



Original Research

Integrating Fitness Training in Oncologic Care: Lessons Learned from a Large Telemedicine Trial



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Late-stage cancer;
Exercise, Fitness;
Physical therapy;
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Telemedicine;
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Abstract Objective: To provide insights from patients and clinicians regarding the benefits and barriers of the introduction of a telerehabilitation fitness program into the oncologic care of people with late-stage cancer.

Design: This study is a qualitative assessment of the Collaborative Care to Preserve Performance in Cancer trial, which involved the insertion of a telerehabilitation fitness program into the oncologic care of patients with late-stage cancer.

Setting: A large midwestern medical center.

Participants: Thirty-one patients who matched the overall demographics of the study participants as well as 3 oncologists, 2 physical therapist fitness care managers (FCMs), nurse pain care manager, and 2 supervisory physicians involved in the study.

Interventions: Five hundred sixteen patients with late-stage (IIIC or IV) cancer were randomly assigned to 1 of 3 arms: a control group that received usual oncologic care and 2 intervention groups. The members of the latter continued with their usual care but also received either 6 months of a fitness program, with or without the addition of pain management assistance. All components were delivered via telemedicine with the fitness program consisting of progressive resistance and walking components.

Main Outcome Measures: Perceived benefits and shortcomings of the intervention were obtained via written narratives from the patients and as well as through interviews with the oncologists, FCMs, nurse pain care manager, and supervisory physicians involved in the study.

Results: Thematic analysis revealed 87% (27/31) of the participants found the program helpful. Regular contact with someone who understood their situation, helped improve their function, and encouraged active engagement in their care was perceived as particularly beneficial. The FCMs who worked remotely with participants to coordinate their exercise programs agreed that regular interactions with the patient facilitated engagement, education, and meaningful goal

List of abbreviations: CCM, collaborative care model; COPE, Collaborative Care to Preserve Performance in Cancer trial; EMR, electronic medical record; FCM, fitness care manager; PROM, Patient Reported Outcome Measure; EQ-5D-3L, European Quality of Life 5 Dimensions 3 Level Version.

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setting. The oncologists were supportive of the intervention but had concerns about patient suitability. The supervisory physicians noted a number of institutional barriers such as oncology workflows and the need for better sharing of information across disciplines.

Conclusions: A fitness program delivered via telemedicine was perceived as beneficial by the patients, the FCMs, and the supervising physicians. Success hinged on the quality of the interaction between patients and the FCMs. Institutional barriers to implementation seem similar to those encountered by many new programs that need to be inserted into the workflows of busy clinics and practices.

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It is well established that exercise and the provision of rehabilitation services can slow the rate of functional loss and prolong the independence of people living with chronic diseases, including cancer.¹⁻³ However, few patients, particularly those with cancer, either exercise regularly or receive these services.⁴⁻⁶ There are many reasons for this disconnection, including a limited number of cancer rehabilitation specialists, a lack of awareness of the benefits of exercise in this population, and limited access.⁶⁻⁹

These concerns are addressable in that the functional losses are often remediable with relatively simple measures.¹ In fact, increasingly, the benefits of cancer rehabilitation are being recognized by patients as well as their caregivers. This changing reality, in turn, mandates that we find more efficient, patient-centered, and less costly ways to improve the lives and maintain the independence of a growing population of people with cancer.

Two advances are pertinent. The first is that rapid strides in the acceptability of telemedicine (accelerated by the COVID-19 pandemic)^{10,11} have the potential to improve remote access for all patients. The second, lesser known, but also well established, is the increasing acceptance and ability of physicians, allied health specialists, and other providers to collaborate via telemedicine with the goals of providing more effective and less costly treatment of chronic conditions using a collaborative care model (CCM)-based approach.^{12,13}

The COLlaborative Care to Preserve PErformance in Cancer (COPE) trial was a randomized controlled trial that included 516 patients with late-stage cancer.¹⁴ In brief, the trial found that those who received a telemedically delivered fitness program in addition to their usual care outperformed their usual-care control counterparts in terms of their level of function, pain control, quality of life, and need for postacute care.¹⁴

Although COPE established that telemedicine-delivered and coordinated rehabilitation services were beneficial, several important questions remained unanswered: did the participants feel training was beneficial and if so, why? What were the perceived positives/negatives of participation? How aligned were the views of patients, the FCMs, the oncologists, and the supervising physicians about the intervention? What were the barriers to implementation? In essence, how could this care model be modified to more effectively improve the lives of patients with advanced cancer?

These are important questions. This study is a qualitative “after action” assessment that sought to address these issues and, hopefully, use the lessons learned to improve the rehabilitation options available to patients living with cancer.

Brief summary of the COPE trial’s design and outcomes

Details of the COPE trial methodology have been published previously.^{14,15} In brief, 516 patients with late (IIIC or IV) stage cancer were randomly assigned to 1 of 3 arms: a control group that received their usual oncologic care and 2 intervention groups. The members of the latter continued with their usual care but also received 6 months of a Physical Therapist (PT)-coordinated, CCM-directed fitness program delivered via telemedicine with or without the addition of pain management assistance.

Outcomes were assessed with well-established measures such as the Brief Pain Inventory and the Activity Measure for Post-Acute Care computerized adaptive test. Health care usage and discharge dispositions were also monitored via their electronic health records. The fitness program included progressive resistive and walking components. Pain care assistance received by one of the intervention groups involved a nurse pain care manager contacting the patients, reviewing their pain levels, suggesting approaches to their medication regimen, and providing feedback to the oncology care team with pain care suggestions. Summary pain and functional reports were provided to the primary, hematologic, or oncologic care team that participants identified as coordinating their care.

This approach to CCM-based pain care had been previously validated among patients with cancer,¹² so the COPE trial’s principal aim was to estimate the benefit of a PT FCM-directed telerehabilitation fitness program.

The 2 FCMs were central to the study and interacted with the patients. These individuals were 2 physical therapist who each had ≥ 15 years of cancer rehabilitation experience. Each was trained in motivational interviewing and active listening. FCM duties included designing and optimizing the participants’ walking and resistance programs, tracking their function Patient Reported Outcome Measure (PROM) scores, and contacting them for problems. Participants could contact their FCM during working hours.

At baseline, pain intensity ratings, health utility as measured with the European Quality of Life 5 Dimensions 3 Level Version (EQ-5D-3L), Activity Measure for Post-Acute Care-Computerized Adaptive Test Basic Mobility scores, and automated monitoring contacts did not differ significantly between the groups.¹⁴ FCM contacts were similar in the intervention arms (~ 7.4), as were their duration (~ 16.4 min). Visits coordinated by the FCM to local PTs were

nearly identical: 111 and 110. Opioid and analgesic use intergroup differences did not reach statistical significance.¹⁴

Analysis at the trial's conclusion revealed that the telemedicine-delivered fitness program improved function, lessened pain, and decreased rehospitalization lengths of stay and the need for postacute care.¹⁴ A secondary cost analysis indicated that the intervention was highly cost-effective with an incremental cost-effectiveness ratio of \$15,494/quality-adjusted life year relative to the \$100,000 value often quoted.¹⁶

Methods

Research design

This study evaluated the program relying on written feedback provided by a consecutive sample of 31 patients and in-depth interviews with 3 oncologists, the 2 FCMs, a nurse pain care specialist, and 2 of the 3 supervisory physicians involved in the trial.

Selection of patient participants

It was planned that the last 100 participants from the telemedicine intervention groups would be consecutively invited to participate in this study until age of 30 years agreed to participate.¹⁷⁻¹⁹ We overshot our goal by one. In all, 36 were approached, with 5 declining to participate citing cancer treatment demands and infirmity. We did not systematically assess barriers to providing written feedback or health literacy. However, all 31 filled out their forms adequately and did not differ in cancer type, education, or socioeconomic status, the latter 2 being surrogate markers for health literacy.

Data collection

This study involved 2 steps. First, a questionnaire with a series of open-ended questions was administered to participants at the trial's conclusion to understand perceived benefits, burdens, and incentives to fitness training participation, and to gather suggestions for how the program might be improved. (appendix 1) Once collected, a sociologist (K.S. S.) independent of the trial, reviewed the patient data using conventional qualitative content analysis²⁰ and created a table to compare participant responses and reveal underlying themes.

The second stage centered on understanding the clinician perspective, drawing from a sample of 8 clinicians with distinct roles on the project (3 oncologists whose patients had been involved in the trial, the 2 FCMs who had supervised the participants' participation, the nurse pain care specialist, and the 2 of the 3 supervising physicians). Semistructured interviews averaged an hour in length and were tailored to each provider's role on the project (appendix 2). Clinicians were asked about how they perceived their role, how they assessed the value versus risk of program participation for their patients, and their views on the value of providing tele-rehabilitation as a routine part of late-stage cancer care.

The study was approved by the Mayo Clinic Institutional Review Board (IRB# 11-008151) and followed the Consolidated Criteria for Reporting Qualitative Research.²¹ All patients provided written informed consent.

Data management and analysis

The clinician interviews were audio-recorded and transcribed. Inductive coding and thematic analysis were conducted by K.S.S. with the assistance of the qualitative software program NVivo12 (released 2018).^{a,b,22} Interpretive analysis, comparing patient and provider explanatory models, also informed the study.²³

Results

The following section provides the findings from the study participants, then describes the perspectives of the oncologists whose patients were in the trial, the PT FCMs, and, lastly, the investigators overseeing the project.

Patient data

The 31 participants who responded to the open-ended questionnaire were similar with respect to their demographic and cancer characteristics to the overall pool of participants (table 1). Topics addressed included their perception of the

Table 1 Characteristics of all intervention participants and qualitative study participants.

Characteristics	All Participants		Qualitative Study Participants	
	(n=344)		(n=31)	
Sociodemographic				
Age (y), mean ± SD	65.4	(11.3)	67.4	9.7
Female, n (%)	170.0	(49.4)	17	(54.8)
Race, n (%)				
White	330	(95.9)	29	(90.6)
Black	9	(2.6)	2	(6.45)
Marital status				
Married	271	(78.8)	23	(74.2)
Malignancy, n (%) [*]				
Breast	47	(13.7)	6	(19.4)
Colorectal	25	(7.3)	3	(9.7)
Gastroesophageal	5	(14.5)	1	(3.2)
Pancreas	6	(1.7)	1	(3.2)
Prostate	62	(18.0)	5	(16.1)
Gyn – Ovarian	18	(5.2)	2	(6.5)
Melanoma	13	(3.8)	2	(6.5)
Sarcoma	6	(1.7)	1	(3.2)
Neuroendocrine	14	(4.1)	2	(6.5)
Thyroid	9	(2.6)	2	(6.5)
Myeloma	52	(15.1)	3	(9.7)
Lymphoma	10	(2.9)	3	(9.7)

Abbreviation: Gyn, gynecologic.

^{*} Percentages do not sum to 100 as only cancers among qualitative study participants are included.

following: (1) the value of their participation in the trial; (2) the trial's most burdensome features; (3) their interactions with the FCMs; (4) utilization of supplementary local PT services; and (5) a global assessment of the benefits of fitness training. A review of the patient responses follows below:

Value of participation

Twenty-seven of the 31 patients (87%) perceived benefits from participation in the trial and noted, in particular, reduced fatigue and an improved ability to perform their normal activities.

I have so much more endurance. I can do yard work and get out and plant my flowers. I can walk more than I could before. I wouldn't even know that I have terminal cancer. (ID 8)

Of the 4 patients who did not report physical benefit, 3 noted that they had been physically active before entry and thus, felt the trial did not increase their level of fitness. Participants also mentioned a greater sense of self-efficacy and overall well-being:

Being bed-ridden you get the mindset that you aren't going to be able to do that [exercise]. You have the motivation get thrown at you and you find you can be more active. (ID 26)

Although the program included both a resistance (Thera-Band)^c strengthening and walking component, participants preferred the walking program over resistance exercises, with roughly a fifth (n=6) discontinuing the resistance exercises because of pain and/or fatigue. More than half (n=18) noted measuring their progress with a pedometer was particularly enjoyable and that the added accountability reduced the number of days they felt pessimistic about their situation.

Patients expressed initial trepidation about being physically active. One reporting "surprise" at realizing he was not as fragile he had thought and another discovering that his fatigue, which he had assumed was an unavoidable part of cancer treatment, had lessened with program participation. Improvements in mood were reported as well.

It made me feel better about myself, [my] quality of life was much better because I was part of something. It really kept me going. (ID17)

Program burden

Although most patients indicated participation in the trial was not burdensome, some (n=7) felt that it was a "mixed blessing" because it required commitment to an exercise regimen. A technological concern included 1 subject's complaints about having to re-enter their password for the website used to report progress and managing occasional scheduling conflicts.

Relationship with the FCM

The greatest area of consensus among trial participants was about the positive effect of the telephone interactions with the FCMs. Participants described the regular check-ins with

the FCM as not only guiding their physical activity, but also deepening their self-awareness. Patients noted the conversations with the FCM helped them come to terms with their cancer-related losses, reframe their goals, recognize improvement, and find "success" in new ways.

It [participation] motivated me to do something. I guess when you look at people that have cancer you kind of feel sorry for yourself, but if you have someone to help you motivate you do more and more - and that you can do more. (ID16)

Referral to a local PT

The protocol included, if felt necessary, having FCMs arrange local PT appointments to help participants fine tune their exercise programs. This feature was not widely used; despite the FCMs recommending and coordinating a visit, 12 of the 31 respondents reported that they did not meet with a local PT. Those who attended at least 1 session noted that it did improve the quality of their exercise program. Barriers to meeting with a local therapist included difficulties in getting to a session, especially during bad weather, or to a lack of insurance coverage. Facilitators were easy access and already having a relationship with a local therapist.

I found it to be very helpful because I had already worked with him in the past. (ID 24)

It was helpful in that it was close by and they knew what we were doing. They knew the area and it was a great connection. I was able to build a relationship with them. (ID17)

Global assessment of the program

Participants described the benefits of participation as including increased strength, improved balance, and less stiffness. Greater endurance, less fatigue, and developing a habit of being active physically, and increased social/family interaction were also reported.

Walking improved - 10 laps around mall with daughter. (ID6)

Getting up and down from chair. Could not do more than 3 times. Now can do 15 or more. Stamina is better, more energy, play with grandkids and get down to their level. Really enjoying things now! (ID24)

One unexpected theme was a tendency for participants to separate or "compartmentalize" their fitness program from their oncologic care. Only 10%, by FCM estimation, expressed a desire that their oncology care team be included in progress updates. Even among this subset, the necessity of doing so seemed low.

I think the oncologist should know what is going on, but it doesn't matter one way or the other to me. (ID6)

It probably would have been nice to have them be able to see it [the information] in my MR [medical record]. If there was a way for them to integrate or acknowledge it would be more helpful. (ID10)

Provider data

As noted above, care team members who the participants had identified as coordinating their care were sent information about their patients' pain levels and function throughout the study. However, interest in receiving this information was limited, with most ignoring it and some requesting that it not be sent because they did not know what to "do" with data not linked to a scheduled visit. A few, however, expressed appreciation, noting the information was clinically useful.

Oncologists

During their interviews, the oncologists shed some light on their thinking about the intervention. One admitted general skepticism about exercise programs for terminal patients with cancer who, he noted, had a finite supply of "energy dollars."

So, take the situation of someone with an advancing tumor who is not responding to their treatment - whose life expectancy is not very long. I'm not sure that I think that PT is going to make them much better. (Medical Oncologist)

Another oncologist described the drain on staff and resources associated with this kind of intervention by drawing a parallel to another clinical intervention that involved electronic monitoring and noting the team was still living with the fallout from this other "good idea."

Our nurses were spending so much time, and still do in my opinion [...]; they are spending so much screen time managing patient care without a lot of direct [contact] - without being in the room with patients, because they are always on the phone! (Breast Cancer Medical Oncologist)

A third oncologist recognized the benefits of conditioning activities and rehabilitation services for his patients, but noted that the business model for cancer care is not structured to make it easy to add PT.

I'm a firm believer that if we involve them [late-stage cancer patients] in PT early, some of them, their quality of life will be better. I've had a hard time referring some people over, especially with the way the practices are. (Medical Oncologist)

All 3 oncologists believed that it would be only the rare late-stage patient who would be interested in an exercise program and fewer still who could maintain participation.

Functional care managers

The FCMs, in contrast, expressed confidence in the benefit of the intervention, although they too had been doubtful initially.

Before I started - in the beginning - I was thinking, "Why can't these people just go to a trainer?" "What's my role here?" Once we initiated the program, I began to see what my role was and how it was unique. (FCM 1)

The evolution in the FCMs thinking about their role with patients was described as taking shape during the trial. Among other things, the FCMs realized that each participant required a carefully tailored plan.

Some of these people had metastases to bones so you have to be careful because they get pain. And then some are pre-pathologic fracture [...] so you do have to be careful there. And [for each] there are different types of exercises that are more acceptable than others. (FCM 1)

The FCMs also noted that because fatigue was such a ubiquitous feature of late-stage cancer, their interactions involved helping patients grapple with it emotionally as well as physically. Fatigue, FCM's noted, was more than simply being tired, it could undermine quality of life and led some patients to completely disengage from normal activities. Thus, FCMs reported that fatigue was discussed in many telephone conversations, and they saw their role as first, helping patients confront the fatigue and then, strategizing ways to better manage it.

... Acknowledging it [fatigue] exists and [asking]: "How are we best going to get you to a point where you still are active even though you feel this fatigue?" (FCM 2)

The FCMs, as did the patients, attributed the regular telephone contact as instrumental to success of the program:

I think it was really critical to have somebody calling [and reassure them] like, I've had many other patients who are at this point where they feel like all of the walls have caved in on them. (FCM 1)

The FCMs described their patients' motivation to exercise as being on a continuum. On one end were the "gunners" (FCM 1), individuals who would exercise with or without encouragement. On the other end were patients with no interest or "chronic procrastinators." The FCMs noted that neither group was their primary focus of attention. It was "the vast middle," "bell of the curve," who were the target group. Motivating these individuals hinged on listening, understanding their goals, and then fine tuning a program to meet their objectives. Patient goals for participating in the program were often difficult to isolate:

There's a bunch of different reasons and a lot of times it [the goal] was anywhere from just improving - they just needed to improve because they knew that they were getting weaker [...] to things like: "I want to play with my grandkids," "I want to live longer," "I want to ski," "I want to walk my dog." (FCM 1)

Patients who had the most positive view of exercise were, not surprisingly, most likely to maintain a routine. FCMs framed this in terms of patients wanting some control.

So exercising was a way to take back control. It's something that you can say "yes" to or "no" to and get benefit at the same time. The chemo, you don't really have much control. (FCM2)

Looking back, the FCMs viewed their role as more nuanced and comprehensive than they anticipated. They noted that their role was not only supporting the patients in whatever way made sense but also in helping local therapists feel comfortable working with patients with cancer.

It's like anything else; if there are other people to support you and that you know you're not alone. (FCM1)

The FCMs also noted that participation in the trial was rewarding to them professionally because the prolonged regular contact allowed them to get to know their patients better and witness their physical and emotional progress.

Supervisory physicians

The physicians who oversaw the trial viewed slowing functional decline, even in the absence of cure, a valuable goal in its own right. One noted that the “medical model” centered on cure may contribute to unnecessary suffering because of the focus on treatment and missed opportunities to help manage symptoms and functional loss:

We kind of wait until they crash and burn, or we assume they are going to come forward and tell us when there is a real problem, but they don't. Often, they suck it up until it really hits the fan and then they wind up admitted and much and worse off than they ever need to be. (Supervisory Physician 1)

The thought system in oncology is that the cancer is the problem. It has these bad secondary effects: the functional degradation and symptoms. And it wrecks people's mood and [wrecks them] financially. (Supervisory Physician 1)

This physician, however, was quick to point out that this disease-oriented care philosophy is embedded in the system of care. There is a tacit alignment between oncologists, patients, and even therapists to favor pharmaceutical and technological treatment over other options.

Supervisory physician 2 agreed that the prevailing medical ideology is an obstacle to fitness training programs in oncology, but also highlighted that it is a consequence of how the work is organized in medicine and the professional boundaries that have been established. In the current configuration, he felt that it was all but inevitable that a physician will bristle at being offered advice from other kinds of specialists about “their” patient’s care.

Here they have this stranger that they've never heard of giving them advice on their patients. How well would they receive that information? Would they view it as somebody meddling or somebody helping? It could go either way.) (Supervisory Physician 2)

He also emphasized the need for a better business justification noting that arguments from “cost avoidance” are a hard sell:

If you can—be physical activity—avoid a hospitalization,... if you can avoid that hip fracture, because when you come to a hip fracture that's 50,000-100,000

dollars. If you avoid one hip fracture, that's paid for a lot of people's time to other things. So, cost avoidance for a system would be an important part of that. (Supervisory Physician 2)

Discussion

We know that patients with advanced cancer experience functional losses that can limit their independence, quality of life, and survival.²⁴ We also know that the delivery of rehabilitation services can significantly slow these losses.^{14,25} What we have not known is whether rehabilitation can be effective when provided via telerehabilitation to *community-dwelling* patients with advanced cancer.

The COPE trial demonstrated that a functionally-oriented, CCM-based telerehabilitation fitness program could not only improve function, pain control, and quality of life, but also reduce rehospitalizations. This follow-on qualitative study was designed to take a deeper look into the “why” of the program’s benefit and to highlight some of the persistent barriers to incorporating a telemedicine fitness program into oncologic care.

What did we learn from this assessment? A number of things: first, we established that a telemedically delivered fitness program was viewed as beneficial by a strong (27/31) majority of the patients. Second, we found that the relationship between patients and the FCM that developed over a series of telephone interactions was perceived as one of the most beneficial components of the trial. Third, although patients generally complied with recommendations from their FCM, a significant proportion resisted supplementing their programs with a local therapist. Fourth, we learned that oncologists not only remained skeptical about integrating fitness training into their established workflows, but also found it difficult to incorporate information into their care that did not coincide with a patient’s visit. Each concern requires careful thought to resolve fully; however, we can make at least 2 provisional suggestions.

One potential technological pathway to integrating fitness training into busy oncology practices could be through creative use of the electronic medical record (EMR). Electronic screening, for example, could be developed to assess the benefits of a functional intervention prior to a patient being seen by an oncologist.^{26,27} When appropriate, the EMR could then present an order set for the oncologist to accept, modify, or reject on a “one-click” basis during or after a patient’s visit. The EMRs could also hold information that arrived before or after a patient’s visit and present it at their next appointment (some research has shown that the EMR’s ability to manage asynchronous information can actually reduce interpersonal conflicts between specialists).²⁸

A second pathway that may be promising, albeit one that requires additional research, is determining more fully what the subjects perceived as beneficial in their interactions with the FCMs. Simple, supportive human contact likely plays a role. However, patient comments about “surprise” at their physical improvement and “renewed hope,” set alongside of FCMs’ own descriptions of “nudging” patients to move beyond seeing only loss and physical decline, suggest

that the interactions helped the patients to envision a more meaningful future even while living with advanced cancer.

Study limitations

Our findings reflect those of patients receiving care in a large medical center and may not be generalizable to other settings. However, given the scale of the COPE trial, what we learned here offers 1 baseline for comparison to subsequent studies. Although the patient data were from a relatively small convenience sample, the demographics of the sample were not only similar to the overall group of participants sample, but also were consistent with COPE trial's quantitative data. Nonetheless, we recognize that if more narrative data were gathered, we would broaden our understanding of the patient experience of rehabilitation.

Conclusions

The vast majority (27 of 31) of the respondents found the incorporation of a customized telerehabilitation fitness program into their late-stage cancer care beneficial and cited that regular contact with someone who understood their situation, was focused on improving their function, and encouraged their active engagement were keys to its success. Oncologists were supportive of the intervention but had concerns about patient safety and the benefits of exercise for their patients. The trial's principal investigators were more positive about the program's benefits but, similar to oncologists, agreed that resolution of institutional barriers, such as difficulties integrating into established clinical workflows and the need for a better way to act on information such as pain and function that did not arrive at the time of a patient's visit, were essential.

Suppliers

- a. QSR International PLNV. <https://www.qsrinternational.com/nvivo-qualitative-data-analysis-software/home>; 2018.
- b. NVivo12; 2018.
- c. TheraBand

Disclosure

The investigators have no financial or nonfinancial disclosures to make in relation to this project.

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Appendix 1 Patient Questionnaire

What parts of the COPE program were most useful to you and why?

What parts of the COPE program were burdensome for you, or do you feel were not helpful?

In what ways do you feel that partnering with a fitness care manager was helpful to you?

In what ways did you find the local physical therapy to be helpful or burdensome?

Can you please share what things you believe that you are able to do now as a result of your participation in COPE?

Is there anything else that you would like to share with the COPE researcher team to help them improve the program?

Appendix 2 Clinician Questions

A "key informant interviewing" strategy was used. Each interview guide was tailored somewhat to the interviewee's specific role with the COPE project, ensuring a comprehensive understanding in light of different positions on the project. All participants, however, were asked to reflect on what worked well, what did not work as well from their perspective, the overall value added by the COPE intervention, perceived administrative barriers, and suggested next steps.

COPE INTERVIEW GUIDE

Professional Background

1. What is your professional title and how long have you been in practice?
2. Can you describe your main responsibilities in your current role?

COPE Intervention (Experience)

3. Tell me about your participation and role in the COPE Project. How did you interact with and support patients?
4. From your perspective, what was the value of the COPE Project to the patients you worked with?

Retrospective View

5. Now that the COPE Project has concluded, how do you think it went overall?
6. What aspects of the project do you think worked particularly well?
7. Were there any areas where you felt the project could have been improved? If so, what were they?
8. In your opinion, what features or elements need to be addressed or added to ensure the program functions effectively in the future?
9. What were the main administrative barriers you encountered during the project, and how did they impact your work?

Based on your experience, what do you think might be good "next steps" for this kind of intervention?

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