
7. Tell me about the topics which you would you like to see in an education programme for community pharmacists in palliative care.
   Prompt if required: opioids, anti-emetics, constipation, syringe driver medicines, formulations communication, reimbursement of unlicensed medicines.

8. How would you like an education programme on palliative care to be delivered?
   Prompt if required: online, information evening, information booklet.

9. Is there anything else you would like to add?

Appendix B: Demographic Data Form

- Gender: Male _____ Female ____

- How many years have you worked as a community pharmacist? _____ years
- Pharmacist grade:
  Supervising _____ Support _____ Locum____
- Have you previously worked in a hospice/hospital?
  Hospice _____ Hospital _____ Both _____ Neither ____
- Location of Undergraduate Training:
  Ireland _____ United Kingdom _____ Other _____
- Did you have any undergraduate or postgraduate training in palliative care?
  Undergraduate _____ Postgraduate _____Both_____ Neither___
- Is your pharmacy serving a nursing home? Yes ____ No_____
- How many palliative care patients have you provided services to in the last twelve months?
  Zero _____ 0- 10 _____ 10-20_____ 20-40 _____ 40+ _____