HHS Public Access

Author manuscript

PEC Innov. Author manuscript; available in PMC 2022 December 09.

Published in final edited form as:

PEC Innov. 2022 December ; 1: . doi:10.1016/j.pecinn.2022.100082.

Complementary and integrative healthcare communication in Chinese American patient / primary care visits: An observational discourse analysis

Evelyn Y. Ho[a,b,*], **Genevieve Leung**[c], **Brady Lauer**[a], **Jane Jih**[b,d,e], **Leah Karliner**[b,d,e]

[a]Department of Communication Studies, University of San Francisco, 2130 Fulton St., San Francisco, CA 94117, USA

[b]Asian American Research Center on Health, San Francisco, CA, USA

[c]Department of Rhetoric and Language, University of San Francisco, 2130 Fulton St., San Francisco, CA 94117, USA

[d]Department of Medicine, University of California San Francisco, 1545 Divisadero St., San Francisco, CA 94143, USA

[e]Multiethnic Health Equity Research Center, University of California San Francisco, 490 Illinois Street, San Francisco, CA 94158, USA

Abstract

Objective: Chinese-American patients use CIH at high rates but disclosure of CIH use to clinicians is low. Further, the content of CIH talk between patients and their clinicians is not well described. We aimed to characterize CIH talk between Chinese-American patients and their primary care clinicians.

Methods: Discourse analysis of 70 audio-recordings of language concordant and discordant-interpreted visits.

Results: Nearly half of all visits (48.6%) had some form of CIH communication. 'Simple CIH talk' focused on a single CIH topic resulting in a positive, neutral, or negative response by clinicians. 'CIH-furthering talk' was characterized by clinicians and patients addressing more than one CIH topic or including a combination of orientations to CIH by *both* clinicians and patients. CIH-furthering talk characterized by clinician humility could enhance rapport, cultural understanding, and open communication. CIH-furthering talk also led to miscommunication and retreat toward biomedicine.

*Corresponding author at: University of San Francisco, 2130 Fulton Street, Communication Studies KA 313, San Francisco, CA 94117, USA., eyho@usfca.edu (E.Y. Ho).

Declaration of Competing Interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Leah Karliner reports financial support was provided by Patient-Centered Outcomes Research Institute. Leah Karliner reports financial support was provided by National Institutes of Health. Jane Jih reports financial support was provided by National Institutes of Health.

Conclusion: CIH communication occurred frequently during language concordant and discordant-interpreted visits with Chinese-American patients. Both patients and clinicians used CIH-furthering talk as a conversational resource for managing care.

Innovation: This discourse analysis of visits between Chinese-American patients and their clinicians advances understanding of CIH communication beyond disclosure, illustrating the complexity of linguistic and cultural nuances that affect patient care.

Keywords

Complementary medicine; Integrative health; Chinese; Clinician-patient communication; Discourse analysis

1. Introduction

In the U.S., 33% of all adults use some form of complementary or integrative healthcare (CIH) [1], resulting in over $30 billion in out-of-pocket expenses [2]. However, in a study of Chinese in the U.S., 98% of patients used some form of traditional Chinese medicine (a type of CIH) within the last year [3]. These patients used Chinese medicine for runny nose, cough, joint or abdominal pain while deferring to biomedicine for more serious issues such as chest pain [3].

Despite its widespread use and decades of studies that conclude that clinicians and patients should talk about CIH, CIH discussion and disclosure rates remain generally low in Asia [4] and in the U.S. among people of color [5]. In the U.S., self-reported disclosure rates are extremely low (below 8%) among Chinese American patients specifically, and especially among those who do not speak English [3,6,7]. In fact, studies among low-income safety net populations found language discordance to correlate with non-disclosure [7].

While numerous studies report CIH disclosure rates with the widespread assumption that patients should reveal their usage of CIH to their clinicians, few studies actually examine what occurs after disclosure in the actual clinical conversations that discuss CIH [8,9]. In fact, there is little understanding of how discussion of CIH affects clinical care or the clinician-patient relationship. Studies relying on patient reporting of CIH discussion have found that patients who used CIH immediately prior to their biomedical visit were more likely than the general population to discuss their CIH therapy [6] and were more likely to positively assess their visit [6]. Patients who discuss CIH also rate their clinician as having a shared decision-making style compared to those who did not talk about their CIH use [7]. Two other studies directly observing CIH talk have correlated CIH discussion with patient satisfaction and patient centeredness [10,11]. Those studies that have examined actual talk about CIH in patient visits find that although CIH is disclosed or raised as a topic of conversation, in many instances no or little actual conversation follows an initial question or disclosure [8,10,12].

Koenig et al. [8], in an observational study of oncologists and patients, presented an exploratory typology of interactions in which a patient's (or caregiver's) presentation of CIH led to the clinicians' either inhibiting or promoting talk. Clinician responses

that inhibited interaction included simple acknowledgment or disattention/ignoring, while clinician responses that promoted interaction could be either positive, neutral or negative about the CIH in response. Similarly, in a qualitative content analysis study of recorded interactions with oncologists, Kumbamu et al. [9] also examined who initiated CIH talk and whether CIH was “mentioned and discussed” or “extensively discussed.” However, their final presentation focused not on these extensive conversations but rather on eight pairings of CIH initiation and response (e.g., CIH disclosed by patient, clarified and acknowledged by clinician; CAM information sought out by clinician).

Thus, previous observational research has primarily attended to CIH initiations and reactions in conversations between clinicians and patients. It is an empirical question whether this characterizes most CIH communication or whether there are more robust ways that patients and clinicians talk about CIH.

In this paper we use a discourse analytic approach with a novel analytic framework to study audio-recorded, naturally-occurring primary care visits with a focus on CIH talk. Additionally, work in the U.S. attending to CIH talk has always analyzed English language visits. Research increasingly recognizes that solely focusing on English language concordant dyads ignores many underserved populations in the U.S. This study’s focus on Chinese American patients using English, Hoisanese, Cantonese, and Mandarin language with and without the use of professional and ad-hoc interpreters, provides a rich window into an understudied population’s communication about CIH with their clinicians.

2. Methods

Data from this paper come from a larger study of communication and language access during primary care visits with ethnically Latinx and Chinese patients [13]. These visits were audio-recorded and categorized as fully language concordant (patient and clinician were proficient in the same language), partially language concordant (clinician had some language skills in the patient’s non-English language), or language discordant (an English-only speaking clinician and a non-English speaking patient); the discordant and partially concordant visits were further categorized as professional interpreted or ad hoc (family) interpreted. A subset (n=70) of the 132 visits among the ethnically Chinese patients (in English, Mandarin, Cantonese, and Hoisanese/Toisanese) were extracted for another study focused on mental health. These 70 recordings were transcribed verbatim and translated into English by bilingual and bicultural research assistants, twice verified by another research assistant and then the second author who is a subject expert in Chinese sociolinguistics. It is these visits that make up the dataset for the current study.

Data analysis was done in iterative steps using discourse analysis, paying analytic attention to interactional work of the talk [14,15]. Discourse analysis commonly notes, for example, how one speaker’s words, silences, or hesitations couple with the other speaker’s responses to advance or hinder the task at hand. By examining talk interactionally, the words that participants say are not just referential or taken at face value, but rather, how things are said (or unsaid) and how they are received and responded to by others are also worth examining. First, at least two research team members read through all English transcripts to identify

places of communication about CIH initiated either by the patient or by the clinician. CIH was defined similarly as the 2012 National Health Interview survey [1] which states:

> use of one or more of the following during the past 12 months: acupuncture; Ayurveda; biofeedback; chelation therapy; chiropractic care; energy healing therapy; special diets...; folk medicine or traditional healers; guided imagery; homeopathic treatment; hypnosis; naturopathy; nonvitamin, nonmineral dietary supplements; massage; meditation; progressive relaxation; qi gong; tai chi; or yoga. (p. 2)

However, we also included mentions of some vitamins/minerals including vitamin D because previous research has recognized that while commonly taken, vitamin D also has inconsistent recommendations and mixed scientific evidence resulting in uncertainty in medical conversations about this supplement [16]. In addition, we also included one instance of magnesium because the patient presented it as an alternative form of treatment. We categorized these mentions all under the umbrella of "supplements." Calcium, multivitamins, and vitamin C were not counted. Data analysis was done in Dedoose qualitative data analysis software [17].

Once the CIH communication was identified, these excerpts and their surrounding talk were extracted for further analysis which included analysis done in English and, when appropriate, in the original Chinese. We began by trying to categorize the conversational excerpts using Koenig et al.'s [8] exploratory typology of CIH-talk, which divides observations of patient-initiated CIH talk in oncology visits into talk which inhibits further talk (through clinician disattention/ignoring or acknowledgement) or talk which promotes talk (through clinician positive, neutral, or negative response). Although our data include both patient and clinician initiated CIH talk, the categories were still applicable. As we tried to deductively code the conversations, we found some conversations or parts of conversations that would fall in line with Koenig et al's [8] "promote further talk" were actually more complex than simply initiation with a positive, negative or neutral response. Therefore, we examined these instances more closely, which we named CIH-furthering talk, for how patients and clinicians used the topics of CIH to discuss a wide number of other clinical concerns.

3. Results

Over 85% of the 70 patients were aged 65 and older, 70% were female, over half had a high school education or less (see Table 1). Nearly 90% of the visits were with the patients' own primary care clinician, and nearly all visits were with a clinician the patient had seen previously. There were slightly more female than male clinicians and an equal number of faculty physicians and resident physicians. Most visits were either fully language concordant in either English or a Chinese language or professionally interpreted, with a small number of fully discordant visits using family to interpret (Table 1).

3.1. Rate of conversation about CIH

Table 2 presents the rate of visits that included at least one CIH mention. Because CIH mentions could include talk about supplements or other forms of CIH, data were further

disaggregated to count those visits that had non-supplement CIH talk. Nearly half of all visits (48.6%) had some form of CIH communication and of those, 29 (or 41.4% of the total) had some kind of communication about CIH that went beyond supplements.

3.2. Talk about CIH

Expanding on Koenig et al.'s [8] typology for CIH conversations, there were many simple examples of that could similarly be categorized as "not talk" or "inhibiting interaction" with acknowledgement or ignoring, and "talk" or "promoting interaction" with positive, neutral, or negative stances toward the CIH taken by clinicians. In many of these conversations, the discussion around CIH was fairly straightforward and often addressed a single CIH issue. However, in addition to these simple instances, we also found that there were more complex conversations in which clinicians and patients addressed more than one CIH topic or moved through a number of different phases of talk that included at times seemingly positive, neutral, or negative orientations to CIH by *both* clinicians and patients. In the following two sections we first present "CIH talk" via the Koenig et al. [8] framework as used for this patient population of Chinese American primary care patients. Next, we extract four examples of what we categorize as "CIH-furthering talk." This talk is qualitatively different in the number of CIH issues raised, the non-medically related talk about CIH, and the shifting positions across positive, neutral or negative stances within one conversation.

3.2.1. CIH talk—Table 3 presents a list of quotes that are similar in nature to the Koenig et al., [8] framework. Originally used only for patient-initiated CIH talk, what these excerpts show from our data set is that regardless of clinician or patient initiation, conversation about CIH *could* be categorized into five options: two non-conversational options (ignore or simple acknowledgment) and three conversational options (negative, neutral, or positive assessment of the CIH). In these conversational options, both patient and clinicians were sometimes positive, negative, or neutral about CIH and that CIH suggestions were also raised by the clinician. While there were certainly cases that could be assessed in this way, there were also other cases that were more difficult to distinguish. For example, in the second example of "negative" one could read the clinician as being negative toward the patient's choice to fast. On the other hand, the clinician could actually be helping the patient to fast better or in a safer manner. Therefore, we believe an additional way to analyze CIH talk is necessary to better understand the role talk about CIH has for clinician-patient interaction.

3.2.2. CIH-furthering talk—In this section, we discursively analyze conversations that demonstrate the complex ways that CIH conversations may manifest in primary care. See Fig. 1. Below we illustrate four examples in which CIH-furthering talk enhanced rapport and communication or led to miscommunication during the visit See Table 4.

3.2.2.1. Clinician curiosity and cultural humility.: In Excerpt One, the conversation is between the clinician, two patients (this was a joint visit between spouses), their caregiver (their daughter), and a professional interpreter. Both patients are Mandarin speakers, who at times speak Cantonese, and their caregiver is a bilingual Mandarin-English speaker. The clinician is ethnically Chinese, and English- and Cantonese-speaking but appears to be able to understand some Mandarin and speak/pronounce some in Mandarin. Despite

having a professional interpreter in the room and a caregiver who could interpret, most of the conversation occurred unmediated between the patients and the clinician who are all speaking a mix of (mostly) non-preferred languages. CIH comes out initially in one patient's disclosure of a cream. When the doctor asks if he has used this cream for his pain, the patient discloses that he goes to see his son twice a week who is a *tuina* or massage doctor. The clinician then asks (line 427) how do you say *tuina* in Mandarin. This clinician-initiated question is not necessarily relevant to the patient's care or treatment; however, it does appear to be a useful way of showing cultural curiosity and possibly making a connection across language barriers because it leads to more disclosure by the patient and family (See Table 4, Excerpt 1).

What the clinician may not realize in the question is that what he was actually saying – *tuina* – is the Mandarin word for the practice. Once the patient and clinician establish that it is the same word *tuina,* the clinician then uses the opportunity to ask about what the practice is. However, from how the question is phrased (asking how it compares to chiropracty [sic]), he is positioning himself as someone who has some knowledge of what *tuina* is. Because this line is stated in English, the caregiver is the only person who can respond. The patients' question (in line 432) seems to interrupt the caregiver and clinician and instead shifts the focus to a side conversation between the patients and their caregiver about what *tuina* entails, likely using nonverbal gestures, because the clinician's response of "here, here, here" appears to be mirroring their motions of the acupoints along the body. While this could simply be characterized as a "positive" response to CIH, what this CIH-furthering talk extract demonstrates is how CIH topics can arise multiple times in a visit and be used to create cultural connections across linguistically different participants. It actually seems like the caregiver is the one who knows the least about what *tuina* is and the doctors is able to honor the patients' knowledge and demonstrate humility in learning about this practice, mirroring their possible nonverbal movements, and verbalizing acceptance when he reveals that many of his patients also use *tuina*. Additionally, the clinician's questions lead to the patient revealing even more CIH usage unrelated to the current visit in line 437, in this case about previous experience with acupuncture. What could have been a passing comment about *tuina* actually was received by the patient as an invitation to bring their previous use of acupuncture into the clinical space, thus furthering CIH talk and (possibly) giving the clinician a fuller picture of the patients' health practices. However, it is unclear whether the clinician *fully* understood all the details because it was said in Mandarin and does not appear to have been translated by the caregiver or interpreter. However, the fact that the clinician reveals that many of his patients use *tuina* and his repetition of his new understanding of *tuina* as like physical acupuncture or like acupressure show the patients that he has learned from them.

3.2.2.2. Assumptions of difference in Chinese and U.S. medicine.: In the Excerpt Two (Table 4, Excerpt 2), there are a number of misunderstandings between patient and clinician based on what appear to be assumptions made about U.S. and Chinese medical procedures and practices that demonstrate a completely unrecognized way of talking about CIH. The patient has gone to China and had some procedures, which are described as ones different from the U.S. The clinician and patient, over a number of conversational rounds, try to

clarify exactly what was done in China and what the future course of action here in the U.S. should be, including what physical therapy may entail. Peppered throughout the talk are mentions of CIH (e.g., massage and acupuncture), but more importantly, what is revealed through these misunderstandings are the ways the doctor assumes the meaning of "Chinese" medicine through a lens of CIH. Alternatively, the patient – who has not used any CIH – presents "Chinese" medicine as a biomedical practice including different procedures not commonly used in the U.S.

The excerpt begins with the patient telling the doctor that she had "surgery" in China and that afterward she had very painful physical therapy (PT). The patient asks whether PT is supposed to hurt because what she had done in China hurt. The doctor's response in line 531 establishes the first separation between "Chinese" and "U.S." "style" and presents the U.S. form of PT as possibly better and certainly worth "a try." In the lines removed which occur while the clinician is doing the physical examination, the patient and doctor continue to discuss what the patient has done in China and the clinician calls it "surgery." The patient says, no it wasn't a scalpel but rather a needle and the topic is not continued while the clinician asks the patient to push this way or that. Then in what sounds like the end of the physical assessment, the clinician the clinician asks in line 580 specifically about the patient's use of acupuncture. While it is unknown what the clinician was thinking, the fact that the question follows conversationally after a mention of both the foreignness of the treatment and the use of a needle may point to the clinician's initial assumptions or possible biases about what constitutes health care in China. The patient's response (line 581) appears to interpret the doctor's question as asking whether she received anesthesia or used acupuncture instead of anesthesia. The patient's denial then leads the doctor to repair the initial wrong question to ask whether the "needle" used was actually a needle or a camera, signaling some kind of endoscopic surgery. The patient reveals she had an injection procedure (periosteal connection surgery), which is done in Asia but not in the U.S. Even though everything is cleared up by the end of the conversation, this excerpt demonstrates how CIH can be invoked accidentally or presumptuously when dealing with foreign or Chinese health care even in language concordant visits.

Examining the CIH-furthering talk within the whole visit, it becomes apparent how the specter of CIH drives the clinician's line of questioning. The result of such misunderstandings is that the clinician can view the patient as non-adherent due to her preference for these unknown-to-the-U.S. foreign treatments. Earlier in the visit, the clinician had been encouraging the patient to exercise in order to lower cholesterol and when she countered that she was in pain, the clinician encouraged her to do physical therapy. Because the patient had done "painful" physical therapy in China, she had yet another ready "excuse" to not comply with the clinician's suggestion. Later in the visit, the doctor says pointedly, "I can tell you that the surgery that you've done was not useful" and again recommends physical therapy. The visit ends with the patient told to come back in a month when they are scheduled to see their family doctor. With neither party being able to achieve their goals (getting the patient to do PT or getting help beyond PT), the earlier CIH-furthering talk exposes how assumptions about foreign medicine and treatment could possibly affect the nature of a visit.

3.2.2.3. Stop everything because of danger.: In Extract Three, the conversation about CIH lasted close to 18 minutes and almost 300 lines of transcript, lasting nearly half of the entire visit. The patient, a Cantonese-speaking woman with her adult son (who acts as both caregiver and interpreter because he declines a professional interpreter despite the clinician's strong urging) is at the visit because she has had a severe rash that has gone to her face and even mouth/tongue. The clinician is quite concerned and begins the talk by asking if the patient has put anything on the rash including any creams or ointments. The beginning of this interaction consists of the caregiver disclosing that she has used some creams which his sister had given to her for itching. The clinician continues to ask questions to rule out various causes such as asking whether she had traveled recently, taken any other medications, whether they have pets at home or whether anyone else in the household also has developed a rash (Table 4, Excerpt 3).

In the 46 lines removed (109–155) the clinician states that most of the patient's medications she has been taking for an extensive period of time and then asks if she is "taking anything that we don't prescribe," possibly a question about CIH usage, to which the patient also responds in the negative. It is not until the doctor pushes further, "Like Chinese medicines…" that the patient's son acknowledges that she has been taking certain Chinese herbal supplements for years and possibly confirming the clinician's hunch that there is something else being ingested that is not being disclosed.

It is noteworthy that the caregiver's interpretation does not fully encapsulate all that the doctor said – a reminder of the importance of using professional interpreters rather than caregivers [18]. Unlike the doctor's generalized message to stop Chinese medicine (line 159), the caregiver's message adds the name of the specific Chinese medicine back to the patient (line 162) which makes it clearer what the patient should stop taking. The doctor heightens the level of alarm and concern to "pretty serious" as he continues to rule out environmental causes for the rash (e.g., new detergents, perfumes, shampoos), all of which the patient's son says have not been used, and in the end, the doctor ultimately decides all the "unnecessary" medications (line 187), including the patient's cancer and blood pressure medications, have to stop. He also frames the situation as one where he does not want to stop all medications, but at least "temporarily" because there is no clarity on what the patient is ingesting to rule out potential side effects, this causes him to have to stop all medications.

In the final lines of the visit, the doctor asks the patient to summarize the content of the action plan that was made as a way to confirm understanding of what was said and to iterate the severity of the matter at hand. The clinician emphasizes that he must get this under control so that the patient does not have her cancer treatment disrupted. Using Koenig et al.'s [8] framework, the provider responds somewhere between neutral and negative. Viewed from a CIH-furthering talk lens, this example shows how patients and caregivers may hold back CIH-related information in ways that can actually increase clinician skepticism throughout the visit. As the clinician says near the end of the excerpt "vagueness in medicine is what gets us all in trouble" (line 201). The clinician's repeated explanations of his extreme caution in stopping all medication points to a presentation of self as someone who might support CIH in many other circumstances – especially one where the patient can remember

the names of what they are taking – but whose hands are tied in this emergency-level case riddled with uncertainty.

3.2.2.4. Should I stop everything?.: In the following English-language example, it is the patient that seems to have a somewhat negative stance toward the CIH supplements, even though the patient is also the one choosing to take the CIH. The patient has experienced atrial fibrillation (a-fib) or irregular heartbeat and the clinician begins by asking about the palpitations (See Table 4, Excerpt 4).

In line 170, the patient offers a possible explanation which he calls an "overdose" of vitamin D or fish oil. He supports his explanation by saying that he "read about" how fish oil can lead to palpitations for "some people." Although the clinician follows up in line 171 by asking how much fish oil he is taking and possibly typing this information into the chart, in line 177, the clinician gives a non-committed acknowledgement of the idea that eating salmon (even three times a day, as mentioned by the patient himself) might be causing the problem, and instead asks a clarifying question about the type of palpitation. This question interrupts the patient's train of conversation, which has now moved to listing all the different things he is ingesting which he is raising as possible reasons for the palpitations, including cacao nibs (line 178). When the clinician in line 181 engages in the talk about caffeine, they seem to use this as a moment to acknowledge that there might be an overdose and laugh. Immediately afterward, the patient brings back the question of vitamin D and the clinician concludes that perhaps he should slow down all of these because the evidence is not very good anyway on vitamin D (line 187) and especially not at such high doses (lines 189–197).

There are a number of differences between this example of "slowing down everything" and Extract Three's "stop everything." First, this discussion is of mutually recognizable and language-accessible supplements that the clinician seems to know research regarding and opinions about (e.g., vitamin D and its overuse vs. unnamed and unknown creams or foreign herbs). Second, unlike the previous extract, in this one, it was the patient and not the clinician who first suggests cutting down CIH usage. While this may seem odd given that the patient is also the one who seems to have initiated taking these various supplements, a closer examination of the turns of talk also shows the different ways the patient and clinician understand the CIH and the possible link to heart palpitations. The patient lumps vitamin D, fish oil, eating fish (up to three times a day) and cacao nibs (with caffeine through theobromine) into one basket of possible heart palpitation causes based on the various things he has read or heard. The patient is actually doing a lot to try to present himself as well-read and certainly invested in the self-care practices he is doing. On the other hand, the clinician only engages in the talk about the caffeine in the nibs and the vitamin D and does not address theobromine or eating salmon. Eventually right before the visit ends, the clinician summarizes their suggestions to reduce the vitamin D. The patient offers "maybe I should slow the fish oil some, a little bit," to which the clinician then adds that the research on fish oil shows that for many people "it does absolutely nothing," and then finally adds that perhaps the patient should also cut down the nibs as well and see if there is a change next time. Were it not for the patient's insistence that these CIH forms all be treated as possible causes, the clinician may not have even addressed the fish oil supplement. Although the clinician presents a "negative" perspective toward the usefulness of these CIH supplements,

through attending to CIH-furthering talk, this case is one in which the topic - for the patient - is multilayered. It is at once about possible effects on heart palpitations, but simultaneously also a request for clinician input on the patient's decision-making overall. Like the first example, it could have been a moment to acknowledge some patient expertise while also guiding the patient in ways he was already suggesting. Read as a series of indirect requests by the patient, it is not surprising that the clinician kept the conversation on utility and scientific evidence and possibly missed the patient's request to discuss why he is taking this level of supplements/foods in the first place as he seems to be reading about and interested in maintaining his own health through non-medical means.

4. Discussion and conclusion

4.1. Discussion

This study found that Chinese American patients and their clinicians in these primary care settings are discussing CIH quite frequently in ways that are much more varied than disclosure of CIH usage. Though our sample size is too small to draw definitive conclusions about differences across the four language situations (English, Mandarin, Cantonese, and Hoisanese), the numbers do show that patients speaking in any variety of Chinese and their clinicians talk very openly about a number of types of CIH. This is different than previous research examining Chinese American patients' self-report about CIH communication which found that especially among Chinese speakers, patients typically do not disclose CIH [3,6,7].

Perhaps more important than the recognition that CIH conversations occur and their frequency, in this paper, we provided a close examination of what that talk entails beyond disclosure and how it affects the interaction in the overall primary care visit. Some CIH conversations are quickly and efficiently managed, and can be categorized using previously created typologies of "CIH Talk." As our extended analysis demonstrates, at other times, CIH becomes the conversational launching point that moves clinician and patient beyond the topic of CIH itself, what we have called "CIH-Furthering Talk." In the first excerpt examined, we found that CIH-furthering talk can be an important way for clinicians to verbalize their cultural humility and build rapport. By doing so, clinicians can invite patients to demonstrate their health knowledge and expertise leading to more patient sharing. Alternatively, the second excerpt examined an accidental presumption of CIH usage, a miscommunication which may have deleterious effects on the trust and rapport building. Future research should examine more cases of all forms of CIH talk to see whether and how such talk affects rapport, trust or other parts of the therapeutic alliance [19].

In the third and fourth excerpts, we explore an inherently conflictual encounter wherein clinicians have to disagree or tell a patient to stop using CIH either because it is dangerous or because the clinician is unsure and therefore suggests caution. In both of these instances, CIH talk actually leads to moments of miscommunication requiring rounds of conversational repair. The CIH-furthering talk in these cases demonstrate how, especially in moments of possible uncertainty, clinicians work to move patients away from CIH and back to a biomedical clean slate. Sometimes that uncertainty derives from lack of knowledge about the CIH (Excerpt 3) and other times uncertainty derives possibly from disbelief (Excerpt

4). However, in both instances, there was an opportunity for the CIH talk to lead to more openness but this did not occur. Especially apparent in Excerpt 4, the patient seemed to be asking the clinician to address his extreme eating/supplement habits but the focus of the conversation stayed on the scientific evidence only.

This research is limited by the fact that these conversations were only audio recorded and not video recorded. The small sample size in a very CIH-positive region also precludes our ability to make larger generalizations about Chinese patients in other parts of the U.S.

4.2. Innovation

In this paper we advance this area of research by expanding the examination of CIH conversations beyond questions of initiation and response, and identifying CIH-furthering talk as a recognizable form of talk in primary care visits. CIH-furthering talk occurs when patients and clinicians use CIH topics and questions to discuss not only CIH but also related clinical concerns and issues. Additionally, as ethnically Chinese patients, a number of the CIH conversations were about culturally-relevant CIH practices such as acupuncture or Chinese herbs or salves which clinicians attended to specifically as Chinese practices. Previous CIH research has mainly focused on the safety, efficacy, and patient preferences for CIH, but rarely have studies been able to show how clinicians and patients use CIH as a way to engage in health discussions vis-a-vis culture. By taking into account both language concordant and discordant conversations with Chinese patients, this research adds a novel snapshot into the complex linguistic and cultural realities facing patients and clinicians in today's primary care settings and the back-and-forth discursive roles both parties take in patient health management.

4.3. Conclusion

Taken as a whole, these four cases of CIH-furthering talk showcase the rich spectrum of ways in which patients and clinicians use CIH as a conversational resource for managing patient care. These conversations also show that in many cases the talk can be about more than just the question about the CIH and could possibly affect the therapeutic alliance, either positively or negatively. Moving beyond self-report data, these conversations are evidence of how this type of CIH-furthering talk is important and meaningful in patient care.

Acknowledgements

Thank you to our research assistants Xiaoyu Jennifer Zhang, Claudia Cheng, Shannon Hau Ying Ku, Elise Ng, Athena Hsu, Tiffaney Tran, and Yilang Lin. And appreciation to the USF Faculty Development Fund.

Funding

Research reported in this manuscript was funded through a Patient-Centered Outcomes Research Institute® (PCORI®) Award (AD-1409-23627) and NIH grant P30AG015272. The statements presented are solely the responsibility of the author(s) and do not necessarily represent the views of the Patient-Centered Outcomes Research Institute® (PCORI®), its Board of Governors or Methodology Committee, or the National Institutes of Health. Dr. Jih was supported by the National Institute on Minority Health and Health Disparities of the National Institutes of Health (K23 MD015089).

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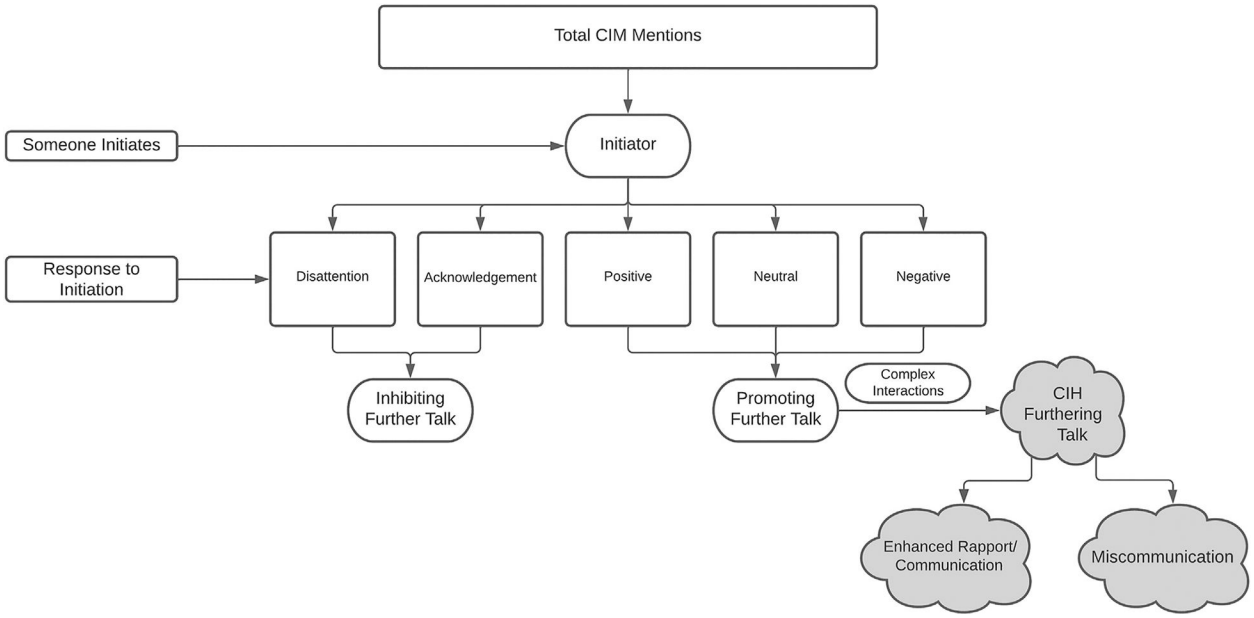

Fig. 1.

CIH mentions. Some CIH mentions that promote further talk are complex interactions called “CIH-Furthering Talk.” CIH-Furthering Talk can lead to enhanced rapport and communication not about CIH or lead to miscommunication.

Table 1

Characteristics of study participants.

Characteristic of Patients (n=70)	**N (%)**
Age, years	
50–64	11 (15.7)
65–74	28 (40.0)
75+	31 (44.3)
Gender	
Female	49 (70.0)
Male	21 (30.0)
Language	
Mandarin	28 (40.0)
Cantonese	28 (40.0)
Hoisan	2 (2.9)
English	12 (17.1)
Education	
Less Than High School	27 (38.6)
High School	11 (15.7)
Some College	12 (17.1)
College Degree or higher	20 (28.6)
Health Insurance Status	
Not Insured	0
Medicare	54 (77.1)
Medicaid	11 (15.7)
Private Insurance	5 (7.1)
Visit with Primary Care Provider	
Yes	62 (88.6)
No	8 (11.4)
Seen Clinician Before	
Yes	65 (92.9)
No	5 (7.1)
Communication Mode	
Fully Concordant	21 (30.0)
Discordant - Professionally Interpreted	19 (27.1)
Partially Concordant - Professional Interpreted	5 (7.1)
Partially Concordant - Family or No Interpreter	14 (20.0)
Discordant - Family or No Interpreter	11 (15.7)
Characteristic of Clinicians (n=32)	N (%)
Clinician Type	
Faculty Physician	15 (46.9)
Resident Physician	15 (46.9)
Nurse Practitioner	2 (6.2)

Characteristic of Patients (n=70)	N (%)
Clinician Gender	
Female	19 (59.4)
Male	13 (40.6)

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Table 2

Clinician-patient CIH communication by language and CIH type.

Mandarin (n = 29)	Cantonese (n = 27)	Hoisan (n = 2)	English (n = 12)	Total (n = 70)
Count (Percent) of All CIH Communication (including Supplements)				
16 (55.2%)	9 (33.3%)	1 (50%)	8 (66.7%)	34 (48.6%)
Count (Percent) of Non-Supplement CIH Communication				
14 (48.3%)	8 (29.6%)	1 (50%)	6 (50%)	29 (41.4%)

Table 3

Complementary and Integrative Health (Non-)Talk Type Excerpts based on Koenig et al. (2015) Typology.

Not Talk	
Acknowledge Patient initiated	**English-speaking Clinician (Dr); Mandarin-speaking Patient (Pt); Professional Interpreter (Int)** [Language in brackets] Pt [M]: It just happened that that day, Monday, after I saw the doctor in the morning, I subsequently went to acupuncture in the afternoon. That acupuncture also helped me, so I'm completely recovered. Int [E]: Ok yes, I'm completely recovered from that, uh, right after the Monday I saw the doctor I went to uh, uh for acupuncture treatment and that did help so I'm completely recovered. Dr: Good, um alright let me look over your medicines
Acknowledge Patient initiated	**English-speaking Clinician (Dr); English-speaking Patient (Pt)** Pt: now I'm making celery juice, you know? Dr: (oh) really? At home? Oh! Pt: yeah to lower- yeah, blend it, you know? To help- anything to lower my blood pressure just in case Dr: great, ok so uh this is the note that I sent, all right, I'm going oh- I'm going to go to Hong Kong very soon
Acknowledge Patient initiated	**Mandarin-speaking Clinician (Dr); Mandarin-speaking Patient (Pt)** [Language in brackets] Dr [M]: Keep it up, ok? I think what you are doing, really, your body, I haven't seen any other 81-year-old as impressive as you. Pt [M]: I'll be honest with you, my father was/is a Chinese medicine doctor Dr [M]: oh Pt [M]: Our family sells Chinese medicine. At that time I studied nursing Dr: Uh-huh Pt [M]: So I really understand it [= Chinese medicine] Dr [M]: [you] really understand it Pt [M]: Yes, I really understand it Dr [M]: wow Pt [M]: How to take care of myself Dr: Yeah, yeah Pt [M]: At the very least, I don't want to give my children any burden, I tell them, you guys don't have to worry, your mother is still very good, hahahahaha Dr [M]: Yeah if your son or your other children have any problems, they can come see me
Ignore Patient initiated	**English-speaking Clinician (Dr); Cantonese-speaking Patient (Pt); Cantonese/English Interpreter (Int)** [Language in brackets] Dr [E]: okay. Do you take any medicine for that pain? Int: [C] do you take any medicine for that pain? Pt [C]: I already take all the medicine. I already used what I can to ease the pain. Int: I take all this medicine, and then there's also some patch, so I use anything to help to control the pain. Dr [E]: okay. One thing we can do is [patient name] is I can have you see the physical therapy specialists who can help work on muscle exercises so that the pain maybe get better
Ignore Patient initiated	**English-speaking Clinician (Dr); Hoisan-speaking Patient (Pt); Hoisan/English Interpreter (Int)** [Language in brackets] Dr: so what do you use [the parking permit] for? = Int [H]: =he is asking, then what did you need the pass for? Pt [H]: I, oh, sometimes I go to the Chinatown. Every Sunday I go to Chinatown sometimes Int [E]: almost every = Pt [H]: =my daughter takes me there Int [E]: every Sunday Pt [H]: sometimes when I am in pain I go, go get acupuncture, yeah Int [E]: sometimes I, I went to Chinatown for acupuncture. Pt [H]: Uhh (affirmation) Int [H]: But why? Why do you need that thing (= the pass)? Dr: is it you who needs = Int [E]: whyyou need this one? Yeah. Pt [H]: it's because of parking difficulties!
CIH Talk	
Positive Patient initiated	**English-speaking Clinician (Dr); English-speaking Patient (Pt)** Dr: ok Pt: yeah Dr: ok, do you think- and what do you think about the idea of medicine? Which we know may also help people sometimes feel a little bit better Pt: uh, I, I, let let me try using some acupuncture first Dr: ok, ok Pt: yeah, that could help me

Positive Doctor initiated	**English-speaking Clinician (Dr); Mandarin-speaking Patient (Pt); Mandarin/English Interpreter (Int)** [Language in brackets] Dr: I have wrote a lot of what we discussed, including the breathing exercise that can help, with some symptoms of anxiety, but unfortunately it's all in English, so I ask you to maybe have someone help you go through this material. Int [M]: He said I wrote this for you, on this prescription I list some simple exercises which will be helpful for you and helpful for the heart. He said this list, unfortunately it's all in English, you will need to find someone to translate for you.
Negative Patient initiated	**English-speaking Clinician (Dr); English-speaking Patient (Pt)** Pt: um I do wanna know my A1c, cause I've taken a different type of supplement, it's called broccoli extract, I was reading about it, it's supposed to lower A1c levels Dr: hm, ok Pt: so it's natural, instead of eating a lot of broccoli, I just take the pill Dr: you take the pill, hm ok Pt: it's called sulforaphane, that's broccoli extract you have to eat a whole lot of broccoli to get it Dr: I generally go for eating the real stuff rather than the extract, tough (chuckles) um Pt: oh Dr: that's usually a better thing to do, ok so, let's see here, you A1c, 6.6, we could do one right now if you want? And see Pt: oh ok, sure ok Dr: yeah, yeah let's do one now
Negative Patient initiated	**Mandarin-speaking Clinician (Dr); Mandarin-speaking Patient (Pt)** [Six lines of conversation about patient's low blood pressure] Pt [M]: Because I believe in Buddha and I just went through fasting, I didn't eat almost for 10 days, just ate a little bit. Dr [M]: [You] Didn't eat anything? Pt [M]: *Bi gu* (辟谷). Dr [M]: *Bi gu* (辟谷). Pt [M]: *Bi gu* means fasting. Dr [M]: Fasting. Pt [M]: It's when you don't want to, don't give, don't eat anything, but also your energy is very good, you won't feel tired. Dr [M]: So, now you're just drinking water. Pt [M]: Just drinking a little bit of water, I would throw up if I drink too much. Dr [M]: Drinking water too much water you will (repeating previous line) Pt [M]: I drink some vegetable soup, vegetables, like that, yeah, that way I won't think about eating, so [like when] people talk about monks being secluded in the caves [that's like what I am doing] Dr [M]: You have to be careful in some places/regards, if you are feeling dizzy or having cramps, drink more water, then just drink more to stop the dizziness, put some sugar in the water if needed. Pt [M]: Drink something with sugar or salt. Dr [M]: Yes, some people don't eat or drink when they are fasting, but if they don't eat those things, and don't drink those things, they will have lower blood pressure. Pt [M]: So then it will drop. Dr [M]: Yes, it will drop. Pt [M]: It will drop for sure, this is normal right? Dr [M]: It's normal, but don't go too far, it may cause some problems if you go too far. Pt [M]: Right.
Neutral Doctor initiated	**English-speaking Clinician (Dr); English-speaking Patient (Pt)** Dr: uh, you could do nasal lavage Pt: what is that? Dr: um, which is particularly helpful, they say for postnasal drip, it's where you rinse the uh nasal passage with saline, with warm water and a little bit of salt Pt: oh Dr: it's called a neti pot? Pt: yeah, yeah, I have a neti yeah, you actually suggested that once Dr: yeah, yeah Pt: yeah, yeah Dr: so you could add the neti pot Pt: uh-huh Dr: it sounds like um studies have shown that that can help with this Pt: aha ok Dr: uh significantly, so that might get you closer to kinda that hundred percent Pt: aha, ok Dr: and that's a pretty low-risk thing to do Pt: yeah, yeah [22 lines deleted about instructions to use the neti pot with patient just saying yes or uh-huh]
Neutral Patient initiated	**English-speaking Clinician (Dr); English-speaking Patient (Pt)** Dr: anything else for today? Pt: er one more thing if I want to take magnesium? Daily? Magnesium? Is-is it ok or no? Dr: and wh- what's the reason to take magnesium? Pt: uh because uh, most of my co-workers that has anxiety too, they took magnesium every day and they said it help him a lot Dr: I- I would say that's fine Pt: that' ok? Dr: uh, so magnesium uh, as far as I know has not been studied for anxiety um

Pt: oh
Dr: I don't think it's harmful either
Pt: ok
Dr: um but what I would recommend is not taking a mega dose of magnesium
Pt: oh ok
Dr: it's possible to have too much, uh it's very hard to have too much, you ought to take a ton of magnesium in order for it to be too much
Pt: oh ok
Dr: but it's not impossible, and so if you take it, I don't recommend it, but it seems probably not harmful, just don't take too much of it
Pt: oh but daily-daily is ok?
Dr: but not in a high dose
Pt: oh ok, so low dose- the one from Costco something like that (mumbles) 200 something 200 mg?
Dr: that should probably be ok

Table 4

CIH-Furthering Talk Excerpts.

Excerpt 1: "Tuina is Massage, Right?"	
Cantonese/English-speaking Clinician (Dr); Mandarin speaking Patients (Pt1, Pt2); Mandarin/English Caregiver (Cr); Professional Interpreter. [Spoken Language in Brackets]	
427	Dr: [C] "Tui na." how do you say this in Mandarin
428	Pt1: [M] Tuina
429	Dr: [M] Tuina [E] so what is that, that's not true chiropractor, but what is it? It's a certain form of treatment in China, right?
430	C: [E]I'm not sure
431	Dr: [E] it's sort of like chiropracty or?
432	Pt1 [M]: Does he know what tuina is?
433	Cr: [M] "Tui-na" is massage, right?
434	Pt1 [M]: It's massage. They press and massage on your acupoint.
435	Dr [E] Here, here, here
436	Pt1 [M]: it's a form of medical treatment, medical treatment in Shanghai
437	Pt2: [M] they used acupuncture needles before, and it didn't hurt for me. When I had to remove my wisdom teeth, they used acupuncture on me, when it was done, didn't need anesthesia, it didn't hurt either.
438	Cr: [M] oh really. [E] I'm not sure what does that mean
439	Dr: [E] oh okay a lot of my Chinese patients go to it. It's almost like a massage but more, MORE than massage
440	Caregiver: yeah, in certain place, there have, like so many place like here or here or here
441	Dr: yeah it's almost like physical like acupuncture maybe
442	Dr: yeah
443	Dr: like acupressure or something like that okay yeah
444	Pt1: [M] My doctor is a Chinese doctor, very famous
445	Dr: OK ((Dr continues to type))
Excerpt 2: "It's Different in Chinese and American Style"	
Mandarin-speaking Clinician (Dr); Mandarin speaking Patient (Pt). [Spoken Language in Brackets]	
530	Pt: [M] I ask you, is that how it (PT) is supposed to be done, some they help me massage and exercise?
531	Dr: [M] I'm not sure because it's different in Chinese and American style. I think it is pretty good here and you should give it a try.
532	Pt: Mm ((=affirmation))
533	Dr. [M] Maybe because after your surgery (in China), your muscles could be damaged, or you didn't exercise your hands and the muscles are shrinking. You should do exercise first, because surgery will not fix your hand. Because your surgery usually would not affect that.
[47 lines removed during physical assessment]	

580	Dr: [M] Sit sit, did you get any acupuncture? What did they do?
581	Pt: [M] They used general anesthesia. They told me that they use this needle because it's for the bones. They put in the soft tissue to connect the two bones.
582	Dr: [M] Right
583	Pt: [M] That's what they said, they needed to separated it a little bit
584	Dr: [M] Did they place the camera inside?
585	Pt: [M] Huh?
586	Dr: [M] Did they have a camera inside?
587	Pt: [M] Camera? I don't know
588	Dr: [M] Sometimes they use it when they use the knife. They have a really small camera inside so they could see what's happening.
589	Pt: [M] I'm not too sure about this because they put me to sleep therefore I'm not too sure. I didn't have any feeling.
[54 lines removed where the doctor talks about surgery and the patient discusses limitations she is having]	
643	Dr: The knife, where did it cut?
644	Pt: n::g? ((questioning tone))
645	Dr: The knife, where did it cut? Your surgery
646	Pt: they didn't use a knife.
647	Dr: oh they used
648	Pt: they used those needles
649	Dr: oh needles
650	Pt: thrust inside
651	Dr: oh
652	Pt: like this, thrust inside, on this side there are holes
653	Dr: oh ok is that the case
654	Pt: mm ((affirmation))

Excerpt 3: "I Need You to Stop Everything"

English-speaking Clinician (Dr); Cantonese-speaking Patient (Pt); Cantonese/English-speaking Caregiver (Cr). [Spoken Language in Brackets]

[59 lines deleted with clinician initial questioning]	
84	Cr: [E] U::::h, they're supplements. The, the=
85	Dr: =what are they?
86	Cr: [E] the mushrooms, lingzidan, I don't know what they're called in Chi, English
87	Doc: is it a PILL? Or is it like an herb
88	Cr: [E] uh pills.
89	Dr: Okay. So how many is she taking?

90	Cr:[C] *lingzidan*, how long have you been taking it?
91	Pt: [C] I only took it on the day for chemo.
92	Cr: [C] But how many were you eating on that day?
93	Pt: [C] I took 2 pills
94	Cr: [E] Two pills a day.
95	Dr: and uh what is this supposed to be for?
96	Cr: [E] uh, just to strengthen the body, basically.
97	DR: To strengthen the body. Do you have the box or does she have a box that has the ingredients in it?
98	Cr: [C] Did you bring the box=
99	Dr: =But she is been doing that for a while right?
100	Cr: [E] Since her chemo. That's like 5, 10 years ago. (8)
101	Dr: You know, there is a thing called MyChart, that she does have access to. I don't know if you know how to use it,
102	Cr: mmhmm=
103	Dr: =but if you don't have it, uh you can go home and you can either take a picture of the ingredients and send it to me, you can upload the picture, yeah
104	Pt: ((inaudible mumbling))
105	Dr: Huh, yeah, ok, uh yeah, I was worried about this. I MAY have to start, stop this medication, the Tarceva ((sound of pointing to a bottle on table three times))
106	Cr: [E] oh ok=
107	Dr: =until she sees a skin doctor, ok?
108	Cr: [E] The Tarceva is the one that she's been taking=
109	Dr: =it's for lung cancer, yeah, I don't WAnna stop it ((chuckles)) but if we stop it for a few days until she, cause if, if we don't STOP it, it can get a lot, if THIS is what's causing it, it can make it a lot worse. Over time, so. Let me just check on the other one. The other one normally doesn't, none of these gives you rashes (3). I have to stop this one now too probably. All right, u:::::h kay. (2) Ok! ((sighs)) So it's going to cause two problems. One is we gotta stop TWO medicines, with the high blood pressure now, so ((chuckles)) we're gonna have to stop that medication. Um, (4)
[46 lines removed with the clinician and patient's son discussing whether anyone else in their family/household has rashes or if it could he based on medication]	
155	Dr: I know, I have to stop it, that's what I'm saying. I have to STOP it.
156	Pt: mm((=affirmation)) (3)
157	Dr: Because the most important is that I just need to make sure that the drug is not causing the problems. And these are the two likely problems ((two tapping sounds)).
158	Cr: Ok=
159	Dr: =and I don't have another reason why this is happening. So what I wanna recommend is actually take off everything that we don't need. So these will stay. These we have to stop tempoRARily. I want you to stop E::verything else you're taking, I don't care if you have been taken it for a 100 years ((laughs)). I need you to STOP.
160	Cr: Ok
161	Dr: Ok? ONCE everything is fine, we can start things up one at a time if you REAlly want to. But right now I don't KNOW what's in that Chinese medicine. Ok? I can't TELL you. And I CAN'T tell you it's not doing this. So I need you to stop EVerything, including whatever cream your s- your aunt or your sister gives you, NOthing.
162	Cr: [C] You have to stop it all, these two medicines you have to stop. You have to stop everything, especially these two. The *lingzidan* also needs to be stopped, he said applying ointment, any cream or ointment needs to be stopped too. ((inaudible))

163	Doc: That's pretty normal. Any pain when I push?	
164	Cr: [C] any pain?	
165	Dr: Let me look in your mouth really quick. Just, once rashes start involving the tongue and the mouth, it's pretty serious, so. (2)	
166	Cr: oh	
[20 lines removed]		
187	Dr: Ok so ((rapid reading tone)) we're concerned about your rash at this time, we need to stop any unnecessary medication and any medication that can cause this right?	
188	Cr: mmhmm? ((=affirmation))	
189	Dr: So I'll say STOP Tarceva? Ok?	
190	Cr: mmhmm? ((=affirmation))	
191	Dr: ((typing)) STOP uhh, what is this one called here (Carea)? Ok? (4) uh any Chinese pills or herbs	
192	Cr: mmhmm? ((=affirmation))	
193	Dr: or ANYthing hhh other than your prescribed medication	
194	Cr: mmhmm? ((=affirmation))	
195	Dr: ok? Just for now. ((typing)) Restart the Benazepril for blood pressure control ok? Because it's gonna be high when we stop this. So she has to go back to Benazepril that's 20 mg, do you have the bottles at home? You have it? Ok you can start taking that, ok?	
196	Cr: Ok	
197	Dr: ((typing)) at 20 mg for your blood pressure, k?	
198	Cr: is that the small bottle? uhh	
199	Dr: ((typing)) you're asking, that is NOT the kind of question you wanna ask your doctor, is this a small or big bottle, I have no idea what that means ((laughs)) right? I can't ANswer that question	
200	Cr: Ok	
201	Dr: so ((bottle clangs on the counter)) but the WORD here I typed out for you is Benazepril, right? It SHOULD be on the bottle and you can cross check it, all right? Yeah, vagueness in medicine is what gets us all in trouble, and I stopped doing it, I used to like, oh yeah doctor when I have this pink little pill and after a while I'm like I don't even KNOW what a pink little pill is	
202	((laughter))	
203	Cr: I see	
[30 lines deleted about the next visit to see a skin specialist with warnings that if there are sores or rash that worsen to go immediately to the emergency room. The clinician repeats this twice]		

Extract 4: "You Don't Want to Take Too Much"

English-speaking Clinician (Dr); English-speaking Patient (Pt)

167	Dr:	any palpitations? Any a-fib?
168	Pt:	uh eh I've been taking a lot of hhh cause .hh yeah, lately I've been getting a little palpitation um
169	Dr:	mm
170	Pt:	I think it's because overdose on either vitamin D:: or. F-fish oil pills. And I read about it and an they do for some people affect, their heart beat [give them palpitations

171	Dr:	[yeah uh how much fish oil are you using?
172	Pt:	u:::m ohm let me see bout 2000mg a day
173	Dr:	ooh. ok
174	Pt:	U::m psh I don't know, and I also eat three times a day fish ((laugh))
175	Dr:	oh ok ((typing))
176	Pt:	usually salmon
177	Dr:	uh-huh ((typing)) oh? Hm and what kind of palpitations are they? Is it the same thi::ng or is it u:::h how does it feel? How do the palpitations feel?
178	Pt:	ehhh just like. I:: also I eat a lot of. what do you call em? Cacao nibs? ((laugh))
179	Dr:	uh-huh?
180	Pt:	which I think has some type of a
181	Dr:	ye::ah? [caffeine yeah
182	Pt:	[caffeine yeah called theobromine or something like that?
183	Dr:	yeah, ok I think you may be ye[ah
184	Pt:	[overdosing
185	Dr:	yeah overdosing ((laugh)) yourself there ((chuckles))
186	Pt:	yeah, and then I take a lot of vitamin D pills. Which I also reading about it, which can cause palpitation in some people
187	Dr:	so maybe you should stop, some of this stuff. I don't think that there's any evidence that they really help
188	Pt:	vitamin D?
189	Dr:	yeah the vitamin D:: you know u::m. you don't want to take too mu^ch of it
190	Pt:	mhm
191	Dr:	u::m a::nd. I know that you know for vitamin ((clicking computer)) let's see ((clicks)) vitamin D we can check your numbers but you know. Ahh and you're taking ho^w much of the vitamin D?
192	Pt:	uh usually it's two ((shuffles, sounds like reading a package)) between three thousand international unit. wshTssh. vitamin D3
193	Dr:	mhm three thousand daily? (.5) Or::
194	Pt:	oh two th- (.3) two four about five? thousand daily
195	Dr:	about five thousand daily
196	Pt:	yeah I. i.u.
197	Dr:	That's : yeah that's uh pro- almost certainly more more than you need, so we'll talk about that in a bit u:::m. no chest pain though, right?
198	Pt:	No