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Enhancing the effectiveness of inpatient palliative care consultation teams (PCCTs)

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WASHINGTON UNIVERSITY IN ST LOUIS

Department of Psychological and Brain Sciences

Enhancing the Effectiveness of Inpatient Palliative Care Consultation Teams (PCCTs)

by

Meghan Leigh McDarby

A thesis presented to
The Graduate School
of Washington University in
partial fulfillment of the
requirements for the
degree of Master of Arts

May 2018

St. Louis, Missouri

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Washington University in St. Louis

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ABSTRACT OF THE THESIS

Enhancing the Effectiveness of Inpatient Palliative Care Consultation Teams (PCCTs)

by

Meghan Leigh McDarby

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Washington University in St. Louis, 2018

Brian D. Carpenter, Chair

Inpatient palliative care consultation teams (PCCTs) provide supportive care to individuals with chronic, life-limiting illness and their families. However, the clinical effectiveness of the PCCT may be affected by the quality of their collaboration with other providers. The purpose of this two-part study was to describe the efforts of inpatient PCCTs in order to (1) determine whether their expertise is maximized by other providers and (2) identify factors that may hinder or facilitate their successful collaboration with other providers. Descriptive analyses of retrospective chart review data ($N = 120$ charts) suggest that the majority of PCCT recommendations to other providers focus on pain and symptom management, and the actions of PCCTs themselves capitalize on their expertise in communication. Thematic analysis of semistructured interviews with PCCT ($n = 17$) and non-PCCT ($n = 27$) providers suggests that the PCCT employs a wide set of skills but that providers prioritize their help differently based on their professional needs. Providers described ways in which the PCCT already facilitates collaboration and suggested mechanisms to address barriers to collaboration. PCCTs may consider techniques like structured educational interventions, increasing their visibility around the

hospital, and promoting the utility of palliative care across disciplines in order to engage in more meaningful collaboration with other providers.

Inpatient palliative care consultation teams (PCCTs) represent a specialty group of interprofessional providers with expertise in pain and symptom management, goals of care discussions, and other forms of psychosocial support for individuals with chronic, life-limiting illnesses and their families (Morrison et al., 2011). Although PCCTs are a relatively new concept, growing from the palliative care movement in the early 1990s, today more than 90% of hospitals with 300 or more beds have an inpatient PCCT (Dumanovsky et al., 2016; Morrison, 2008). The delivery of palliative care via PCCTs has been championed over the past decade, largely because of the ability of PCCTs to optimize the delivery of patient-centered care for individuals on a chronic illness trajectory (Committee on Approaching Death, 2015; Morrison et al., 2011). At the system level, palliative care's focus on pain and symptom management has significantly reduced spending in the healthcare sector, and goals of care conversations carried out by PCCT providers are associated with a reduction in future acute care spending for patients (Dunn et al., 2016; O'Connor et al., 2017). At the individual level, the implementation of early palliative care has been associated with decreases in patient depressive symptoms and higher self-report ratings of quality of life (Temel et al., 2010). Furthermore, family interactions with inpatient PCCTs have been associated with higher overall ratings of satisfaction with medical care (Casarett et al., 2011).

PCCTs in the inpatient setting generally function as a consultation service. Medical billing manuals describe a consultation as “an evaluation and management service provided at the request of another physician or appropriate source to either recommend care for a specific condition or problem, or to determine whether to accept responsibility for ongoing management of the patient's entire care or for the care of a

specific condition or problem” (Capture Billing, 2018). This definition implies that successful propagation of palliative care via PCCTs requires meaningful team collaboration. In healthcare settings, collaboration involves “professionals assuming complementary roles and cooperatively working together, sharing responsibility for problem-solving, and making decisions” to pursue common goals that reflect the wishes of a patient (O’Daniel & Rosenstein, 2008, p. 272). Various factors, including open communication between collaborators, a respectful atmosphere, and shared responsibility for team success, may interact to define the working relationship and degree of successful collaboration (O’Daniel & Rosenstein, 2008). However, little is known about what specialists expect in their consultation interactions with the PCCT, to what extent specialty providers are educated about the consultation process during their medical training, and how providers perceive the role of the inpatient PCCT as applicable to their own practice (Salerno et al., 2007; Sibert et al., 2002).

To better understand the role and function of inpatient PCCTs at a macro level, research to date has examined the trajectories of palliative care consultations, from initial consultation requests, to the types and numbers of recommendations made by the PCCT. These studies lend themselves to quantitative evaluations of the scope of the PCCT’s recommendations, the speed with which the PCCT fulfills consultation requests by other providers in the hospital, and the degree to which recommendations made by the PCCT are implemented by other providers (Chong et al., 2004; Kozlov et al., 2012). To better characterize the nuances of collaboration with consulting providers, previous research has focused on defining facilitators and barriers to professional teamwork. For example, cancer patients cite a lack of physician referral as the largest barrier to receiving a

palliative care consultation (Kumar et al., 2012), suggesting that collaboration may be stifled by a physician's inability or reluctance to request a consult. Furthermore, previous evidence suggests that a physician's attitudes toward and knowledge about palliative care may modulate their working relationship with PCCT providers (Ahmed et al., 2004; Buckley de Meritens et al., 2017; Firn et al., 2016; Smith et al., 2012). Even seemingly minor factors, like the mere availability of palliative care beds in a hospital, may also influence a physician's decision to request a consult (Smith et al., 2012).

Although research has broadly described the function of the PCCT in the inpatient setting and documented general key components of collaboration with PCCTs, few studies have specifically examined the inherent roles of the PCCT in providing recommendations for patient care, the nuances of collaboration and teamwork with PCCTs, and moreover, how functional relationships between PCCTs and non-PCCT providers may shed light on patterns of palliative care utilization in the inpatient setting. Furthermore, additional research in this area would not only help PCCT providers maximize the full range of their competencies throughout the consultation process, but also help them identify the specific factors that facilitate and limit their ability to apply their entire clinical skillset in collaboration with other inpatient providers. Given the uniqueness of palliative care—a discipline that, due to its newness, is still regarded with some stigma and confusion by practicing physicians—it is plausible that one might employ a multidimensional approach in order to comprehensively understand the consultation process (LeBlanc et al., 2015).

The purpose of the current study was twofold. The first aim was to understand the degree to which non-PCCT providers effectively utilize the range of expertise offered by

the PCCT. To achieve this goal, I employed a medical records chart review in order to characterize consultation recommendations made and actions taken by PCCTs in response to inpatient consult requests. The second aim was to elucidate the dynamics between PCCTs and other inpatient providers and examine the degree to which nuances of the working relationship may be related to successful interprofessional collaboration. To achieve this goal, I conducted semistructured, qualitative interviews with PCCT and non-PCCT providers at three local hospitals. The goal of the interviews was to identify facilitators and barriers to the utilization of the PCCT, as well as to describe the collaborative relationships between the PCCT and other providers. Based on the current literature, I hypothesized that PCCT providers would not consistently utilize the full range of their clinical expertise in consultation interactions with other providers. Furthermore, I hypothesized that providers would cite insufficient knowledge about the scope and expertise of palliative care as a primary barrier to successful collaboration and point to specific communication strategies that facilitate their working relationship with other providers.

Method

Study 1: Retrospective Chart Review

Data source. I conducted a retrospective electronic medical record review of initial palliative care consultations (PCCs) that occurred between January 1, 2014 and December 31, 2016 at one Midwestern urban teaching hospital and one community hospital, hereafter referred to as “Hospital/PCCT A” and “Hospital/PCCT B,” respectively. Characteristics of each PCCT appear in Table 1. *Initial* PCCs refer to the first time that the PCCT was consulted about a particular patient. I did not include PCCs

from patients' subsequent hospital admissions. Each site provided a list of all initial PCCs that the team received within the time frame under study. Sixty consultations were randomly selected for review at each site, stratified to achieve equal numbers of cases in each study year. I documented the first visit from each discipline on the PCCT (i.e., physician, nurse practitioner, nurse, social worker, chaplain) within one week of the initial consult request, and I tracked the subsequent recommendations made and actions taken by each discipline.

Variables.

Patient characteristics. For each case, I recorded the patient's date of birth, primary diagnosis, sex, race, date of initial PCCT consultation request, and date of discharge or death.

Recommendation and action variables. For each consultation completed by the PCCT, I documented all recommendations made by the PCCT, actions taken by the PCCT during a consult, and comments about current or future care. For recommendations, I recorded the discipline of the PCCT provider making the recommendation and the verbatim recommendation text. The second coder (BC) and I sorted recommendations into five categories: discharge (e.g., "Discharge planning: ensure continuity of care in discharge environment."), symptom management (e.g., "I recommend 10mg of Ativan as needed for the patient's anxiety."), pain management (e.g., "Start the patient on 5mg of morphine BID for breakthrough pain."), comfort (e.g., "Stop vitals and unnecessary blood draws since goal at this time is comfort."), and consult (e.g., "Recommend that you consult psychiatry for a full evaluation.").

For actions taken by the PCCT, I recorded the discipline of the PCCT provider who completed the action and the verbatim description of the action taken. Coding categories for this text included: conversation with a patient, family member, or provider (e.g., “I spoke with the patient’s husband on the telephone about setting up a family meeting this week.”); discharge (e.g., “Palliative Care will initiate referral to hospice.”); goals of care discussion (e.g., “Had a goals of care counseling discussion with patient and family members.”); and psychosocial support (e.g., “We met with the patient for some supportive counseling.”).

Statistical analysis. I used descriptive statistics to characterize patient demographic variables (age, race, diagnosis, date of consultation request, total length of stay from admission to discharge/death), recommendations made by the PCCT (types of recommendations, discipline making recommendations, number of recommendations, recommendations made per patient), and actions completed by the PCCT (types of actions, discipline completing the action, number of actions, and actions completed per patient). All analyses were completed in R Studio Version 0.99.903 (2015).

Study 2: Semistructured Provider Interviews

Participants. I interviewed members of the PCCTs ($n = 17$) at Hospitals A and B (described in Study 1), as well as at Hospital C, another community hospital, to learn more about the consultation process and their professional experiences. Each site’s PCCT provided names and contact information of approximately 25-30 non-PCCT providers in that hospital (i.e., not part of the palliative care team), a mixture of non-PCCT providers who either (a) regularly consulted the PCCT, (b) occasionally consulted the PCCT, but could probably consult them more often, and (c) did not regularly consult the PCCT but

could reasonably consult the PCCT based on their typical patients and scope of practice. Providers were contacted by email to solicit participation in an interview, and of 94 total providers contacted, 27 (28.7%) agreed to and completed an interview.

Detailed characteristics about PCCT and non-PCCT providers from Hospitals A, B, and C interviewed for the study are presented in Table 5. The mean age of participants was 51 ($SD = 10.4$, range = 30-66), and nearly 64% of the all providers had more than 20 years of experience in their professional discipline. The majority of non-PCCT providers who agreed to participate were those who the PCCT had described as “regular” or “moderate” PCC requestors. Nevertheless, several participants had been recommended to me by the PCCT at that hospital as providers who “rarely or never” consult.

Interview structure. All providers responded to a brief, anonymous demographic survey before the interview. Semistructured interview questions elicited information about types of team interactions, the qualities of “successful” and “unsuccessful” palliative care consults, reasons for which providers might consult the PCCT, responsibilities routinely performed by a PCCT, types of recommendations requested from and made by the PCCT, and the perceived scope of practice of a PCCT. Questions were phrased differently and contained slightly different content based on the interviewee’s role (PCCT or non-PCCT member). See the Appendix for interview prompts.

Procedure. I interviewed providers between August 2017 and March 2018. I completed all of the interviews at Hospitals A and B. A medical fellow on the PCCT at Hospital C completed approximately half of the interviews at that site, and I completed the rest. Interviews were conducted individually, in a private space in the hospital. My

goal was to interview as many providers on each PCCT as possible in order to collect a range of responses to questions across provider type (e.g., physician, nurse). I stopped collecting data from non-PCCT providers once data saturation had been achieved. On average, interviews lasted 24:25 minutes ($SD = 9:03$, range = 8:41-53:59). Interviews were recorded and later transcribed into text documents by three research assistants who were blind to the type and discipline of provider.

Data analysis. The second coder (BC) and I thematically analyzed the interview data using a directed content analysis approach. Based on methodology outlined by Miles, Huberman, & Saldaña (2008), I designed an iterative coding procedure, whereby I could employ both deductive and inductive coding. This hybrid approach provided the opportunity to specify some hypothesized themes in advance, based on ideas proposed in previous literature regarding barriers to the utilization of palliative care, and to inductively identify themes that emerged from the raw interview data during the coding process (Feredey & Muir-Cochrane, 2006).

First, both interviewers (two) and transcribers (three) discussed several frequently occurring ideas that we identified during the interviews and transcription processes. The team operationally defined each of these ideas (i.e., codes) prior to coding in order to reduce opportunities for confusion while reading through transcripts. Next, both coders independently read the first five interviews, applying the codes that were generated deductively and also coding inductively to address emergent concepts. The two coders then met to discuss and compare both the utility of predefined codes, as well as the emergence of new codes. I collapsed some codes into smaller units (many of our original codes became subthemes nested under our five major themes), and redefined others to

address discrepancies. Due to the fact that multiple codes were collapsed and reworked during the first collaborative session, the two coders reviewed the first five interviews a second time to resolve discrepancies and apply the updated coding scheme. We applied the same iterative coding procedure until we had both coded 12 interviews with PCCT providers, at which point we had resolved all coding discrepancies; as a result, I independently coded the five remaining PCCT interviews. The same coding procedure was used with the interviews with non-PCCT providers. Due to the fact that interview responses among non-PCCT providers fit into the pre-existing codes created for the PCCT interviews, the two coders only read five interviews together to substantiate agreement. I coded the remaining 22 non-PCCT interviews independently, and BC was consulted when questions surfaced. I utilized QSR International's NVivo 10 Software to support data analysis.

Results

Study 1: Retrospective Chart Review

Detailed patient, consultation, and recommendation characteristics for the 120 patient initial consults reviewed at Hospitals A ($n = 60$ charts) and B ($n = 60$ charts) appear in Table 2. The mean patient age at consultation was 72.9 years ($SD = 16.0$, range = 24-106). The sample was 54.5% male and 71% White, and cancer was the most common diagnosis type in the entire sample. The average length of stay for patients in the study sample was 11.6 days ($SD = 13.1$ days), and the average time between admission and initial PCCT consultation request was 6.1 days ($SD = 9.9$ days).

Recommendations made by PCCT. Across both sites, the PCCTs made a total of 91 distinct recommendations to requesting providers across the 120 patients in the

study sample (some patients received more than one recommendation, while others did not receive any). Due to the fact that PCCT B is comprised of three nurses whose educational training does not permit them to make pain and symptom medication recommendations without the support of a physician, only six of the 91 recommendations included in the sample were made for patients at Hospital B. As a result, I only include descriptive statistics for the 85 recommendations made for patients by PCCT A at Hospital A in Table 3.

On average, more than one specific recommendation was made per patient by PCCT A to the physician who had originally requested the consult ($M = 1.42$, $SD = 1.94$, range = 0-8). Overall, 80% of recommendations were related to pain or symptom management, while fewer recommendations were made with regard to comfort, seeking another consult, or discharge (see Table 3). Physicians on PCCT A made 66% of patient recommendations, while nurse practitioners made 32%. The team's social workers or chaplain made only 2% of recommendations. Eighty-two percent of the recommendations made by PCCT A were implemented, and on average, these recommendations were implemented on the same day that the recommendation was made ($M_{days} = 0.3$, $SD_{days} = 1.1$).

Actions completed by PCCT. Overall, the PCCTs completed 105 actions across the 120 patients in the study sample. Both PCCT A and B are considered in these analyses. The PCCTs documented an average of 0.9 specific actions completed per patient ($SD = 0.6$, range = 0-3). Approximately 50% of these actions represented a conversation that the PCCT member had with a patient, family member, or provider.

Another 36.2% of the actions involved the PCCT member having a goals of care discussion with the patient and/or family (see Table 3).

PCCTs A and B completed approximately equal numbers of actions as a result of a consult request (Table 3). Nurse practitioners on PCCT A completed the majority of actions (48%), followed by the team's physicians (26%), social workers (15%) and chaplain (11%). Due to the homogeneous composition of providers on PCCT B, all actions were completed by nurses.

Study 2: Semi-Structured Interviews with Providers

Five major themes emerged from interviews with both PCCT and non-PCCT providers (Table 6). I also identified subthemes within each theme that reflect variety in provider responses and also underscore the dynamic nature of the services provided by the PCCT. Quotes from providers at Hospitals A (Site 1), B (Site 2), and C (Site 3) are included throughout to highlight specific examples, and participant ID number denotes both site and participant (e.g., 2-4 refers to participant 4 at Hospital B).

Theme 1: Variable Interactions with Other Providers. PCCT and non-PCCT providers stated that they have some *formal* interactions with one another within the hospital, such as interdisciplinary care team meetings, hospital-wide lectures, and grand rounds. However, their descriptions implied that these formal interactions tend to happen irregularly (e.g., some providers do not consistently attend these events) and often do not lead to direct conversations among providers. As a result, the bulk of the interactions between PCCT and non-PCCT providers are described as more *informal*, brief, and fleeting—at the patient's bedside, in the hallway, and informal huddles before family meetings. Even then, providers described conversations that focus on the patient, family,

and care situation and do not deviate from professional topics. Providers stated that they rarely have conversations with their partners in collaboration about their personal lives.

Theme 2: Roles and Responsibilities of the PCCT.

Subtheme 1: General expertise. Both groups of providers referred to a general expertise contributed by PCCT providers that complements the care provided by non-PCCT providers. This expertise includes conducting goals of care conversations and managing symptoms, and although I identified those roles and responsibilities as separate subthemes, providers view the PCCT as the true “experts” in these services:

Our expertise in symptom management adds to what the team is providing in terms of management of symptoms and it helps the patient, and the patient feels better because of it. (1-8, PCCT physician)

Furthermore, non-PCCT providers acknowledged that although they have the skillset required to treat patients with chronic illness, PCCT providers offer a useful depth of knowledge and expertise:

Sometimes if it's a complex pain issue, and I'm looking for more novel ideas about how to manage it, sometimes they can come up with things that I don't, because it's their expertise. So when I feel like I'm pushed to my limits, I always wanna acknowledge, “It seems I don't know,” and there's a reason that there's a specialty/expertise in this. (3-5, hospitalist)

Some participants acknowledged that even when they share skills with PCCT providers, the expertise of the PCCT can still be of benefit:

I mean, so I guess as far as like things that I *can't* do...I don't know if there's anything that, you know, like there's not like official hospital prohibitions...but I would say that there are things that they have greater expertise in. (1-10, hospitalist)

This gynecological oncologist, described something similar:

We're sort of cocky at first. We thought, “Well, we don't really need a palliative care team. We can really do it ourselves.” But honestly, that's what they [do]. They're better at it. (1-9, gynecological oncologist)

Subtheme 2: Communication. Both PCCT members and non-PCCT providers described an essential role of the PCCT in bridging communication among patients, families, and other providers. As one palliative care physician said:

None of us can do anything by ourselves. Working as a team can really make a difference in how we provide care. I think communication is the key in communicating with the attending and the varied specialists and the nurses at the bedside, and of course family. Family and patients. (3-2, *palliative care physician*)

Non-PCCT providers referred to the role of the PCCT as “helping the patient and family understand the medical prognosis in a way that I may not have been able to help them understand as completely.” (2-7, *cardiologist*) Furthermore, a gynecological oncologist agreed that it can be helpful for patients to hear about issues related to their care “from more than one angle.” (1-9, *gynecological oncologist*)

Nearly every provider interviewed mentioned the essential role of the PCCT as facilitator of goals of care discussions with patients and care partners. In this role, the PCCT helps patients consider alternate care options, prioritizes patients’ preferences for treatment and quality of life, and advocates on behalf of patients to be sure their values are honored by the treatment team. However, other non-PCCT providers indicated that it is a primary responsibility of the PCCT to perform “conflict resolution,” often in the context of goals of care decision making. One non-PCCT provider defined palliative care as “a service line which helps the interactions between patients and patients’ families . . . mostly when there’s a conflict.” (3-4, *critical care physician*) In fact, some participants explicitly stated that the PCCT’s role in helping the family cope with conflict superseded their competency in pain and symptom management:

I personally think that their . . . expertise is with communication and helping the family cope with conflict. And less medical management. But that may not be the case for everybody else, because a lot of people are not interested in palliative care

and have not done end of life care and are not familiar with medications that are used, and for them, the medical recommendations may be more relevant, for me, they're not. (3-14, *critical care physician*)

Providers discussed the role of the PCCT as a neutral “third party” to help patients, families, and providers “get on the same page,” (1-16, *critical care physician*) or resolve discrepancies in perceptions about care and treatment. Several non-PCCT providers stated that they use the PCCT to restate their position on treatment to patients in the hope that the patient will come to a similar understanding. Some PCCT members acknowledged this role but felt uncomfortable about it at times:

I think we get consulted a lot when somebody is getting really sick, and they're not going to get better. And the family wants to continue with aggressive care and the medical team doesn't think that's a good idea and it's kind of a secret “please change my code status” consult and you know, we'll get goals of care and then we'll get from the team: hey, please change their code status, we really need to change their code status. And I think that sometimes, what it is, is sort of a secret consult. Let's talk broader goals of care but also, we really need you to do this. And you know sometimes we are able to do that and sometimes we aren't. (1-2, *PCCT social worker*)

A palliative care chaplain had a similar remark:

I think they think that palliative care can come in and somehow get the patient and family to hear what we haven't been able to get them to hear. I think what we do on the palliative care team is establish relationships where patients and families feel that they can sort of, I don't know, have an outside group of folks that feel trustworthy to them. If things have sort of deteriorated with the treating team. (1-7, *PCCT chaplain*)

Subtheme 3: Pain and symptom management. All PCCT providers spoke of their role in assisting with patients' poorly managed pain symptoms, such as dyspnea, nausea, and constipation. Both sets of providers discussed that PCCT members offer a “fresh perspective” on symptoms that have been difficult to manage and generate ideas that the treating team has not yet considered. One PCCT nurse stated that “even [if] the reason for the consult was goals of care, we will [still] look at pain and symptom management,”

underscoring the PCCT's role in assisting with this domain of care (2-10, *PCCT nurse*).

The majority of non-PCCT providers also described the utility of the PCCT in providing symptom management recommendations, largely because the focus of their practice is on treating a specific illness, not on treating symptoms as their own illness:

I would defer it to them because they're used to...they're more knowledgeable of treating someone with such a high dose of pain medications. It's more just trust, like maybe I wouldn't prescribe [that medication], but they're offering that and they're doing well with it, so let's go with it. (2-1, *hospitalist*)

Subtheme 4: Supportive care, care transitions, and continuity of care. Providers described the PCCT as critical in coordinating patient care and assisting with transitions throughout the course of serious illness, including transitions in illness states and logistical transitions. One non-PCCT provider described the PCCT's utility in providing supportive care during a transition from the inpatient setting to home:

So we try to get them [the PCCT] involved and I think as much for the patient but also for the family to help understand and to help make decisions and see what kind of options there are at home because many of these patients have a variable socioeconomic status, caregiver support and really I find that PC does a good job of trying to organize and figure out what the options really are based on what the resources are at home. (1-4, *critical care physician*)

Participants also described the continuity of care that the PCCT can provide to inpatients, mentioning follow-up with patients who had been readmitted and taking calls from patients even after discharge:

I've started using PC . . . to have a familiar face, especially in a high intensity setting like an ICU, where we expect or anticipate that the patient is going to be admitted multiple times or will have a prolonged admission, because the other parts of the healthcare team keep changing. Nurses will change, physicians will change, consultants will change, but the palliative care team can remain the same. So it provides for some continuity of care for the patients and families to have a familiar face throughout their readmissions or prolonged hospital stay. (3-14, *critical care physician*)

Subtheme 5: End of life, but “not just hospice.” A majority of both PCCT and non-PCCT providers spoke to the usefulness of the PCCT in providing support related to end-of-life care and decision making, psychosocial concerns related to dying, and education/preparation for hospice. As one PCCT nurse practitioner stated, some of his patients are “people who are getting ready to die, so you’re able to help the family see that this is the best route.” (3-1, *PCCT nurse practitioner*) That end-of-life support is a predominant role of the PCCT was an especially consistent view among providers who consulted the PCCT less frequently or admitted that they were less familiar with the services offered by palliative care. However, some non-PCCT providers also acknowledged that although many of the responsibilities shouldered by the PCCT are relevant to end-of-life care, their scope of practice is not limited to just that. A colorectal surgeon said that the purpose of palliative care is:

To allow us to transition from aggressive treatment mode to patient comfort mode and not always necessarily at the very end of life. I know, I mean sometimes there are times where it is at the end of life, but it’s not always that...we sometimes need palliative care a lot earlier than the last six months of people's lives. (1-11, *colorectal surgeon*)

Other PCCT and non-PCCT providers spoke to the damage that can ensue when providers (and patients) are not aware that palliative care is more than hospice:

I think hospice is kind of the expected role for palliative care team, although I think that single role has expanded more toward more patient relief and suffering and then also for family support. . . but you know, there’s a misperception about PC being only hospice, so when I talk to patients and their families about it, it’s more of a “you have to tread lightly” to bring up the subject. Because as a care provider, it’s hard to introduce palliative care to patients that are gonna die within a certain amount of time and [they think] you’re talking about hospice, which is not the case. I present it as a resource for the future and then if they have any pain issues, that PC can help with a lot of that, especially metastatic disease, [in] patients that have a lot of pain. (3-16, *colorectal surgeon*)

Subtheme 6: Saves time. At a practical level, providers spoke consistently about the key role of the PCCT in saving time for other providers, largely by spending more with family members. PCCT providers tend to have more time in their schedules to devote to lengthier patient visits:

We may not be able to spend the amount of time that's necessary to fully deal with some of these more complicated PC issues. And so I think that having a service available that can do that . . . it's really important not to make patients feel rushed about these sorts of things and the decisions that they have to make. And so having a group that can help to facilitate that can be very helpful. (1-13, *critical care physician*)

Other non-PCCT providers described the time constraints on their practice and alluded to the ways in which their practice might suffer without support from the PCCT:

I think the PCCT can supplement the discussions that I cannot have because I'm taking care of patients who are sicker, younger, more salvageable, maybe have a problem that is fixable, so those are people we don't want dying. Versus people that we think have problems that are not fixable . . . so I think the focus of palliative care can be on those patients so that they get adequate care as well. (3-14, *critical care physician*)

Theme 3: Barriers to consultation/consultation process. We identified three distinct subthemes that captured providers' descriptions of barriers to the consultation process, as well as barriers to getting an initial consultation.

Subtheme 1: Patient- and family-level barriers. Providers commonly noted that one major barrier to the effectiveness of the PCCT is confusion about the reason for the consult and resistance about PCCT involvement in their care. A PCCT physician described a poignant example of a time when patient and care partners were both begrudging and skeptical of the role of the PCCT in the patient's care:

We walked in the door into the room and her sister was there. She basically said, "So, (and we had introduced ourselves) you're palliative care?" And we said, "Yes, we're palliative care," and what we do, and so forth. And she says, "So you're here to pull the plug?" We said, "No, we're here to provide support and just assure those

goals and so forth that your sister has and your family, if they can be reached, we can try to provide support.” “You’re here to pull the plug, aren’t you?” We said, “Not really.” So that’s about it, and she threw us out. (1-8, *PCCT physician*)

Non-PCCT providers also commented that misunderstanding on the part of the patient or reluctance to involve a treatment team with comfort goals is a common obstacle:

There are occasionally times or situations where [in] my perception . . . the PC team either feels like hospice is the right thing or is kind of pushing that approach. I’d say that doesn’t happen very often, but I think that’s been the times when we’ve had a little bit of a difficult situation in terms of trying to navigate what we’re going to end up doing. It may seem appropriate to us but they [some patients and families] haven’t quite, you know mentally gotten there and I think that’s where sometimes we have some difficult things. (1-4, *critical care physician*)

Subtheme 2: Provider-level barriers. Many providers raised the idea that consulting the PCCT may imply failure to some physicians. For example, one PCCT physician stated, “I think they feel like they’re failing their patients sometimes when they call us.” (3-2, *PCCT physician*) A general surgeon described the perception that palliative care feels “synonymous to giving up” for some providers:

Like “we’re going to give up, so we’ll consult palliative care.” And I don’t believe that’s really what it really is, so I think that we would consult more if we didn’t have this kind of bias about that and feeling like that was synonymous with giving up. (3-7, *general surgeon*)

Similarly, several participants pointed out that palliative care is sometimes perceived by non-PCCT providers as a last resort. For example, a PCCT chaplain, stated that “physicians seek out our help when they are just at wits end about how to help,” (1-7, *PCCT chaplain*), and a PCCT physician described a provider belief that “any PC involvement will signal to the patient and family that death is imminent and [that] our agenda is to stop whatever active treatment they are doing and prepare for hospice.” (3-10, *PCCT physician*)

Other providers alluded to deeply-rooted beliefs in self-sufficiency among non-PCCT providers that might prevent certain individuals from seeking palliative care consults. For example, PCCT providers cited a belief among non-PCCT providers that they do their own palliative care, and some non-PCCT providers corroborated this idea: “If you don’t know how to relieve pain, are you even a doctor?!” (1-15, *medical oncologist*) Some participants noted that differences in professional philosophy about the utility of palliative care may pose as a barrier to consultation. For example, a PCCT physician said, “Sometimes, they [other providers] don’t value what we have to offer . . . there’s less value in the communication skills and what we bring in that way.” (3-11, *PCCT physician*) Similarly, a PCCT nurse practitioner stated simply that “there are providers who really don’t believe in palliative care.” (1-1, *PCCT nurse practitioner*) The same medical oncologist who described his self-sufficiency also shared a professional philosophy conflicting with the purview of PCCT: that he cannot provide continuous care to his oncology patients if he “outsources” certain care to the PCCT. (1-15, *medical oncologist*)

Lastly, few participants mentioned that when other providers perceive the PCCT as being too busy and having a full caseload already, that could also deter additional consultations: “They [other providers] are cognizant that a few providers can’t do it, and so they don’t consult us sometimes because we might not even get to it.” (2-10, *PCCT nurse*)

Subtheme 3: System-level barriers. The predominant system-level barrier universally reported by providers was confusion of palliative care with hospice, or lack of education around palliative care. Although one could argue that this subtheme doubles as

a provider-level barrier, I propose that the general misunderstanding of palliative care as synonymous with hospice care stems from a broader misrepresentation of palliative care in the education and training of medical providers (i.e., in medical school, residency, practicum training). A PCCT social worker and a chaplain described their similar experience with this lack of differentiation:

I think some of it is misconceptions. Palliative care is a relatively new specialty, really, in the last 15-20 years it's kind of really taken off, so there's a lot of providers who were not trained in a time that it existed, and I do think that there is a generational impact, providers who only see it as hospice and end of life and who have not been able to make the shift to recognize that we offer more than that. (1-2, *PCCT social worker*)

Well. I think there's the common misconception that palliative care is only for people at the very end of their lives. So there's not an understanding or appreciation that our team can work side-by-side with patients receiving aggressive, life-prolonging therapy. I just think people are working with a 30-year-old definition of palliative care unfortunately. (1-7, *PCCT chaplain*)

Participants on PCCTs at other sites echoed the same sentiments, stating that “there are providers who wonder why we're involved...I've heard them say, ‘Well, they're not dying, why are you guys involved?’” and, “They clearly don't know the role and definition of palliative care.” (3-3, *PCCT social worker*; 3-13, *PCCT nurse practitioner*)

Other providers spoke to differences in education around palliative care and how it served as a barrier for some physicians, depending on how they may have been exposed to the concept of care in their medical training. For example, a PCCT nurse stated that “the younger ones (the older ones are less likely to consult us) who have had it as part of their training, I think also have had that early exposure to us and realize that palliative care can be a benefit and help them in their role as a treating physician.” (2-4, *PCCT nurse*)

Theme 4: Facilitators for consultation/consultation process. We identified two subthemes of facilitators that providers identified in terms of promoting successful collaboration between the PCCT and non-PCCT providers.

Subtheme 1: Strategies for PCCT providers. Both sets of providers spoke of facilitators that the PCCT either already employed skillfully in their day to day service, used somewhat regularly but could use even more consistently, or had not fully capitalized in their current delivery of service. Both PCCT and non-PCCT providers discussed the key role of visibility of the team, in both facilitating new consultations as well as maintaining positive relationships between providers. For example, a PCCT nurse described her practice of purposefully charting at the nurse's station to make herself visible to other providers. This strategic visibility seemed to be a tool successfully implemented by many palliative care providers. When discussing their attendance at interdisciplinary care meetings and grand rounds, PCCT providers also alluded to it as a gesture via which they could reinforce their presence in the hospital. Providers also discussed unintentional visibility (e.g., passing each other in the hallway) as sometimes equally important, though unplanned. Non-PCCT providers suggested that they might be triggered to consider a consultation for a new patient after bumping into a member of the PCCT on the floor while seeing another patient.

Providers also discussed the critical importance of education, promotion, and marketing of palliative care throughout the hospital. Many non-PCCT providers referenced specific times when the PCCT had given presentations or provided education to their team at a scheduled event, which they found to be useful. However, these events seemed infrequent, and most interviewees stated that the PCCT could engage in even

more, explicit attempts at provider education as a way to facilitate consultation. A comment from a general surgeon, who should have presumably known about palliative care, underscored the importance of educating providers throughout the medical center about how the PCCT could be helpful:

I guess, you know, maybe this isn't really answering that question, but I'm just curious as to what palliative care . . . what patients do they feel like they could benefit? That's what I would like to know. (3-15, *general surgeon*)

Lastly, providers discussed the utility of the longstanding, trusted relationships that they had cultivated after having worked together over extended periods of time. For example, a PCCT nurse practitioner stated, "I think we do a really good job of collaborating with other teams. And just trying to foster a good working relationship." (1-1, *PCCT nurse practitioner*) A PCCT social worker echoed similar thoughts and also discussed the importance of building trusted relationships with all types of providers, not just physicians and nurse practitioners:

...building relationships with not only the physician providers but the NPs out there, the nurses, like the nurses in the ICUs, the nurses on the TCU, the ground level people, if you will. I think just developing those relationships and reminding them because they can advocate for a consult sometimes, I think that makes a big difference. (3-3, *PCCT social worker*)

Trusted relationships between the PCCT, patients, and families are also important:

I think the biggest thing for palliative care is making a relationship with that patient or that family, because for some there is a trust issue, so if they don't trust you, they will not listen to you. Same with the doctors, but if they don't trust you and you don't have a relationship with them, they're not going to listen to you at all. (2-2, *internist*)

Subtheme 2: Strategies for other providers. Interviewees also suggested there are ways for non-PCCT providers to facilitate the collaborative consultation process with the PCCT. One major idea cited by providers was cultivating a positive view of palliative

care and collaboration. Many PCCT providers suggested that they consistently received consults from those providers who understood how palliative care could benefit their service and their patients. Furthermore, providers seemed to suggest that clinicians who consistently seek consultations tend to have a preconceived idea about the specific role of the PCCT in their typical patient's care (e.g., help with pain management, symptom management, goals of care).

Lastly, both groups of providers described that early consults facilitate collaboration and the consultation process, and that getting the PCCT on board early with a patient is one of the best ways to maximize the consultation experience.

Theme 5: Recommendations made by the PCCT. We identified two subthemes regarding the type, context, and nature of recommendations made by the PCCT to non-PCCT providers requesting consultations.

Subtheme 1: Characteristics of recommendations that are followed. Overall, providers stated that they were generally likely to follow recommendations made by the PCCT. Both sets of providers stated that recommendations related to goals of care, or care preferences gleaned from the patient during a conversation, would almost certainly be followed. Palliative care providers also highlighted broad reasons why providers may be more likely to follow a recommendation, including that they are desperate (i.e., "...that's when they really take the help. When they are desperate, when they have tried everything."), they are affiliated with a certain team (i.e., "Gynecology always takes our recommendations."), the recommendation addresses a particular symptom, the PCCT follows up immediately and reinforces action, or the recommendation applies to a specific location (i.e., "Out on the floor, if we're consulted for symptom control, I would

say that upwards of 85-90% of the time the physician will listen to my recommendations . . . I think it's less in the ICU.”).

Subtheme 2: Characteristics of recommendations that are partially followed and not followed. Both PCCT and non-PCCT providers disclosed that pain and symptom recommendations are most commonly only partially followed or not followed at all. Non-PCCT providers suggested that sometimes the PCCT is unaware of interactions with the patient's other medications or symptoms, and that certain recommended treatments have the potential to cause more harm than good in their opinion. As a result, those recommendations might not be incorporated into the patient's treatment plan, at least as the PCCT originally conceived them. Occasionally, participants also implied that requesting providers may be reluctant to prescribe the type of medication suggested by the PCCT (e.g., opioids) for various reasons, including lack of knowledge about the literature supporting the use of that treatment, or fear about how that medication would be handled during a care transition. One provider noted that “it's a tricky subject” because:

I think a lot of them don't want to be pain doctors. And I think that's been a real struggle, because from a hospital-based practice, it's difficult to transition to help some of these patients who . . . are on chronic narcotics. . . It's hard to find anybody as an outpatient who will take over that pain management. (3-16, colorectal surgeon)

Lastly, when recommendations are partly followed, it tends to be because the requesting provider modifies the recommended dose or substitutes a similar treatment believed to be better suited to the patient's circumstances.

Discussion

Inpatient palliative care consultation teams (PCCTs) provide interprofessional care that addresses a wide variety of issues for people living with serious or life-limiting illness (Gade et al., 2008; Kelley & Morrison, 2015; Morrison et al., 2004, 2008; Steihauser et al., 2000). However, with some exceptions, previous research has not examined to what extent PCCTs employ all of their competencies, determined whether other providers utilize the full range of expertise of the PCCT, or addressed the dearth of systematic information about how to improve the dynamics between PCCTs and other providers (Kozlov et al., 2011; Oishi & Murtagh, 2014; Schaefer et al., 2014). The purpose of the current study was to characterize the key roles of inpatient PCCTs and the nuances of their collaboration with other providers. The mixed-methods study included a retrospective medical chart review along with semistructured qualitative interviews with hospital providers in order to (1) elucidate to what extent the expertise of the PCCT is utilized during the inpatient consultation process, (2) examine the dynamics between PCCT and non-PCCT providers with whom they collaborate, and (3) identify ways to enhance the working relationship between PCCT and non-PCCT providers. Overall, the results suggest that inpatient PCCTs emphasize their expertise in pain and symptom management when responding to consultation requests and highlight their clinical competency in communication when engaging with patients, care partners, and providers, thus partially supporting my original hypothesis that PCCT providers would not apply all of their competencies equally during the consultation process. Furthermore, my results suggest that while the PCCT generally has successful collaboration with other providers, there may be several methods to enhance their working relationship, especially by

increasing knowledge about the role of the PCCT. This finding supports my hypothesis that inadequate knowledge about palliative care acts as a barrier to collaboration.

What *is* the role of the PCCT, and is their expertise fully utilized?

The results of this study indicate that PCCTs contribute the breadth of their skillset in collaborative work with other providers, given that they make recommendations to other providers in several domains (e.g., pain and symptom management, discharge planning) and engage in a variety of helpful actions related to their scope of practice (e.g., communicating with families, providing psychosocial support). However, in the current study, the majority (more than 75%) of PCCT recommendations that were documented in the medical record were fairly circumscribed in their focus and limited to suggestions for pain and symptom management. In addition, more than 75% of actions taken by the PCCTs involved having a conversation or discussion with a patient, family member, or provider. These two findings underscore the conceptualization of these domains (i.e., symptom management and communication) as primary competencies of palliative care providers (American Board of Internal Medicine, 2018; Morrison et al., 2008; Schaefer et al., 2014) and suggest that they are areas of palliative care expertise that are especially useful for certain providers, but simultaneously imply that there may be certain areas of PCCT expertise that tend to be underutilized in the inpatient setting.

Comments directly from providers also support the notion that expertise in pain and symptom management, as well as communication skills, represent primary roles of the PCCT. Every PCCT provider and the majority of non-PCCT providers referenced both roles in their definition of palliative care or provided anecdotes highlighting the

contributions of the PCCT in these areas. However, there was still some inconsistency between the roles and responsibilities PCCT providers saw for themselves and what was reported by non-PCCT providers, even in these domains of practice. For example, while many providers were grateful for the PCCT's expertise in pain and symptom management as well as a fresh perspective on how best to help their patients, others expressed reluctance to implement certain recommendations, particularly those related to strong pain medications (e.g., morphine). They raised concerns about the PCCT's ability to coordinate outpatient management of these medications, either themselves or via patients' primary care providers, and described discomfort about employing potent medications not standard for their usual practice. These comments suggest that PCCTs might consider strategies like providing a more explicit rationale for medications in their recommendations, including brief educational information about medications, outlining plans for medication management upon the patient's discharge, and recommending medication alternatives for the outpatient setting. In fact, similar strategies are supported by a study conducted by Boluware and colleagues (2010), wherein physicians ($N = 651$) ranked the importance of different components of consultation response notes. Overall, 98% of physicians placed high or moderate importance on the inclusion of rationale behind the decision making for a particular intervention, and 76% placed high or moderate importance on including one or more alternative therapies in the consultation recommendation.

Similarly, most providers described the PCCT as expert communicators, skilled at conducting goals of care conversations and engaging in family discussions. Providers value this expertise and recognize the limitations of their own training and time. For

example, providers emphasized that their typical caseload only allows for abbreviated meetings with patients and families, but that the PCCT often has the luxury of extra time to apply their expert communication skills in extended conversations, over multiple visits, and across care transitions. PCCT members also highlighted their expertise in communication as a frequent contribution that they make to patient care. However, some non-PCCT providers placed heavier emphasis on the role of the PCCT as a mediator during communication. They stated that they recruit the PCCT to change patient and family perspectives about the future care trajectory when they may be in disagreement with the treatment team, or when the treatment team feels they are disillusioned about their prognosis (e.g., they should stop treatment, but they refuse to). This colorectal surgeon's remarks describe the PCCT's role as mediator:

When there are different family members have . . . where not everybody is on the same page as far as goals of treatment. We try to get people there, we try to, but the palliative care team is so much better at it with all of the resources that they have. That's a time where I think in particular I really, really need their help. (*I-11, colorectal surgeon*)

While these diverse perspectives on the communicatory roles of the PCCT underscore the breadth of their expertise, provider beliefs about the PCCT's role as mediator, as well as expectations about what PCCT providers can accomplish in that role, may nonetheless inhibit collaboration when the PCCT cannot change the patient's or family's mind about a particular course of treatment. In fact, several providers characterized as unsuccessful consults when the patient and family ultimately did not "get on the same page" as the treatment team. As a result, divergent expectations require an understanding among providers that while the PCCT can provide communication support, successful palliative care consults may not always be synonymous with changing the perspectives of patients

and families. PCCT providers may consider underscoring their support of patient-centered care when they are asked to mediate conflict between patients, families, and providers (Wagner et al., 2005). Furthermore, the PCCT can gently remind providers that using their communication expertise to re-explain the treatment team's goals may not necessarily change the situation but may still result in treatment goals that are aligned with the patient's values and preferences, an important tenet of care (Sandsdalen, Hov, Høy, Rystedt, & Wilde-Larsson, 2015; Singer, Martin, & Kelner, 1999).

Lastly, discrepancies between PCCT and non-PCCT providers regarding the role of the PCCT in supporting end-of-life care imply that there is still a tendency for palliative care to be conflated with hospice care, and that the nuances that distinguish one from the other can be confusing. This problem was mentioned by both PCCT and non-PCCT providers:

I've had other people say that they think we are just hospice, or that we're gonna convince patients...our agenda is just to convince everybody to do comfort care. (1-5, PCCT nurse practitioner)

[Palliative care] is to assist the patients, especially patients that could be at the end of life...and the families to get there. It doesn't necessarily mean that they are...they should be in hospice or that they are going to die right away. But it is kind of the beginning of the end for the patients and the families. And palliative care comes in and helps the patient get through that at this stage, as is the family's. (2-5, non-PCCT internist)

Although addressing end-of-life issues is part of the PCCT's expertise, it seems that it is not always clear to other providers that palliative care encompasses the entire chronic illness trajectory, not just the final months or weeks of a patient's life (National Consensus Project for Palliative Care, 2013; Rome, Luminais, Bourgeois, & Blais, 2011). Furthermore, even some providers who acknowledged that palliative care is not limited to a patient's end of life still admitted to requesting consults primarily within that time

frame. Given that more than 25% of patients included in my retrospective chart review died during their inpatient admission ($M_{days, admission to death} = 5.3$), however, perhaps providers are not fully to blame when they misnomer palliative care as end-of-life care or describe the primary utility of the PCCT in end-of-life care cases: the bulk of their clientele are people approaching the end of life, and by the time they arrive at the hospital, there are very few other functions the PCCT could perform for them anyway.

What are barriers to collaboration, and how does the PCCT address them?

PCCTs face challenges when collaborating with other providers, and at their core, the most intransigent of these challenges reflect misinformation and misunderstanding of the full scope of palliative care. For example, some providers in this study described the perception of palliative care as a “last resort” and endorsed a belief that its fundamental tenets run counter to the overarching goal of medicine: that is, to cure. Of course, that is not true, given that 1) palliative care can be delivered concurrently with other treatments, and 2) previous research suggests that early palliative care interventions can increase life expectancy (Schofield, Carey, Love, Nehill, & Wein, 2006; Temel et al., 2010).

Nonetheless, providers described some methods to combat the barriers posed by this belief. For example, they suggested that the PCCT could correct misinformation about various aspects of palliative care (including the perception that it is synonymous with giving up) by providing formal workshops, seminars, and educational opportunities for teams in the hospital. The need for greater education among medical students and medical professionals has also been underscored in previous literature, yet few studies supply a framework for targeted educational interventions about palliative care as a specialty practice or evaluate such interventions (Aldridge et al., 2015). Increased

opportunities for structured education, especially for currently practicing providers, may not only highlight the utility of the PCCT as a complementary care partner, but also correct misinformation about the scope of practice of the PCCT.

A related barrier that could also be addressed by additional targeted education was raised by non-PCCT providers who believe they are self-sufficient and do not need to consult the PCCT because they can provide their own palliative care. Although new physicians are introduced to some information related to palliative care (e.g., basic pain and symptom management) in their training, that exposure is quite limited, and providers trained years ago would not have had the same exposure. Furthermore, given the recent push for increased training in *primary palliative care*, or basic palliative care training for providers who are not palliative care specialists, there remains a clear consensus that many non-specialists are not adequately prepared to provide basic palliative care without some form of structured training in the field (Quill & Abernethy, 2013; Weissman & Meier, 2011). Emphasizing the role of primary palliative care in the practices of non-PCCT providers may not only serve as a legitimate way to promote the self-sufficiency of non-PCCT providers for less complex cases, but also triage cases so that the PCCT's time is reserved for more complicated care situations (Lupu, 2010).

What are facilitators to collaboration, and how do we maximize them?

In spite of the barriers that can interfere with collaboration, providers in this study also pointed to several important facilitators of collaboration. Furthermore, it seemed that the PCCTs had already started to implement these strategies, sometimes purposefully, and other times unintentionally. For example, some providers referenced tactics as simple as the PCCT making follow-up calls or sending text messages with specific

recommendation details, as opposed to simply leaving a note in the patient’s electronic medical record with no follow up. Providers say they appreciate these notifications and updates, because they permit timely implementation of PCCT recommendations and facilitate ongoing teamwork.

As another example, several providers cited “visibility” of the PCCT as important in nurturing collaboration. When providers bump into the PCCT on the floor or see them charting in a central location, they are reminded of their presence, as well as the availability and utility of their service. Although some PCCT providers were aware of this phenomenon, they did not always describe it as a conscious effort at enhancing collaboration. Providers might consider using this technique strategically in order to maximize contact with other providers and maintain a presence throughout the hospital.

Similarly, non-PCCT providers mentioned that requesting the support of the PCCT feels more straightforward when it is clear how exactly they can assist providers in different disciplines (e.g., surgery versus intensive care). In related comments, PCCT providers believed that collaboration is enhanced overall when providers possess positive perceptions of palliative care. Beyond targeted educational interventions, providers also cited the value of “marketing and promoting,” via case presentations and in-services, so that colleagues better understand how the PCCT could complement their service. As an analogy, a person hoping to lose weight might know that a combination of a healthy diet and regular exercise is effective (“Palliative care helps patients with chronic illness”) and might know that there is a free gym at his workplace (“We have a PCCT”) but may be reluctant to try it out because he does not know what equipment is available (“What will the PCCT do for my surgery patient?”) or how much a membership costs (“What does

collaboration entail?”). Provider responses suggest that more education and marketing about palliative care would bolster their understanding of the PCCT, ultimately serving to enhance collaboration. However, the specific content highlighted by the palliative care team during educational and marketing events may directly affect providers’ perceptions of the PCCT at their hospital, so PCCT providers should strategize about the services they are equipped to provide and how best to portray their service to other providers.

Lastly, providers suggested that longstanding, trusted relationships among providers facilitate collaboration. Those kinds of long-term relationships are the result of working together for long periods of time and are therefore not amenable to brief interventions. However, providers also described their interactions with each other as predominantly patient-centered and work related; few providers mentioned having personal conversations with their partners in collaboration, and even fewer referred to other providers as their “friends.” The opportunity to develop friendships in the workplace is associated with increases in job satisfaction and job involvement (Riordan & Griffeth, 1995), and maintaining friendships in the workplace also cultivates shared perceptions of trust and support between individuals (Berman, West, & Richter, 2002). Although limited research evidence exists about the role of personal relationships among healthcare providers (Yang et al., 2012), my findings support the idea that facilitating more meaningful, personal connections between PCCT and non-PCCT providers may enhance collaboration by promoting trust and shared values.

Limitations and Future Directions

This study provides rich insights into the workings of several PCCTs and the providers who interact with them, although the study was limited in several ways. First, I

originally intended to complete the chart review in Study 1 with three hospitals, but administrators at one hospital declined to give access to their medical records, despite the support of the PCCT. In addition, as I began data collection at a second hospital, I learned that they generally do not provide explicit recommendations in the medical record, limiting what actions could be tracked. Relying on just one hospital, I was underpowered to detect meaningful differences in consultation recommendation implementation across types of patients (e.g., based on medical diagnosis, race) and across sites. Future research might utilize medical record data across multiple sites to examine patterns of PCCT utilization and practice.

Second, given the fact that the chart review was both retrospective and several years old, it could be more meaningful to track recommendations and actions completed by PCCTs prospectively. Even at these three hospitals, the palliative care service is changing rapidly in terms of its staff and services, and a retrospective, static view of the service perhaps obscures important dynamics. A useful follow-up study could involve prospectively following current patients and documenting PCCT interactions as they unfold. Lastly, because the disciplines of our non-PCCT providers were largely heterogeneous (e.g., cardiology, nephrology, critical care), it could be possible that there are patterns in the perceptions of the PCCT by type of provider that could not be detected quantitatively. Given the findings of the current study, future research might consider the use of interventions aimed at increasing awareness about the full scope of practice of the PCCT, including structured educational interventions organized by members of the PCCT (e.g., seminar series, workshops, presentations for individual practices and subspecialties), as well as informal social opportunities designed to encourage the

exchange of personal and professional information between PCCT and non-PCCT providers and promote the development of trusted provider relationships.

The results of this study highlight barriers to effective collaboration between PCCT and non-PCCT providers, including lack of knowledge about the specialty, varying perceptions about aspects of the PCCT's role in patient care, and a general belief among providers that the expertise of the PCCT, while clearly present, is not always necessary. However, providers also pointed to aspects of the palliative care consultation process and general milieu around palliative care in the inpatient setting that facilitate collaboration, suggesting that palliative care educational and marketing interventions might remedy some of the most daunting factors inhibiting collaboration. Effective interprofessional teamwork and collaboration is essential, and both PCCT and non-PCCT providers shoulder the responsibility of maintaining a fluid working relationship.

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Table 1

Characteristics of Palliative Care Consultation Teams (PCCTs)

Site	Hospital A	Hospital B	Hospital C
Description	University medical center	Community hospital	Community hospital
Setting	Urban	Suburban	Suburban
Providers (total)	7	3	10
Physicians	2	0	3
Nurse Practitioners	2	0	5
Nurses	0	3	0
Social Workers	2	0	1
Chaplains	1	0	0
Year team initiated	2005	2003	2004

Table 2

Demographics of Patients in the Chart Review Study

	<i>N/M</i>	<i>%/SD</i>
Age at consultation, years	72.9	16.0
Sex (male)	66	55
Race		
White	85	71
Black	29	24
Asian	1	<1
Not reported	5	5
Primary Diagnosis		
Cancer	32	27
Lung disease	16	13
Cardiac disease	26	21
Dementia	3	2.5
Liver/renal disease	5	4.2
Stroke/coma/brain injury	5	4.2
GI	8	6.7
Sepsis	10	8.3
Other	15	12.5
Admission to discharge, days	11.6	13.1
Admission to consult request, days	6.1	9.9

Table 3
PCCT Response Characteristics by Category

Variable	PCCT A		PCCT B		Total Sample	
	<i>n</i>	%	<i>n</i>	%	<i>N</i>	%
Recommendation type						
Discharge	3	3.5	0	0	3	3.3
Consult	1	1.2	0	0	1	1.1
Symptom management	35	41.2	0	0	35	38.5
Comfort	13	15.3	2	33.3	15	16.5
Pain management	33	38.8	4	66.7	37	40.7
Actions taken by PCCT						
General conversation	29	53.7	24	47.0	53	50.5
Goals of care	12	22.2	26	51.0	38	36.2
Psychosocial support	4	7.4	0	0	4	3.8
Discharge	9	16.7	1	2.0	10	9.5

Table 4
PCCT Consultation Response Characteristics by Provider

Variable	Hospital A		Hospital B		Total Sample	
	<i>n</i>	%	<i>n</i>	%	<i>N</i>	%
PCCT recommendations						
Nurse	NA	NA	6	100	6	6.5
Physician	56	65.2	NA	NA	56	61.5
Social worker	1	1.2	NA	NA	1	1
Chaplain	1	1.2	NA	NA	1	1
Nurse Practitioner	27	31.4	NA	NA	27	30
PCCT actions						
Nurse	NA	NA	51	100	51	48.6
Physician	14	25.9	NA	NA	14	13.3
Social worker	8	14.9	NA	NA	8	7.6
Chaplain	6	11.1	NA	NA	6	5.7
Nurse Practitioner	26	48.1	NA	NA	26	24.8

Table 5
Characteristics of PCCT and Non-PCCT Providers Who Completed Qualitative Interviews

Variable	PCCT Members		Other Providers	
	<i>n/M</i>	<i>%/SD</i>	<i>n/M</i>	<i>%/SD</i>
Total	17	39	27	61
Age	54.4	10.6	47.4	9.6
Gender (male)	3	18	21	77.8
Race				
White	15	88.2	17	63.0
Asian	1	5.9	8	29.6
Hispanic/Latino	0	0	1	3.7
Other race	1	5.9	1	3.7
Type of Provider				
Physician	4	23.5	26	96.3
Nurse Practitioner	7	41.2	1	3.7
Nurse	3	17.6	0	0
Social Worker	2	11.8	0	0
Chaplain	1	5.9	0	0
Length of Employment				
2-5 years	1	5.9	5	18.5
6-10 years	5	29.4	0	14.8
11-15 years	2	11.8	5	18.5
16-20 years	2	11.8	2	7.4
20+ years	7	41.2	11	40.7

Table 6

Themes and Subthemes from Semistructured Interviews with PCCT and Non-PCCT Providers at Hospitals A, B, and C

Theme	Title of Theme	Subtheme	Subtheme Example
1	Interactions with other providers	Formal	“We attend rounds together.”
		Informal	“We bump into each other on the unit.”
2	Roles and responsibilities of the PCCT	General expertise	“Physicians like the PC team who are thinking about this [symptom management] all the time could be a very good resource for physicians.”
		Communication (including goals of care)	“Palliative care can re-explain something I’ve already told the patient or family if they didn’t completely understand what I was saying the first time.”
		Pain and symptom management	“Palliative care helps manage difficult symptoms.”
		Supportive care, care transition, continuity of care	“Palliative care helps people navigate transitions to hospice.”
		End of life, but not only hospice	“They’re thinking that their patients shouldn’t be put through any more suffering, so they reach out to us.”
		Saves time	“They have the time to sit down and have two-hour long conversations, and I just don’t have that time when I’m treating other patients.”
3	Barriers to consultation process	Patient- and family-level	“They don’t reach out because the family doesn’t want us to be involved. They think that calling us means they are going to die.”
		Provider-level	“I think a lot of the docs don’t consult us because they think it would mean they were giving up.”
		System-level	“The older doctors just don’t know as much about palliative care because it wasn’t around when they were being trained.”

4	Facilitators for consultation process	Strategies for PCCT providers	“We had a few invited lunches where we could tell oncology about our practice and they could tell us about theirs.”
		Strategies for non-PCCT providers	“It’s great when they realize how we can benefit their practice and how we can all work together on the patient’s care.”
5	Recommendations made by the PCCT	Characteristics of those followed	“[We follow them] 99% [of the time], virtually always, unless there's a contraindication or something they don't know about the patient or it's not the best choice.
		Characteristics of those partially or not followed	“Sometimes the pain medicine is hard because they don’t want to make them any sleepier.”

Appendix

Palliative Care Provider Interview Questions

I. Interactions with consulting colleagues and PCC experiences

Script: *In this section, I'll be asking you a series of open-ended questions about your experiences with providers who consult you and your overall experiences with providing recommendations to those providers. Please ask me to clarify any questions that do not make sense to you, and please feel free to elaborate on any questions. These questions will focus on interactions that you have with your colleagues who consult you during the consultation process and outside of the consultation.*

1. What types of **formal** interactions do you have with the colleagues who consult you (e.g., case conferences, team meetings, professional development activities)? Describe the frequency and content of these interactions.
 - a. Description:
 - b. Context (e.g., team meetings, individual meetings, professional development, case conferences, etc.)
 - c. How frequently do you have these interactions?

2. What types of **informal** interactions do you have with your consulting colleagues (sharing office space, spontaneous conversations around the hospital, attending lectures together, eating lunch together)? Describe the frequency and content of these interactions.
 - a. Description:
 - b. Context:
 - c. How frequently do you have these interactions?

3. Provide an example of a PCC [experience/s] that was successful
 - a. What aspects of the consultation made it successful (*for example, the time at which the consult was placed, the way in which the consult was placed, the rate at which you were able to schedule a meeting with the patient*)?
 - b. Why specifically did you think the recommendation was going to be helpful (*for example, did the way in which it was written make it easier to follow, did you communicate with the provider in a certain way, was it specific to the type of patient, did you think that recommendation was particularly easy to follow compared to other recommendations*)?

4. Provide an example of a PCC [experience/s] that was not helpful
 - a. What aspects of the consultation made it **unsuccessful** (*e.g., not received well from perspective of requesting provider, way it was written, too late, too early, no explanation from consulting provider*)?
 - b. Why specifically did you think that the consultation, and resulting recommendation was not helpful (*for example, maybe you recommended it*)?

too late, or you didn't have time to make a recommendation at all, there was disagreement among family members and providers)?

II. Perceived barriers and facilitators to collaboration

Script: In this section, I'll be asking you a series of open-ended questions about your perception of things that facilitate the seeking of palliative care consult requests from other providers, as well as your understanding of barriers that hinder collaboration between you and other providers who may request your services. These questions will focus on specific evidence and illustrative examples that convey facilitators and barriers to collaboration.

5. Some individual colleagues might be more likely to consult you than other colleagues. In your opinion why is that so?
 - a. Do you have any specific or anecdotal evidence directly from those colleagues about their reasons for consulting you?
6. Some colleagues might be less likely to consult you than other colleagues. In your opinion, why is that so?
 - a. Do you have any specific or anecdotal evidence directly from those colleagues about their reasons for not consulting you?
7. What other barriers exist that prevent your colleagues from consulting you as often as you think is appropriate (*for example, they do not know that the palliative care exists, they do not understand the scope of the palliative care team, they do not ethically or morally agree with the scope of palliative care team*)?

III. Enhancing collaboration and consultations

Script: In this section, I'll be asking you to explain things that you or members of your team have done in an attempt to enhance and foster collaboration with other providers.

8. What efforts have you or members of your team made to increase the number of consultations you get from your colleagues?

IV. Perceived barriers and facilitators to implementation of recommendations

Script: In this section, I'll be asking you to elaborate on things that you perceive as both facilitators and barriers to the implementation of recommendations that you make after a consult has been requested. The questions will focus on both personal and situational factors that may affect the perception of your recommendations to consulting providers and their eventual implementation of your proposed recommendations.

9. When you are consulted, how often are your recommendations implemented? (ask for more specific detail)
 - a. Never
 - b. Rarely
 - c. Sometimes
 - d. Often
 - e. Always

10. Within what time frame are they implemented?
11. When your recommendations are not implemented, what are the reasons?
12. Are there ever times when your recommendations are partially implemented, or one aspect of the recommendation is followed but other aspect/s are not? Could you provide an example? What do you think are the reasons that sometimes your recommendations are only partially followed?
13. What have you or your team done to increase the likelihood that your recommendations are implemented (*for example, do you try to consciously phrase recommendations, or do you use any specific language to try to ensure that your recommendation will be followed*)?

V. Strategies when writing consultation recommendations & typical follow-up process
Script: *In this section, I'll be asking you to discuss techniques you use in the consultation process.*

14. What strategies do you use when writing consultation recommendations?
15. What is your typical follow-up process once you have written a recommendation?

Wrap-Up Question: Lastly, is there anything else you would like to add about your membership as part of the palliative care team, how the palliative care consultation process works at your hospital, or any other information that might be relevant to the discussion we've had today?

Non-Palliative Care Provider Interview Questions

I. Interactions with consulting colleagues

Script: *In this section, I'll be asking you a series of open-ended questions about your experiences with the palliative care team. Please ask me to clarify any questions that do not make sense to you, and please feel free to elaborate on any questions. These questions will focus on interactions that you have with the PCCT both during the PC consultation process and outside of the PC consultation process.*

1. What types of **formal** interactions do you have with members of the palliative care team (e.g., case conferences, team meetings, professional development activities)?
 - a. Description:
 - b. Context (e.g., team meetings, individual meetings, professional development, case conferences, etc.)
 - c. How frequently do you have these interactions?
2. What types of **informal** interactions do you have with members of the PC team (sharing office space, spontaneous conversations around the hospital, attending lectures together, eating lunch together)?
 - a. Description:
 - b. Context:
 - c. How frequently do you have these interactions?

II. Perceptions of role and scope of Palliative Care Team

Script: *In this section, I'll be asking you a series of questions about your perceptions of palliative care and the palliative care team. Please feel free to request clarification on any questions and to elaborate as much as you feel is necessary.*

3. Providers from different disciplines and backgrounds may apply different definitions to *palliative care* based on the scope of their own practice and their professional experiences. What would you say is the purpose of palliative care? And what would you say are the goals of palliative care?
4. From your perspective as a [insert type of provider], what are the primary roles of the PC team?
5. How is the PC team relevant to you? What types of services do they provide that you find useful or that are specifically beneficial to your practice? What types of services do they not (to your knowledge) provide but you wish they did provide? *Are there ways that the PC team could elaborate on what they do (and maintain their scope of practice) but be of greater benefit to you and other providers in similar disciplines?*
6. Describe some situations where you would (or have in the past) seek out a recommendation from the PC team. *You may want to think about specific types of patients for whom you thought it was important to seek a PCC, or perhaps a*

specific area where you thought that expertise from the PC team would have been useful.

7. Describe the scope of the PC team in terms of:
 - a. Types of recommendations (*e.g., do they make recommendations for patients with cancer, patients who are in pain, patients with psychological distress? Do they make recommendations in all of these domains or certain domains only?*)
 - b. Context of recommendations (*e.g., do they provide recommendations in real time, do they meet with you in person, do they make recommendations after you see the patients together?*)

III. Experience/s with consultations

Script: *In this section, I will be asking you about your specific experiences with the PCT in terms of requesting consults and receiving recommendations from them. Some of the questions are specifically about the content of meetings and consults with the PCT, and others focus more on the consultation process.*

8. How frequently do you consult/seek recommendations from the PCT?
 - a. <once a month
 - b. Once or twice a month
 - c. Once weekly
 - d. Once or twice a week
 - e. Several times a week
 - f. Once a day
 - g. Once or twice a day
 - h. More than once or twice a day
9. How frequently do members of the PCT make recommendations for your patients? *What types of recommendations does the PCT usually make for your patients, or are they oftentimes variable?*
10. Provide an example of a PCC [experience/s] that was helpful
 - a. What aspects of the consultation made it helpful?
 - b. Why specifically did you think the recommendation was going to be helpful (*for example, the way in which it was written was clear and concise, or the communication style/skills of the PC team made it easy to understand the recommendation and think about how to implement the recommendation, the type of patient made it conducive to enacting the recommendation*)?
11. Provide an example of a PCC [experience/s] that was not helpful
 - a. What aspects of the consultation made it unhelpful? (*e.g., way it was written, too late, too early, no explanation from consulting provider*)
 - b. Why specifically did you think that the recommendation was not helpful? (*maybe this is redundant*)

- c. What alternate circumstances may have resulted in your decision to implement the recommendation?

IV. Perceived (and actual) barriers and facilitators to implementation

Script: *In this section, I'll be asking you to elaborate on things that you perceive as both facilitators and barriers to the implementation of recommendations made by the PC team. The questions will focus on both personal and situational factors that may affect your perception of the feasibility of implementing certain recommendations, and what specific factors may increase or decrease your ability to carry out suggestions by the PC team.*

12. After seeking a PCC, how frequently do you implement the recommendations that were provided to you by the PCT?
 - a. Never
 - b. Rarely
 - c. Sometimes
 - d. Often
 - e. Always

13. What would facilitate your readiness to consult the PC team more? What factors would make you more likely to consult the PC team, if any? Are there team factors (things that people on the PC team could do) or system factors (things that your hospital could do) to increase your likelihood of consulting the PC team? Are there things that the PC team could do in terms of the recommendations they provide to increase your likelihood of following through with those recommendations?

Wrap Up Question: Lastly, is there anything else you would like to add about your experience as a provider who consults the palliative care team, how the palliative care consultation process works at your hospital, or any other information that might be relevant to the discussion we've had today?