Original Article

Learner Experiences Matter in Interprofessional Palliative Care Education: A Mixed Methods Study

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Abstract

Context. Interprofessional collaboration is needed in palliative care and many other areas in health care. Pallium Canada's two-day interprofessional Learning Essential Approaches to Palliative care Core courses aim to equip primary care providers from different professions with core palliative care skills.

Objectives. Explore the learning experience of learners from different professions who participated in Learning Essential Approaches to Palliative care Core courses from April 2015 to March 2017.

Methods. This mixed methods study was designed as a secondary analysis of existing data. Learners had completed a standardized course evaluation survey online immediately post-course. The survey explored the learning experience across several domains and consisted of seven closed ended (Likert Scales; 1 = "Total Disagree", 5 = "Totally Agree") and three open-ended questions. Quantitative data were analyzed using descriptive statistics and Kruskal-Wallis non-parametric test tests, and qualitative data underwent thematic analysis.

Results. During the study period, 244 courses were delivered; 3045 of 4636 participants responded (response rate 66%); physicians (662), nurses (1973), pharmacists (74), social workers (80), and other professions (256). Overall, a large majority of learners (96%) selected "Totally Agree" or "Agree" for the statement "the course was relevant to my practice". A significant difference was noted across profession groups; X^2 (4) = 138; $p < 0.001$. Post-hoc analysis found the differences to exist between physicians and pharmacists (X^2 = -4.75; $p < 0.001$), and physicians and social workers (X^2 = -6.63; $p < 0.001$). No significant differences were found between physicians and nurses (X^2 = 1.31; p = 1.00), and pharmacists and social workers (X^2 = -1.25; p = 1.00). Similar results were noted for five of the other statements.

Conclusion. Learners from across profession groups reported this interprofessional course highly across several learning experience parameters, including relevancy for their respective professions. Ongoing curriculum design is needed to fully accommodate the specific learning needs of some of the professions. J Pain Symptom Manage 2022;000:1−13. © *2022 The Authors. Published by Elsevier Inc. on behalf of American Academy of Hospice and Palliative Medicine. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).*

Key Words

Palliative, education, interprofessional, palliative approach, primary care

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Key Message

In this study, the large majority of learners across different professions (including physicians, nurses, pharmacists and social workers) rated an interprofessional two days palliative care course targeting primary care providers as highly relevant for their respective practices and a positive learning experience. Given the importance of interprofessional collaboration in palliative care and in health care in general, these results are encouraging, and support ongoing efforts to develop interprofessional learning opportunities. The learning experience, particularly across professions, remains an important aspect of evaluating interprofessional learning.

Introduction

Health care professionals across professions and care settings lack core palliative care competencies to provide primary-level palliative care (also referred to as the "palliative care approach") to their patients with serious illnesses.[1–3] Education, including continuing professional development (CPD), is considered a key strategy to address these gaps and to improve access to palliative care.[4–6] Given the role of interprofessional care in palliative care, there are also calls for interprofessional education.[7–9]

Interprofessional education (IPE) however requires intentional design and the application of best evidence and practices in this field.[10,11] A major challenge relates to addressing the scopes of practice and learning needs of different professions simultaneously.[12] While some palliative care-related competencies overlap, others diverge in scope and depth across the professions. Some are unique to a specific profession group. Moreover, different profession groups may use different epistemological approaches and approaches to clinical care and decision-making, contributing to the creation of different cultures across professions.[13]

The development, delivery, spread and impact of education programs, including those that incorporate IPE, should be informed by evidence and best practices.[10,14–17] Ongoing evaluation and research of education interventions is needed to guide continuing quality improvement and contribute to the evidence base. This this end, a number of frameworks and approaches are available to guide the evaluation of education interventions.[17–19] Although educators are increasingly expected to evaluate program impact at the "higher" levels that include impact on patients and the health care system[20], the "lower levels" related to learner experience cannot be ignored, especially in IPE.

Aim

As part of a larger study to evaluate the impact of Pallium Canada's Learning Essential Approaches to Palliative Care (LEAP) program, this sub-study sought to explore the learning experiences of different professions with the LEAP Core course version.

Methods

Study Context and Education Intervention

Pallium Canada is a non-profit organization established in 2000 to build primary-level palliative care capacity nationally.[21] It does this largely by way of its LEAP program. The main goal of the LEAP courses is to provide health care providers across different professions, services and settings with the core competencies to provide a palliative care approach.[5,22] The skills include early identification of patients with palliative care needs, undertaking essential conversations such as advance care planning and goals of care discussions, decision-making, managing pain and other symptoms and addressing psychosocial and spiritual needs across the illness trajectory.

There are several versions of the course, each targeting different care settings and disease groups.[23] These are available for classroom, hybrid or fully online delivery. LEAP Core, the version examined in this study, is a 14-hour interprofessional classroom course with 13 modules that are often delivered back-to-back over two days. It targets primary care health care professionals in community-based settings such as family clinics and home care teams. The curriculum is similar to programs in other jurisdictions, including the Education in Palliative and End-of-Life Care and the End-of-Life Nursing Education Consortium in the United States, although the latter targets mainly nurses.[24–27]

LEAP Core, like most of the LEAP course versions, is designed for IPE and incorporates various learning methods including small and large group case-based learning, theory overviews, reflections, and trigger videos.[28] The overall approach is informed by constructive learning theory where learners' and facilitators' past and recent experiences are leveraged for learning. The curricula are developed by interprofessional teams of palliative care clinicians and educators. Curriculum development usually starts with identifying the appropriate competencies for the targeted profession groups and selecting content and learning activities based off these.[23]

Course sizes, classroom or online, are limited to a maximum of thirty learners. Each course is facilitated by two to four trained facilitators who are mainly palliative care nurses, physicians and social workers. The facilitator training program includes approaches to

promote IPE. Courses are usually facilitated by an interprofessional team.

The curriculum development framework and process, learning methods, course types, course delivery and program spread strategies are described in detail elsewhere.[21,23,28] Evidence showing impact at "higher levels" is emerging and has previously been reported.[29–34]

Overall Study Design and Participants

This mixed methods study was designed as a secondary analysis of existing data. The data was collected by way of a standardized course evaluation questionnaire submitted immediately post-course by health care professionals who participated in all LEAP Core courses delivered over a two-year period; April 1, 2015 to March 31, 2017.

A total of 244 courses were delivered during the study period with a total of 4636 participants (See **Table 1**). Professionals from various professions participated in the courses with nurses (including registered nurses, registered practical nurses and nurse practitioners) representing the largest group (2990; 65%), followed by physicians (878; 19%). Other professions included physiotherapists, occupational therapists, counsellors, and administrators (541; 12%). This profession group breakdown is proportionate to, and therefore reflects, the Canadian workforce in that there are many more nurses than physicians, and far fewer social workers and pharmacists.

Questionnaire

The evaluation questionnaire includes 10 items that evaluate the learning experience of course participants. Seven items are closed-ended questions consisting of statements with Likert-type scales with five categories (1 = "Totally disagree" and 5 = "Totally agree"); higher scores represent more favorable ratings. The items explore constructs related to the learner experience and include the extent to which the course met learning needs, the relevancy of the cases to practice, opportunities for discussion, knowledge of the facilitators, and the overall learning experience. Two items, namely relevancy of the course to practice and whether they would recommend the course to colleagues (referred to in industry as the net promoter), are used as global indicators of the learner experience.[35–38] Three additional open-ended questions solicit input on what worked well in the course, what could be improved, and topics that should be added or removed from the course.

Table 1

Number of Participants and Course Evaluation Survey Response Rates for all 244 Learning Essential Approaches to Palliative Care (LEAP) Core Courses Delivered From 1 April 2015 to 31 March 2017 (for Respondents Who Completed All Ten Survey Items)

Profession	Number of learners (% of total)	Number of surveys returned and Response Rate (%)
Total	4636	3045 (66%)[b]
Physicians	878 (19%)	662 (75%)
Nurses	2990 (65%)	1973 (66%)
Pharmacists	100 (2%)	74 (74%)
Social workers	127 (3%)	80 (63%)
All others[a]	541 (12%)	256 (47%)

[a]Includes physiotherapists, occupational therapists, dietitians, spiritual care providers, managers and administrators.
[b]An additional 64 respondents responded only to the three open-ended questions, they were included in the qualitative analyses (i.e., 3109 respondents).

Data Collection and Analyses

All LEAP courses and learners are registered online in Pallium Canada's customized learning management system (LMS). The LMS is based on the Moodle open-source software program. Learners complete pre- and post-course knowledge, attitudes, comfort and evaluation surveys online through that portal. Completion of the instruments is voluntary, except for physicians applying for continuing education credits from their professional bodies as they surveys are part of the learning process.

All data were downloaded from the LMS databases into a Microsoft Excel™ 2016 spreadsheet, checked for quality, cleaned, and de-identified. Quantitative data were then uploaded and analyzed with R Version 4.0.2 (2020-06-22) program. Qualitative data were downloaded into QSR NVivo Plus™ software program to aid analysis.

Descriptive statistics consisting of box plots were used to show the distribution (and median, range) of the response data by item and professional group. For the primary inferential statistical analyses, the Kruskal-Wallis (KW) non-parametric test was used to test whether the rankings (scale of 1–5) for each of the seven closed-ended items differed across the profession groups. If the KW test was significant, follow-up post-hoc testing was undertaken to identify which specific profession group pairs differed. Post-hoc testing used the Dunn test with the Bonferroni method to adjust the *p*-values to avoid the possible inflation of the type-I error arising from multiple comparisons. Statistical analyses assumed a two-tail, 5% (0.05) level of significance.

The qualitative data were analyzed using a thematic analysis technique that involved an iterative process of coding, identifying themes and relationships, and moving to interpretation.[39,40] Categories were identified a priori based on the open-ended survey questions, namely Course Strengths, Course Improvements, and Content. Rigour was ensured using techniques that address large qualitative data sets, including methodological congruence.[39,41] Two independent researchers (LM, TS) did the initial coding and a third researcher

(JP) provided additional analysis and context. Data related to interprofessional learning and improvements to the course were also subjected to enumerative analysis in order to provide an indication of frequency and prevalence of a particular idea amongst respondents.[42]

Ethics

The study was approved by the Conjoint Health Research Ethics Board of the University of Calgary (REB 17-0429).

Results

A total of 3045 participants responded to all ten items of the evaluation questionnaire (response rate 65.7%). Response rates varied across professions, with the lowest being amongst "other professions" (47.3%) and the highest amongst physicians, pharmacists and nurses (75.4%, 74% and 66% respectively) (**Table 1**). An additional 64 participants responded only to the open-ended questions for a total of 3109 responses to that part of the questionnaire. These 64 responses were included in the qualitative analysis.

Quantitative Analyses

Table 2 shows the learners' responses by profession group with the responses combined into two categories. For the item related to relevancy of the course to practice, 96% of all learners indicated "strongly agree" or "agree" with the statement. For the net promoter item (recommend the course to colleagues), 97% strongly agree or agreed with the statement. The proportions varied across professions for these responses. In the case of the relevancy item, for example, 97% and 97% of nurses and physicians respectively agreed or strongly agreed with the statement, compared to 78.8% and 87.8% of social workers and pharmacists respectively. Overall, high positive ratings were reported for the other five items. Variability is also noted across the professions.

The median scores were 5 ("5" being the most favorable score) across almost all seven items for almost all profession groups (**Appendix A**). Social workers scored medians of four for the items related to relevancy of the course, the course meeting their learning needs, and the relevancy of the cases to their practices. Pharmacists also reported median scores of four for the course meeting their learning needs and the relevancy of the cases.

No significant differences were found across profession groups for the item related to opportunities for discussion in the course [X^2 (df 4) = 2.59; p = 0.628], so no post-hoc analysis was undertaken. However, statistically significant differences were noted across and between profession groups for the other six items (**Fig. 1** and **Appendix A**).

For the global item related to the course being relevant to their practices, no statistically significant differences were noted between the following groups: physicians and nurses (X^2 = 1.31; p = 1.00); pharmacists and social workers (X^2 = -1.25; p = 1.00); pharmacists and other (X^2 = 0.725; p = 1:00); and social workers and other (X^2 = 2.32; p = 1:00). Statistically significant differences were noted between: physicians and pharmacists (X^2= -4.75; $p < 0.001$); physicians and social workers (X^2 = -6.63; $p < 0.001$); nurses and pharmacists (X^2 = -5.52; $p < 0.001$); and nurses and social workers (X^2 = -7.39; $p < 0.001$). For the "recommend the course to colleagues" item significant differences were found between physicians and nurses (X^2 = 5.40; $p < 0.001$), and nurses and pharmacists (X^2 = -3.52; $p < 0.001$).

Qualitative Analyses

The qualitative analysis of the open-ended questions revealed several course strengths. Five major themes were identified (see **Table 3**). These included interactivity and learner engagement (especially case-based learning, small group learning, and open discussions), high quality of facilitation and facilitator knowledge, leveraging learners' and facilitators' real-life narratives and experiences, the relevance of the course and its contents and cases to their practices, and interprofessional learning.

Interprofessional learning, including the small group, case-based learning approach, was identified as a major strength by respondents from across all professions. Respondents described the value of learning with and from other professions in the course, learning and valuing what other professions had to offer, and what other professions experienced.

Course limitations and areas for improvement clustered into five themes, namely course length and content volume, communication learning videos, facilitation, adjustments for different contexts, and interprofessional learning (see **Table 4**). Mixed views were expressed about the course length. Lengthening the course to three days to reduce the intensity of the large volume of material was suggested by some, while others suggested shortening it to one day. Most however felt that two days struck a reasonable balance. While the communication trigger videos were identified as one of the course strengths, opportunities for improvement were described; most notably to consider juxtaposing the current videos (that show mediocre skills to trigger discussion) with videos that show excellent skills. Some suggested more use of role play. Although the quality of facilitation and knowledge of facilitators was deemed as a course strength by most respondents, some reported issues with the quality of facilitation, including

Table 2
LEAP Course Participants' Responses (Rounded to Nearest Whole Number), by Profession Groups, to Closed-Ended Survey Questions; Categories Combined (See Figure 1 and Appendix A for Further Analysis)

Survey statement	Profession	*n*	"Strongly agree" or "Agree" combined *n* (%)[a]	"Neutral", "Disagree" and "Strongly disagree" combined *n* (%)[a]
"The course was relevant to my practice"	Physicians	662	640 (97%)	22 (3%)
	Nurses	1973	1919 (97%)	54 (3%)
	Pharmacists	74	65 (88%)	9 (12%)
	Social Workers	80	63 (79%)	17 (21%)
	Others	256	231 (90%)	25 (10%)
	Total	**3045**	**2918 (96%)**	**127 (4%)**
"I would recommend the course to colleagues"	Physicians	662	631 (95%)	31 (5%)
	Nurses	1973	1934 (98%)	39 (2%)
	Pharmacists	74	70 (95%)	4 (5%)
	Social Workers	80	71 (89%)	9 (11%)
	Others	256	243 (95%)	13 (5%)
	Total	**3045**	**2949 (97%)**	**96 (3%)**
"The course met my learning needs."	Physicians	662	618 (93%)	44 (7%)
	Nurses	1973	1886 (96%)	87 (4%)
	Pharmacists	74	69 (93%)	5 (7%)
	Social Workers	80	64 (80%)	16 (20%)
	Others	256	234 (91%)	22 (9%)
	Total	**3045**	**2871 (94%)**	**174 (6%)**
"The cases were relevant to my practice."	Physicians	662	632 (96%)	30 (4%)
	Nurses	1973	1847 (94%)	126 (6%)
	Pharmacists	74	59 (80%)	15 (20%)
	Social Workers	80	60 (75%)	20 (25%)
	Others	256	223 (87%)	33 (13%)
	Total	**3045**	**2821 (93%)**	**224 (7%)**
"There was ample opportunity for discussions."	Physicians	662	630 (95%)	32 (5%)
	Nurses	1973	1864 (95%)	109 (6%)
	Pharmacists	74	69 (93%)	5 (7%)
	Social Workers	80	69 (86%)	11 (14%)
	Others	256	248 (97%)	8 (3%)
	Total	**3045**	**2880 (95%)**	**165 (5%)**
"The facilitators were knowledgeable."	Physicians	662	654 (99%)	8 (1%)
	Nurses	1973	1960 (99%)	13 (1%)
	Pharmacists	74	73 (99%)	1 (1%)
	Social Workers	80	75 (94%)	5 (7%)
	Others	256	255 (100%)	1 (0.4%)
	Total	**3045**	**3017 (99%)**	**28 (1%)**
"Overall, the course was a good learning experience"	Physicians	662	638 (96%)	24 (4%)
	Nurses	1973	1940 (98%)	33 (2%)
	Pharmacists	74	70 (95%)	4 (5%)
	Social Workers	80	74 (93%)	6 (8%)
	Others	256	251 (98%)	5 (2%)
	Total	**3045**	**2973 (98%)**	**72 (2%)**

[a]Denominator is the total number of responses received from that profession.

excessive lecturing and not soliciting enough input from all professions.

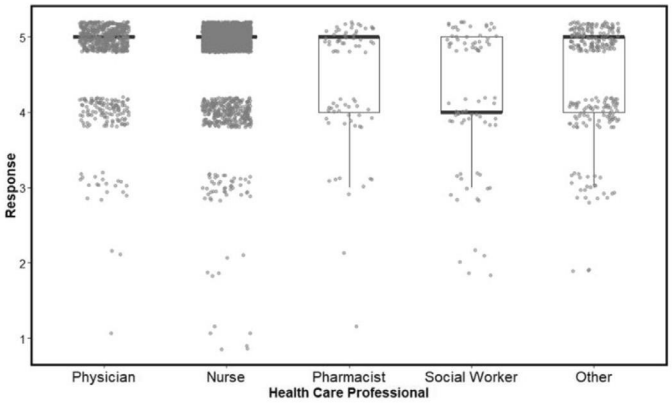
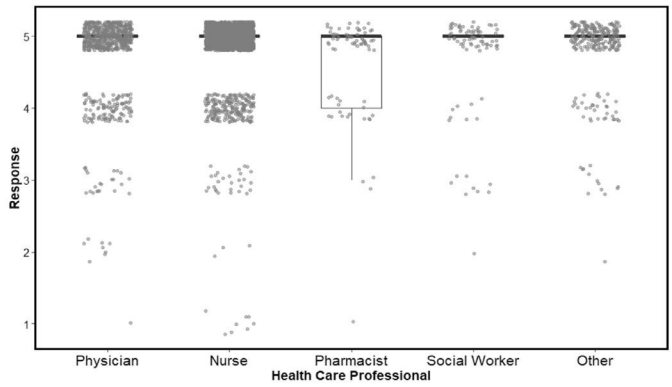
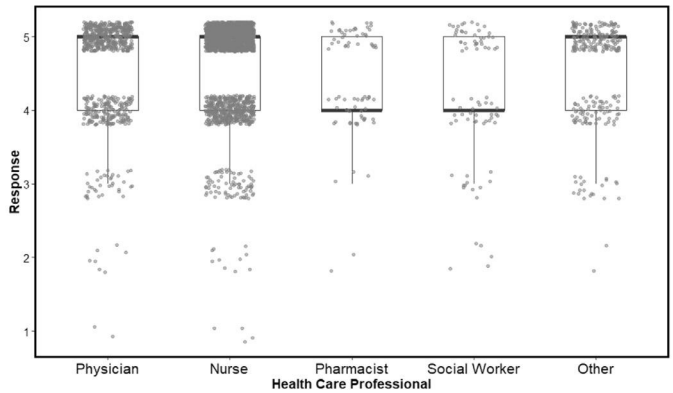
Only 69 of 3109 respondents specifically identified the interprofessional learning design as a limitation or area for improvement. All professions were represented. They called for different course versions or more breakout sessions for different professions. Some physicians felt that the presence of other professions reduced the "scientific" and "medical" content of the course while some social workers felt that the psychosocial domains were underrepresented and the course "too medical". Some nurses felt that knowing about medications, including opioids, was outside their scopes of practice while others valued that content. Similarly, some physicians requested separate "psychosocial" modules for other professions.

There were few suggestions for additional topics to be incorporated. These included more in-depth attention to cultural and religious aspects of providing a palliative care approach and how to manage family conflicts.

Discussion

Main Findings

In this study involving over 3000 participants, a large majority of professionals (75%−99%) across several

Survey statement	Frequency and distribution of responses by profession group X-axis: Profession groups Y-axis: scale; 1 = Strongly Disagree, 5 = Strongly Agree Thick lines represent median scores	Differences across profession groups [a] n=3045[b] df 4	Differences between profession groups[c] Not significant p>0.05	Differences between profession groups[c] Significant p<0.05
a **"The course was relevant to my practice"**		X^2 138.0 p < .0001	MD/RN Ph/SW Ph/Other SW/Other	MD/Ph MD/SW MD/Other RN/Ph RN/SW RN/Other
b **"I would recommend this course to colleagues."**		X^2 42.2 p<0.0001	MD/Ph MD/SW MD/Other RN/SW RN/Other Ph/SW Ph/Other SW/Other	MD/RN RN/Ph
c **"The course met my learning needs."**		X^2 56.2 p<0.0001	MD/Other Ph/SW Ph/Other	MD/RN MD/Ph MD/SW RN/Ph RN/SW RN/Other SW/Other

X^2: chi-square statistic
df; degree of freedom.
NA = Not applicable; omnibus test found no statistical differences across groups.
[a] Omnibus Kruskal-Wallis test used. X^2 statistic is reported as the H statistic is approximated by X^2 for large data sets such as this one.
[c] Post-hoc test (X^2) if omnibus test significant, with Bonferroni correction.

[b] n
Physicians (MD) = 662
Nurses (RN) = 1973
Pharmacists (Ph) = 74
Social Workers (SW) = 80
Other = 256

Fig. 1 (a-h). Boxplot showing frequency and distribution of responses by profession groups to LEAP Core course evaluation survey (seven closed-ended questions).

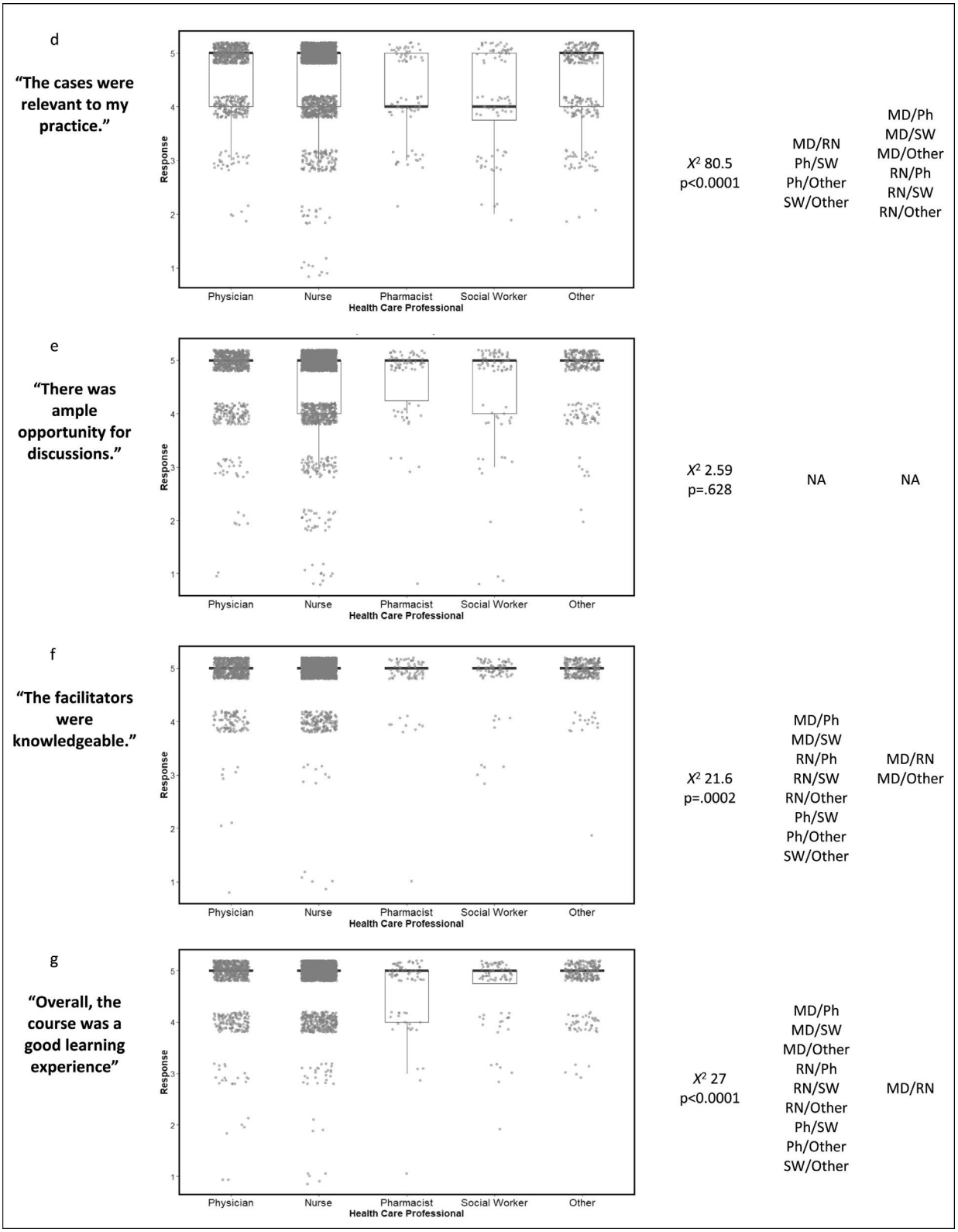


Fig. 1 (a-h) Continued.

Table 3

LEAP Core Course Strengths as Reported by Learners From Different Professions in the Survey (Open-Ended Questions)

Theme	Illustrative quotes
Learning methods that promote interactivity and engagement	*"Working through cases with highly experienced palliative care providers was invaluable."* (Physician) *"Large enough group to allow discussion but not too large as to be intimidating"* (Physician) *"The group discussions of personal cases- I loved being able to talk out some cases and get answers to questions - taking an actual case study and applying helped put pictures and a real live person to remember what to do with the new information"* (Nurse) *"I like the small group discussions and case studies"* (Pharmacist) "*The videos offered a good way to start a conversation.*" (Nurse) *"The open format with ample opportunity for interactive discussion"* (Physician) *"The interactive modules and being able to openly discuss stressful events we have experienced in palliative care"* (Other) *"The course was perfectly structured in a way which includes theory along with good interactions and experience sharing that all the participants can benefit well. Group discussion on different case scenarios and essential conversations on the palliative care approach were the best for me."* (Nurse)
High quality facilitation	*"Excellent experienced facilitators who were able to draw from their backgrounds to give "clinical pearls" and further guidance."* (Physician) *"Facilitators were highly knowledgeable, very effective presenters and approachable"* (Nurse)
Use of narrative and case examples	*"The conversations with the facilitators and the participants…sharing ideas and experiences."* (Physician) *"The real-life examples that were provided by the facilitators and the group discussion"* (Nurse) *"Small group discussions, examples and cases from presenters' experiences"* (Pharmacist)
Inter-professional learning (IPL)	*"Diversity of professionals/settings at each table"* (Physician) *"Being able to interact with other health care professionals and know more on resources available for palliative care patients"* (Physician) *"Interaction with other health professionals to see the entire picture of the palliative patient/family"* (Pharmacist) *"The group discussions were exceptionally useful, learning what other doctors have experienced. Also having input from nurses as to what their problems were."* (Physician) "*The interprofessional learning experience was great, it was eye opening to hear about different experiences and the collaborative approach that suggestions were made when discussing scenarios"* (Physician resident) *"The interprofessional atmosphere and open discussions."* (Physician) *"As an NP I prescribe. I found the nuts and bolts of prescribing medications to manage symptoms most helpful."* (Nurse Practitioner)
Course relevancy	*"The length of the course and material covered were adequate."* (Nurse) *"All course content was relevant to my practice."* (Nurse) *"I now will consider Spiritual care. Which I'd kind of forgotten about."* (Nurse) *"Pain management in palliative care and essential conversation"* (Physician) *"The information was relevant, clinical, concrete and useful. That's the sort of information I thrive on"* (Nurse) *All participants' questions were answered.* (Physician) *"I found to be overall knowledgeable in a concise format"* (Physician) *"At this time, I cannot think of anything that could be improved. I am new to palliative care in general, so this was a great way to become introduced to the topic."* (Pharmacist) *"I found it covered all aspects of palliative care"* (Physician)

professions − including physicians, nurses, pharmacists, social workers and other allied health professionals − rated this interprofessional CPD palliative care course highly across several facets related to the learning experience. These results are encouraging, support the LEAP course's interprofessional approach and confirm that interprofessional learning is possible.[28]

Designing an interprofessional CPD curriculum can be challenging as common and diverging learning needs across the professions need to be taken into consideration.[9,28] Designing for large scale national deployment adds another layer of complexity.[28] Intentional instructional design is required to, among others, address varying scopes of practice and different lenses used by different professions in their clinical and learning activities.[12,43–45] To this end, Pallium Canada's LEAP courses incorporate instructional strategies such as integrating cases that resonate with and solicit input from various professions, facilitator training to support IPE, and interprofessional curriculum and facilitator teams.[28]

Satisfaction with the learning experience across different facets, while overall favorable across professions, did show variability between profession groups. With some exceptions, alignment was generally noted between physicians and nurses as a pair, and pharmacists and social workers as a separate pair. Physicians and nurses, for examples, rated the course highest with respect to its being relevant to their practices and addressing their learning needs. The level of endorsement on the part of pharmacists and social workers, although favorable, was lower. As in clinical research however, statistically significant difference does not necessarily translate to clinical or education significance.

The variability in experience can be explained by the professions' respective scopes of practice and competencies. Some "palliative care approach" competencies are shared across professions, others are shared but vary in depth and breadth from one profession to another, while others are profession specific. There are more competency overlaps between physicians and nurses than there are between these two groups and

Table 4
LEAP Core Course Limitations and Areas for Improvement as Reported by Learners From Different Professions in the Survey (Open-Ended Questions)

Theme	Illustrative quotes
Course length and content volume	*There was a lot of information over a short amount of time, it may be beneficial to make the course an extra 1/2 day for more time for discussion and questions.* (Nurse) *"It could be a bit shorter. . . . I don't want to hear what other family doctors are doing, I want to hear what the palliative doctors are doing and take those messages away"* (Physician) *"Less time should be spent on the initial "Being Aware" session and more time on the med parts"* (Nurse) *"There is too much to cover in two days with very little time for extra discussion and not enough time to break."* (Nurse) *"I did find it quite intense. By the second afternoon I was saturated. I don't know if it could be offered over a full day and two half days . . . it was a lot of information to process."* (Physician)
Communication learning videos that demonstrate good skills	*"The videos on communication that showed how not to discuss issues with patients should be complemented by videos on how to discuss difficult topics with patients"* (Physician). *Would like to see videos showing the "right way" rather than mostly having videos with "what needs to be improved".* (Nurse) *Videos should probably show what was done bad and then an example of a video where it was done well* {Physician) *"Role playing allows the opportunity to put into practice some new communication skills."* (Physician)
Facilitation	*"More interaction with the group, less lecturing. putting a doctor or palliative nurse educator/social worker into each group".* (Nurse) *"[the facilitators] Tended to engage the physicians more than other members of the team. They did a great job however of addressing the varying levels of knowledge."* (Physician) *"Opening remarks also should set the "tone", and the ground rules which includes attendees and facilitators alike. For example, that everyone is from different professions, and come with different experiences and backgrounds."* (Nurse)
Adjustments for different contexts	*"Having the content geared to LTC [long term care]. But there is a LEAP for LTC therefore I just need to take that course."* (Nurse) *"Would have liked to further discuss things that ELC, community health nurses provide for palliative [patients] in our area."* (Nurse)
Inter-professional learning	*"Myself, as an LPN, I would have liked it if it was more into my scope of practice. This program was over my head."* (Licensed Practical Nurse) *"I don't think it's appropriate to have, Social Workers, and Occupational Therapists, physiotherapists, etc... in the same learning environment as physicians and NPs. Their learning focus is completely different. I appreciate interdisciplinary care, but I found the medical aspect teaching and learning in this course was significantly slowed down by the questions and focus of the non-medical practitioners."* (Physician) *"Our group consisted of mainly nurses (from a variety of settings), one social worker, and one pharmacist. Overall the course was excellent, but as a pharmacist, it would have been beneficial to work through some more complex cases. However, I understand that this would not have been appropriate for this specific group."* (Pharmacist) *"As an Allied Health professional, I don't necessarily deal with medications. I don't believe that it was useful for me to learn about the conversions of the opiods. Although it has increased my knowledge with medications."* (Other) *"Less calculation... Nurses can't do that. It was helpful to know the ranges."* (Nurse) *"I wonder if physicians should be offered a more concise course over one day. . . .Although the large group discussions were interesting, I don't know if it's the best use of time for physicians."* (Physician) *"Need a course for non-medical practitioners, such as social workers, mental health workers, psychotherapists..."* (Social worker) *"Have a separate course for MDs"* (Social Worker) *"Time management to allow for adequate time for all topics. Perhaps offer a separate physician-directed and allied-health directed course."* (Physician) *"Course could possibly be modified for each discipline. For example, as an RN I would have liked to have spent more time on medications, calculations of same etc."* (Nurse) *"Divide the course participants and discuss more relevant issues for the different professions."* (Dietician) *"Having Doctors and nurses in separate groups, seemed to be geared more to physicians."* (Nurse) *"More time [should be] allotted to all areas except psycho/social (which is important, but too much time given to it)"* (Nurse)

pharmacists and social workers. Pharmacists focus more on pharmacological aspects of care (recognizing that competencies related to communication and recognition of psychosocial distress also apply) and consequently may find the modules and materials related to psychosocial and spiritual care less relevant. Conversely, social workers may find pharmacological and physical symptom aspects less relevant, and social aspects of the course perhaps not sufficiently addressed.

Educators are faced with a conundrum when designing interprofessional courses. If the focus is only on addressing common competencies, or common ground, one may paradoxically deter some professions who feel the course does not fully address their needs. For example, omitting areas such as opioid and

medication prescribing to make some professions feel included, may deter physicians and pharmacists, and some nurses, from participating. These design polarities have previously been described.[28]

The responses of the "other" profession group (mainly of physiotherapists, occupational-therapists, dieticians, spiritual care workers and administrators) aligned with those of physicians and nurses. This was unexpected given their practice scopes. An explanation, hinted at by the open-ended responses, may be that these professions appreciated being included in the course and learning of the many facets of palliative care and the experiences of other professions.

Learners drew attention to several advantages of IPE, including being exposed to various aspects of care to provide a wholistic approach and the respective roles of different professions working collaboratively to achieve this. Our findings are consistent with emerging evidence on IPE that shows it is generally well received.[11,46]

Support for IPE in this course was however not universal. Some real or perceived concerns and some ambivalence was described by a small number of learners (less than 1%) across professions in the open-ended responses. Differences in scopes of practice again may be a key driver. Several root causes related to suboptimal interprofessional collaboration have been described in the literature, including factors related to communication, respect, trust, unequal power, professional roles and contributions, task prioritizing, care domains, and role expectations.[13,47–51]

Not all participants who reported issues with IPE in the course were necessarily opposed to it; some were not opposed but offered ideas on how to improve the experience. These included profession-specific breakout sessions or learning activities.

Within the same profession, varying opinions were noted about their profession's scope of practice. Some nurses, for example, did not see medication management and opioid dose calculations as part of their role, while others did. Similarly, differences of opinion were noted amongst physicians with respect to the relevance of the psychosocial domain.

Implications for Practice

This study demonstrates that interprofessional palliative care CPD is possible and can be a positive learning experience for most learners across professions. It requires sound adult and IPE learning approaches, guided by the competencies to be acquired.[52]

The presence of ambivalence or confusions within some profession groups about their scope of practice and accompanying palliative care competencies, highlights the importance of ongoing efforts to clarify palliative care approach-related competencies across the professions.[53–57]

Educators and policymakers may be inclined to recommend courses based on the extent to which they address a specific profession's competency needs and scopes of practice. This may disadvantage courses such as LEAP that promote IPE and interprofessional collaboration. Excluding them or opting to develop separate courses for each profession may ultimately undermine the goal of advancing interprofessional learning and collaboration.[8]

Educators may at times need to take a position in some competency areas. In select cases, despite calls from learners to remove or reduce a certain component of the curriculum, educators may need to insist on its inclusion. Removing medication-related knowledge from the nursing component of the curriculum may, for example, compromise nursing influence and patient safety.[58] Similarly, excluding psychosocial and spiritual care content from physician curricula will compromise holistic person-centered care.

This study highlights the importance, especially in IPE, of including the learner experience in program evaluations and using mixed methods to explore it. While good satisfaction ratings do not necessarily guarantee changed behaviors and improved patient care, bad experiences likely decrease the probability of learning occurring and attracting new learners.[16]

The results identify several areas for future curriculum development and research. There are, for example, opportunities for curriculum design innovations to be even more inclusive of the learning needs of specific professions. Profession-specific modules are under development to supplement the existing interprofessional case-based learning opportunities. These can involve group or self-learning and could harness virtual delivery methods. Understanding the impact of age, gender and years-in-practice on the learning experience may also identify important curriculum design considerations.

Limitations

This work has several limitations. First, we did not use an instrument that specifically explores learners' attitudes to IPE or interprofessional collaboration. While a number of such tools exist, there is no gold standard.[59] Furthermore, since IPE is not the principal goal of LEAP, it was deemed excessive to add it to an already full slate of instruments learners complete. Second, the limitations of satisfaction-related evaluations are recognized.[17,18] Using single questions, such as the net promoter, has limitations.[36,60] To mitigate this, we assessed several additional domains pertinent to the learning experience and included open-ended questions. Third, a ceiling effect is observed in the responses for several items and certain groups such as physicians and nurses. However, in our view the differences in profession

groups identified in the statistical analysis are meaningful and provide additional insights and areas for future research. These findings are corroborated by findings in the qualitative analyses."

Conclusions

This study adds further understanding to interprofessional palliative care education. The findings confirm that interprofessional palliative care CPD courses that include nurses, physicians, pharmacists, social workers and other professionals are possible and can provide a positive learning experience across profession groups. However, the study also highlights the challenges of addressing all the needs and scopes of practice equally across all profession groups simultaneously in one course. Some compromises are required while some curriculum design adjustments can be made to make the courses even more relevant for each targeted profession group.

Although educators should be evaluating education programs at higher levels such as impact on patients and the health care system, they should not ignore the learner experiences as these remain relevant, especially if we are to fully understand and optimize IPE in palliative care education.[61] Future work should incorporate instruments that specifically evaluate attitudes to and impact of interprofessional learning and collaboration in courseware such as LEAP.

Ethical Approval and Patient Consent

The study was reviewed by two research ethics boards. It was approved by the Conjoint Health Research Ethics Board (CHREB) of the University of Calgary (REB 17-0429). The Bruyère Research Ethics Board exempted it from a full review as it was deemed quality improvement (REB #M16-16-029).

Author Contributions

JP: Concept and curriculum development; JP, HP, DK, LM: Study design; BR, JF: Data collection; BR, DK, HP: Database management; LM, TS, JP: Qualitative analyses; DK, KF, JP: Quantitative analyses. All authors contributed to manuscript editing and review.

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Supplementary materials

Supplementary material associated with this article can be found in the online version at doi:10.1016/j.jpainsymman.2021.12.034.

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