Expanding the Interdisciplinary Palliative Medicine Workforce: A Longitudinal Education and Mentoring Program for Practicing Clinicians

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Abstract

Context. The disparity between gaps in workforce and availability of palliative care (PC) services is an increasing issue in health care. To meet the demand, team-based PC requires additional educational training for all clinicians caring for persons with serious illness.

Objective. To describe the educational methodology and evaluation of an existing regional, interdisciplinary PC training program that was expanded to include chaplain and social worker trainees.

Methods. From 2015-2017 twenty-six social workers, chaplains, physicians, nurses and advanced practice providers representing 22 health systems completed a two-year training program. The curriculum was comprised of bi-annual interdisciplinary conferences, individualized mentoring and clinical shadowing, self-directed e-learning, and profession-focused seminar series for social workers and chaplains. Site-specific practice improvement projects were developed to address gaps in PC at participating sites.

Results. Palliative care and program development skills were self-assessed pre and post training. Among 12 skills common to all disciplines, trainees reported significant increases in confidence across all 12, and significant increases in frequency of performing 11 of 12 skills. Qualitative evaluation identified a myriad of program strengths and challenges regarding the educational format, mentoring, and networking across disciplines.

Conclusions. Teaching PC and program development knowledge and skills to an interdisciplinary, regional cohort of practicing clinicians yielded improvements in clinical skills, implementation of practice change projects, and a sense of belonging to a supportive professional network.

Key Words: *interdisciplinary, workforce, interprofessional, education, palliative care, mentoring*

Key Message: This article describes the implementation and evaluation of an interdisciplinary palliative care training program for practicing clinicians. The results indicate that a multimodal educational format that includes mentoring, shadowing, and practice change projects yielded a positive change in clinical skills and intensified relationships across disciplines and health care systems.

Introduction

As the demand for high-quality palliative care (PC) rises, workforce development, resiliency and retention are major concerns for the future of the field[1-3]. There has been a marked increase in the proportion of US hospitals reporting having PC services[4], yet the size and scope of the teams providing these specialty services vary greatly and often lack true interdisciplinary elements, such as a dedicated social worker or chaplain[5-7]. That, coupled with the push for availability of primary PC training due to the shortage of PC specialists[8], has led to an increase demand in curricula aimed at interdisciplinary training in PC[9,10]. Many published studies on interdisciplinary curricula in PC focus on health professional students[11-15] yet there is limited data on multi-modal longitudinal curricula in PC that engage practicing interdisciplinary clinicians.

In 2012, a group of Chicago-area PC leaders addressed the local workforce shortage by creating the Coleman Palliative Medicine Training Program (CPMTP). This program engaged physicians and advanced practice practitioners (APPs) employed in academic medical centers, urban and suburban community health care systems, and safety net hospitals, who were part of, or planned to work on, PC teams. In addition to core PC topics and communication skills the program included longitudinal shadowing and mentoring, resiliency training, and participant-led institutional practice change projects. Full details and outcomes of the initial CPMTP are described elsewhere[16]. Early success of the CPMTP led to renewed funding for a second cohort of physicians and nurses and the addition of other core disciplines (chaplains, social workers). Building on the original training program, CPMTP-2 aimed to increase providers' clinical competence in PC and program development skills with the ultimate goal of building a supportive, regional network of PC providers over a two-year period. This paper describes the development, evaluation, and impact of CPMTP-2.

Methods

Recruitment and Application Process

Recruitment began at the institutional leadership level with outreach by email and telephone to directors of nursing, social work, PC programs, and cancer centers at health care systems across the Chicagoland area. Administrators were introduced to the program's mission and encouraged to sponsor up to three interdisciplinary PC champions to participate in the training. To encourage a greater investment by leadership, the CPMTP-2 application process required a letter of support from the institution as well as an interview with the applicant's direct supervisor. In a brief essay, applicants proposed a potential practice improvement project (PIP) to address unmet PC needs within their institution. Eligible professionals included physicians, nurses, APPs, social workers, and chaplains. To offset the trainees' expense and time, individuals who completed program requirements were eligible to receive a $5000 stipend.

Selection of Trainees

Eligibility criteria included physicians, nurses, social workers and chaplains employed part or full-time at a Chicago area health care organization. Applicants were not required to be in a palliative care or supportive care position at their workplace. However, there needed to be an expressed commitment by institutional leadership to develop a palliative care program and the opportunity for such a position. Strong candidates were those who demonstrated a commitment and ability to improve access to palliative care in their health care systems, as well as the support and buy-in for implementing performance improvement projects from hospital leadership. Individual factors considered for acceptance into the program included prior PC experience and employment history; potential for incorporating PC training into current clinical practice or

teaching; and leadership experience or committee membership. Copies of the application form for this phase of the project are available upon request.

Selected applicants were interviewed by CPMTP-2 directors who explored the applicants' perceived institutional support and investment in PC services, types of services/programs available, goals for PC growth, and gaps in PC or institutional needs. The administrators were asked about the availability of institutional and departmental resources and support for the PIP and the applicant, and potential barriers to implementation of the proposed PIP. To further facilitate engagement of institutional administrators, two leaders from each applicant's site were invited to attend a one-day regional Palliative Care Leadership Summit hosted by the CPMTP-2. Based on the project leaders' experience of the first phase of the training program trainees were more likely to succeed if they had some experience at developing, expanding or leading other clinical programs. During the selection interview we asked prospective learners to reflect on occasions when they encountered difficult work situations, how they navigated them, and where they have experience advocating for program resources. We also evaluated how they adapted to instances of organizational change, such as change in leadership.

This study was approved by the Institutional Review Boards at University of Chicago and Rush University Medical Center.

CPMTP-2 Course Design, Structure and Content

The curriculum was designed to be incorporated into a full-time employee's schedule. Similar to the first cohort, it was comprised of 4 main components: 1) live conferences; 2) self-directed computer-based learning; 3) direct observation of a mentor's practice; and 4) implementation and evaluation of a PIP. In order to accommodate new disciplines in CPMTP-2,

a core group of key faculty representing medical providers, chaplaincy, and social work reviewed the curriculum and made changes described below.

The project core faculty and other faculty represented each discipline, and identified core palliative care learning objectives specific to their field. They then met bi-weekly by phone during the planning phase of the program and monthly thereafter to plan educational offerings and teaching strategies for an interprofessional audience. The program directors relied on the recommendations of the social work and chaplain core faculty for social work and chaplain-specific training. Decisions on content for interprofessional education were made following iterative discussions during these phone calls.

During the interview process the core faculty solicited additional areas of educational need from the applicants. After acceptance into the program the trainees completed a pre-course self-assessment of skills survey which provided additional perceived knowledge gaps to inform the curriculum. The content for future conferences evolved based on real-time feedback after live conferences. For example, social workers were particularly keen to learn about medical ethics. Both the social workers and chaplains recognized the importance of teaching colleagues about the multiple, diverse roles and services they provide to teams, patients and families.

Lastly, the core faculty was also informed by important components of existing training programs, such as hospice and palliative medicine fellowships for physicians as well as other national faculty development programs in palliative care (PCEP, ELNEC, EPEC, VitalTalk). What is unique about this program is the opportunity to shadow/observe and then debrief (a core component of HPM fellowship training) and was a highly valued experience in this interdisciplinary training program. In general, the trainee shadowed the mentor or another experienced interdisciplinary team member.

CME/CE conferences and self-directed online learning

Three live CME/CE conferences were conducted over the course of two years, with the majority of content delivered simultaneously to foster interdisciplinary teaching and learning. Discipline-specific and pediatric sessions were added as break-out sessions. Content on professional development, team-based care and provider resilience were revised and added to the new curriculum (Table 1). In addition to the live conferences, nurses, APPs, and physicians completed 20 hours of self-directed learning that were compiled from existing resources and linked to the program website. The on-line training provided foundation and knowledge acquisition and in-person created opportunity for practicing communication skills and discussing complex ethical challenges and interdisciplinary dialogue. Program planning was an essential training component as many of the programs were in the developmental stages.

Seminar Series for Social Workers and Chaplains

In lieu of on-line modules, the core faculty in chaplaincy and social work recommended additional in-person training for their respective disciplines. This provided an intimate setting to support discipline-specific learning and networking, and to generate additional products outside of the scope of the PIPs (Table 2).

Longitudinal mentoring and shadowing

Twenty-eight seasoned interdisciplinary providers from twelve healthcare systems were invited to serve as mentors. They included PC program directors, ACGME fellowship directors, and educators from diverse settings (inpatient, outpatient, hospice, nursing home and home-based PC). Mentor-mentee pairings were arranged based on geography and practice setting

preferences. Mentors provided trainees with 40 hours of shadowing and monthly consultation on their PIPs.

Shadowing was largely discipline-specific and occurred at the mentors' place of work. However, there were instances where trainees requested to shadow a different discipline or where mentors chose to observe the trainees at their place of work. While most trainees shadowed a single mentor, the chaplain division opted to have each chaplain trainee observe multiple mentors' practices. In addition there was cross-discipline informal mentoring during many of the small group session and at the larger conferences and seminars.

Practice Improvement Projects

In keeping with the previous curriculum, all trainees were required to develop, implement and evaluate a PIP that addressed an unmet PC need within their own practice setting. Trainees could opt to work solo, in pairs or in trios with shared goals and interventions. Project goals, action plans and evaluation methods were recorded in Intent to Change Contract (available upon request). Trainees in CPMTP-2 were supported and required to implement multiple strategies for project success including: meeting with key leaders to align their project with institutional priorities; monthly individualized review with mentors; small interdisciplinary group project consultation sessions at the bi-annual conferences; and peer input at the chaplain and social worker seminar series. The program directors conferenced with mentors quarterly to provide support, address barriers to mentoring, and attend to obstacles to implementing the PIPs. At sites where leadership turnover transpired, outreach to new leadership was undertaken by the program directors. See Table 3 for examples of PIPs.

Evaluation

Trainees completed a non-validated pre/post survey (24 items physician/APP/nurse; 22 items social worker/chaplain) that were developed by core faculty through an iterative process and assessed confidence and frequency performing core skills in their discipline (available upon request). A 5-point Likert scale measured confidence from very low to very high and frequency from never to always. Twelve items in both surveys were deemed common to all groups and fell into the domains of total pain, communication, mental health, ethical and legal issues, spiritual care, and program leadership. All trainees completed a global post-training program evaluation survey to gather qualitative information regarding how the CPMTP-2 supported their PIP, challenges encountered, lessons learned and general feedback on the curriculum. The mentors also completed a survey assessing their expectations, goals, challenges, and impact of the mentoring relationship. Study data were captured and managed using Research Electronic Data Capture, a secure web-based application designed to support data capture for research studies by providing an interface for validated data entry, audit trails for tracking data, and procedures for importing data from external sources[17]. Pre/post ratings on the interdisciplinary skills self-assessment survey results were analyzed with paired sample t-tests on SPSS, version 22 (SPSS, Inc. Chicago, IL), and using the Bonferroni correction.

Results

Impact on Interdisciplinary Workforce Growth

Forty-nine applications from interdisciplinary health care professionals were received, with 29 accepted into the program. Twenty-six successfully completed the two-year training. Three dropped out due to illness and other personal circumstances. The majority were female (78%), from adult programs (85%), and practicing in inpatient settings (68%). Most of the learners were mid to late career providers, but early in their PC career, with two-thirds reporting

less than one year of experience in hospice and PC. More than half of the participants were providing PC three or more days per week (Table 4). Although some of the trainees had a significant amount of experience as palliative clinicians most reported having received little or no formalized education in palliative medicine.

Impact on Confidence and Frequency of Performing PC Skills

Table 5 describes the pre- and post-assessment confidence in and frequency performing the 12 skills common across disciplines. Participants' confidence increased significantly in all adult patient care skills and program development skills. The frequency of performing the skills after training also significantly increased in all but one skill, "provide support to family members of actively dying patients." Thirteen participants who care for children completed the survey questions on the pediatric care skill, with significant improvement in confidence but not frequency in giving bad news to children of all ages.

Impact of the Interdisciplinary Conferences, Mentoring, and Overall Program

All participants responded to post-training program evaluations with open-ended prompts about the benefits of the training overall, and the impact of conferences and seminars on project work. The following program characteristics were positively referenced most frequently: multi-modal teaching formats and curriculum; growth in PC and communication skills; learning about interdisciplinary roles; and generation of a supportive network and cross-institutional learning. Mentors found strengths in their ability to provide guidance and education to others in their own discipline. Challenges that were cited included finding time to shadow and keeping mentees on track with their PIPs. Table 6 provides quotes to exemplify some of the findings. Lastly, respondents suggested specific program improvements such as offering tracks for

different learner levels, adding didactics on documentation practices for new providers, increasing online learning, allowing shadowing at multiple sites, and providing reunion programs for graduates.

Discussion

The delivery of high-quality PC involves an interdisciplinary team of professionals dedicated to caring for patients and families with serious illness[18]. In 2018 the National Consensus Project Clinical Guidelines for quality palliative care were updated, urging *all* health care professionals to integrate PC principles into the routine care of persons with serious illness[19]. Importantly, the new edition emphasizes the integral role of social workers and chaplains in addressing psychological, social, and spiritual distress[19,20]. As such, competencies for generalist-level PC work are emerging with the intent to inform the development of new training curricula[21, 22].

The CPMTP-2 addressed the call to action to engage, train, and broaden the interdisciplinary community of PC providers through delivery of a multi-modal longitudinal curriculum led by experts in their respective fields. Beyond education in clinical skills, the program empowered the interdisciplinary learners to become change agents at their institutions through practice change projects[23]. This program also intensified collaborative relationships across health care institutions, especially between academic and community settings sharing best practices, which is rare in competitive urban healthcare markets. In addition, the program reduced isolation of clinicians who were working in small teams at their practice sites and encouraged dialogue among administrators and leaders.

The longitudinal design of this program, coupled with intentional mentoring through shadowing and PIPs, is unique. For example, shadowing, where a learner observes an

experienced practitioner, is not commonly used in chaplaincy education. The chaplains in the CPMTP-2 appreciated this opportunity to learn the differences among PC teams across institutions and the utility of shadowing as a method to provide peer support and addressing isolation that is often part of chaplaincy practice[24]. Other programs similarly found great value in observation of PC teams in practice[25, 26]. Our chaplains also generated a group research project that resulted in the creation of a new spiritual assessment tool, the PC-7[27], which is currently in the process of validation.

Programmatic evaluations have also included an assessment of growth in palliative care activity and access to hospice care during the project [5, 28] . The trainees were encouraged to remain engaged with the program community and continue to be invited to other program conferences. Some of the trainees from this phase have moved on to leadership roles and serve as faculty and mentors in our current program activities (www.colemanpalliative.org).

The ease of project implementation varied based on the design, the nature of the goal of the project and the level of support within the hospital, independent of discipline or type of practice site. A few trainees unexpectedly encountered difficulty in implementation due to leadership change, departure of a project team member, alterations in job responsibilities or personal circumstances.

This program had several notable limitations. First, it required collaborative multi-institutional infrastructure of well-established PC teams in both academic and community medical centers which may be difficult to replicate in smaller cities in other regions. In addition, the creation and implementation of a project of this scale depended on philanthropic support which may be a barrier to replication. An assessment of the individual cost and relative value attached to individual educational offerings by participants would be an important step prior to planning similar initiatives. There were weaknesses in analyses of the evaluation on clinical

skills development, given low numbers of some participants (e.g. pediatrics). In fact, evaluation methods for interdisciplinary skills are currently lacking in published literature[29]. The CPMTP-2 is a model that attempts to integrate the 6 key characteristics of interprofessional PC education as outlined from a recent consensus Delphi survey, including competencies, content, educational strategies, interprofessional focus, evaluation, and systems integration[30]. Given the emphasis on team-based care, future work should be conducted to develop assessment tools that meet the needs of interdisciplinary learning. The current report also does not include long term follow up on the gains in knowledge and comfort levels with performing core domains of palliative care.

One of the challenges was the changing circumstances in trainees' personal lives over the length of the program (e.g. illness, relocation). Many of the trainees were new to both palliative care and their primary professional role, which required broadening the scope of the mentors' roles to include serving as career advisors. Implementation of PIPs proved difficult for those who lost their highly invested leaders and needed to educate and negotiate with new leaders who were not familiar with the PIPs. Others trainees' roles changed markedly in the midst of organizational buy outs and mergers. Lastly, while philanthropic support ensured that the trainees could allocate some time to the project some found difficulty balancing clinical responsibilities with the program requirements. Replication of a program of this scope requires serious commitment by heath system leaders in protecting trainees' time to engage in learning and development of their skills.

Notably, few physicians participated in this cohort. Anecdotal evidence from conversations with prospective physician applicants was the lack of ability to apply for ACGME board certification post-training. Alternative pathways to achieve board certification for practicing physicians are now in process, including part-time options[31]. For APPs this training program helped them partially fulfill the criteria for 500 contact hours for HPNA certification.

Some of the teams, particularly those based in community settings, rely on APPs as they have challenges filling vacant palliative medicine physician positions.

Resiliency skill training was added to the curriculum after the program start and therefore not included in the initial skills assessment instrument. As moral distress and resiliency and traumatic stress are of concern for retention of PC clinicians[6, 32, 33], the program directors will continue to seek ways to assess and mitigate these issues in future cohorts.

A third phase of this program is underway which includes a three month APP immersion training program to develop a foundation of clinical skills, streamline the process of on-boarding new APPs, and help mitigate some of the enhanced risk of early-stage PC career providers to burnout.

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Table 1 Conference Sessions, Grouped by Profession and Subject

All Disciplines:

Symptom Assessment and Management

- Assessment of Total Pain
- Psychiatric Symptoms, Psychosocial Oncology and Geropsychiatry
- Caring for the Actively Dying Patient
- Cases: Treating Anxiety/Depression in the Seriously Ill

Communication Skills

- Mindful Communication
- Communication Skills Development with Special Populations: Dementia, End Stage Renal Disease and Young Parents with Cancer
- Quagmires in Care Transitions: Guiding Patients and Families in Preparedness Planning

Spiritual Care

- Spiritual Support and the Role of the Interdisciplinary Provider
- Responding to Requests for Miracles
- Responding to Religiously Based Requests for Curative Care
- Responding to Requests to Hasten Death
- A Shift from Competency to Humility: How do we Address Spiritual Distress?

Interprofessional Team Enhancement

- Managing Up
- Negotiating Conflict within a Palliative Medicine Team
- The Art of Effectively Giving and Receiving Feedback in Team-Based Care
- What Do Social Workers Do? The Role of Social Work on Interprofessional Palliative Medicine Teams
- Opening the Black Box – What Does a Chaplain do?
- Mindfulness
- Provider & Team Resiliency

Program Development

- Implementing Standards for Quality in Palliative Care
- Business Planning and Assessing Models of Care: Home Based and Skilled Nursing Facility, Caring for the Underserved, Hospital Based Care/Intensive Care Setting, Team-Based Pediatric Care

Show Me the Data: Obtaining Metrics that Matter

Special Topics

- Regulatory Issues: Best Practices in Safe Opioid Prescribing
- Palliative Medicine for Persons with Mental Health Disorders or Special Needs
- Societal and Family Concerns about End of Life Care in the United States
- Ethical Issues in Palliative Care: A Series of Case Discussions
- Medical Marijuana

Nurses, APPs and Physicians:

Symptom Management

- Adult Pain Management
- Perils and Pearls when Prescribing
- Challenging Pain Cases: Round Table Discussion
- Gastrointestinal Issues - Nausea, Vomiting and Bowel Obstruction
- Agitation, Delirium and Sleep Issues

Social Workers and Chaplains:

Psychosocial & Spiritual Care Skills

- Psychosocial and Spiritual Domains in Palliative Care
- Psychosocial Assessment and Communication

Professional Standards, Networks & Research

- Social Work Credentials in Hospice and Palliative Care
- Creating Professional Networks for Social Workers in Palliative Care
- Creating Professional Networks for Chaplains in Palliative Care
- Updates in Chaplaincy and Palliative Care
- Chaplains' Role in End of Life Decision Making: Evidence from a Recent National Survey

Pediatrics:

Pain Assessment & Management

- Advanced Pain Management and Complex End-of-Life Care
- Pain and Symptom Management in Children with Severe Neurological Impairment

Care Models, Practice Settings & Patient Populations

- Introduction to Hospital-Based Pediatric Palliative Care
- Pediatric Palliative and Hospice Care in the Home
- Perinatal Palliative Care

Mental Health

- Psychological Assessment of Children
- None of this is "Normal": Psychological and Behavioral Challenges Faced by Adolescents/Young Adults in Palliative Care

Ethical Issues

- Ethical Issues in Palliative Care: A Series of Case Discussions

Table 2: Chaplain and Social Worker Seminar Series

	Teaching Methods				Objectives	Products
	Didactics	**Discussion**	**Readings**	**Videos**		
Chaplains (16 contact hours)	👍👍	👍👍	👍👍	👍👍	👍👍 Review evidence based models for spiritual care screening 👍👍 Implement a standardized, quantifiable spiritual care assessment tool 👍👍 Discuss chaplain chart notes 👍👍 Provide group consultation on practice improvement projects 👍👍 Evaluate chaplains' role in goals of care	👍👍 Delivered teaching session to interdisciplinary training community on chaplains' role 👍👍 Created bibliographies on spiritual care and responding to request for miracles 👍👍 Published research on shadowing 👍👍 Generated and published a spiritual assessment tool
Social Workers (18 contact hours)	👍👍	👍👍	👍👍		👍👍 Discuss ethical issues in end of life care 👍👍 Provide group consultation on PIPs 👍👍 Discuss varied roles of SW in team based PC and across practice settings 👍👍 Review differences in SW training and skills and leadership roles/utilization of SW on PC teams 👍👍 Evaluate methods of bereavement counseling 👍👍 Provide interdisciplinary peer consultation on role, work environment, and best use of SWs	👍👍 Delivered teaching session to interdisciplinary training community on social workers' roles in PC

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Chaplains viewed and discussed key readings and videos by leaders in the field such as Dame Cicely Saunders and a talk on *High Touch with High Effectiveness: The Future Role of Chaplains in the Care Management of the Seriously Ill* by Tammie Quest MD (Emory), presented at 2015 annual mtg, Assn of Professional Chaplains.

Table 3. Examples of Practice Improvement Projects

PROFESSION / SETTING	PROJECT TITLE	GOALS/INTERVENTIONS	OUTCOMES
Social Worker, Safety Net Hospital	**Utilizing Social Workers to Enhance Access to Palliative Care for Homeless Patients in a Chicago Hospital**	• Develop criteria to identify homeless patients in need of palliative care • Increase utilization of HCPOA to initiate goals of care conversations with homeless patients • Create portable advance directives for homeless • Identify barriers to palliative care referrals for homeless patients	• Generated criteria to trigger ACP discussions (e.g. serious illness, # admission days) • Quantified the need for healthcare POA discussion, education, and PC consults • Created viable foundation for future expansion with EMR flagging system to generate referrals to PC SW for advanced HCPOA and PC consult qualifiers
Chaplain, Safety Net Hospital	**Determining the Extent of Spiritual Need Among Palliative Care Patients**	• Collect data on number of patient/family encounters and chaplain activities with the PC service inpatient consults • Use 5 item Spiritual Assessment (SA) tool to quantify unmet spiritual needs • Track key information including: length of visit, source of referral, reasons for no assessment made, and follow-up visits	• Quantified patients' unmet spiritual needs following referral for spiritual assessments • Described PC chaplains' services and time allotment • Demonstrated the gap in spiritual care needs among patients referred to PC service and PC chaplains' capacity to meet this need
Social Worker, Community-based Hospital	**Implementation of an Outpatient Palliative Care Clinic as part of an Integrated Cancer Care Center**	• Conduct literature review and stakeholder analysis • Deliver PC in-services to cancer center staff • Engage hospital and cancer center administration in staffing PC clinic • Define PC consult referral triggers • Collect PC dashboard data • Compare oncologists' pre/post Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) provider rating scores across nine levels	• Opened weekly outpatient PC clinic staffed by physician, nurse, and social worker • Reported dashboard data on reasons for referrals, referral sources, services provided and HCAHPS scores • Improved access to PC and continuity of care
Advanced Practice Nurse, Safety Net	**Integrating Palliative Care in Pulmonary Clinic: Advance Care**	• Complete chart audits for baseline ACP documentation • Assemble task force of pulmonary and	• ACP documentation rate increased by 65% within 6 months • High percentage of patients with

Hospital	**Planning (ACP) and Distress screening**	palliative teams to discuss barriers for ACP completion • Obtain weekly assessments of ACP completion rates among pulmonary clinic patients • Hold periodic stake holder meetings to identify barriers and opportunities • Perform NCCN distress screening for pulmonary patients on continuous oxygen • Implement PC consult trigger based on positive screens	advanced pulmonary disease had significant distress on screening • PC consult referrals increased with addition of distress screening of patients with advanced lung disease

HCPOA = Healthcare Power of Attorney; NCCN = National Comprehensive Care Network

Table 4. Demographics of the Coleman Palliative Medicine Training Trainees

Characteristic	N=26	Percentage
Health Care Discipline		
Physicians	2	8
Advanced Practice Nurses	10	38
Physician Assistant	1	4
Chaplains	7	27
Social Workers	5	19
Nurse	1	4
Sex		
Female	20	78
Male	6	22
Age (N=25)*		
25-34	4	16
35-44	3	12
45-54	7	28
55-64	10	40
>64	1	4
Health Care Organization		
Community-based Health Care System	11	42
Academic/Teaching Hospital	11	42
Safety Net Hospital	4	15
Primary Patient Population Served		
Adults	22	85
Pediatrics	4	15

Characteristic	N=26	Percentage
Primary Practice Setting (N=25)*		
Inpatient	17	68
Outpatient	4	16
Home-based Care	3	12
Skilled Nursing Facility	1	4
Provide PC in Current Position (N=25)*		
Yes	22	88
No	3	12
Palliative Care Effort per Week (N=25)*		
½ day/week	3	12
1 day/week	2	8
3 days/week	3	12
5 days/week	11	44
Other	3	12
Prior Experience in Palliative Care (N=25)*		
< 1 year	15	60
1 - 4 years	5	20
5 - 10 years	4	16
>10 years	1	4

*One respondent did not complete the survey

Table 5. Self-Assessment of Palliative Medicine and Program Development Skills, All Disciplines

		Mean Rating[a]			
Skills	**Measure**	**Pre**	**Post**	**S.D.**	**p-value[b]**
I. Adult Patient Care (N =26)					
Explain palliative care to patients and families	Confidence	3.46	4.46	.800	.000[c]*
	Frequency	3.12	4.08	1.207	.000[c]*
Discuss hospice care with patients and families	Confidence	3.50	3.42	.796	.000[c]*
	Frequency	2.80	3.68	1.054	.000[c]*
Assess and treat anxiety and depression	Confidence	3.04	3.62	.758	.001*
	Frequency	2.68	3.40	1.021	.002*
Provide support to family members of actively	Confidence	3.85	4.35	.648	.000[c]*
dying patients	Frequency	3.29	3.38	1.316	.084[c]
Participate in advance care planning with	Confidence	3.50	4.27	.863	.000[c]*
patients and families	Frequency	3.04	3.68	1.036	.000[c]*
Lead a discussion on communicating bad news	Confidence	3.19	3.88	.928	.000[c]*
	Frequency	2.44	3.48	1.274	.000[c]*
Manage spiritual distress in patients	Confidence	3.04	3.46	.857	.019*
	Frequency	2.52	2.96	.917	.024*
Navigate common ethical issues in palliative care	Confidence	2.88	3.54	.745	.000*
	Frequency	2.04	2.68	.907	.002*
Navigate common legal issues in palliative care	Confidence	2.27	3.04	.908	.000*
	Frequency	1.52	2.24	1.100	.003*
AGGREGATE: ADULT PALLIATIVE CARE SKILLS	Confidence	3.19	3.78		
	Frequency	2.61	3.29		
II. Program Development Skills					
Deliver teaching sessions in palliative care	Confidence	2.56	3.56	.816	.000*

		Frequency	1.67	2.57	1.136	.002*
Effectively lead/communicate on		Confidence	3.12	3.96	.800	.000*
An interdisciplinary team		Frequency	2.32	2.96	1.381	.029*

III. Pediatric Patient Care (N=13)

Give bad news to children at different	(N = 13)	Confidence	2.38	3.00	.650	.005*
ages	(N = 13)	Frequency	1.46	1.62	.555	.337

[a] A 5-point Likert scale was used to measure "Confidence in ability to perform skill" with 5=Very high confidence, 3=Moderate, and 1=Very low; Anchors for measuring "Frequency performing skill" were 5=Always, 3=Often, and 1=Never.

[b]P values are based on paired sample t-tests.

[c]Significance values have been adjusted for multiple variable comparisons.

[*]Denotes statistically significant change

Table 6: Qualitative Comments from Interdisciplinary Learners and Mentors

Multi-Modal Teaching Formats and Curriculum

- *An outstanding program with support for clinical, program development, mentoring, peer-networking, and leadership development. The balance of pain and symptom support with chronic illness update was good.* (APN)
- *I could not be any more pleased with the leadership, organization, structure and implementation of the fellowship. So many learning opportunities.* (Chaplain)
- *The conference sessions and evening seminars were truly a rich goldmine of not only information, but tools, stories, resources, and seasoned experts in palliative care. As a newcomer to palliative care, my learning through shadowing visits at hospitals was more greatly enhanced by my learnings at conference sessions and evening seminars.* (Chaplain)
- *Serious commitment to the training of professionals, including other disciplines, was greatly appreciated and needed.* (Mentor)

Growth in Palliative Care Skills

- *The information sessions and role playing helped me a lot. I am so confident in talking about advance directives, palliative and hospice care….. in conducting challenging family meetings especially about when to stop hemodialysis, about not placing feeding tube in advanced dementia patients, etc. My listening skill has improved.* (APN)
- *I feel that the education and project have enhanced my practice and helped my physicians as well to understand EOL issues. I have been able to have conversations and have been successful in helping increase discussion of EOL issues….It has helped our practice to be more proactive with prognosis.* (Physician)

Learning about Interdisciplinary Roles

- *…very eye-opening to have social worker and chaplain perspectives. It helped me to understand how I should be using them as a resource.* (PA)
- *The sessions helped me…reflect and consider my response to patients and families struggling with grief/loss, the hope for miracles, and spiritual distress.* (Chaplain)
- *Understanding their (chaplain and social workers') roles….spiritual assessment help with impact on direction of advance care planning; help with coping with serious illness; and …how to integrate them into the team, defining how their support can benefit palliative care gives me a voice to explain to others.* (APN)
- *Added new perspective into my conversations with patients. I was not aware of the role of social workers or chaplains prior to this and they explained their roles to us.* (PA)
- *Chaplains and social workers provided valuable insight into different topics that were applicable to my role as an APRN*
- *I am clearer about the difference between general chaplaincy and palliative chaplaincy. I have stronger relationships with members of other disciplines* (Mentor)
- *In having a shadow I have been able to define my own work more clearly as well. I find this a mutual learning* (Mentor)

Growing a Supportive Network, Cross-Institutional Learning

- *It was very helpful to have that network of social workers available to you for support, problem solving, and resource sharing throughout the fellowship.* (Social Worker)
- *I know that even after the fellowship is over I can go to anyone of the social work fellows if needed.* (Social worker)
- *On-going learning on what is happening in other institutions/systems in the area of palliative care* (Chaplain)
- *As a…new nurse practitioner in PC, the program was very supportive and helped me grow as an NP and also helped to facilitate growth at my institution.* (APN)
- *For my profession, brought colleagues together who are bright, gifted leaders in our field, and gave us meaningful information, guidance, mentoring, encouragement and powerful thought leadership.* (Chaplain)