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Studying communication in oncologist–patient encounters: The SCOPE Trial

Celine M Koropchak Department of Medicine and Center for Palliative Care, Duke University Medical Center, Durham, Kathryn I Pollak Department of Community and Family Medicine and Duke Comprehensive Cancer Center, Duke University Medical Center, Durham, Robert M Arnold Department of Medicine, University of Pittsburgh Cancer Institute, Pittsburgh and Institute for Doctor–Patient Communication and Institute to Enhance Palliative Care, University of Pittsburgh School of Medicine, Pittsburgh, Stewart C Alexander Department of Medicine and Center for Palliative Care, Duke University Medical Center, Durham and Center for Health Services Research, Durham VA Medical Center, Durham, Celette Sugg Skinner Duke Comprehensive Cancer Center, Duke University Medical Center, Durham, Maren K Olsen Center for Health Services Research, Durham VA Medical Center, Durham and Department of Biostatistics and Bioinformatics, Duke University Medical Center, Durham, Amy S Jeffreys Center for Health Services Research, Durham VA Medical Center, Durham, Keri L Rodriguez Center for Health Equity Research and Promotion, VA Pittsburgh Healthcare System, Pittsburgh, and Department of Medicine, University of Pittsburgh School of Medicine, Pittsburgh, Amy P Abernethy Department of Medicine and Center for Palliative Care and Duke Comprehensive Cancer Center, Duke University Medical Center, Durham and James A Tulsky Department of Medicine and Center for Palliative Care and Duke Comprehensive Cancer Center, Duke University Medical Center, Durham and Center for Health Services Research, Durham VA Medical Center, Durham

Study objective: Most oncologists have not received adequate training in physician–patient communication, and existing effective courses tend to be time and resource intensive. We are developing and testing a tailored CD-ROM educational intervention that includes feedback on oncologists’ own audio-recorded conversations with their advanced cancer patients. In this report, we describe the study methods and identify challenges to implementation and how these were overcome. Study design: A three-phase, randomized, controlled trial. In Phase 1, we audio-recorded oncologist–patient clinic encounters. In Phase 2, oncologists were randomly assigned to a communication CD-ROM intervention or control. Phase 3 consisted of audio-recording all participating oncologists conversing with a new sample of patients, two to 12 months after the intervention, to assess its effectiveness. Setting: Oncology clinics at Duke University Medical Center (DUMC) and the Durham Veterans Affairs Medical Center (DVAMC) in Durham, NC, and the University of Pittsburgh Medical Center (UPMC) in Pittsburgh, PA. Participants: Medical, radiation and gynecological oncologists and their patients with advanced cancer. Intervention: A tailored CD-ROM that contains an interactive educational interface with reference materials and video-clips of model conversations, along with the oncologists’ own Phase 1 audio-recorded conversations. Conclusion: We present challenges and solutions to oncologist recruitment, identifying appropriate patients with advanced cancer, adapting to clinic flow, and developing a self-administered communications intervention. Palliative Medicine 2006; 20:813–819

Key words: patient–provider relationship; physician–patient communication; oncologist

Introduction

Communication is the cornerstone of high quality cancer care. Nearly every day, oncologists see patients with whom they must discuss bad news or help make decisions about how to deal with a potentially life-limiting illness. How oncologists address patients’ emotional needs during these conversations affects patients’ subsequent anxiety, depression and ability to cope with their illness.1–4 When oncologists communicate effectively with patients, patients have increased satisfaction and adherence.1,2 However, numerous studies indicate that patient–oncologist communication is sub-optimal, particularly when focusing on issues at the end of life.5–9 This has led many to develop interventions to improve communication. For example, recent studies document that a three-day intensive curriculum can improve oncologists’ communication.10 However, these communication courses are
time-consuming, expensive, and not likely to be embraced by many practicing oncologists.

Studying Communication in Oncologist Patient Encounters (SCOPE) is a randomized, controlled trial, designed to evaluate whether a shorter, less faculty intensive intervention can improve communication skills. This study provides oncologists’ with their own audio-recorded conversations in a user-friendly, self-directed, CD-ROM, which illustrates effective communication skills. SCOPE is the largest patient–oncologist communication trial to date, and while implementing this study, we faced and overcame a series of obstacles. These included: (1) the recruitment of oncologist participants; (2) identification and recruitment of cancer patients; (3) collection of data while seeming ‘invisible’ in busy clinic environments; and (4) developing a user-friendly minimal communications intervention. We present the study design, challenges and our solutions to help other communications researchers study oncologists and their seriously ill patients.

Methods

Study design

SCOPE is a randomized, controlled, trial at two sites (Duke University Medical Center and Durham Veterans Affairs Medical Center in Durham, NC, and the University of Pittsburgh Medical Center in Pittsburgh, PA). The aim of the study is to evaluate the effect of a new intervention on oncologists’ ability to respond effectively to patients’ emotional concerns and to communicate bad news and prognosis. In Phase 1, the pre-intervention phase, we audio-recorded oncologists talking to their patients with advanced cancer during routine clinic visits. For each oncologist, between six and eight encounters were audio-recorded. At the end of Phase 1, all oncologists were asked to view a one-hour lecture on communication skills prior to being randomly assigned, in equal numbers, to either the intervention or control arm.

In Phase 2, the intervention phase, oncologists in the control arm received no further instruction, while oncologists in the intervention arm received a tailored, interactive CD-ROM with educational information on methods of communicating effectively with their oncology patients. The CD was narrated, included exemplar video-taped encounters to demonstrate the identified skills, and also contained interactive elements that allowed participants to practice, and encouraged them to create learning goals, which were then fed back to them over time via e-mail. In addition, examples correlating to major teaching points were included from the oncologists’ own audio-recorded conversations, and these were accompanied by tailored feedback to the oncologists. Finally, intervention oncologists received complete copies of their audio-recordings.

This study is currently in Phase 2, and will soon begin Phase 3, the post-intervention phase, during which we will audio-record additional clinic encounters between all participating oncologists and a new sample of patients with similar disease attributes as those enrolled at baseline (Figure 1). The protocol was approved by each site’s Institutional Review Board.

Participants

Oncologists. We approached medical, gynecological and radiation oncologists to participate in the study. The Principal Investigators or a faculty Co-Investigator sent a personal e-mail to each oncologist introducing the study, followed by individual face-to-face meetings. If oncologists agreed to participate, they signed a consent form and completed a baseline survey. Oncologist participants were offered $25 gift certificates upon completion of each phase of the study. They also were paid $100 for attending a baseline lecture on communication skills at the end of Phase 1. Those who were unable to attend could watch the lecture via webcast. Oncologists in the intervention arm also received high quality headphones together with the CD-ROM.

Patients. Our goal was to identify patients with sufficiently advanced disease, to increase the probability that conversations would contain emotional concerns and communication about prognosis. We asked oncologists or their mid-level provider staff to identify patients with a Stage IV malignancy whom they ‘would not be surprised if they were admitted to an intensive care unit or died within one year’. This appeared to guarantee a significant burden of disease without the patient being referred so late in their disease progression that they were too ill to be enrolled in the study. Other eligibility criteria included that the patients (1) spoke English; (2) received primary oncology care at DUMC, UPMC or the DVAMC; and (3) had access to a telephone.

We needed to recruit these sick patients to participate in an observational study that did not offer a medical intervention and, thus, no potential benefit. Identified patients were sent an introductory letter and brochure that mentioned their oncologist’s referral to the study. The letter included a toll-free number patients could call to refuse any further contact. Patients who did not call within 10 days were contacted by telephone. At this time, the interviewer described the study to patients and asked permission to approach them in clinic before their next visit. We stressed that their oncologist agreed to be audio-recorded and that by enrolling, the patients would be helping him/her improve their own or other oncologists’ communication skills. To those patients who
praised their oncologists’ communication skills, we said that this study would also identify exemplary behaviors and allow us to use them as models for teaching others. Patients also received a small incentive of parking vouchers or VA canteen coupons (depending on the study site) for each visit that was recorded. These were valued at $5–7.00 each. Patients were ineligible if they were: (1) unable to provide informed consent as assessed by the interviewer (due to dementia, delirium or mental illness); (2) seen primarily by non-physician providers or medical residents; or (3) hearing impaired or had a speech disorder.

Audio-recording. Every attempt was made to audio-record conversations in busy oncology clinics without disrupting clinic flow. This was particularly difficult as each oncology clinic had its own system. We contacted oncologists or their assistants with reminders one day prior to the designated visit. On the visit day, we placed digital recorders unobtrusively in the examination rooms before the oncologists entered, and immediately retrieved the recorders at the end of the visit. We asked all health care providers and family members present during the encounter to sign a consent form acknowledging the presence of a recorder. To ensure voice recognition of the audio-recordings, interviewers noted who entered the examining room during the clinic visit and their gender.

Measurements
The audio-recordings were the primary data collected. We measured oncologists’ communication behaviors using template-based coding (described elsewhere). However, we were also interested in a number of other outcome and covariate measures and, in selecting instruments, we struck a balance between a sufficient number of items to collect necessary data without burdening patients or oncologists. These measures included patients’ anxiety and depression, self-rating of communication with their oncologists, satisfaction with care, quality of life, social support, and their demographics. From oncologists, we assessed demographics, outcome expectancies, confidence, and comfort level for addressing patients’ emotional concerns. After each encounter, both patients and oncologists were asked...
about their perceptions of the visit;26 oncologists were asked to complete their survey immediately after each encounter, whereas patients were called within a week of their first encounter to complete the post-visit survey. These measures are summarized in Table 1.

### Results

Seventy-four oncologists consented to participate in the study. Eight physicians withdrew voluntarily because they moved outside the study area, while an additional 18 were withdrawn because they lacked eligible patients. Nine physicians refused to participate. One had concerns about clinic flow, one did not want to be recorded and seven were considered passive refusers after failing to respond to multiple contact attempts.

In Phase 1, participating oncologists referred 603 patients. Ninety-five of these patients (16%) did not meet eligibility criteria. A total of 118 patients (23%) were not contacted because the target number of recordings for their oncologist was already met. Of the remaining 390 eligible patients, 97 patients (25%) refused to participate in the study: by calling the toll-free number \( n = 17 \), during the initial phone contact \( n = 69 \), or in clinic before seeing the MD \( n = 11 \). Reasons for refusals included no interest in the study, too ill, not wanting to be recorded or family refusing to allow patient to participate. Of the 293 patients who consented, eight were not included for the following reasons: asked to withdraw from the study \( n = 1 \), died before being able to complete the study \( n = 2 \), ineligible due to aphasia \( n = 1 \), or outside study window \( n = 4 \). Thus, a total of 285 patients completed the study and had 415 encounters audio-recorded (some had two visits recorded). Available demographics collected on patients \( n = 281 \) and oncologists \( n = 59 \) with at least one audio-recording are shown in Table 2.

### Discussion

We implemented a complex study, audio-recording conversations in busy clinic settings between oncologists and their patients with advanced cancer. In doing so, we have encountered and overcome several methodological challenges including: (1) recruiting busy oncologists from multiple sites; (2) identifying and recruiting appropriate patients with advanced cancer; (3) collecting data in busy clinic environments; and (4) developing an economical and easy to use intervention.

**Challenges in recruiting busy oncologists from multiple sites**

Our first challenge was to recruit a minimum of 50 oncologists as study participants. Data from survey
studies suggest that physicians have low participation rates. Oncologists, specifically, are not accustomed to being study participants themselves; they are more accustomed to recruiting their patients for clinical trials. This role reversal made some oncologists reluctant. We also straddled the delicate balance between convincing oncologists that improving communication was important without making them feel we viewed their communication as inadequate. Oncologists were concerned about being audio-recorded because of potential legal issues (ie, having what they said monitored and perhaps requested by malpractice attorneys). In addition, they were concerned about how audio-recording would affect clinic flow.

To overcome these challenges, we recruited eligible oncologists on an individual basis after personal contact from the study PI or faculty co-investigator. We stressed that oncologists encountered difficult conversations more often than other physicians. We explained that listening to these conversations would also give us some insight into what communication methods have been effective with this patient population. In anticipation of any legal concerns, we acquired a Certificate of Confidentiality from the National Cancer Institute, to protect these conversations from subpoena. Further, oncologists were given the option to refuse audio-recording any particular encounter. We assured oncologists that we would not interrupt clinic flow, and to achieve this, we would work closely with clinic staff.

Challenges in identifying and recruiting appropriate patients with advanced cancer

Our second challenge involved oncologists identifying eligible patients using our criteria that they ‘would not be surprised if the patient were admitted to an intensive care unit or died within one year’. Studies show that all oncologists have difficulty prognosticating accurately and tend to have an optimistic bias. In addition, because this patient population had significant co-morbidities, life expectancy could not easily be predicted in terms of the cancer alone. The oncologists also wanted to choose patients from whom we would acquire the ‘better’ conversations or whom they thought would most likely agree to participate in the study.

In response to these concerns, we acknowledged the difficulty in making an accurate prognosis and emphasized that patients could die from something other than their cancer. In some cases, we discovered that working with physician extenders (ie, nurse practitioners and physician assistants) in identifying eligible patients and their appointment status was more efficient. Finally, both extenders and oncologists needed to be reassured that it was not their job to get us the ‘right’ conversation or the ‘right’ patient. We had to stress that even though they felt a patient would refuse participation, we needed to hear from the patient directly.

Table 2  Demographic characteristics

<table>
<thead>
<tr>
<th></th>
<th>Patient (n=281)%</th>
<th>Oncologist (n=59)%</th>
</tr>
</thead>
<tbody>
<tr>
<td>(No. Pts/total No.)</td>
<td></td>
<td>(No. MDs/total No.)</td>
</tr>
<tr>
<td>Mean age, in years (SD)**</td>
<td>60.4 (13.0)</td>
<td>44.7 (8.5)</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>49% (138/281)</td>
<td>75% (44/59)</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>83% (210/253)</td>
<td>80% (47/59)</td>
</tr>
<tr>
<td>African American</td>
<td>15% (38/253)</td>
<td>2% (1/59)</td>
</tr>
<tr>
<td>Other</td>
<td>2% (5/253)</td>
<td>19% (11/59)</td>
</tr>
<tr>
<td>Physician specialty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical oncology (solid tumors)</td>
<td>39% (23/59)</td>
<td></td>
</tr>
<tr>
<td>Hematology oncology (liquid tumors)</td>
<td>20% (12/59)</td>
<td></td>
</tr>
<tr>
<td>Medical oncology (solid and liquid tumors)</td>
<td>25% (15/59)</td>
<td></td>
</tr>
<tr>
<td>Gynecological oncology</td>
<td>7% (4/59)</td>
<td></td>
</tr>
<tr>
<td>Radiation oncology</td>
<td>9% (5/59)</td>
<td></td>
</tr>
<tr>
<td>Average No. of years since oncology fellowship started (SD)**</td>
<td>14.6 (8.5)</td>
<td></td>
</tr>
<tr>
<td>Mean No. of patient care hours/week (SD)</td>
<td>29.9 (22.6)</td>
<td></td>
</tr>
<tr>
<td>Patient education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HS or less</td>
<td>33% (84/254)</td>
<td></td>
</tr>
<tr>
<td>Some college</td>
<td>31% (78/254)</td>
<td></td>
</tr>
<tr>
<td>Completed college or graduate school</td>
<td>36% (92/254)</td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>74% (189/254)</td>
<td></td>
</tr>
<tr>
<td>General health (ECOG)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fully active</td>
<td>24% (40/168)</td>
<td></td>
</tr>
<tr>
<td>Restricted in strenuous activity, but able to do light work</td>
<td>50% (84/168)</td>
<td></td>
</tr>
<tr>
<td>Ambulatory, but unable to carry out any work activities</td>
<td>17% (28/168)</td>
<td></td>
</tr>
<tr>
<td>Capable of only limited self care</td>
<td>7% (12/168)</td>
<td></td>
</tr>
<tr>
<td>Completely disabled</td>
<td>2% (4/168)</td>
<td></td>
</tr>
<tr>
<td>Household’s financial situation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>After paying bills, have enough money for special things</td>
<td>55% (137/249)</td>
<td></td>
</tr>
<tr>
<td>Enough to pay bills, but little spare money for special things</td>
<td>27% (66/249)</td>
<td></td>
</tr>
<tr>
<td>Money to pay bills, but only by cutting back on things</td>
<td>13% (32/249)</td>
<td></td>
</tr>
<tr>
<td>Difficulty in paying bills, no matter what</td>
<td>6% (14/249)</td>
<td></td>
</tr>
<tr>
<td>Total visits with this oncologist</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0–2</td>
<td>21% (52/252)</td>
<td></td>
</tr>
<tr>
<td>3–5</td>
<td>15% (39/252)</td>
<td></td>
</tr>
<tr>
<td>6 or more</td>
<td>64% (161/252)</td>
<td></td>
</tr>
</tbody>
</table>

*We were unable to collect audio-recordings and/or demographics on all 293 enrolled patients.

**Of the 58 MDs with audio-recordings; one MD had missing data.

Challenges in identifying and recruiting appropriate patients with advanced cancer

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In response to these concerns, we acknowledged the difficulty in making an accurate prognosis and emphasized that patients could die from something other than their cancer. In some cases, we discovered that working with physician extenders (ie, nurse practitioners and physician assistants) in identifying eligible patients and their appointment status was more efficient. Finally, both extenders and oncologists needed to be reassured that it was not their job to get us the ‘right’ conversation or the ‘right’ patient. We had to stress that even though they felt a patient would refuse participation, we needed to hear from the patient directly.
Challenges in collecting data in busy clinic environments
Our third challenge was to collect data while achieving our goal to be invisible and not to interrupt clinic flow. We originally aimed to enroll only medical oncologists in order to provide a relatively homogeneous group. However, to increase the number of oncologist participants, we opted for a more diverse group that included radiation, bone marrow transplant, gynecological oncology and brain tumor clinics. This required adapting to different clinic schedules. Often, at the last minute, patients saw an oncologist or extender other than the scheduled enrolled oncologist. In addition, patients’ treatment regimens frequently caused last-minute cancellations or rescheduling. As different specialties saw fewer eligible patients or spent less time in clinic, we required a longer time frame than initially projected to collect our target number of baseline audio-recordings.

Having two full-time interviewers at the busier Durham clinics allowed us more flexibility in dealing with these issues; subsequently, we were able to collect complete data sets from more Durham oncologists than Pittsburgh oncologists. However, we found it necessary to lower our target number of audio-recordings from eight to six per oncologist. Even with the lowered quota, it was still necessary to withdraw some oncologist participants due to lack of eligible patients. Time required to reach our target number of audio-recorded clinic visits for each oncologist varied from one to 12 months.

Differences in clinic scheduling affected our data collection. Some clinics had rooms that were not being used where we could interview patients, while lack of space in other clinics only allowed us enough time to consent the patients in the examination room before the oncologist entered. Also, consenting everyone present in the room (i.e., health care providers and family members) to acknowledge the presence of an audio-recorder required additional time.

Challenges to intervention development
Our fourth challenge was to develop a communication intervention that was engaging and educational. We created a personalized, user-friendly CD-ROM, containing oncologists’ own coded baseline conversations and an interactive educational interface with reference materials and video-clips of model conversations. The five modules included in each CD-ROM were: (1) principles of effective communication; (2) recognizing empathic opportunities; (3) responding to patients’ emotions; (4) conveying prognosis; and (5) responding to difficult questions.

During Phase 2 of the study (our current phase), each site will have a trained ‘communication coach’ to introduce the CD-ROM and motivate oncologists to use the intervention. We chose the CD-ROM as an easy medium for busy oncologists to use anywhere. Oncologists in the intervention arm will be asked to review the CD-ROM over a three-week period. Total estimated time for reviewing the CD-ROM is 3–4 hours.

Once oncologists view the CD-ROM, we will assess the intervention ‘dose’ by asking oncologists which modules they completed and how much time they spent on each module. Oncologists will also be asked to rate the helpfulness, utility and ease of utilization of the CD-ROM.

Conclusion
The SCOPE Trial is the largest communication study of oncology encounters conducted, to date, in the US. In this study, we have developed and are currently testing a tailored CD-ROM educational intervention that provides oncologists’ feedback from conversations with their own patients who have advanced cancer. Due to its magnitude, a number of challenges arose when recruiting oncologists and patients and developing the intervention. Through often time-consuming trial and error, we have been able to overcome many of these hurdles. By presenting these solutions, we hope to assist others and facilitate more widespread physician–patient communication research.

Acknowledgements
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