



“Part of the Conversation”: A Qualitative Study of Oncology Healthcare Professionals’ Experiences of Integrating Standardized Assessment and Documentation of Complementary Medicine

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Abstract

Introduction: The use of complementary medicine (CM) among individuals with cancer is common, however, it is infrequently assessed or documented by oncology healthcare professionals (HCPs). A study implementing standardized assessment and documentation of CM was conducted at a provincial cancer agency. The purpose of this study was to understand the perspectives and experience of oncology HCPs who took part in the study, as well as withdrew, regarding the feasibility and the challenges associated with assessment and documentation of CM use. **Methods:** An interpretive descriptive study methodology was used. A total of 20 HCPs who participated, managed staff, or withdrew from the study were interviewed. Interviews were recorded and transcribed verbatim. Thematic, inductive analysis was used to code and analyse themes from the data. **Results:** Oncology HCPs who participated in the study felt that CM use was common among patients and recognized it went underreported and was poorly documented. Facilitating factors for the implementation of standardized assessment and documentation of CM use included having a standard assessment form, embedding assessment within existing screening processes, and leveraging self-report by patients. Barriers included limited time, perceived lack of knowledge regarding CM, hesitancy to engage patients in discussion about CM, and lack of institutional support and resources. Recommendations for future implementation included having explicit policies related to addressing CM at point-of-care, leveraging existing electronic patient reporting systems, including the electronic health record, and developing information resources and training for HCPs. **Conclusions:** With the high prevalence of CM use among individuals with cancer, oncology HCPs perceive addressing CM use to be feasible and an essential part of high-quality, person-centered cancer care. Institutional and professional challenges, however, must be overcome to support the assessment, documentation and discussion of CM in patient-HCP consultations.

Keywords

assessment, perceptions, healthcare team, barriers, facilitators, qualitative

Submitted September 1, 2021; revised December 29, 2021; accepted January 14, 2022

Introduction

The use of complementary medicine (CM), defined as non-mainstream therapies used alongside conventional medicine, is common among individuals with cancer.¹ It is estimated that nearly 80% of all individuals living with cancer use a CM therapy during or after treatment.² Despite how common CM use is during cancer care, healthcare professionals (HCPs) often do not ask patients about their use of these therapies,³ nor is it documented in their electronic health record (EHR).⁴ Although some CM therapies are efficacious and safe to use,^{5,6} other therapies may pose risks

such as interacting with cytotoxic agents,^{7,8} inducing organ toxicity,⁹ and antiplatelet activity,¹⁰ or causing financial harm.^{11,12} As such, lack of assessment, documentation, and

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discussion around CM use may pose risks to individuals with cancer who consider or choose to use these therapies.

To address the lack of standardization of assessment, documentation, and discussion of CM use within cancer care settings we developed a clinical practice guideline that outlined 7 practice recommendations regarding how to address CM use by individuals with cancer.¹³ These recommendations focused on communication, assessment, education, decision-coaching, documentation, active monitoring, and adverse event reporting related to CM. We then launched a study that aimed to implement 3 key recommendations drawn from this clinical practice guideline—assessment, documentation, and education—within a provincial cancer agency in Canada. This included an assessment form that consisted of a 1-page, double-sided form of 40 commonly used natural products and 11 non-biological therapies (eg, yoga, massage, acupuncture; see Supplemental Table 1) and standardized documentation of CM therapies in patients' EHR. Education was provided through a brief seminar outlining the study processes, online and hardcopy evidence-based CM resources, and weekly email reminders. Further details of the implementation of the clinical practice guideline recommendations can be found elsewhere.¹⁴ Beyond examining the impact of the recommendations on HCPs' knowledge, attitudes and practices related to CM,¹⁴ we were also interested in understanding the feasibility and experience of addressing CM at point-of-care from the perspective of oncology HCPs.

The overall purpose of this qualitative study was to explore the experiences and perceptions of oncology HCPs and clinical managers regarding their participation, or lack thereof, in the implementation of the CM guideline recommendations, as well as the barriers and facilitators they experienced in assessing, documenting, and discussing CM use as part of their clinical practice.

Methods

This qualitative study, informed by interpretive descriptive methodology,¹⁵ took place at CancerCare Manitoba, the provincial cancer agency located in Manitoba, Canada. Oncology HCPs who took part in the implementation project were asked to describe their past (ie, prior to study commencement) and current experiences of standardizing the assessment and documentation of CM use, as well as the barriers and facilitators to addressing CM with individuals living with cancer. We also interviewed HCPs who withdrew from the study to assess their concerns and perspectives on how CM use should be addressed as part of cancer care. Finally, we interviewed clinical managers to obtain their perspectives regarding incorporating CM assessment and documentation within oncology HCPs' scope of

practice. Future recommendations related to addressing CM use in cancer care settings were also sought.

Sample and Sampling

Participants were eligible if they participated, withdrew from participating, or managed oncology HCPs involved in the guideline implementation project. All interviews were conducted either one-on-one or in dyads. Purposeful sampling was employed to have participants who both completed the guideline implementation project as well as those who chose to withdraw from the project but were willing to engage in qualitative interviews about their experience to obtain varying perspectives on the feasibility of implementing a practice guideline related to CM. A total of 32 participants were contacted via email, with 20 (63%) agreeing to be interviewed. Participants who consented to take part in the study were interviewed in private by a member of the research team (CZW) via phone or in-person.

Data Collection

Two interview guides were employed depending if the HCP completed the study or withdrew from the study (see Supplemental Table 2). Interview guides were developed from the Complementary Medicine Education and Outcomes Program (CAMEO) research program,¹⁶ which aims to address the CM decision support and education needs of individuals with cancer and oncology HCPs. Study participants were encouraged to share their prior and current experiences and perceptions of assessing, documenting, and discussing CM use with cancer patients, as well as what worked well in the implementation of the guideline recommendations and what could have been improved. Each interview lasted approximately 15 to 30 min, and were audio recorded and transcribed verbatim. All willing participants were interviewed and while data saturation across key study themes was a goal, it did not guide data collection. Due to time constraints and the busy workload of clinicians in cancer care, transcribed interviews were not returned to participants for further comment.

Data Analysis

For each interview, inductive thematic analysis was conducted. Transcripts were read twice by both authors (LGB and CZW) to identify key themes. From this, an initial coding scheme was developed and used to code the transcripts. All transcripts were coded using the qualitative data management software, NVivoTM. From the coded data, themes were further explored and compared across all interviews.

Ethical approval for this study was obtained from the University of Manitoba Research Ethics Board and from

CancerCare Manitoba's Research Resource Impact Committee.

Results

A total of 20 HCPs were interviewed, of whom 11 completed the assessment and documentation portion of the study and 5 chose to withdraw. Four nursing managers who oversaw clinical nursing staff were also interviewed. Of the 11 HCPs who took part in CM assessment and documentation, 3 were medical oncologists, 6 were registered nurses, including nurse practitioners and educators, 1 was a radiation therapist, and 1 was a pharmacist. In total, 16 participants identified as women and 12 participants reported working in an oncology setting for more than 10 years. Six participants indicated they had recommended CM therapies to patients in the past, whereas only 2 reported receiving any formal CM education. See Table 1 for additional information.

Overall, 6 main themes were identified within the interview data. These include: (1) Motivations for study participation and withdrawal; (2) Past experiences in addressing CM use; (3) Experiences of implementing standardized CM assessment and documentation; (4) Barriers and facilitators to assessment and documentation of CM use; (5) Future intentions related to assessing and documenting CM use; (6) Recommendations related to assessment and documentation of CM use.

Motivations for Study Participation and Withdrawal

Several of the oncology HCPs who participated in the assessment and documentation of CM shared that they were interested in taking part in the study as they believed CM to be a "clinically relevant issue" that was commonly used by patients but often not disclosed, thus presenting safety issues. HCPs were particularly concerned about potential interactions between CM and conventional cancer treatments. Some participants also felt that the study would promote "open dialogue" about CM, and improve patients' decision-making, as well as their own knowledge and awareness about CM use. As 1 nurse explained:

I think that patients were under-reporting their products and they were doing so because they didn't want to be told not to take them. And for me, it was a big concern around toxicity and potential harm, so I thought that encouraging the conversation and disclosing could help, hopefully, patient safety and increase awareness of the products [used]. And what things [I need] to know to educate the patients about. But also having the patients have their sense of control and making better-informed decisions with the right information.

Other participants were interested in participating in the study based on their own personal interest in CM, wanting

Table 1. Characteristics of Oncology Health care Providers Interviewed (N=20).

Characteristic	N (%)
Age	
30-39 y	4 (20)
40-49 y	5 (25)
50+ y	5 (25)
Missing	6 (30)
Gender—Women	16 (80)
Participation in study	
Completed the study	11 (55)
Withdrew from the study	5 (25)
Managed staff involved in study	4 (20)
Profession	
Medical oncologist	4 (20)
Nurse/nurse educator/nurse practitioner	6 (30)
Pharmacist	1 (5)
Dietitian	1 (5)
Radiation therapist	1 (5)
Psychosocial provider	3 (15)
Nursing managers	4 (20)
Number of years working in oncology	
1-4 y	5 (25)
5-10 y	3 (15)
10+ y	12 (60)
Type of cancer primarily work with	
Breast	5 (25)
Gynecological	2 (10)
Gastrointestinal	3 (15)
Hematology	3 (15)
Multiple sites	7 (35)
Education in complementary medicine before study	
Yes	2 (10)
No	16 (80)
Missing	2 (10)
Recommended complementary medicine for patients before study initiation	
Yes	6 (30)
No	7 (35)
Missing	7 (35)
Use any form of complementary medicine in their personal life	
Yes	12 (60)
No	4 (20)
Missing	4 (20)

to gain skills in discussing CM, as well as advancing their understanding of why individuals with cancer use CM. As 1 nurse practitioner shared: "[I have] a long-standing interest in complementary therapies, and never really having enough guidance on how to discuss it with patients." A few participants indicated that their study participation was motivated by the recognition that understanding patients' use of CM was an important part of providing holistic,

high-quality, person-centered care that acknowledged patients' beliefs and promoted a healthy patient-clinician relationship. As 1 medical oncologist explained:

Basically, patients come in with preconceived ideas about the benefits of complementary medicine, and I don't agree with their understanding of it, but unless I can get to a place where I can understand where they are coming from, it could sabotage my relationship with my patients and my ability to provide good care.

For those HCPs who withdrew from the study, their reasons for withdrawal included being concerned about having insufficient time or feeling that assessing CM use did not fit into their clinical role. For example, several of the psychosocial oncology clinicians indicated that while patients' CM use would arise occasionally during visits, the formal assessment of CM would have been disruptive to their role in the healthcare team and the therapeutic alliance they have with patients. One psychosocial clinician explained:

It would have disrupted the flow of communication, it would have possibly misled the patient and family about the nature of my work with them and what my role was, and it could have muddied the waters in terms of roles with other team members.

Several of the oncologists interviewed expressed concern that assessing CM use could be perceived by patients as an endorsement. As shared by a medical oncologist who chose not to implement CM assessment: *"My only concern is the way that those questions sometimes can come about. There is almost an endorsement of the use of CM and I think we just have no idea if they're effective."* While some HCPs choose not to take part in CM assessment and documentation, most expressed that they perceived the topic to be important and had discussed CM use with cancer patients in the past.

Past Experience Addressing CM Use

Prior to taking part in the study, most HCPs described CM assessment as occurring "sporadically," if at all, and not conducted in a systematic or comprehensive manner. CM use was typically addressed only at the initial consult or when patients "brought forward questions," resulting in limited assessment while patients underwent active treatment or transitioned to a new phase in the cancer continuum. As a consequence, several HCPs expressed the belief that a substantial amount of information about CM use was not being gathered. As 1 medical oncologist shared:

We were missing a lot of the data and we were not getting full disclosure of the things patients were taking. . .we didn't know what they were using because we didn't ask. I think one of the

benefits of the study is that it brought to attention that we were failing to collect this data.

The rationale provided by HCPs for the limited prior assessment of CM use included lack of time, their insufficient knowledge about CM therapies and their efficacy and side effects, and subsequent discomfort in addressing any questions posed by patients about CM. One HCP equated CM assessment to asking *"the sexuality question – if you don't know the answers, you just don't bring up the question."*

Several oncology HCPs, however, described CM assessment as part of their prior history taking and medication reconciliation, the latter focusing on natural products such as vitamins, minerals and herbal therapies. As 1 pharmacist shared:

It was always part of my process every time I would meet with patients in clinic for chemotherapy teaching. One of the first things I ask is about medications and what they're on and I do specifically ask about natural products, things of that nature.

With regards to previous documentation experiences, when assessment did occur, most HCPs described listing CM therapies under a progress note or in patients' initial medical history. For those HCPs who engaged patients in a more detailed conversation about CM use, progress notes were most often used to document patients' treatment decisions. Several HCPs noted that CM therapies other than natural products were rarely assessed or documented, as illustrated by the following quote from a nurse describing their documentation practices: *"But yoga. . .the other physical therapies are sometimes just not on my assessment, so it's hit and miss, it's not consistent."*

Experiences of Implementing Standardized CM Assessment and Documentation

Overall, most HCPs interviewed who completed the study described the process of implementing the CM assessment form as "easy," with many directing patients to complete the form alongside other existing screening material (ie, symptom assessment tool) prior to consultations. As a consequence, the impact on workload was perceived by most participants as minimal. Some HCPs, however, suggested that the 1-page, 2-sided form was quite long, listing many therapies that were not commonly used by patients in their practice. A few HCPs also indicated that they did not review patients' completed form, nor discussed CM use with patients. Despite this, most HCPs praised the standardized nature of the form, which they perceived to be a reminder for everyone in their clinic to have a conversation about CM. The assessment form was also seen to highlight to patients the importance of fully disclosing all forms of CM utilized and to foster dialogue about CM:

It was a standardised approach to make sure that we were letting patients know that we wanted to keep track of everything they were taking, not just medications, but also natural medicines. I really liked that on the form it also included a spot for massage therapy or acupuncture, acupressure, stuff like that, which is also important. It opened up the discussion about CM. Otherwise, in a busy clinic, you tend to forget about bringing everything up, whereas when this is part of the standard [forms that] they filled out ahead of time, then I found that it kind of opened up, gave you a little bit of a gateway to talk about CM and why it's important to talk about it.

Most HCPs involved in the study relied on data entry clerks to document CM use into the EHR. Time constraints in the clinical setting made it challenging for HCPs to chart CM use at point-of-care, the exception being nurse educators and nurse practitioners, who sometimes shared they made time during consults to document natural products disclosed by patients. The few HCPs who entered CM therapies into the EHR found it somewhat challenging due to the specificity of product names required:

I honestly find it a bit frustrating when it's not easy to find the actual complementary medicine. For example, if turmeric isn't underneath turmeric, it's underneath a different name, then I'd have to go in and find the name that it actually would be listed under [in the medication record]. And when you're super busy and behind, I can't even remember where to find that list, so I honestly sometimes haven't entered it.

Both participants who took part in the implementation phase of the study and those who withdrew agreed that the documentation of CM use needs to be more easily accessible in the EHR. In particular, CM therapies other than natural products were difficult to locate as they were relegated to a separate section of the EHR devoted to patient-reported outcomes and unique nursing or medical checklists, which was infrequently reviewed by the healthcare team. In contrast, natural products were embedded in the medication history, which is commonly reviewed during each consultation. As a result, several HCPs indicated that they were able to use this information to inform their conversations with patients about the safety of specific natural products, especially with regards to potential drug interactions. As 1 pharmacist shared:

So, in the past, when we're triaging chemotherapy orders, one of the things we look for is drug interactions and often if patients were on any kind of those therapies [natural products] we'd have to go digging through the chart to find that information. Usually, it would be in a chart note of some sort or sometimes it would be omitted all together. So, I find that having it as part of the [medication reconciliation] now makes it a lot easier to find in one single place that everyone can access.

Navigating questions about CM. According to the HCPs interviewed, assessing CM use sometimes prompted patients to enquire about specific CM therapies. Patients' questions included whether a therapy was recommended and if it was considered safe. In addition, some patients appeared concerned about how any information they shared about CM would be used. One pharmacist shared the following when asked if questions arose due to assessing CM use:

Definitely. I find usually as soon as you ask the question, the follow-up question that comes is, 'Is this okay for me to take?' It helps to prompt that discussion for sure. The two top questions were 'Is this okay to take?' or 'Do you recommend that I do this?' and then also 'What [be]comes of the information that I provide to you?'

The degree to which HCPs felt prepared to answer patients' questions about CM varied across participants depending on their experience in addressing CM questions and their level of knowledge regarding specific therapies. For those therapies they felt less comfortable addressing, participants indicated they consulted or referred patients to other HCPs more knowledgeable about CM, such as pharmacists and dietitians, or they referred to evidence-based resources, such as the Memorial Sloan Kettering Cancer Center's¹⁷ *About Herbs* app. One nurse described their experience of responding to CM questions as the following:

I did my best – but most of those questions revolved around either risks or benefits so I did my best to respond to that based on my knowledge of the existing evidence around each particular agent as well as asking a pharmacist to take a look.

Barriers and Facilitators to Assessment and Documentation of CM use

Commonly, participants stated that time was a substantial barrier to discussing CM use with patients. The participants who withdrew from the study stated that the potential time needed to assess and then document CM use was a major factor in their decision to withdraw. One medical oncologist who withdrew stated: “Well, one of the concerns was really the amount of time involved. So, I think that's probably one of the biggest challenges, there's not [enough] time within clinic to do that.” For other participants, the repeating theme of having a lack of knowledge about CM was perceived to create hesitancy among HCPs regarding assessing CM use as it could lead to questions they felt unprepared to address. One nurse shared her hesitancy as follows: “We haven't really had a whole lot of training on supportive medication [CM]. . . I think we always defer [patients'] questions.”

In contrast, participants reported that a major facilitator to completing the CM assessment form was the fact that it

was implemented, often by patients, alongside existing screening processes. Participants also stated that having a standardized form was helpful as it ensured all patients were asked about the same CM therapies and did not require in-depth questioning. As 1 pharmacist explained:

It might have actually made it a little bit easier for me because especially if all the therapies that a patient was on were on the form, then I didn't have to actually write anything down. I could just check, do the checkmarks on it. So, in those cases where those therapies were on the form, it probably actually saved me time.

Future Intentions Related to Assessing and Documenting CM Use

Most participants, except those concerned about legitimizing CM use, indicated that they would be willing to continue to assess and document CM use in the clinical setting outside of the purview of a research study. They perceived CM to be “just like any other medication” and assessing CM use was deemed an important part of providing safe and comprehensive cancer care. Some even suggested that it would be unprofessional or “disingenuous” not to assess CM use as part of their clinical intake or physical examination. Some HCPs also emphasized the importance of CM use being documented within the medical record “where everyone has access.” As a radiation therapist shared:

If the statistics are right on how many [patients] are using some type of CM, I think the onus is on us to get with the times and stop putting it in the closet, pretending it's not a scope of practice. It's in our competency profile.

A few HCPs also expressed the belief that beyond safety issues, assessing and documenting CM use may open up the conversation about treatment options, including CM therapies, that may benefit and empower patients. As a nurse educator shared:

Plus, the other part is, if they're not partaking in complementary therapies, you can start saying, 'Look, acupuncture might help with your neuropathy, exercise will work for this. Different things like this.' And it's something that they have power and control over. I think it opens up that conversation of, 'Okay, if you're not using these things, these are ideas of what's complementary and what may work.'

A few participants, however, did express hesitation regarding continuing to assess and document CM use. Concerns included the impact on flow within a clinic due to additional time being spent discussing CM use with patients and needing a more streamlined form that focused on commonly used therapies. In addition, 1 HCP expressed reservations about collecting data on CM use without a clear

plan regarding how that information would be used and addressed within the clinical setting.

If [CM assessment and documentation] was no longer affiliated with a research project but it was just day-to-day clinic activity, I would want to be well-versed in what that information was going to be used for and who was actually going to look at it. Because I think we do have an issue of sometimes collecting data and then not actually looking at it. So why collect information from a patient if you're not going to be using it.

In a similar vein, 1 nurse manager expressed concern that clinic nurses were collecting complex information about CM that warranted follow-up, however, it was unclear if and how nurses should address potentially problematic CM use.

You [the patient] said you were taking whatever, multiple different herbs or what have you, what do we do with that once we have that information? So, I think for some of the clinic nurses that were involved in this study, I'm speaking more nursing wise than physician wise, is now what do we do with that?

Recommendations Related to Assessment and Documentation of CM Use

Numerous recommendations were provided by study participants regarding how assessment and documentation of CM use could be improved and how HCPs could be better supported in addressing CM use as part of their clinical practice.

Embedding CM in standard of care. The majority of participants agreed that the assessment of CM use should be a standard of care and occur for all patients. When asked about future directions of assessing for CM use, 1 HCP stated, “I think it needs to become part of our norm.” Participants also agreed that timing of assessment should occur at first appointment and continue through treatment and follow-up. One nurse explained:

I think it [CM assessment] should be done right at the beginning and there should be information available in our Patient and Family Resource Centre and there should be a culture of openness and education and discussion around it that is present in the team all the way along, every step of the way, but starting with a conversation right at patient registration. Then it should be part of regular follow-up.

Education and training about CM. A few HCPs suggested having standard CM education and training across the institution to better equip them to ask and discuss CM use with patients. Whether there was institutional support for such education or having CM addressed as part of clinical practice, however, was questioned by some participants:

I'm just not sure if they [senior management] have a buy-in on it [addressing CM]. I just don't see a huge support from the higher-ups to say this is an important piece and we need to get this organized.

Improvements to assessment and documentation of CM use. As previously described, some HCPs offered suggestions about how the assessment of CM use could be improved, including shortening the form and standardizing the assessment of CM use at key milestones in the cancer care continuum (eg, diagnosis, end of treatment, at recurrence). There was also the recommendation that clinicians be consulted to identify newly emerging therapies that should be added to the form, as well as those that were no longer commonly used.

With regards to documentation, those HCPs who entered data related to CM use reported being frustrated with the specificity of the natural products listed in EHR and recommended creating a searchable list of products that included both brand and scientific names. Several HCPs also recommended improvements in the structure of the EHR to better facilitate the documentation of CM use as well as increase its visibility within the health record for all healthcare team members. More specifically, participants recommended that beyond maintaining natural products within the medication record, other CM therapies and providers (eg, naturopathic and chiropractic care) should be documented in a location in the EHR that would be readily accessible and commonly reviewed during consultations. Other participants envisioned the implementation of technologies (eg, tablets, kiosks, online portals) where patients could self-report CM use, which would then be imported directly into the EHR, streamlining the overall documentation process.

For oncologists focused on discussing treatments with patients, a suggestion was made that a “flag” be created similar to pharmaceutical medication to not only prompt the documentation of CM but also identify any therapies of concern, particularly in relation to potential harms and/or interactions. As 1 medical oncologist suggested:

I think if there was real-time feedback to have the patients' data input into the electronic record, like the same way their medications would be. . .there was no real flag or forced function for me to be documenting what they'd put down on the study worksheet.

Healthcare providers responsible for CM. Several HCPs emphatically stated that it was time for oncology HCPs to accept that CM was commonly used by many patients and that assessment and documentation of CM use was part of all clinicians' scope of practice. One nurse manager stated: “. . .having it [CM] part of the conversation just helps everybody; whether it's providers or patients.” However, when asked which specific HCPs should complete the formal assessment and documentation process, responses

differed. While physicians and nurses were commonly identified as being the best situated to ask patients about CM, allied health professionals such as pharmacists and dietitians were seen to be better positioned to provide more in-depth consultation regarding natural products and potential risks and benefits.

CM resources. Participants expressed that having evidence-based resources, such as a repository of information on specific therapies that both HCPs and patients could access, would help facilitate discussion and aid in treatment decision making. Nurses and other HCPs also expressed the desire for an integrative medicine clinic or even a specialist who was an “expert” on CM where they could refer patients with more complex CM needs for consultation. One nurse suggested:

If we had a practitioner, someone they could go and talk to, and maybe it's something like a multidisciplinary thing, where there's pharmacists, dietitians, or somebody that's knowledgeable in those things [CM], where they can go and have an intelligent conversation about this.

Creating an integrative medicine clinic, however, was a point of contention for some HCPs who perceived such a resource as potentially legitimizing the use of CM therapies that were not supported by strong evidence. As 1 medical oncologist shared:

I think there's a risk with having a complementary medicine clinic, again, because these therapies aren't studied extensively, and we should not validate it in that way. So, I'm not opposed to having some pertinent information or some sort of support to help patients decide, but in a way that is not validating.

Discussion

This is the first study, to our knowledge, that examines oncology HCPs' perceptions and experiences related to assessing and documenting CM use at point of care. While there have been numerous studies that have explored HCPs' attitudes and knowledge related to CM use among individuals living with cancer,¹⁸⁻²¹ our study provides insight into the feasibility of standardizing the assessment and documentation of CM use in busy ambulatory cancer care settings. In addition, our study sheds light on oncology HCPs' willingness, aptitude, and comfort to incorporate CM into their scope of practice, and the resources and training required to ensure they are able to provide safe, informed, and timely care related to CM use.

Overwhelmingly, CM use was perceived to be an important clinical issue that was worthy of attention due to the potential negative, as well as positive, health effects. Incorporating CM assessment and documentation into standard clinical practices, such as patient history taking,

medication reconciliation, and follow-up appointments, was seen as an essential part of high-quality cancer care. However, oncology HCPs reported that addressing CM use was not consistently done due to issues in the health-care system (ie, lack of standardized assessment procedures, CM therapies not included in the EHR, and insufficient time) as well as individual factors, such as attitudes toward CM, perceived lack of knowledge about CM, and fear of legitimizing CM use. Similar barriers to addressing CM use in cancer care settings have been reported in previous studies.²¹⁻²³

For those oncology HCPs who implemented or oversaw the assessment and documentation of CM use, most found the process feasible and to have minimal impact on their workflow. Many participants, however, were candid that they had limited engagement in the overall process, relying on individuals with cancer to complete the assessment form and clerks to enter the reported information into the EHR. Study participants also reported that they infrequently reviewed CM information and consulted with patients who disclosed CM use. In order for CM use to be reconciled as part of standard cancer care, institutional support, information and decision support resources, and training were perceived by participants as potential facilitators.

Overcoming Challenges to Assessment and Documentation of CM Use

Our findings clearly show that while there is support for standardizing the assessment and documentation of CM use across the cancer care continuum, and ensuring this information is consistently reviewed and addressed in patient-HCP consultations, a guideline alone will not sustain such a change in practice. Despite being provided a standardized assessment form and having support in entering CM use information into the EHR, there was a disconnect expressed by many HCPs about what to do with this information and if they were the appropriate HCP to discuss CM use. This begs the question of what needs to be in place for oncology HCPs to take responsibility and embed CM use assessment, documentation and discussion as part of standard care?

Institutional support. Most participants interviewed felt that institutional policies, standard procedures, and resources need to be in place before they felt comfortable in discussing CM use with individuals with cancer. Despite many professional regulatory bodies in North America stipulating that providing evidence-informed decision support to individuals considering CM is part of HCPs' scope of practice,²⁴⁻²⁶ many oncology HCPs felt they do not have the requisite knowledge, skills, resources, and institutional support to do so. As such, cancer care institutions must create clear expectations through the development of policies, procedures, and resources (eg, access to evidence-based

CM databases, such as Natural Medicines™) for HCPs to feel prepared to address CM use. Similar strategies have been found to be effective in other neglected areas of cancer care, including psychosocial oncology,²⁷ symptom screening,²⁸ and advance directives²⁹; topics that are commonly cited as being difficult to communicate about with patients. In addition, including CM assessment and documentation as part of quality assurance and accreditation processes will further normalize and regulate addressing CM as part of the expected standard of care within an institution.

Health informatics. Health informatics may also play a central role in addressing many of the barriers experienced by HCPs regarding addressing CM use. This may include introducing standardized questions about CM use in existing electronic patient reporting systems, creating new avenues for individuals with cancer to self-report CM use that are directly entered into the EHR, and modifying the EHR structure so that CM information is readily available to the entire healthcare team. Similar health informatic interventions have been found to be effective in other areas of oncology care.³⁰ The development of a notification system that prompts oncology HCPs to review new CM information and reflect on the need for consultation and decision support may further facilitate timely patient-HCP communication about CM. In addition, the creation of alerts regarding potential interactions between CM and medications and the use of therapies known to have adverse effects would contribute to patient safety. Links to existing reporting systems for adverse events associated with natural products and other CM therapies (eg, FDA Safety Reporting Portal, MedEffect Canada) would also contribute to the larger body of knowledge related to CM and public safety. Lastly, accurately capturing not only individuals' use of CM, but also clinical and patient-reported outcomes, will provide much-needed, population-based data that will support future research focused on the efficacy and safety of CM.

CM education and training. Despite numerous studies identifying the need for education related to CM among oncology HCPs,^{20,21,31} participants in our study continue to report lack of knowledge about CM as creating hesitancy related to assessing and discussing CM. While it is not realistic that all oncology HCPs can become experts on the wide diversity of CM therapies, developing undergraduate and continuing education programs that provide foundational knowledge and decision support skills related to CM would promote respectful and informed dialogue between patients and clinicians. Understanding the different types of CM, the current evidence associated with popular CM therapies, where to find evidence-based information, and how to engage in shared decision making will potentially increase HCPs' capacity and comfort in discussing CM with patients. Fortunately for HCPs, there is an increasing number of

education and training programs available internationally aimed at advancing oncology HCPs' knowledge and skills related to CM.^{16,32,33} It is also important to note that many of the skills associated with communicating about CM draw on basic skills that all HCPs should be well versed in, such as inquiring about self-care behaviors in a non-judgmental, respectful manner, and assessing patients' level of understanding and knowledge related to treatment decisions.³⁴

There will be, however, complex situations that will require more in-depth knowledge about CM and decision coaching skills (eg, polytherapy use during active cancer treatment). In such scenarios, identifying oncology HCPs with the required knowledge and skills (ie, pharmacist, dietitian), establishing clear referral processes, and creating space within their clinical practice role for such counseling work, will be imperative. It may also be worthwhile for institutions to consider developing a specialized position for HCPs with advanced training in CM who can provide in-depth support to not only patients and families interested in and using CM, but also act as a resource for oncology HCPs encountering CM use within their clinical practice. Such positions have become increasingly common in major cancer centers around the globe.^{35,36}

Professional responsibility. Ultimately, oncology HCPs need to professionally accept responsibility for addressing CM use as part of comprehensive, person-centered, and high-quality cancer care. Participants in our study recognized that CM use is now commonplace among individuals with cancer and that it should be treated like any other medication or self-care behavior. Choosing not to acknowledge CM use may not only lead to incomplete health information, patient safety issues,³⁷ and potential disruptions in the patient-clinician relationship,^{25,38} but also have ethical and legal implications. All regulated HCPs have a duty to ensure patients are making informed treatment decisions,^{39,40} with no distinction made between therapies that are considered conventional versus complementary. Moreover, not informing individuals with cancer about both conventional and evidence-based CM therapy options, especially in light of a growing number of systematic reviews and clinical practice guidelines,^{5,6} has been considered by some to be unethical.^{38,41,42} For those oncology HCPs that do assess and document CM use, failing to research or seek professional advice on possible contraindications, adverse effects or interactions with conventional cancer therapies could open the door to potential liability.⁴³

Oncology HCPs also need to be reflective regarding how their attitudes toward CM may influence their clinical interactions with individuals with cancer who express interest in, or disclose the use of, CM. Despite the growing body of evidence regarding the possible role of CM therapies, especially in the context of supportive cancer care,^{5,6} there continues to be considerable skepticism and stigma associated

with CM use.⁴⁴ Not asking about CM for fear of encouraging use or possibly "legitimizing" certain therapies harkens back to past unease expressed about other taboo subjects, such as sex education and substance use.^{45,46} Stigmatizing and/or dismissive attitudes toward CM have the potential to impact how clinicians discuss CM use with patients, resulting in interactions that may discourage disclosure, undermine trust, and lead to fractures in the patient-clinician relationship.³⁸

Study limitations. There are a few study limitations that should be considered. Foremost, while purposive sampling was employed and resulted in a sample representing a wide array of oncology HCPs, we may not have captured the experiences and perspectives of all HCPs. Typically, individuals who agree to participate in research are unique and have polarizing attitudes or experiences toward a subject matter. Although we attempted to have perspectives from both participants who withdrew and completed the study, participants who declined to be interviewed may have differing perspectives than those willing to participate. Moreover, HCPs included in the study were employed at a single cancer center in Canada, and therefore, may not be representative of experiences of all oncology HCPs. With regards to data analysis, data saturation may not have been achieved due to the limited sample that were interviewed and the complexity of the issues surrounding CM use in cancer care; however, no substantially unique ideas or themes were identified in the final interviews. It is important to note that many participants appeared focused on the potential risks of natural products; it would thus be worthwhile in future research to explore in greater detail oncology HCPs' perspectives around other CM therapies.

Conclusion

Using CM is the reality for many individuals living with cancer. The standardization of the assessment and documentation of CM use is an essential first step in providing safe, comprehensive, and person-centered cancer care. Our study findings, however, illustrate that addressing CM use as part of standard cancer care comes with challenges. It requires institutional and professional support through policies, infrastructure, and training that provide oncology HCPs with the foundation to confidently address CM as part of their clinical practice. Going forward, the assessment and documentation of CM will need to be streamlined and operationalized into standard care processes and procedures to promote widespread uptake. The development of advanced training for oncology HCPs in CM will be needed to further enhance oncology HCPs' ability to support individuals with cancer in making safe and informed treatment decisions about CM.

Acknowledgments

We would like to thank the healthcare providers who contributed to this study and all CancerCare Manitoba staff who made this study possible. We would also like to acknowledge the following individuals for their assistance with this project: Dr. Tracy Truant, Dr. Antony Porcino, Ms. Brenda Ross, Ms. Jill Taylor-Brown, and Ms. Emilie Hayward.


Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: Funding for this study was provided by the Canadian Cancer Society Research Institute Knowledge to Action grant (#702660).

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Supplemental Material

Supplemental material for this article is available online.

References

1. National Center for Complementary and Integrative Health. Complementary, alternative, or integrative health: What's in a name? NCCIH. 2021. Accessed August 13, 2021. <https://www.nccih.nih.gov/health/complementary-alternative-or-integrative-health-whats-in-a-name>
2. Judson PL, Abdallah R, Xiong Y, Ebbert J, Lancaster JM. Complementary and alternative medicine use in individuals presenting for care at a comprehensive cancer center. *Integr Cancer Ther.* 2017;16:96-103. doi:10.1177/1534735416660384
3. Davis EL, Oh B, Butow PN, Mullan BA, Clarke S. Cancer patient disclosure and patient-doctor communication of complementary and alternative medicine use: a systematic review. *Oncologist.* 2012;17:1475-1481. doi:10.1634/theoncologist.2012-0223
4. Stan DL, Wahner-Roedler DL, Yost KJ, et al. Absent and discordant electronic health record documentation of complementary and alternative medicine in cancer care. *J Altern Complement Med.* 2018;24:988-995. doi:10.1089/acm.2018.0141
5. Deng GE, Rausch SM, Jones LW, et al. Complementary therapies and integrative medicine in lung cancer: diagnosis and management of lung cancer, 3rd ed: American College of Chest Physicians evidence-based clinical practice guidelines. *Chest.* 2013;143:e420S-e436S. doi:10.1378/chest.12-2364
6. Lyman GH, Greenlee H, Bohlke K, et al. Integrative therapies during and after breast cancer treatment: ASCO endorsement of the SIO clinical practice guideline. *J Clin Oncol.* 2018;36:2647-2655. doi:10.1200/JCO.2018.79.2721
7. Block KI, Gyllenhaal C. Clinical corner: herb-drug interactions in cancer chemotherapy: theoretical concerns regarding drug metabolizing enzymes. *Integr Cancer Ther.* 2002;1:83-89. doi:10.1177/153473540200100118
8. Meijerman I, Beijnen JH, Schellens JH. Herb-drug interactions in oncology: focus on mechanisms of induction. *Oncologist.* 2006;11:742-752. doi:10.1634/theoncologist.11-7-742
9. Gabardi S, Munz K, Ulbricht C. A review of dietary supplement-induced renal dysfunction. *Clin J Am Soc Nephrol.* 2007;2:757-765. doi:10.2215/CJN.00500107
10. Kumar NB, Allen K, Bell H. Perioperative herbal supplement use in cancer patients: potential implications and recommendations for presurgical screening. *Cancer Control.* 2005;12:149-157. doi:10.1177/107327480501200302
11. Bhoo-Pathy N, Subramaniam S, Khalil S, et al. Out-of-pocket costs of complementary medicine following cancer and the financial impact in a setting with universal health coverage: findings from a prospective cohort study. *J Oncol Pract.* 2021;17:e1592-e1602. doi:10.1200/OP.20.01052
12. Nahin RL, Barnes PM, Stussman BJ. Expenditures on complementary health approaches: United States, 2012. *Natl Health Stat Rep.* 2016;95:1-11.
13. Balneaves LG, Watling CZ, Hayward EN, et al. Addressing complementary and alternative medicine use among individuals with cancer: an integrative review and clinical practice guideline. *J Natl Cancer Inst.* 2022;114:25-37. doi:10.1093/jnci/djab048
14. Hayward EN, Watling CZ, Balneaves LG. A pre-post evaluation of oncology healthcare providers' knowledge, attitudes, and practices following the implementation of a complementary medicine practice guideline. *Support Care Cancer.* 2021;29:7487-7495. doi:10.1007/s00520-021-06318-2
15. Thorne S, Kirkham SR, MacDonald-Emes J. Interpretive description: a noncategorical qualitative alternative for developing nursing knowledge. *Res Nurs Health.* 1997;20:169-177.
16. Balneaves LG, Truant TL, Verhoef MJ, et al. The Complementary Medicine Education and Outcomes (CAMEO) program: a foundation for patient and health professional education and decision support programs. *Patient Educ Couns.* 2012;89:461-466. doi:10.1016/j.pec.2012.01.005
17. Memorial Sloan Kettering Cancer Center. About Herbs App. Memorial Sloan Kettering Cancer Center. 2021. Accessed August 31, 2021. <https://www.mskcc.org/cancer-care/diagnosis-treatment/symptom-management/integrative-medicine/herbs/about-herbs>
18. Christina J, Abigail W, Cuthbertson LA. Nurses' knowledge and attitudes toward complementary therapies for cancer: a review of the literature. *Asia Pac J Oncol Nurs.* 2016;3:241-251. doi:10.4103/2347-5625.189816
19. Hyodo I, Eguchi K, Nishina T, et al. Perceptions and attitudes of clinical oncologists on complementary and alternative medicine: a nationwide survey in Japan. *Cancer.* 2003;97:2861-2868. doi:10.1002/cncr.11402
20. Risberg T, Kolstad A, Bremnes Y, et al. Knowledge of and attitudes toward complementary and alternative therapies a national multicentre study of oncology professionals in Norway. *Eur J Cancer.* 2004;40:529-535. doi:10.1016/j.ejca.2003.11.011

21. Lee RT, Barbo A, Lopez G, et al. National survey of US oncologists' knowledge, attitudes, and practice patterns regarding herb and supplement use by patients with cancer. *J Clin Oncol*. 2014;32:4095-4101. doi:10.1200/JCO.2014.55.8676
22. Broom A, Adams J. Oncology clinicians' accounts of discussing complementary and alternative medicine with their patients. *In Health*. 2009;13:317-336. doi:10.1177/1363459308101806
23. Tilburt J, Yost KJ, Lenz H-J, et al. A multicenter comparison of complementary and alternative medicine (CAM) discussions in oncology care: the role of time, patient-centeredness, and practice context. *Oncologist*. 2019;24:e1180-e1189. doi:10.1634/theoncologist.2019-0093
24. College of Nurses of Ontario. Complementary therapies. 2018. Accessed August 5, 2021. <https://www.cno.org/en/learn-about-standards-guidelines/educational-tools/ask-practice/complementary-therapies/>
25. Sulmasy LS, Bledsoe TA. American College of Physicians ethics manual: seventh edition (Spanish version). *Ann Intern Med*. 2019;170:S1-S32. doi:10.7326/IsTranslatedFrom_M18-2160_Spanish
26. Canadian Medical Association. *CMA Policy: Complementary and Alternative Medicine (Update 2015)*. Canadian Medical Association; 2015.
27. Kayser K, Brydon DM, Moon H, Zebrack B. Institutional capacity to provide psychosocial care in cancer programs: addressing barriers to delivering quality cancer care. *Psychooncology*. 2020;29:1995-2002. doi:10.1002/pon.5488
28. Bultz BD, Groff SL, Fitch M, et al. Implementing screening for distress, the 6th vital sign: a Canadian strategy for changing practice. *Psychooncology*. 2011;20:463-469. doi:10.1002/pon.1932
29. Bestvina CM, Polite BN. Implementation of advance care planning in oncology: a review of the literature. *J Oncol Pract*. 2017;13:657-662. doi:10.1200/JOP.2017.021246
30. Basch E, Deal AM, Kris MG, et al. Symptom monitoring with patient-reported outcomes during routine cancer treatment: a randomized controlled trial. *J Clin Oncol*. 2016;34:557-565. doi:10.1200/JCO.2015.63.0830
31. Hessig RE, Arcand LL, Frost MH. The effects of an educational intervention on oncology nurses' attitude, perceived knowledge, and self-reported application of complementary therapies. *Oncol Nurs Forum*. 2004;31:71-78. doi:10.1188/04.ONF.71-78
32. Ben-Arye E, Frenkel M, Bar-Sela G, Margalit RS, Hermoni D, Kuten A. Teaching complementary medicine at an academic oncology department. *J Cancer Educ*. 2008;23:46-50. doi:10.1080/08858190701821261
33. Witt CM, Helmer SM, Schofield P, et al. Training oncology physicians to advise their patients on complementary and integrative medicine: an implementation study for a manual-guided consultation. *Cancer*. 2020;126:3031-3041. doi:10.1002/cncr.32823
34. Gilligan T, Coyle N, Frankel RM, et al. Patient-clinician communication: American Society of Clinical Oncology consensus guideline. *J Clin Oncol*. 2017;35:3618-3632. doi:10.1200/JCO.2017.75.2311
35. Ben-Arye E, Schiff E, Zollman C, et al. Integrating complementary medicine in supportive cancer care models across four continents. *Med Oncol*. 2013;30:511. doi:10.1007/s12032-013-0511-1
36. Yun H, Sun L, Mao JJ. Growth of integrative medicine at leading cancer centers between 2009 and 2016: a systematic analysis of NCI-designated comprehensive cancer center websites. *J Natl Cancer Inst Monogr*. 2017;2017:lgx004. doi:10.1093/jncimonographs/lgx004
37. Jacobson GM, Cain JM. Ethical issues related to patient use of complementary and alternative medicine. *J Oncol Pract*. 2009;5:124-126. doi:10.1200/JOP.0938501
38. Frenkel M, Cohen L. Effective communication about the use of complementary and integrative medicine in cancer care. *J Altern Complement Med*. 2014;20:12-18. doi:10.1089/acm.2012.0533
39. Canadian Medical Association. *CMA Code of Ethics and Professionalism*. Canadian Medical Association; 2018. Accessed August 5, 2021. <https://policybase.cma.ca/en/viewer?file=%2Fdocuments%2FPolicyPDF%2FPD19-03.pdf#phrase=false>
40. Canadian Nurses Association. *Code of Ethics for Registered Nurses*. 2017 edition. CNA; 2017. Accessed August 5, 2021. <https://www.cna-aicc.ca/en/nursing/regulated-nursing-in-canada/nursing-ethics>.
41. Verhoef MJ, Boon HS, Page SA. Talking to cancer patients about complementary therapies: is it the physician's responsibility? *Curr Oncol*. 2008;15(suppl 2):s88-s93. doi:10.3747/co.v15i0.279
42. Weir M. Obligation to advise of options for treatment—medical doctors and complementary and alternative medicine practitioners. *J Law Med*. 2003;10:296-307.
43. Cohen MH, Eisenberg DM. Potential physician malpractice liability associated with complementary and integrative medical therapies. *Ann Intern Med*. 2002;136:596-603. doi:10.7326/0003-4819-136-8-200204160-00009
44. Baum M. The dangers of complementary therapy. *Breast Cancer Res*. 2007;9:S10. doi:10.1186/bcr1808
45. Marsman JC, Herold ES. Attitudes toward sex education and values in sex education. *Fam Relat*. 1986;35:357-361. doi:10.2307/584361
46. van Boekel LC, Brouwers EP, van Weeghel J, Garretsen HF. Stigma among health professionals towards patients with substance use disorders and its consequences for health-care delivery: systematic review. *Drug Alcohol Depend*. 2013;131:23-35. doi:10.1016/j.drugalcdep.2013.02.018