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Qualifiers in patient-physician discourse: An analysis of interviews from radio call-in programs

Qualifiers in patient-physician discourse: An analysis of interviews from radio call-in programs¹

Jennifer Stevens Pappas

This paper reports on a study which investigated how qualifiers are used in radio medical call-in shows. It offers some support for the hypothesis that physicians qualify their medical advice in ways which could impede effective communication.

Recent studies of physician-patient discourse indicate asymmetries in the distribution of speech acts by patients and physicians. Compared to patients, physicians: say more (Shuy, 1976), ask more questions (Frankel, 1984; Hatch, 1980; Todd, 1984;), ask more narrow questions (Mischler, 1984), answer questions less often (West, 1984), accomplish more speech acts per turn (Todd, 1984), interrupt more often (Frankel, 1984), and maintain greater control over the initiation and termination of topics by their use of questions and reactives (Mischler, 1984; Todd, 1984). While the definition of what is valid and relevant information is negotiated by the patient and physician, physicians appear to dominate the process (Frankel, 1984; Mischler, 1984). It is hypothesized that one way physicians maintain greater control over the interaction is by their more frequent use of qualifiers, which make their assertions less disputable.

The term "qualifiers" will be used to refer to words and phrases which are used to indicate the level of approximation of propositional content or the level of speaker commitment to the proposition. Qualifiers which suggest approximation or uncertainty regarding the core assertion (i.e., the unqualified part of the assertion) will be defined as "hedges." More generally, to hedge can be defined as "to protect oneself from losing by a counterbalancing transaction" (as in to hedge a bet) or "to evade the risk of commitment especially by leaving open a way of retreat" (Webster's Ninth New Collegiate Dictionary, 1985). Qualifiers which emphasize the typicality or severity of attributes or which indicate speaker confidence in a core assertion will be called "intensifiers." And assertions which include neither hedges nor intensifiers will be considered "unqualified."

Bonanno (1982:36) defined hedges as words or phrases which convey speaker uncertainty (e.g., "kinda pinkish," "I guess," "I think"). In a study of discourse between female patients and physicians of both genders, Bonano found that patients used hedges more frequently than physicians and that female physicians used

hedges more frequently than male physicians. She concluded that patients used hedges when they "had difficulty remembering or when reference was made to topics that the patient felt uneasy about or wanted to avoid." There was some evidence to support the hypothesis that hedges and other forms of indirect speech (i.e., euphemisms, vague intensifying adjectives, and tag questions) hindered the effective exchange of information. However, the lack of data on male patients and the lack of discussion of physicians' hedges limit the conclusions which can be drawn from this study.

In a study of discourse between physicians, Prince et al. (1982) identified four ways physicians hedge their assertions: (1) "rounders" which suggest ranges or confidence intervals for quantitative information, (2) "adaptors" which indicate that the case in question is similar but not identical to some prototype, (3) "plausibility shields" which suggest that the speaker is not fully committed to the assertion or that the assertion is based on plausible reasoning rather than deductive logic, and (4) "attribution shields" which attribute the assertion to another person, named or unnamed. Examples of each type are given below:

Rounder:	"She weighs <i>about</i> 45 pounds."
Adaptor:	"It was <i>sort of</i> blue."
Plausibility shield:	" <i>It seems like</i> it is blue."
Attribution shield:	" <i>According to her</i> it was blue."

The first two types represent hedges with the content of propositions (i.e., approximated numbers or qualitative attributes) and the other two represent hedges regarding the speaker's commitment to or ownership of a proposition. The researchers found that physicians used hedges frequently, that hedges were used in reference to medical as well as ethical issues, and that adaptors and shields were more frequent in statements which included other markers of uncertainty (such as self-repairs). They concluded that these types of hedges represented true markers of uncertainty and were not merely colloquial phrases which had lost their meaning through repeated use. The results of their study suggest the following questions about the use of hedges in medical discourse:

- (1) Do patients and physicians use hedges differently ?
- (2) Do hedges represent different levels of certainty?
- (3) Are hedges used more often than markers of certainty?
- (4) How are multiple qualifiers used and interpreted?

The study of qualifiers may be useful for: (1) discovering the rules of evidence which underlay medical discourse, (2) identifying one source of power physicians have over the interaction, and (3) ultimately, for identifying the effects of such

communication strategies on the ability of patients and physicians to fulfill their objectives for the encounter. However, the goals of this study are narrower: to describe how qualifiers are used and to suggest further research to determine which assertions are disputable, on what grounds, and by whom.

Contextual Factors in Radio-Based Medical Interviews

This study examines an atypical form of medical interview: encounters between physicians and patients on a radio talk show. One of the ways the radio-based encounters differ from private medical interviews is that there are at least three additional participants: a moderator who manages the introductory greetings and the closing acknowledgements, the moderator's staff who screen the calls and the members of the radio audience whose silent "presence" is likely to affect the performance of both the physician and the caller.

From the moderator's point of view, the primary purpose of the program is to engage the interest of the listening audience by: (1) letting callers describe typical or interesting medical problems so (2) the physician can offer diagnostic and treatment information which will (3) educate and entertain the radio audience sufficiently to (4) maintain or increase the number of listeners. The market share determines the (5) commercial advertising rates of the show and (6) ultimately affects the profitability of the radio station.

From the physician's point of view, the program offers an opportunity to display professional expertise which will enhance his own reputation and the reputation of his profession, his speciality, his subspeciality (or areas of expertise), and his group practice or affiliated institution. Satisfying the concerns of individual callers may be less of a priority than educating the listeners about medicine but each caller represents an important opportunity to display the knowledge, advice, interpersonal skills, and communication skills that the physician imagines the listeners want from a physician.

For the caller, the program offers an opportunity to obtain free diagnostic and therapeutic advice including the possibility or referrals to medical practitioners. In addition, the caller has the option to remain anonymous; callers are referred to by first names only, they rarely give their last names, and some have admitted that they have given false first names. The lack of a fee and the potential for anonymity may make it easier for some callers to introduce issues which they would hesitate to share with their own physician or which have not been answered by other physicians. On the other hand, there are probably more constraints (legal and customary) on what

can be discussed on radio than on what can be discussed in a private medical interview. The main function of the show for the caller remains similar to that for a typical medical interview; to get a first or second opinion on a current health concern.

The potential for conflict between the objectives of the participants in typical medical encounters is increased when there are additional participants and objectives (Tannen and Wallat, 1982). Some of the potential conflicts will be noted below because they may affect the types of assertions and qualifications which are expressed and may therefore limit the generalizability of the findings to more typical medical encounters. First, there is a contradiction between the intimacy of the physician-patient dialogue and the "presence" of the larger listening audience. The moderators of similar shows sometimes refer to this conflict when they attempt to calm a nervous caller by saying, "Don't be nervous, it's just you and me," occasionally adding "and a thousand other folks who will understand." More importantly, the physician has a dual audience and can thus be expected to direct many of his remarks to both audiences.

Second, there is a potential conflict between the medical/educational objectives and the commercial/entertainment ones. The moderator tends to emphasize the educational rather than the commercial objectives; it is the frequent commercial breaks which remind the audience of the underlying financial objectives. The conflict is apparent when a commercial break interrupts a discussion of a serious issue, such as child abuse, suicide, or terminal illness. Moderators often try to ease the transition with an explanation of why a commercial is necessary. The moderator may say "we must take a break now in order to pay the bills": or "to serve those who make this show possible," in an attempt to make the transition from personal tragedy and crass commercial lingo less jarring for the audience. Similarly, there is potential conflict between the assertions of the physician and those contained in commercial messages. One of the physicians in this study expressed skepticism about manufacturers' claims about their skin care products. If there had been commercials about such products, the conflicting claims could have caused more hedging by the physician and more confusion for listeners. (For this study, only the patient-physician dialogue was examined; the commercials and moderator-physician dialogues which occurred between the interviews were not examined.)

Third, there is the conflict between the objective of having physicians provide reasonable answers to caller questions and concerns and the physicians'

lack of access to the visual cues and medical record information which are often required for diagnosis. As physicians attempt to give useful, appropriate, and accurate information based solely on patient's verbal reports of their problem, they can be expected to make more than the usual number of hedges (though probably fewer than in physician-physician discourse where potential challenges might be more threatening to the physician's sense of his own competence). In this sense, the radio-based encounters may offer a better source of information on how physicians hedge their assertions even though some of the criteria for the hedges will be different (i.e., the lack of visual cues) from those in face-to-face encounters.

There are two other potential sources of conflict which are not unique to the radio-based encounters but which could affect the patterns of discourse. First, the physician may have dual objectives: (a) to prove that his type of expertise is useful and (b) to help callers help themselves in order to reach a state of health which reduces the need for professional intervention. (Labov and Fanshel, 1977; Waitzkin and Stoeckle, 1972). Second, a physician may feel conflicting obligations to (a) challenge advice given to patients by other physicians (when he considers it inaccurate) and (b) to refrain from criticizing a fellow health professional. When diagnostic or treatment information is disputable, the physician is more likely to (1) recommend physician intervention than self-diagnosis or self-treatment and (2) to question the patient's report of the information than to question the reported judgment of their physician (see Katriel and Neshier, 1987, for similar conclusions about tutors and student-callers on an Israeli radio call-in program) While this study does not focus on the actual challenges (there were few), these two sources of conflict may affect the types of qualifiers which are used by physicians.

In summary, while the context for radio-based encounters is different from that of face-to-face medical interviews, it is likely that the radio-based encounters will manifest some patterns of discourse which are typical of medical interviews (Katriel and Neshier, 1987). Physicians are likely to rely on patterns of interviewing developed through years of training and practice and therefore are likely to unintentionally display some of the best and worse aspects of (their) usual medical encounters. Similarly, it can be assumed that most callers bring to the encounter extensive knowledge of medical interviews in terms of what kinds of assertions are appropriate and defensible (Frankel, 1984; Mischler, 1984).

Methods

The data for the study consist of tapes of 14 interviews from two radio call-in programs which featured physicians who answered questions from callers. The six interviews with the pediatrician concerned children with weight problems and all of the callers were parents of such children. The eight interviews with the dermatologist included discussions of skin problems which had been experienced by the caller or a close relative of the caller. The sampling of interviews was arbitrary in the sense that the researcher taped all of the interviews which occurred after she was notified that the talk show was in progress (after the first few interviews in each case). The tapes were transcribed with attempts to retain and identify the dysfluencies and unaudible phrases.

Unlike face-to-face medical interviews, radio-based interviews yield tapes of encounters which offer the researcher almost all of the information and cues which were available to the participants. Except for the nonverbal communications between the moderator and physician, all communication was aural and most was verbal. The lack of visual cues in the physician-patient encounters can be expected to modify the nature of the discourse, for it makes the participants more dependent on linguistic (and vocal) forms of communication and excludes diagnostic evaluations which depend on visual cues. This study is limited to analysis of the lexical features of the encounter except where rising intonation suggested questions and where nonlexical utterances such as laughs and "uh huhs" could be represented in the transcript.

The unit of analysis varied depending upon the nature of the qualifiers examined. Unlike previous studies which have reported the number of qualifiers per minute or per interview, the number of qualifiers in these interviews was compared to the number of assertions which *could be* qualified. For the analysis of rounders, the units of analysis were assertions which referred to numbers. For other types of qualifiers, the units of analysis were complete assertions.

Hedges: Rounders

According to Prince et al. (1982), rounders are used to suggest ranges of values where greater precision is unavailable or irrelevant. In these interviews, it was expected that physicians and patients would use rounders and that physicians would use them more frequently since physicians are more likely to be aware of: (a) potential measurement errors, (b) variability in physiological conditions over time, and (c) the difficulty of interpreting the meaning of a single numerical value (e.g., a

lab test result) without additional diagnostic data or repeated measurements. Further, physicians were expected to use all types of hedges more often than callers, since their knowledge base is probabilistic and their assertions have more serious consequences for the listeners.

Of 67 references to numbers, 57 were single numbers and 10 were reports of specific ranges of values (e.g., "from 1941 to 1964," and "less than a centimeter"). Where specific ranges were reported, there were no rounders. While the use of rounders was not precluded in assertions about specific ranges of values, the lack of rounders suggests that the range was deemed to offer sufficient approximation without additional qualifiers.

In the references to single numbers, the frequency of rounders varied by the type of variable discussed (see Table 1). The fact that none of the references to age included rounders reflects the common treatment of age as a discrete variable as well as the caller's certainty about their ages and the ages of their children. There were few rounders in reference to dates; references to certain months or years was apparently considered sufficiently precise in these references to the history of a patient's problem (five references) or the history of medicine (four references). Most references to medical data and relative time intervals were accompanied by rounders which suggested vague two-directional confidence intervals around the stated figure (e.g., "about 40 pounds"). In fact, if we exclude two references to hypothetical values and one request for confirmation, all such references were accompanied by rounders. In the case of the request for confirmation, if the physician had repeated the patient's response verbatim ("*About* ten years.") this would have conveyed a challenge to the accuracy or precision of the report rather than a request for confirmation ("Ten years?"). The references to other variables included one rounder; the physician asserted that "a good bath *or two*" would be sufficient to wash off dead skin which accumulates after a case is removed.

Thus, there were consistent patterns of use of rounders by the type of variable, patterns which probably reflect typical usage in everyday conversation. When speakers reported single, nonhypothetical values of continuous variables, rounders were used to convey a range of values, suggesting that greater precision was both unavailable and unnecessary ("about a month later"). In other types of numerical references, rounders were rarely used and in references to specific ranges, no rounders were used. In addition, most rounders were not accompanied by markers of hesitation or uncertainty. The results are consistent with the conclusion by Prince

et al. (1982) that most rounders do not represent uncertainty but are indications of approximate ranges, where greater precision is unnecessary.

TABLE 1
Patients: Single Numbers

<u>Type of Variable</u>	<u>Rounder</u>	<u>None</u>	<u>Rounder/Total</u>
Medical Data	05	00	05/05 (100%)
Time Intervals	06	00	06/06 (100%)
Dates	01	05	01/06 (17%)
Ages	00	15	00/15 (0%)
Others	01	07	07/07 (0%)

Physicians: Single Numbers

<u>Type of Variable</u>	<u>Rounder</u>	<u>None</u>	<u>Rounder/Total</u>
Medical Data	01	02*	01/03 (33%)
Time Intervals	00	01**	00/01 (0%)
Dates	01	02	01/03 (33%)
Ages	00	08	00/08 (0%)
Others	01	02	01/03 (33%)

* two hypothetical numbers

**one request for confirmation

There were too few numerical references (i.e., per type of variable and speaker) to determine how patients and physicians differ in their use of rounders. There are only a few references to medical data and no references to quantitative results of lab tests. This can be attributed to the lack of importance of lab tests for the diagnosis of the weight and skin problems which were discussed. In similar radio call-in programs which have featured cardiologists, there have been frequent references by patients and physicians to specific quantitative results of lab tests and other diagnostic procedures. And in radio programs which feature nonphysician experts (e.g. physician therapists and nutritionists), there are even more references to quantitative diagnostic and treatment information and fewer hedges. Such differences between physicians and nonphysicians suggests that one way professionals indicate their level of expertise is the degree of uncertainty they convey (e.g., the number of exceptions to generalizations which are implicit or explicit in their hedges).

There were no challenges to unrounded (or rounded) assertions and thus there is no strong evidence that rounders were necessary for providing useful and plausible information. However, there were four references to numbers which illustrate how certain levels of approximation can impede the effective exchange of information.

In the first example, while one would not expect rounders in parents' reports of the number of children they have, one caller reported that "I have ah ah some daughters." This assertion, not included in the count of numerical references, indicates how approximators can be inappropriate when applied to variables which are discrete and which are indisputably known to the speaker. If the caller had not subsequently clarified that he had three daughters, the physician might have challenged and/or doubted the caller's competence both as a reporter of medical information and as a parent.

Second, there was one example of overprecision (or underapproximation) when a caller reported that she had undergone surgery "on December 29th," which was three months earlier. This report did not impede communication but it suggests that repeated overprecision may affect physicians' view of patient competence (as a patient and as a reporter of medical history information). While hedges have been interpreted as having a negative effect on the listener's view of a speaker's competence (Erickson et al., 1978), insufficient approximation may have a similar effect. If patients or physicians do not translate the particulars of their knowledge into a level of precision which matches the listener's interest then such assertions will impede effective communication (Hatch, 1980; O'Barr, 1985; Shuy, 1976). In future studies of the use of rounders in medical discourse, it would be useful to examine how either extreme of approximation or precision affects the plausibility of the assertion, the perceived competence of the speaker, and the effectiveness of the exchange of information. It would also be useful to assess whether either extreme (of approximation or precision) is associated with more challenges or requests for clarification by the listener.

Third, the assertion that "often a good bath *or two*" is sufficient to wash off dead skin illustrated the tendency of the physicians to use multiple qualifiers. If the core assertion is defined as "a bath will wash off the dead skin" then the physician's use of three qualifiers (or two, good, and often) suggests that the statement could be too easily challenged or misinterpreted if fewer qualifiers were used. If the listener found that one bath was not sufficient, the physician has offered several retorts to a potential challenge: the bath may not meet the unstated criteria of "good" bath, two

baths may be needed, two "good" baths may be needed, or more than two "good" baths may be needed.

In the final example, when a physician estimated the calorie intake of a caller's daughter, without knowledge of her dietary or exercise habits, he stated "she's probably takin in *something in excess of 2500, maybe 3500* calories." The use of two rounders and a shield ("probably") make the assertion indisputable. If information is defined as that which reduces uncertainty (Waitzkin & Stoeckle, 1972), such an assertion offers little information. No matter what the real calorie intake is, the physician cannot be wrong. The core assertion ("she's taking in more than 2500 calories a day") has been transformed from a defensible approximation to a defensive, uninformative assertion

Hedges: Shields and Adaptors

Callers and physicians were similar in their use of plausibility and attribution shields. When callers described symptoms, many used plausibility shields such as *'it seems like* there's no lump," *"I seem to* have a very unusual skin condition", and *"she's almost* using it (food) like a pacifier." Physicians prefaced some of their assertions with an analagous type of attribution shield, *"by what you're describing ..."* and *"you sound* ah very fair" and *"it sounds like you... have a problem."* Callers reported that one or more family members had "a tendency toward" a certain symptom or behavior and physicians reported that categories of patients such as women and children had a "tendency to have" certain symptoms. Both callers and physicians prefaced some comments with plausibility shields such as "I think that" or " I suppose I would say." The callers used "I guess" or "I suppose" or "as far as I know" whereas the physicians used the more authoritative form "I think." Four different callers prefaced comments with "I don't know but" and one physician prefaced his assertion about the ingredients of shaving cream with "I'm not an expert .. I'm sorry to say but...".

Both callers and physicians used attribution shields. Callers invoked the authority of their own physician when reporting on some symptoms ("the surgeon said") and physicians qualified some assertions by referring to the views of other unnamed physicians ("some people might try you with antibiotics" and "there are ah um all kind of people who believe that ...").

Physicians were unique in using shields which expressed very high degrees of uncertainty or maximum protection against potential challenges. As expected, a few physician assertions included explicit references to the limitations of an

interview without visual contact, as in "It might benefit you ah, again, I, I emphasize 'might' without ah without seeing you." Several shielded assertions appeared to be attempts at polite ways of disagreeing with the caller, such as "you're describing it well but *I'm not sure* the description is necessarily ah ah apt ah" and "you know, *I don't know that* there's a society called Deviant Behavior Anonymous." These could be seen as false hedges, which in attempting to avoid insult had the potential of being interpreted as insulting and even as sarcastic. There were several instances when physicians were adamant about their inability or unwillingness to answer a question, such as:

- (1) "Ah, I'm, I'm not quite sure...I'm not going to venture a diagnosis."
- (2) "OK again, its its impossible for me to answer, answer your question."
- (3) "I really don't want to get into ah ... I don't want to get into that..."

The repetition in these statements suggests that the physicians felt uncomfortable when they did not answer the caller's question. In fact, the repeated hedges quoted above did not follow repeated questions by the callers; callers asked few direct questions and these were usually answered directly by the physicians. These types of hedges could be considered the ultimate shields since no diagnosis or treatment suggestions were ventured.

Numerous physician assertions contained shields which were harder to classify. Many of these assertions included multiple qualifiers and the use of multiple qualifiers is one way physicians differed from callers; physicians used multiple qualifiers much more often than did callers. One way to assess the effect of multiple qualifiers is to rewrite the assertions adding one qualifier at a time, as shown below:

Ex. 1 : Physician (interview 13)

- (a) As you change her diet, that will come into focus and the random hyper behavior (will) go
- (b) Well, *you may find that*, as you change her diet that will come into focus and the random hyper behavior (will) go
- (c) Well, you may find that, as you change her diet *around a little bit*, that will come into focus and the random hyper behavior (will) go
- (d) Well, you may find that, as you change her diet around a little bit, *some of* that will come into focus and the random hyper behavior (will) go
- (e) Well, you may find that, as you change her diet around a little bit, some of that will come into focus and *some of* the random hyper behavior (will) go
- (f) Well, you may find that, as you change her diet around a little bit, some of that will come into focus and some of the random hyper behavior *may* go

Ex. 2: Physician (interview 4)

- (a) There (are) other things that have to be examined
- (b) There *might be* other things that have to be examined
- (c) There might be, *I doubt it by what you're describing but there might be* other things that have to be examined
- (d) there might be, I doubt it by what you're describing but, there might be *some* other things that have to be examined

In the examples given above, the first statement in each series may misrepresent the level of certainty of the speaker. However, the second or third statements are defensible forms of the assertion (with one or two hedges). The additional qualifiers do not substantially change the meaning but do transform defensible, qualified assertions into defensive, indisputable ones. Although there is no evidence that callers were dissatisfied with these answers (there were no explicit challenges or requests for clarification), it is hypothesized that the use of multiple, redundant hedges could confuse callers and give them the impression that they did not receive definitive answers or useful information.

There were no striking differences between callers and physicians in their use of adaptors. Four types of adaptors were used, all of which could be interpreted as indicating that the observed phenomena differed somewhat from some prototypical or extreme case. The adaptors were classified as (1) those which minimized the similarity to a prototypical or extreme case, (2) those which gave two-directional hedges much like rounders, (3) those which indicated something was not quite true or untrue, and (4) those which suggested that something was essentially (cut not completely) the same as a prototypical case. Examples of each are given below:

- (1) "I mean they're *sort of* lethargic" (caller), "well that's *a little* peculiar"
(physician)
- (2) "we've always had to *more or less* stay out of the sun" (caller), "she really is *more or less* able" (physician)
- (3) "she doesn't eat *all that* much" (caller), "its *like* not *that* different from"
(physician)
- (4) "its been *basically* my mother" (caller), "weight is *basically* a calorie gain"(physician)

Intensifiers: Emphasizers

Callers frequently used qualifiers which suggested the severity or prototypicality of symptoms (categorized here as "emphasizers"). Of the few physician uses of emphasizeers, several were references to their own experience of relevant symptoms. There were four types of emphasizeers: (1) vague adjectives (e.g.

awful, horrendous), (2) vague quantities (e.g. quite a bit, numerous, a lot), (3) adverbs which suggested extreme degrees (e.g. very, terribly, extremely), and (4) other adverbs which added emphasis (e.g. just, even, still, only), as shown in the examples below:

- (1) "It looks *awful*" (caller), "it looks *horrendous*" (physician)
- (2) "we had to go through *a lot of* therapy on that" (caller), "they eat *a lot of* sweets" (physician)
- (3) "my background is *extremely* sensitive skin" (caller), "they're *very* effective" (physician)
- (4) "*even* with that block ... I can *still* get burnt" (caller), "I wouldn't *even* worry" (physician)

It appears as if such qualifiers are used to help prove the caller's case that their symptoms are serious and thus important enough to warrant diagnostic investigation and/or therapeutic intervention. Not surprisingly, the physicians sounded most like the callers when they described their own symptoms but such references to themselves were rare. It would be interesting to assess whether physicians' assertions were similar to those of patients in situations where they were patients speaking to their own physicians.

Intensifiers: Absolutes and Markers of Certainty

The simplest markers of certainty were the markers within the propositional content which conveyed absolutes in terms of time (e.g., "always" or "never") and amounts (e.g. "not a bit" or "not at all"). Callers and physicians used such qualifiers rarely and usually in references to particular symptoms.

The more interesting markers of certainty were used to convey the speaker's commitment to a proposition (or "markers of certainty"). These included qualifiers which conveyed (1) lack of doubt (e.g. "obviously" and "definitely"), (2) certain truth (e.g., "the fact that" and "the truth of the matter is"), (3) explicit references to the speaker (e.g., "in fact we are positive" and "I'm sure that" and "we know that"), (4) authoritative directives (e.g., "you're going to have to cook more fish") and (5) others including metaphors (e.g., "it's a sign as big as any billboard").

Physicians used intensifiers about twice as often as callers (19% of physicians' assertions versus 11% of callers' assertions) and used a greater variety of intensifiers. All of the intensifiers used by callers referred to symptoms and only one included an explicit reference to the speaker (and his wife); he commented "she, *in fact we are positive*, is involved in some promiscuous activity".

Where physicians used qualifiers to suggest certainty, the core assertions often represented truisms or refutations of absurd hypothetical situations. In a discussion of the kinds and amounts of food which can cause obesity, a caller argued that his daughter could be getting fat by eating too much food, even if she was eating nutritious, low-calorie foods. The physician expressed certainty in his dispute of an extreme extension of the patient's assertion: "You can get fat eating a thousand bananas in the day, *the truth of the matter is*, you'll get full long before you get fat." The physician's statement is unrefutable though it does not refute the patient's assertion. Later, in the same interview, the physician attempted to convey the level of responsibility parents have for the kinds of foods their children eat. The child in question was an overweight five-year-old. The physician commented, "Y'know the the fact that if it isn't in the house -- she doesn't shop. When was the last time she took the car and went to the ACME? It doesn't happen -- if the food's not in the house, she's not going to eat it." One caller noted that when his daughter ate chocolate or other sweets, she became hyperactive and had a tendency to get migraine headaches. The physician responded: "And so what she's showing you -- and it's a sign as big as any billboard you're going to pass on the highway -- is she's a kid who shouldn't eat chocolate."

In some cases, the use of qualifiers which expressed certainty were used in restatements of callers' reports, perhaps to convey empathy or agreement:

Caller: (my daughter and I) had to come live with my mother, my daughter jumped two sizes... it was a lot of traumatic things going on ...(and I was) in the hospital and my husband and I separated..."

Physician: *Certainly* you- your illness and the disruption in the family -- ah moving ah into the ah other environment of her grandmother's house -- these things *have to have* an effect on on *any* ah child.

The only new information is that such traumas would effect *any* child but the assertion ("have to have an effect") is much too general to be classified as useful information. In another interview, the same physician asserted that "a lot of children suffer from terrible problems and *that's a fact of life*." And there were numerous instances where the physician prefaced a restatement of the patient's report with "obviously," as in "*obviously* there is concern (by you)" and "*obviously* sunburn can make you sick."

The most emphatic markers of certainty communicated that (a) the statement was true in all cases and (b) therefore, certain information was considered irrelevant:

Physician: "If she eats fewer calories -- *and I don't care what level she's at now* -- she's going to not be as heavy as she is.

Physician: "If you look at any diet -- *and I don't care whether its the grapefruit diet or the Scarsdale diet or the Weight Watchers diet or even the diet that U.S. Health Care does ah within our HMO, where we have a a an eating program called Health Eating* -- it's still a calorie-restricted diet."

There were numerous directives with markers of certainty, as in "you've got to be very careful" and "its a conversation you're going to have to have." However, most directives were less direct and less certain.

Out of a total of 38 physician assertions with markers of certainty, only five offered specific medical information which did not constitute restatements of patient reports or a nonphysician's level of knowledge about sunburn, diets, weight gain or other health issues:

- (1) "As far as skin cancers are concerned, its (melanoma is) *clearly the most dangerous*"
- (2) "Our skin is is active, its alive, its *always turning over*"
- (3) "*Ah its become clear* that another effect of sunlight is to deplete ... Langerhan cells"
- (4) "One of the side effects of sun..*its becoming more evident..* is telangiectasias"
- (5) "*We know that* there are hormones and things that..actually suppress appetite"

In fact, two of the statements shown above could also be considered common knowledge: that melanomas are the most dangerous form of skin cancer and that skin is continually shed and replaced.

Finally, one of the most absurd uses of intensifiers occurred in the following assertion by the dermatologist: "it (the rash) will have *no effect whatsoever* on your broken bones." There was no evidence that the caller was requesting information about the effects of superficial skin rashes on the healing of broken bones. This is an extreme example of the difficulty physicians face in estimating the level of knowledge of their patients, since a comment which would be reassuring to one patient could be insulting to another. (Though the behavior of these two physicians cannot be assumed to be representative of physicians in general, the pediatrician did seem to underestimate the comprehension level of his adult callers more often than did the dermatologist.) For this study, it is further evidence of the physician's tendency to use intensifiers where the core assertion was already indisputable.

Conclusion

The analysis of 14 caller-patient conversations indicated that: (1) physicians used qualifiers more often than callers, (2) physicians used hedges more often than callers, (3) callers and physicians used hedges more often than intensifiers, (4) there were more qualifiers which conveyed different levels of uncertainty, (5) physicians used markers of certainty more often than callers, and (6) physicians used multiple qualifiers more often than callers. It was predicted that physicians would use hedges often and more often than callers. However, the physicians' frequent use of *multiple* hedges was surprising and resulted in assertions which were both irrefutable and uninformative. While physicians used intensifiers more often than expected, an examination of the "intensified" assertions indicated that physicians limited most of their expressions of certainty to core assertions which were truisms or extreme hypothetical cases (or 'straw men,' which were also irrefutable and uninformative). The study offers some support for the hypothesis that physicians qualify their medical advice in ways which make their assertions less disputable and in ways which could impede effective communication. Further studies are needed to assess whether physician (or patient) uses of qualifiers impede the ability of patients and physicians to fulfill their objectives for such encounters.

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