Contending Worldviews in the Clinical Encounter: An Empirical Study of Complementary and Alternative Medicine Deliberations in Contemporary Medical Oncology

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Abstract

Objective: In this article, the authors characterize the different ways patients and clinicians discuss complementary and alternative medicine (CAM) during routine cancer care.

Methods: Over a period of two years, the authors audio-recorded clinical interactions between 37 medical oncology clinicians and a sample of 327 oncology patients at an academic cancer center in the Midwest United States. Recordings of conversations that included any discussion of CAM were transcribed and analyzed using a qualitative content analysis approach.

Results: Out of 327 conversations, CAM was mentioned and/or discussed in only 31 encounters. Communication dynamics between clinician and patient involve several factors: the condition of the patient and his or her knowledge about and experience with CAM, the clinician's knowledge and values about CAM, perceived assumptions and stereotypes about CAM, and institutional response to the integration of CAM in cancer care.

Conclusion: Addressing the difficult and sensitive topic of CAM in cancer care requires hearing patients in a manner meaningful to them. In that sense, CAM can serve as an important marker and test case in the march toward shared decision-making and patient-centered communication generally.

Keywords: complementary and alternative medicine, oncology, clinical deliberations, qualitative content analysis, patient–physician communication

Introduction

IN THIS ARTICLE, the authors explore, describe, and characterize the different ways patients and clinicians discuss complementary and alternative medicine (CAM) during routine cancer care consultations in biomedical systems. “Natural” therapies appeal to patients,¹ despite potential treatment interactions. Conversely, research demonstrates that safe CAM can support symptom control with side effect profiles more favorable than medications.^{2,3} The National Institutes of Health and the Institute of Medicine have called for open, evidence-informed conversations about CAM in cancer care.^{4–6}

Research shows that effective communication about CAM enhances the patient–clinician relationship^{1,7,8} and shared decision making.⁹ Despite this, patients and doctors discuss CAM less than it is used,^{1,10} a fact that may be a function of the sometimes negative assessment of CAM within biomedicine.^{11,12} Little is known about the nature and dynamics of clinical deliberations about CAM in biomedicine.^{10,13} Only a few studies have employed audio/video-recordings to examine these conversations directly.^{1,14} As part of a larger study of CAM use, clinical interactions in an oncology clinic at three academic centers in the United States were audio-recorded.¹⁵ In this article, the authors present a qualitative

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TABLE 1. CLASSIFICATION OF CLINICIAN–PATIENT COMPLEMENTARY AND ALTERNATIVE MEDICINE CONVERSATIONS

<i>Categories of conversation</i>	<i>Description of categories</i>
1. <i>Who initiated?</i> (whether the clinician, the patient, or the companion).	This category reflected the individual that first mentioned CAM in any capacity.
2. <i>What was discussed?</i> (the nature of CAM and its implications).	This category reflected the content of the discussion.
3. <i>The extent of discussion</i> (briefly mentioned, mentioned and discussed, and extensively discussed).	This category described the depth and meaningfulness of the discussion. The authors used “briefly mentioned” to describe situations where either the clinician or the patient just mentions CAM but does not discuss it in that interaction. They labeled situations where either the clinician or the patient brings up CAM and discusses its usage and implications “mentioned and discussed.” “Extensively discussed” situations were those in which the clinician or the patient brought up CAM and extensively discussed the nature of the CAM modality, scientific research related to it, and positive and negative implications for the patient’s overall health.
4. <i>How was it discussed?</i>	This category reflected the tone of the conversation—dismissive or inviting, and whether it was discussed as general information or as part of the treatment plan.

CAM, complementary and alternative medicine.

content analysis of 31 conversations in which CAM was mentioned and discussed out of a total of 327 audio-recordings from one of those centers.

Methods

Data collection

This study was approved by the Mayo Clinic Institutional Review Board (IRB). Details of the approach have been previously published.¹⁵ In brief, medical oncology physicians, nurse practitioners, and senior fellows with written informed consent were enrolled. Among consented clinicians, patients who would be eligible and interested in participating were identified, describing the study as a “communication and patient experience” study. IRB approval was granted for incomplete disclosure of the purpose of the study. Those who expressed interest provided written consent, and companions provided oral consent for audio-recording. The study coordinator placed an unobtrusive audio-recorder in the enrolled patient’s examination room and turned it on at the start of the patient–clinician encounter and then left the room. After the clinical encounter, the study coordinator returned to turn off the recorder and download files to a secure database for subsequent analysis.

Data analysis

For this study, the authors used a taxonomy of established definitions of CAM.* A study coordinator listened to all audio-recordings and identified interactions in which CAM was mentioned and/or discussed. Two expert team members reviewed questionable cases to confirm or deny whether the potential instance was indeed an example of CAM based on

the established definitions. Any disagreements were resolved by consensus. Then, all CAM-containing audio-recordings were fully transcribed and deidentified.

Following standard methods of qualitative content analysis,¹⁶ this analysis involved several steps: First, three investigators (A.K., J.T., and A.L.) carefully read all transcripts and created initial broad thematic coding categories. Second, the authors developed a codebook using the initial broad thematic codes. Third, they used the codebook to code all transcripts independently and in duplicate to identify major themes. In the subsequent analysis, each coder noted what type of CAM was discussed within a transcript, who initiated the conversation, and how extensively they discussed it. Discrepancies in coding were resolved through consensus at monthly meetings. Two senior qualitative experts with methods (B.K.) and content (G.G.) expertise supervised coding synthesis and revision. Based on this iterative coding process, each conversation was classified into four major categories (Table 1). In a subsequent analytic phase, patterns and connections within and between categories were identified. In the final phase of analysis, syntheses of patterns and connections were refined with representative excerpts from transcripts to better differentiate categories. Through discussions with senior qualitative colleagues, interpretations were refined and revised. In this iterative and interpretative approach, the goal is to provide thick descriptions of a particular social phenomenon in given context than to emphasize generalizable patterns. For this reason, smaller sample size in qualitative research is not considered as a major issue as long as it allows the researcher to address the research question.¹⁷

Results

The authors identified 31 of 327 interactions in which CAM was mentioned or discussed. Patient characteristics are

*<https://nccih.nih.gov/health/whatiscam>

TABLE 2. DEMOGRAPHIC CHARACTERISTICS OF THE ENROLLED PARTICIPANTS (N=31)

Characteristic	n
Female	19
Male	12
Education	
<High school	2
Grade 12	5
Some college	6
College graduate	1
Postgraduate	12
Tumor type	
Brain	4
Breast	8
Gastrointestinal	8
Head/neck	3
Lung	4
Melanoma	1
Sarcoma	3
Cancer spectrum	
Initial diagnosis	3
Early initial treatment	5
Mid-initial treatment	8
Post-treatment/remission	11
Recurrence treatment	3
End stage	2
Appointment type	
First visit in oncology	2
Return visit but first with clinician	1
Return visit with regular clinician	28
Cancer stage	
Stage 1	1
Stage 2	5
Stage 3	2
Stage 4	13
Other/nonstaged	10
Clinician type	
Biomedical practitioner—MD	24
Physician fellow	3
Nurse practitioner—NP	4

shown in Table 2. Of 31 interactions, 22 were patient initiated, 7 were clinician initiated, and 2 were companion initiated. In 16 of those 31 CAM was briefly mentioned, in 13 CAM was mentioned and discussed, and in only 2 was CAM extensively discussed. Most of the “mentioned and discussed” and “extensively discussed” instances were clinician initiated (Table 3). CAM modalities mentioned included chiropractor, yoga, acupuncture, meditation, massage, herbal medicine, spiritual activities, and naturopathy (Table 4).

In the 31 cases, the initial coding categories were further synthesized to derive eight distinct yet broad patterns of

communication based on the initiating dynamics of the conversation. These categories were illustrated with transcript excerpts to describe the conversational dynamics of CAM in a cancer care setting.

CAM disclosed by patient but ignored by clinician

In a subset of conversations, the patient initiated disclosure of existing CAM use but the clinician ignored it. In the excerpt below, a 70-year-old woman with recurrent metastatic breast cancer on hormonal therapy has returned to the clinic. After a brief conversation about how the patient was doing, the clinician inquired about pain:

Clinician (C): Aches and pains out of the ordinary?

Patient (P): Uh, no, I got a problem with my neck hurting. I've been going to the chiropractor but that hasn't helped a whole lot lately, but other than that, no.

C: Okay, the neck is not something new for you?

P: No, I've been having problems with...see I used to have problems with headaches and stuff, then I started going to the chiropractor off and on, and I really don't have any headaches anymore. You know what I mean, but I went and had an adjustment done earlier this summer and, it's just been messed up since then. And, anyway, just survive with it.

C: Where in your neck does it bother you?

(CE049, lines 56–66)

The clinician asks about any new or unusual symptoms that might indicate a change in the course of her cancer, and she mentions long-standing neck pain. Without addressing the chiropractic care, the clinician moves on. An additional patient mention of chiropractic being helpful for headaches garnered no additional response. The clinician does not bother to inquire further about the chiropractic care, but instead proceeds with the physical examination and discussion about pain medication.

CAM disclosed by patient, clarified and acknowledged by clinician

In other instances, the patient discloses the existing CAM use, and the clinician clarifies or acknowledges that disclosure. In the excerpt below, a clinician meets with a 43-year-old woman with stage II breast cancer post-treatment with no evidence of recurrence. Early in their conversation, the clinician reviews the list of medications and inquires about upcoming appointments. Then, the clinician proceeds further with questions about lumps and pain:

C: So you are feeling well. No new lumps or bumps?

P: Nope.

TABLE 3. WHO INITIATED COMPLEMENTARY AND ALTERNATIVE MEDICINE DISCUSSION AND EXTENT OF DISCUSSION?

	Patient initiated	Clinician initiated	Companion initiated	Total
Briefly mentioned	14	2	0	16 (52%)
Mentioned and discussed	7	4	2	13 (42%)
Extensively discussed	1	1	0	2 (6%)
Total	22 (71%)	7 (22%)	2 (7%)	31 (100%)

TABLE 4. WHAT WAS DISCUSSED
IN THE CLINICAL INTERACTION?

<i>Modality</i>	<i>No. of clinical interactions</i>	<i>%</i>
Chiropractor	5	16
Yoga	4	13
Acupuncture	3	10
Meditation	2	6
Massage and physical therapy	8	26
Herbal medicine	7	23
Spiritual	1	3
Naturopathy	1	3

C: Aches or pains?

P: I've been getting a number of headaches. They start in my neck, but ... usually I'm better about getting to the massage therapist. I think it's stress.

C: And you've mentioned that those have helped you, right?

P: Yes.

C: Okay.

P: And I think I would also see ... I would receive some adjustments from a chiropractor and it's been, probably 2 months since I've been in. So I think it's just stress, but...

C: Okay. I mean, tell me about the pain. Is it a terrible pain? (CE070, lines 76–94)

In this case, similar in the context to the previous excerpt, it was surmised that the clinician's attitude toward CAM was tolerant with a brief neutral-to-affirming tone. While there is no concerted response to it or to follow-up on the chiropractic disclosure, that moment of affirmation seemed to set a different (at least is not dismissive) tone toward the patient's use of CAM.

CAM disclosed by patient, tolerated/accepted by clinician

In some instances, clinicians pay greater explicit attention to a patient disclosure, granting a degree of tolerance or even acceptance. In the excerpt below, a 68-year-old man with metastatic lung cancer back for routine follow-up. They are discussing chemotherapy. The companion initiates a conversation about taking ginseng:

Companion (CO): Now, he's been taking ginseng, can he continue that?

C: Yeah.

P: One bottle, I'm taking, one manufacturer said you should only take it for six months and then quit for a few weeks. And then the new company doesn't have anything about not taking it.

C: I'm not aware of taking breaks or what that would do. You're taking it for fatigue, are you?

P: Yes.

C: Had we talked about this back in the day? Yeah I remember now.

P: You had mentioned.

C: Yeah, I was kind of, it was studied and seemed to be relatively safe and have some benefit. Does this seem to give you a little bit more oomph?

P: I think significantly. Yeah.

C: That's good, then I have no problem with you continuing it.

P: I'm rarely fatigued, but sometimes in the morning I need a quick nap but then I take Tarceva in the morning. Part of it could be aging, too.

C: Which is a process we like to continue, so that's ok. [Laughs]

P: Right.

(CE353, lines 494–523)

When the companion raises the topic of ginseng, the clinician engages and briefly deliberates about it considering the scientific evidence that supports ginseng's merits as well as safety.

CAM information sought out by clinician

In some conversations, CAM discussion was initiated because the clinician directly sought it out. In one instance, a 39-year-old man with a metastatic nasopharyngeal cancer visits his clinician after a complicated, 3-year course of multiple surgeries, chemotherapy, and radiation. The spreading tumor and its treatment have led to neurologic damage and difficult symptoms. The patient presents for follow-up and is anxious to receive scan results. The clinician says "I know, I see everybody go through it. It's normal. It's normal to be very anxious... Actually, I try not to scan people before the holidays... But I had forgotten about that in your situation" (CE296; lines 130–139). After discussing his scan results, the clinician changes the topic and inquires about how the patient's dog is doing and how he has been managing her. Then, the clinician asks whether the patient is doing yoga.

C: How is the yoga?

P: Ah...I gave up on it.

C: [Chuckles] Oh, you were doing so well for a while there.

P: Well, I was doing so well with the stretches and core work and then I tried to do some of the stand work with neuropathy and yoga do not go well.

C: Yeah, that could be hard.

P: Yeah, it was like Pirates of Penzance—stumble, stumble, fall, fall, crawl, crawl. Yeah. It was not fun, no...not fun. So I kind of said, well....[laughs]

C: Well, do what you can. It's great that you're walking.

P: Well, yeah, I am, but...

C: Do everything you can.

(CE296, lines 174–192)

The clinician's casual inquiring about the patient's dog and practice of yoga after addressing technical matters reorients and lightens the discussion. With a particular safety focus, the physician demonstrates a kind of discretionary engagement that seeks to affirm the patient's values through the topic of CAM. In so doing, the physician demonstrates a degree of proactive curiosity.

CAM discouraged by clinician

There were particular instances of CAM communication in which CAM was discouraged by the clinician. In this excerpt, a 59-year-old woman presents to her nurse practitioner for management of recurrent metastatic uterine cancer. The

patient was diagnosed 7 years ago. She received surgery and chemotherapy at that time. Recently, the cancer had recurred in the lung. The patient had a second surgery to remove a tumor mass from her chest a month ago, and during this consultation she was receiving chemotherapy. Her most recent cycle of chemotherapy resulted in a fever and a trip to the emergency room. The encounter begins with a recounting of this episode and its associated management:

- C: Now with the Paclitaxel, are you still having horrible pain in your feet?
 P: Yes.
 C: Okay.
 P: Now what I do to deal with it is I take B6
 C: Mhmm.
 P: Um, just so you know.
 C: Yep.
 P: I'll get it all for you. I was going to send you. I should probably give you the list of everything I take when I take anything.
 C: As long as it's not herbal.
 P: It's not herbal.
 C: Okay.
 P: No. I'm not taking anything herbal.
 C: Okay. Because herbal things can interact with chemo.
 P: Like milk thistle?
 C: Yeah. Yeah.
 P: Oh well.
 C: That's... you...
 P: Okay, I've only taken one. I've taken one.
 C: Stop. Okay?
 P: [Laughs]. I'm just telling you.
 C: Yeah.
 P: I'm not going to hide anything
 C: Yeah.
 P: You know?
 C: No, and that's why we don't want you too, because ...
 P: Yeah.
 C: Those can have interactions
 P: Yeah, I know.
 C: Those haven't been studied
 P: Yeah, I know.
 C: And it can get scary.
 P: Sure. Or I could live forever, because it hasn't been studied. I tend to reframe things positively [laughs].
 C: [Laughs]
 P: But I hear you.
 C: Considering you already ended up in the emergency room.
 P: That wasn't good.
 C: Let's try to avoid that again [laughs].
 P: Okay.
 (CE523, lines 144–187)

In this context, the clinician suggests the patient should not use any herbal products, because they can interfere with chemotherapy and can potentially complicate the situation. But, the clinician focuses more on cautioning the patient with broad proscription rather than explaining how and why the two specific treatments may interact in ways that are counterproductive to their overall treatment goals in this particular situation. The clinician finally solicits agreement from the patient in the spirit of "safety."

CAM recommended by clinician

In contrast, there were instances when CAM was recommended and referrals were offered. In the excerpt below, a 55-year-old woman diagnosed with stage II breast cancer 6 months ago is participating in a clinical trial. She achieved a complete response with neoadjuvant chemotherapy. She presents to the oncology clinic to discuss long-term antiestrogen treatments. The clinician explains that as a general rule she gives the antiestrogen treatment for 10 years and offers it to the patient and discusses how side effects can be managed:

- P: And I'm 55 [laughs].
 C: And now we might give you some [estrogen] back.
 P: And now you might give them [estrogen] back to me [laughs]
 C: Yeah, I know, and that's...
 P: I keep thinking, okay, maybe this is it. Maybe this is it.
 C: And that's why we have drugs, you know, that we can help with that.
 P: Okay.
 C: You know there are things over-the-counter you can use. You can use Black Cohosh. You can use even primrose oil. Those are some natural herbs, if you will, over-the-counter that aren't estrogen-based to help as well if, you know, ...Um, but there's a lot of things we can do.
 P: Okay, okay.
 C: You know, we want to try to reduce the risk of recurrence and improve your symptoms as best as possible.
 P: Okay.
 (CE565, lines 295–311)

In this interaction, the clinician's willingness to go beyond a strictly prescription-based perspective in addressing symptoms demonstrates an attentiveness to the patient's symptom burden and acknowledges the limitations of the biomedical paradigm.

CAM expert referral

In another case, a 63-year-old woman was diagnosed with melanoma of the left foot 4 years ago. The tumor had metastasized, requiring multiple surgeries of the foot and systemic chemotherapy. A recent positron emission tomography (PET) scan showed a complete response to the chemotherapy. The patient and the clinician discuss imaging options for follow-up, particularly related to what insurance will pay for. The clinician reviews options. Spontaneously, the patient interjects and explains what she learned about milk thistle and why she is taking it:

- P: So you know I started taking milk thistle. You know, that herb milk thistle. I read a report ... milk thistle was shown to suppress melanoma, of course in rats or whatever.
 C: Yeah.
 P: But I just decided to start taking it, why not [laughs]. Take some milk thistle.
 CO: It's good for the liver.
 P: It's good for the liver too supposedly. Helps the liver clean out or whatever.
 C: And how much do you take of it?
 P: I take like... the thing says 30 to 60 drops a day from a tincture, you know, it's in a tincture.

- C: Yeah.
 P: I just take like 30 or 40 once a day little drops.
 CO: Like a dropper full.
 P: Little teeny bit. I've been doing that for at least three months, since the last time I saw you I think I read that article.
 C: Okay. Okay. Whatever you do, please do in moderation.
 P: Yeah. Don't change something drastically.
 C: Don't just say I'm going to take only milk thistle and nothing else in my life. Please don't do that.
 P: No, no.
 CO: No, no.
 C: Because I don't know what this compound is and what it's, you know, side effects are and things like that. So you know, we have a complementary medicine program here at the Clinic where there are people who can talk to you about these things if you would like, and I can arrange for a visit if you would like.
 P: Oh. I see.
 C: You know, the next time when you come back.
 P: Yeah. Talk about the various herbal things and alternatives...
 C: Exactly. And they can actually tell you, you know, you're on milk thistle and you're on, you know, these are the three medications we have known that there is an interaction between this and milk thistle, don't do it, or something like that.
 P: Right, right.
 C: I think the best they can actually, and we don't know anything about the alternative medicines, but they are probably better than I am in trying to tell you.
 P: Sure.
 C: So if you'd like it, I'd be happy to...
 P: Sure, for next time up.
 C: Yeah. In three months from now when we meet again, we can have an arrangement for you to meet with them.
 (CE600, lines 507–576)

The clinician shares his or her knowledge about natural products (although limited) and suggests the patient see CAM experts. Unlike the previous case in which the positive endorsement is “handled” by the clinician alone, in this case, the “endorsement” comes in the form of willingly referring the patient to colleagues who might allow her to get her questions answered about milk thistle and other herbal therapies. In this case, the clinician humbly accepts the limitation of his or her knowledge about CAM and discusses referral to an expert.

CAM integrated by clinician

There were also instances in which CAM was actively integrated into the treatment plan. A 53-year-old woman returning after a mastectomy for stage II breast cancer has been taking adjuvant Tamoxifen and tolerating it well. The patient reports that her only real issue is lack of sleep, which she feels may be exacerbated by a recent job change. After discussing sleep, the two discuss issues of anxiety and fear of recurrence and anxiety treatments:

- P: I actually thought about trying yoga.
 C: Yoga is absolutely wonderful, wonderful, wonderful intervention. I think it is good for a lot of reasons. I

think those stretches help with preserving a range of motion in that shoulder; it also is, you know, that form of meditation to some extent, you know, living in the moment and doing deep breathing and lots of exhaling. I think it is a wonderful thing.

- P: Yes, okay.
 C: You know it has actually been studied in breast cancer survivors. They've published research on yoga.
 P: Really?
 C: Uh-huh, and not only do women who do yoga report better quality of life, they also—they've actually looked at the immune system and they actually have elevation in like an immune boosting kind of intervention. So there are actually markers in the blood stream, lower cortisol levels which are kind of that stress hormone we make. It is a wonderful intervention. I think that would be a wonderful thing to do. You bet! Excellent! I would definitely support that.
 P: Good.
 C: This is the name of the book, Mindfulness Based Cancer Recovery; it is just a wonderful...as you can see it is pretty darn cheap. I recommend it to lots of my patients here. Okay?
 P: Okay. I will do that.
 (CE115, lines 9–10)

The clinician offers explanations to the patient, referring to scientific studies on why and how yoga works. The clinician also refers the patient to educational resources about treatment options. Although not common in this study, these expressions demonstrate a capacity to engage the CAM topic and integrate its merits into a symptom-oriented wellness plan for a cancer survivor.

Discussion and Conclusion

In this inductive qualitative analysis of 31 instances of CAM dialogue that occurred in over 300-recorded visits at an academic, referral oncology practice, a range of communication dynamics were identified. This study confirms previous findings that CAM is not widely discussed in cancer care.^{18,19} These findings, although plausible and intuitive, have not been documented in the real-time observed flow of communication in contemporary North American cancer care. Moreover, the patterns these findings imply may begin to elucidate how the boundaries of patient/clinician, alternative/biomedical notions of health are negotiated in contemporary healthcare contexts that claim “patient-centeredness” as their mantra.

When clinicians ignore large swaths of what the patient reports—including CAM—abruptly shifting the focus to prespecified biomedical categories with little explicit rationale or asking a series of checklist questions that may not be relevant to each patient, the patient's voice can be undermined. This dominant motif, consistent with a rational-bureaucratic approach to modern healthcare generally, may be one of the reasons why patients seek out CAM in the first place and continue to not talk about it within the oncology establishment.

These observations should prompt deeper questions about the possibility of patient-centered communication in cancer care. Despite the declared importance of patient-centered communication and the need to treat cancer patients

holistically, the dynamics observed suggest that there is a long way to go to make “patient-centered” mean something.^{20,21} A critical goal of psycho-oncology is to mitigate reductionist framings of what it means to take care of the whole person in cancer care.²¹ Yet, these observations of CAM communication suggest a biomedical framing of those scant conversations still very much predominate.

These data cannot reveal us about motivations or degree of self-awareness clinicians do or do not have when CAM is discussed. These are worth exploring in future studies. This analysis is based on transcripts of audio-recordings of conversations only. The authors were not able to capture and analyze silences and nonverbal communication in the conversations, moments where opportunities for dialog about CAM were missed. Did patients feel silenced? These and similar questions remain unanswered.

A shared decision-making model of communication identified decades ago, and echoed in recent calls for patient-centered communication in oncology²⁰ remains an admirable goal to path to which may be long and fraught. Addressing the difficult and sensitive topic of CAM in cancer care requires hearing patients in a manner meaningful to them. In that sense, CAM can serve as an important marker and test case in the march toward shared decision making and patient-centered communication generally. Aligning the systems and the mentality of everyday healthcare with the lives of those it serves should remain the goal of alternative or biomedical care.

Author Disclosure Statement

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