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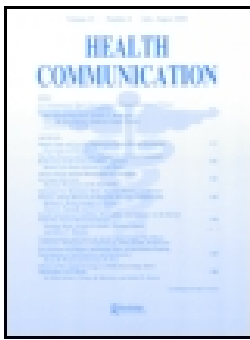
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How patients understand physicians' solicitations of additional concerns: implications for up-front agenda setting in primary care

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ABSTRACT

In the more than 1 billion primary-care visits each year in the United States, the majority of patients bring more than one distinct concern, yet many leave with "unmet" concerns (i.e., ones not addressed during visits). Unmet concerns have potentially negative consequences for patients' health, and may pose utilization-based financial burdens to health care systems if patients return to deal with such concerns. One solution to the problem of unmet concerns is the communication skill known as *up-front agenda setting*, where physicians (after soliciting patients' chief concerns) continue to solicit patients' concerns to "exhaustion" with questions such as "Are there some other issues you'd like to address?" Although this skill is trainable and efficacious, it is not yet a panacea. This article uses conversation analysis to demonstrate that patients understand up-front agenda-setting questions in ways that hamper their effectiveness. Specifically, we demonstrate that up-front agenda-setting questions are understood as making relevant "new problems" (i.e., concerns that are either totally new or "new since last visit," and in need of diagnosis), and consequently bias answers away from "non-new problems" (i.e., issues related to previously diagnosed concerns, including much of chronic care). Suggestions are made for why this might be so, and for improving up-front agenda setting. Data are 144 videotapes of community-based, acute, primary-care, outpatient visits collected in the United States between adult patients and 20 family-practice physicians.

Research suggests that the majority of primary-care patients bring more than one distinct concern to visits, with three being relatively common (Braddock, Edwards, Hasenberg, Laidley, & Levinson, 1999; Heritage, Robinson, Elliot, Beckett, & Wilkes, 2007; Middleton, Mckinley, & Gillies, 2006). This reality clashes with the social organization of many primary care visits, which are frequently structured around specific, and often singular, clinical tasks, such as the diagnosis and treatment of single (i.e., "chief") concerns (Krupat, Frankel, Stein, & Irish, 2006; Robinson, 2003). Without special training, physicians do not tend to solicit the full agenda of patients' concerns, and physicians' untrained attempts are largely ineffective (Beckman & Frankel, 1984; Berger et al., 2011; Heritage et al., 2007; Marvel, Epstein, Flowers, & Beckman, 1999). As a consequence, patients' additional concerns (i.e., those beyond their "chief" concern) either emerge late during visits or not at all, and this potentially burdens (a) physicians' time management, (b) patients' health (because such concerns may not be addressed in a timely manner), and (c) system utilization (because patients may return to deal with such concerns) (Dyche & Swiderski, 2005; Peltenburg et al., 2004).

The recommended solution to this problem is a physician-communication skill known as *up-front agenda setting*. Ideally, up-front agenda setting occurs relatively early during

visits (e.g., immediately after patients present their chief concerns) and involves physicians continuing to solicit patients' concerns to "exhaustion" (Bower et al., 2011; Brock et al., 2011; Krupat et al., 2006; Marvel et al., 1999; Wissow et al., 2011), for example, with questions such as "Are there some other issues you'd like to address?" (Heritage et al., 2007). For almost 30 years, up-front agenda setting has been widely advocated for, and utilized in, physician training/intervention programs (Baker, O'Connell, & Platt, 2005; Carroll & Platt, 1998; Kemper, Foy, Wissow, & Shore, 2008; Krupat et al., 2006; Lipkin, Quill, & Napodano, 1984; Mauksch et al., 2008; Wissow et al., 2011), not only because it is easily trainable (Brock et al., 2011; Heritage et al., 2007; Wissow et al., 2011), but because it is a component of patient-centered communication (Epstein, Mauksch, Carroll, & Jaen, 2008) with an evidence base for improving health outcomes. For example, not only does up-front agenda setting significantly reduce the incidence of patients' unmet concerns (Heritage et al., 2007), but it has also been associated with improved patients' evaluations of the overall quality of physician–patient interaction (Rodriguez et al., 2008), improved physician understanding of patients' concerns (Dyche & Swiderski, 2005), and a decreased incidence of late-emerging (or so-called "doorknob") concerns (Berger et al., 2011; Marvel et al., 1999). Research suggests that up-front agenda setting

does not significantly affect visit length (Brock et al., 2011; Heritage et al., 2007; Marvel et al., 1999), with at least two studies finding that it can be associated with slightly shorter visits (Brock et al., 2011; Heritage et al., 2007), perhaps because it facilitates physicians' time management (Dugdale, Epstein, & Pantilat, 1999) (cf. Bergh, 1996).

Given this background, some research has focused on refining up-front agenda setting. For example, guided by linguistic and sociological theory, and contrary to medical-education textbooks, the Heritage et al. (2007) intervention demonstrated that physicians' solicitations of additional concerns should not be formatted with the word "any" (e.g., "*Anything* else?" or "Are there *any* other issues you'd like to address today?") because "any" has the property of negative polarity: It establishes a bias toward "no"-type answers. Instead, Heritage et al. demonstrated that solicitations should be formatted with positively polarized words, such as "some" (e.g., "Are there *some* other issues you'd like to address today?"), which establish a bias toward "yes"-type answers and are favorable to the presentation of concerns. Heritage et al. found that, compared to the absence of up-front agenda setting, it was only the "some" (and not the "any") version of the solicitation question that significantly reduced the incidence of patients' unmet concerns. However, this intervention was not a panacea: The "some" condition still failed to expose 22% of unmet concerns, and this percentage rose when patients wanted to discuss more than two concerns.

This article aims to further refine our understanding of up-front agenda setting by documenting a previously unrecognized barrier to its effectiveness. This barrier arises from patients' understandings of the *social action* implemented by up-front agenda setting questions. Specifically, we demonstrate that patients understand these questions as making relevant only what the National Ambulatory Medical Care Survey (2010) classifies as "new problems." "New problems" are concerns that are either totally new or "new since last visit" and that are need of diagnosis, such as new incidences of dry skin/rashes, chest pains, and sinus headaches. In contrast, "non-new problems" include ongoing, previously diagnosed concerns, such as dealing with preexisting migraines, hypertension, and depression, as well as requests for prescription refills and for counseling regarding preexisting lifestyle concerns (e.g., for weight issues). If patients understand questions like "Are there some other issues you'd like to address today?" as targeting "new" problems, then patients are less likely to raise other ongoing, important, but "non-new" problems. An implication is that up-front agenda setting, at least as currently designed, will be less than fully effective in uncovering the full range of patients' additional concerns. This article offers an account of why patients understand agenda-setting questions in this manner, and concludes with recommendations for improving the communication skill of up-front agenda setting.

Data and method

All data collection and analysis was approved by University Human-Subjects Protection Committees. This study is a secondary, (primarily) qualitative analysis of intervention data collected in the United States by Heritage et al. (2007), which were gathered from 144 community-based, primary-care, outpatient visits scheduled around dealing with acute problems, for adult patients and 20 family-practice physicians. Immediately after soliciting or confirming patients' chief concerns, physicians engaged in up-front agenda setting by asking either an "any"-formatted question (*n* = 74; e.g., "Are there *any* other issues you'd like to discuss") or a "some"-formatted question (*n* = 70; "Are there *some* other issues you'd like to discuss"). Data were videotaped and transcribed using the system developed by Gail Jefferson, and the primary method used is conversation analysis, particularly as it is applied to the study of institutional interaction (Drew & Heritage, 1992).

Analysis

The analysis section is organized into five subsections. First, as a prerequisite for our analysis, we ground the argument that, as answers to physicians' up-front agenda-setting questions, patients' lateral headshakes constitute "no"-type answers. Second, we examine apparently puzzling (i.e., self-contradictory) cases in which, in response to physicians' up-front agenda setting questions, patients begin by producing "no"-type answers and then immediately go on to present additional concerns. Third, we reject two possible solutions to this puzzle. Fourth, we argue for a third, correct solution to this puzzle, which sheds light on how patients understand physicians' up-front agenda setting questions. Fifth, we provide an account for how patients come to such an understanding.

Lateral headshakes constitute "no"-type answers

This subsection defends the argument that, as answers to physicians' up-front agenda setting questions, patients' lateral headshakes constitute "no"-type answers. It is important to ground this argument because although headshakes are typically emblematic (Ekman & Friesen, 1969) of negation, they can alternatively be practices for accomplishing other actions, such as indexing inclusivity, intensification, and uncertainty (for review, see McClave, 2000). Three types of qualitative evidence are presented, each represented by a single extract (Extracts 1–3, respectively), followed by some quantitative evidence.

In all forthcoming extracts, asterisks in the transcript symbolize the onset and offset of a lateral headshake. All conduct (by patients or physicians) between asterisks co-occurs with patients' headshaking, and is represented in transcripts with boldface type. The first type of evidence is represented in Extract 1.

Extract 1 [MC:02:05]

```
01        DOC:  You know I know that you have (.) thuh diarrhea an'
                thuh runny no:se, .hh (.) are there some other (0.1) *(0.1)
02 —>           issues that
03 —>           you need duh discuss during your* visit.
04 —>     PAT:  No.
05              (.)
06        DOC:  °°Okay.°°
```

The physician begins by summarizing the patient's chief concern: "You know I know that you have (.) thuh diarrhea an' thuh runny no:se," (lines 1–2). When the physician continues speaking, although he has not finished his question after "are there some other" (line 2), he is recognizable (Jefferson, 1984) as soliciting additional concerns, and this is precisely where the patient begins to laterally shake his head. The patient stops shaking his head after the physician completes "your" (line 3), and thus before the physician completes his question (i.e., The patient is not shaking his head during "visit"; line 3). Immediately upon completion of the physician's question, the patient answers with "No." (line 4), which is evidence that his prior headshake both projected (Schegloff, 1984) and embodied a "no"-type answer. Extract 1 also provides evidence that headshakes and verbalized rejections (e.g., "no") are not necessarily produced concurrently; rather, they can be produced as independent behaviors that index negation severally and in combination.

In line with this, a second type of evidence is that lateral headshakes can themselves be produced and treated as possibly complete "no"-type answers, as seen in Extract 2. In this case, the patient has already presented her eye problem as the chief concern.

Extract 2 [MC.19.07]

```
01        DOC:    Okay. .hhh uhm are there any- (.) other issues you need
02                to discuss today?
03  —>    PAT:    *(0.5)
04        DOC:    Just thuh* (.) just thee ey[e?]
05        PAT:                                [#Y]eah.#
06                (.)
07        DOC:    Okay.
```

In response to the physician's agenda-setting question, "are there any- (.) other issues you need to discuss today?" (lines 1–2), the patient merely shakes her head, which begins immediately after the physician's question (at line 3), and extends through the silence at line 3 and the physician's "Just thuh" (line 4). The physician treats the patient's head shake as a complete "no"-type answer by requesting confirmation that the patient "just" has one concern (i.e., her chief concern about her eye; line 4), and then by proposing sequence closure and transition to history taking with "Okay." (line 7; Beach, 1993, 1995).

A third type of evidence is represented in Extract 3. In this case, the patient begins by responding with a "no"-type answer, but then changes tack and actually presents an additional concern.

Extract 3 [MC:4:10]

```
01        DOC:    Are there some other issues you wan'ed=(duh) discuss
02  —>            today, (.) bee- *be[si:de u]h*[:]
03  —>    PAT:                     [No:.    ]  [U]h-=well (.) the
04                other thing is tha:t I've been having this migrai:ne
05                uh:m (0.4) .tch I w- I guess you would call it a
06                sinus headache, >for thuh past< four da:ys.
```

The patient initially answers by shaking her head (line 2), which slightly precedes, and co-occurs with, her saying "No:." (lines 2–3); This further supports the arguments made about Extracts 1–2 (above) that headshakes project and embody "no"-type answers. Both the patient's headshake and "no" overlap the physician's incremental extension (Ford, Fox, &

Thompson, 2002; Schegloff, 2001) of his question: "besi:de uh" (line 2). In this case, the patient interrupts (Schegloff, 2002) the physician's extension by producing "Uh-" (line 3), which is vocally cut off (symbolized in the transcript by the hyphen). This cutoff is a practice for projecting self-repair (Schegloff, 1979), in this case of her prior [headshake + "no"]. Note that the patient's "Uh-" is precisely timed with the halting of her headshake, and thus effectively cuts it off. The patient continues by producing "well" (line 3), which (in this context) is a practice for projecting self-correction (Schegloff, 1997b). When the patient continues speaking, she presents an additional concern: "the other thing is tha:t I've been having this migrai:ne" (lines 3–6). By presenting an additional concern as a correction of her [headshake + "no"], the patient orients to her [headshake + "no"] as a "no"-type answer that claimed that she had no additional concerns.

The argument that patients' headshakes embody "no"-type answers is also supported quantitatively in several ways. First, in the context of patients' answers to physicians' up-front agenda-setting questions, there is a significant association between the presence of patients' headshakes and patients' production of verbal "no"-type answers (Table 1). Second, there is a significant association between the presence of patients' headshakes and patients' not presenting additional concerns (Table 2). These correlations are further supported by 84 cases in which, in response to physicians' agenda-setting questions, patients do not present additional concerns of any type during the remainder of the phase of problem presentation. In 83 (99%) of these 84 cases, patients decline with verbal "no"-type answers (the one exception being Extract 2, already presented). In 69 (83%) of these 83 cases, the verbal "no"-type answers are type-conforming (e.g., *No, Nope, Mm mm*) and thus are not designed to project or foreshadow additional responsive agendas (Raymond, 2003; non-type-conforming answers included *I don't think so, Not that I know of, Not really, That's pretty much it*, etc.). Most relevantly, in 59 (86%) of these 69 cases, patients accompanied type-conforming, "no"-type answers with lateral headshakes (as seen in Extract 1, presented earlier). These 59 cases further support the claim that headshakes embody "no"-type answers, and strongly reject the possibility that at least

Table 1. Association between patients' lateral headshakes and production of verbal rejection components during answers.

	Verbal Rejection Present	Verbal Rejection Absent	Total
Headshake present	75 (87.21%)	11 (12.79%)	86
Headshake absent	19 (32.76%)	39 (67.24%)	58
Total	94	50	144

Note. Chi^2(1, N = 144) = 45.31, p = .00.

Table 2. Association between patients' lateral headshakes and presentations of additional concerns during answers.

	Additional Concern Presented	Additional Concern Not Presented	Total
Headshake present	15 (17.44%)	71 (82.56%)	86
Headshake absent	41 (70.69%)	17 (29.31%)	58
Total	56	88	144

Note. Chi^2(1, N = 144) = 45.33, p = .00.

these headshakes are practices for projecting or foreshadowing additional responsive agendas beyond such declinations (even though such practices do exist, but tend to involve "non-type-conforming" answers; see Beach & Metzger, 1997; Heritage & Raymond, 2012).

A puzzle: patients' answers sometimes appear to be self-contradictory

In the face of the observation that patients' headshakes embody "no"-type answers, the current data present a puzzle. Specifically, patients' answers sometimes appear to involve overt self-contradictions, as when patients (a) shake their head while presenting additional concerns; or (b) produce a verbal "no"-type answer (typically accompanied by a headshake) and then immediately go on to present additional concerns without framing this shift as a correction to their prior "no"-type answer (as we saw in Extract 3, above). For an example of the former condition, see Extract 4:

Extract 4 [MC:03:05]

```
01        DOC:   Well we'll discuss that further but le'=me ask you is there
02               <any> (.) <other> (.) thi:ng .hh any other thing (.) I can
03               do for you or discuss (.) any other problem you wanna
04               discuss with me.
05   —>   PAT:   Uh:*m (.) the only other thing* would be: uh:m (1.0) I'm
06               seein' doctor Amidva:r for migraine[s, ]
07        DOC:                                       [M]m hm:,
08               (0.2)
09        PAT:   A:nd he did a lotta lab work,
10               Mm hm,
11               (.)
12        PAT:   An' (Lis:) ca:lled, (.) and told me to- (.) to discontinue
13               my i:ron (.) supplement,=
14        DOC:   =Mm kay,
15               (.)
16        PAT:   I'm not taking iron supple[ment.]
17        DOC:                             [Oka  ]y,
18               (.)
19   —>   PAT:   A:nd I'm wondering if my la:b
20               (.)
21        DOC:   W'll we'll get intuh that. but…
```

In response to the physician's up-front agenda setting question (lines 1–4), the patient begins to present an additional concern while shaking her head: "Uh:m (.) the only other thing…" (line 5; Figure 1). Over the course of several turns of talk, which are oriented to as prefatory by the physician—note his continuers (Schegloff, 1982) at lines 7, 10,

and 14, and his acknowledgment token (Beach, 1993) at line 17—the patient ultimately presents her concern, which involves monitoring lab results for her chronic migraines: "A:nd I'm wondering if my la:b" (line 20). (For similar cases, see Extracts 8, 12, and 13, all analyzed in the following.)

Note that this puzzle is not limited to headshakes alone, and extends to verbal "no"-type answers. For example, see Extract 5:

Extract 5: [MC:08:09]

```
01        DOC:   Well before we gunna address that i:ssues, uhm
02               <are there some other> issue:s you like tuh discuss
03               today, besides thuh shoulder pain,
04               (.)
05   —>   PAT:   .tch No: = I wanna know when that (.) I'm due fer
06               another [blood tes:[t]
07        DOC:           [.hhh     [(U]kay), last time you saw me
08               I gave you a blood work order.
```

In response to the physician's agenda-setting question (lines 2–3), the patient answers with a type-conforming (Raymond, 2003) "No:" (line 5). Although this is a place where it is relevant for the physician to speak next (Sacks, Schegloff, & Jefferson, 1974), the patient uses intonation to project that she is not complete (Local & Walker, 2012); Specifically, she produces "No:" with level (vs. rising or falling), stretched intonation (symbolized in the transcript by the colon), which projects more talk (Wennerstrom & Siegel, 2003), and then "blends" (symbolized in the transcript by the equals sign) the sound of the "No:" into the start of her new unit, effectively erasing the transition space (Schegloff, 1988). The patient goes on to request a routine blood test related to statin medication being taken for high cholesterol. (For similar cases, see Extracts 8 and 12, analyzed in the following.)

So again the puzzle is: In response to physicians' agenda-setting questions, why would patients respond by producing nonvocal and/or verbal "no"-type answers—which appear to claim "I do not have additional concerns"—and then proceed to present additional concerns?

Two unsuccessful solutions to the prior puzzle

Unsuccessful solution 1: headshakes and/or "no" are responsive to questions' negative polarization. On the one hand, the social action of physicians' up-front agenda setting questions pressures patients toward presenting a concern. In other

Extract 4 [MC:03:05]

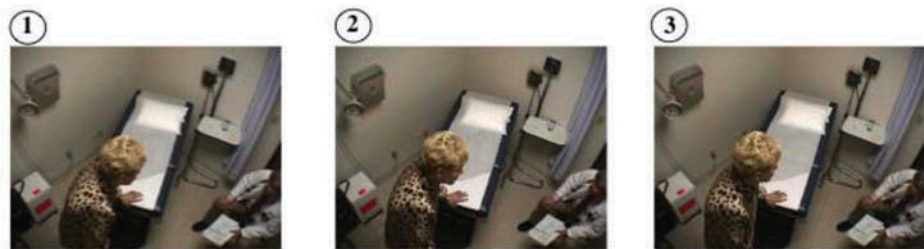05   PAT: ①Uh:*m (.) the only② other③ thing* would be:...

Figure 1. Patient lateral headshake in extract 4.

words, the alternatives of either presenting a concern or not are not equally weighted, and this bias is part of what conversation analysis refers to as preference organization (Pomerantz & Heritage, 2013). On the other hand, there are many vectors of preference organization, and in addition to social action, grammar also plays a role. As the physician does in Extract 4 (shown earlier; lines 1–4), the act of formatting questions with negative-polarity items, such as "any" (e.g., "any other problem you wanna discuss with me"), independently pressures patients toward "no"-type answers. Thus, negatively polarized questions have the potential to involve what Schegloff (2007) referred to as "cross-cutting" preference organizations (i.e., the social action invites "yes" but its grammatical format invites "no"). In these cases, Schegloff argued that answerers prioritize the preference of social action over grammatical preference. Nonetheless, one possible solution to the puzzle, which turns out to be incorrect, is that patients shake their heads and/or produce verbal "no"-type answers to somehow align with the question's grammar-based negative polarization. This solution is negated by numerous cases where physicians' questions are negatively polarized, where patients answer by presenting additional concerns, yet where patients neither shake their heads nor produce verbal "no"-type answers. For just one example (of many), see Extract 6:

Extract 6 [MC:01:10]

```
01    DOC:   Uh we could take a look at that, tu:hm any other issues: uh
02           besides that you wanna discuss today?
03 —> PAT:   Uhm (.) dry skin.
04           (0.3)
05    PAT:   [(    )- I] think (.) it's (.) you know I've only lived in
06    DOC:   [(     )  ]
07    PAT:   California for ten months…
```

The physician grammatically formats his question (with "any") to prefer a "no"-type answer. However, unlike Extract 4 (shown earlier), the patient's answer includes neither a headshake nor a verbal "no"-type answer. The patient aligns with the action performed by the physician's agenda-setting question by presenting an additional concern (i.e., dry skin).

Regression analysis further undermines the "polarity" hypothesis. A logistic regression indicates that the grammatical formatting of physicians' questions (i.e., "some" vs. "any") is not significantly associated with the presence of headshakes in patients' answers (Table 3). What is significantly negatively associated with headshakes is whether or not patients answer by presenting additional concerns: If patients do present additional concerns, they do not tend to shake their heads. In sum, the puzzle is not adequately explained by grammar-based preference constraints involving negative polarization instantiated by the "any" form of physicians' questions.

Table 3. Variables associated with patients' lateral headshakes during answers (N = 144).

Variables	Odds Ratio	Std. Error	Z	p	CI
Some (0); Any (1)[1]	.89	.36	−0.29	.769	0.40–1.96
Concern presented (0 = no)[2]	.09	.04	−6.00	.000	0.04–0.19

[1]Did the physician format his or her question with "some" or "any"?
[2]Did the patient present an additional concern?

Unsuccessful solution 2: headshakes and/or "no" are responsive to "problem" formulations. At least since Benjamin Whorf, research has argued that how persons, places, and things are referred to, or *formulated*, influences how they are understood (for review, see Enfield, 2013; Gumperz & Levinson, 1996). In Extract 4 (shown earlier), the physician begins his question by asking the patient if she has "<any> (.) <other> (.) thi:ng" (line 2) to discuss. Here, the physician refers to, or formulates, an additional concern as a "thi:ng". The physician initially completes his question after "discuss" (line 3). When the patient does not answer, which becomes especially evident in the micropause, "(.)" (line 3), the physician pursues her answer by re-asking the question: "any other problem you wanna discuss with me" (lines 3–4). When doing so, the physician shifts from the nominally neutral formulation "thi:ng" to that of "problem," which arguably connotes medical problems to be diagnosed. This "problem" formulation runs at odds with the patient's actual additional concern, which is not such a medical problem, but rather a question about lab results.

Thus, a second possible solution to the puzzle is: During up-front agenda setting questions, when physicians formulate additional concerns in ways that connote diagnosable medical problems (e.g., as "problems" as opposed to "issues"), and when patients have additional concerns to present that are not diagnosable medical problems, per se, then patients initially respond with nonvocal or verbal "no"-type answers in order to reject the presence of such problems, and then go on to present other concerns.

This second solution is further supported by cases like Extract 7. In response to the physician's solicitation of "problems," "are there some other problems that we need duh discuss on today's visit?" (lines 2–3), the patient answers by shaking her head (lines 4–5), saying "No:" (line 5), and then presenting an additional concern that is not a diagnosable medical problem.

Extract 7 [MC:2:10]

```
01    DOC:   You know I understand that you're in for a
02           co:ld, (.) but there are s- are there some other
03           problems that we need duh discuss on today's visit?
04 —>        *(0.4) ((computer timed at 658 milliseconds))
05 —> PAT:   No*: = I thought I was in for a (b)- (0.4) blood
06           pressure (.) check. (0.3) Bu[t I  ]
07    DOC:                               [Oh.] And you have a cold.
```

The patient works to design her multi-unit response as a single answer. That is, although the patient's "No:" (line 5)—which is a type-conforming answer (Raymond, 2003)—is a possibly complete answer (at least syntactically and pragmatically; Ford & Thompson, 1996), and thus a place where it is relevant for the physician to speak next (Sacks et al., 1974), the patient uses intonation to project that she is not complete (Local & Walker, 2012). Specifically, as in Extract 5 (shown earlier), the patient produces "No:" with level (vs. rising or falling), stretched intonation (symbolized in the transcript by the colon), which projects more talk (Wennerstrom & Siegel, 2003), and then "blends" (symbolized in the transcript by the equals sign) the sound of the "No:" into the start of her new unit, effectively erasing any gap or "transition space" between

the "No" and the sentence that follows (Schegloff, 1988). The patient goes on to request a blood pressure check to monitor her chronic hypertension, which is not a diagnosable medical problem: "I thought I was in for a (b)- (0.4) blood pressure (.) check." (lines 5–6). Note that, unlike in Extract 3 (shown earlier), the patient does not frame her additional concern as a correction of her prior [headshake + "no"].

Despite cases like Extracts 4 and 7 (shown earlier), this second solution involving how physicians formulate concerns (e.g., as "problems") does not hold up in the face of numerous cases like Extract 8:

Extract 8 [MC:12:07]

```
01    DOC:    Okay. (.) .hh u- uhm I'll addre:ss this a l:ittle
02            bit f:urther but are there (0.2) some other issues
03            that you'd like me: .h a:lso (.) tuh cover
04            tuhda[y.    ]
05    PAT:       [*.h] I just wanna get my* prescription for r-
06            uhm amitriptyline refilled. wh[ile I'm here.]
07    DOC:                                   [Okay.        ]
```

The physician's question is designed—with "some" (line 2) and "a:lso" (line 3)—to strongly prefer the presentation of a concern. Furthermore, and most importantly for the present argument, the physician formulates concerns as "issues" (line 2), which is arguably neutral in terms of the types of concerns it connotes. Yet the patient nonetheless shakes her head as she begins to present another concern, in this case a request for a prescription for her chronic depression: "I just wanna get my prescription for r- uhm amitriptyline refilled." (lines 5–6). (For similar cases, see Extract 5, shown earlier, as well as Extracts 11–13, all analyzed in the following).

Extract 8's status as counterevidence to the "formulation solution" hinges, in part, on the idea that the physician's use of the term "problem" is understood as referring to diagnosable medical problems, per se, while other terms, such as "issue," are understood as more inclusive of other types of concerns. These conjectures are supported by Extracts 9 and 10. Extract 9 provides evidence from the perspective of physicians. Here, the physician begins her question by formulating additional concerns as 'stuff': "Is there any other stuff-" (lines 1–2). However, she cuts herself off after "stuff-" (symbolized in the transcript by the hyphen), projecting its repair (Schegloff, 1979), and then does so by replacing "stuff" with the term "medical problems": "any other medical problems you wan'ed duh talk about (.) >today.<" (lines 2–3).

Extract 9 [MC:16:06]

```
01    DOC:    Before we get goin' on all tha:t (.) is there any other
02 —>         stuff- (0.2) any other medical problems you wan'ed duh
03            talk abou[t (.) >tod]ay.<
04    PAT:             [Mm mm.]
```

Here, the physician orients to the existence of different terms for referring to additional concerns (i.e., "stuff" vs. "medical problems"). As is normal in reference-recalibration repairs (Lerner, Bolden, Hepburn, & Mandelbaum, 2012), the physician narrows, rather than broadens, the original formulation. Doing so is a practice for increasing the formulation's "situated relevance for the task at hand" (Lerner et al., 2012, p. 208). Thus, compared to the more general term "stuff," the

physician orients to that of "medical problems" as being "more attuned to the actions, attributes, and setting depicted in the talk" (Lerner et al., 2012, p. 198).

Extract 10 provides evidence from the perspective of patients. Here, the physician formulates additional concerns as "issues" (line 1), and the patient explicitly orients to this term as being relatively nonspecific (line 5–6):

Extract 10 [MC:06:05]

```
01    DOC:    Are there some (.) other issues you('d) like to discu:ss?
02            (0.7) ((computer timed at 1,028 milliseconds))
03    PAT:    Uh:(m) (0.3) *No.*
04            (.)
05 —> PAT:    I'm (1.0) doing fi:ne otherwise. I mean (0.2) physically,
06 —>         mentally, emotionally, = er:
07            (0.2)
08    DOC:    (i)- All of thee- any [of the  ]
09    PAT:                          [Hih hih] hih A(h)ll of the abo:ve?
```

After answering with "No." (line 3) while shaking his head (line 3), the patient initiates repair (Schegloff, Jefferson, & Sacks, 1977) on the physician's solicitation with "I mean (0.2) physically, mentally, emotionally, = er:" (lines 5–6). With "I mean" (Schegloff, 1997a), the patient explicitly seeks to clarify the "meaning" of the term "issues," which he orients to as potentially comprising a relatively large and general category of possibilities, including physical, mental, and emotional concerns. At line 8, the physician affirms that her solicitation was indeed general. In sum, the puzzle is also not adequately explained by constraints involving how physicians formulate concerns. That is, regardless of whether physicians formulate concerns as "medical problems" or more general "stuff" or "issues," patients can still be found to respond in apparently inconsistent ways by first producing "no"-type answers and then proceeding to present additional concerns.

A successful solution to the puzzle: the action of up-front agenda setting questions

Thus far, when patients presented additional concerns and did not respond with "no"-type answers, these concerns involved what the National Ambulatory Medical Care Survey (NAMCS, 2010) classifies as "new problems," such as dry skin (Extract 6, earlier) and migraine headaches (Extract 3, earlier, where it will be recalled that the patient "retracted" her headshake, correcting her response from a "no"-type answer to the presentation of a concern). By "new," the NAMCS refers to concerns with an onset of less than 3 months, and thus concerns that are either totally new or "new since last visit." By "problem," the NAMCS refers to medical conditions in need of diagnosis. Visit communication confirms that the patients in Extracts 3 and 6 (earlier) all have established relationships with the physicians, and that both physicians and patients orient to patients' additional concerns as being "new." On the other hand, when patients did respond with "no"-type answers and then continued to present additional concerns, these concerns involved what the NAMCS classifies as "non-new problems," which include ongoing, previously diagnosed concerns, such as monitoring lab results for chronic migraines (Extract 4), getting a routine blood test

related to statin medication being taken for high cholesterol (Extract 5), getting a routine blood-pressure check for chronic hypertension (Extract 7), and refilling a prescription for chronic depression (Extract 8). Again, visit communication confirms that these patients all have established relationships with the physicians, and that both physicians and patients orient to patients' additional concerns as being "non-new."

The puzzle being addressed is: In response to physicians' agenda-setting questions, why would patients respond by producing "no"-type answers—which appear to claim "I do not have additional concerns"—and then proceed to present additional concerns? One apparently successful solution (i.e., one that reconciles all previous cases) is that patients treat physicians' up-front agenda setting questions—regardless of how physicians formulate additional concerns, such as "problems," "things," "concerns," "issues," "stuff," and so on—as inviting responses in terms of "new problems." With initial "no"-type answers, patients are claiming to not have additional "new" problems, even though they may go on to describe "non-new problems." In this way, patients treat their "non-new problems" as inappropriate responses to agenda-setting questions, that is, as answers that depart from the types of concerns that physicians" agenda-setting questions invite (i.e., "new problems').

We have already seen initial support for this argument from physicians' perspectives. That is, in Extract 9 (earlier), the physician repaired her formulation from "stuff" to "medical problems," orienting to her agenda-setting question as relevantly and normatively (Drew, Walker, & Ogden, 2012) being about soliciting "medical problems," per se, as opposed to more general "stuff." The following four examples provide additional evidence that patients treat physicians' up-front agenda-setting questions, regardless of how physicians formulate additional concerns, as normatively inviting "new problems," and that patients treat "non-new problems" (e.g., those involving chronic care, medication, counseling, etc.) as being dispreferred, inappropriate, or even accountable responses.

For a first example, see Extract 11. The physician designs his question with the positive-polarity item "some" (line 1) so as to grammatically prefer the presentation of a concern, and uses the neutral formulation "issues" (line 1) (Thus, neither the grammar nor formulation explanations can be used to solve the puzzle.)

Extract 11: [MC:13:09] 807

```
01   DOC:   .hhh Are there some other issues you'd like to
02           discuss?
03           (0.4) ((computer timed at 624 milliseconds))
04   PAT:   *Mm: [no*:,
05   DOC:        [((begins to back chair up for computer use))
06           (0.8)
07   DOC:   <O > k[ay,]
08   PAT:        [I: ] nee- do need thuh: this one. (right)?
09           (0.2)
10   PAT:   A: referr:al, (0.2) er ay [uh >prescription<] refill.
11   DOC:                            [<Okay,>           ]
```

Given the preference organization of the physician's question (just shown), the patient designs a canonical, dispreferred, "no"-type answer; Specifically, the patient pauses for 624 milliseconds, which is a noticeably long delay prior to

answering (Kendrick & Torreira, 2015; Roberts & Francis, 2013; Stivers et al., 2009), and further delays her answer with "Mm:" (line 4; Schegloff, 2007). As projected, the patient initially answers by shaking her head while saying: "Mm: no:," (line 4). After the patient produces "Mm:" but before she produces "no:," the physician begins to back his chair away from the patient in preparation for using the computer, and thus for beginning a new medical activity, specifically history taking (line 5; see Robinson & Stivers, 2001). In doing so, the physician displays his understanding of the patient's head-shake as a "no"-type answer. The physician goes on to produce "<O>kay," (line 7), which simultaneously acknowledges the patient's answer and proposes a shift to a new activity (Beach, 1995). The focus is on the fact that before the physician completes "<O>kay,"—that is, after the "<O>k…" of "<O>kay," (symbolized in the transcript by the left-facing bracket)—the patient interruptively and preemptively nominates another concern, in this case a "non-new problem," that being a request for a prescription refill (lines 7–9). Here, at a very late stage in her response, the patient specifically works to add a "non-new problem" onto her prior answer, treating it as "above and beyond" the domain of concerns made relevant by the physician's agenda-setting question. The patient's interruption, as well as her self correction of "I: nee-" (symbolized in the transcript by the hyphen; line 8) in order to insert "do" to "do need" (Schegloff, 1979), is evidence of her orientation to the presentation of her additional concern as being accountable relative to her prior "no"-type answer.

A second example is in Extract 5 (shown earlier). The physician designs his question with the positive-polarity item "some" (line 2) so as to grammatically prefer the presentation of a concern, and uses the neutral formulation "issues" (lines 1–2). (Thus, neither the grammar nor formulation explanations can be used to solve the puzzle.) The patient designs a canonical dispreferred answer. Specifically, the patient withholds an answer when the physician initially completes her solicitation, "<are there some other> issue:s you like tuh discuss today" (lines 2–3), and then, even after the physician incrementally extends (Ford et al., 2002; Schegloff, 2001) her solicitation with, "besides thuh shoulder pain" (line 3), the patient delays her answer with a micropause "(.)" (line 4) and a tongue-click (".tch") (line 5), which together span 569 milliseconds. As projected, the patient answers with "No:" (line 5). As noted earlier, the patient specifically works—through her use of level intonation, vowel stretching, and sound "blending" at the end of "No:"—to "buy" more talk. She goes on to present a "non-new" problem, that is, to request a routine blood test related to statin medication being taken for high cholesterol. As in previous extracts, the patient treats this concern as being "above and beyond" the domain of concerns made relevant by the agenda-setting question.

In Extracts 11 and 5 (shown earlier), patients' "non-new problems" have involved classically chronic concerns (i.e., hypertension and high cholesterol, respectively). However, it is worth noting that patients' "non-new problems" can also involve other types of concerns, such as the need for weight-related counseling (Extract 12, shown next), and following up on a previously diagnosed and treated "new problem" (Extract

13, in the following). In Extract 12, the physician designs her question with the positive-polarity item "some" (line 2) so as to grammatically prefer the presentation of a concern, and uses the neutral formulation "<iss>ues" (line 2) (thus, neither the grammar nor formulation explanations can be used to solve the puzzle).

Extract 12 [MC:08:11]

```
01    DOC:    Uh::m (.) so before we address that, are there
02            some (.) other <iss>ues you wanna talk (.) tuh
03            me about (0.2) bes*ides not (0.2)* feeling
04            nor- (.) *mal.
05    PAT:    My* wei:ght. that's like (.) thuh biggest concern
06            i've had for thuh longe:st,
07    DOC:    Okay so weight is another i:ssue.
```

In this case, the patient enacts two distinct headshakes. The physician initially grammatically and pragmatically completes her question after "are there some (.) other <iss>ues you wanna talk (.) tuh me about" (lines 1–3). After delaying 0.2 seconds, and after the physician begins to incrementally extend her solicitation with "bes…" (line 3), the patient shakes her head for the first time (line 3). The patient shakes her head again as the physician recompletes her question (the second headshake begins across the physician's "mal." at line 4 and ends after the patient's "My" at line 5). As demonstrated previously, the patient's headshakes embody "no"-type answers. At line 5, while shaking her head through "My" (line 5), the patient presents a "non-new problem" involving reseeking advice for how to lose weight: "My wei:ght." (Visit communication confirms that the patient and physician have an established relationship, and that the physician had previously prescribed weight-loss medication.) The patient then accounts (i.e., provides a justification) for topicalizing her weight as a concern in terms of its salience as a chronic/ongoing concern: "that's like (.) thuh biggest concern i've had for thuh longe:st" (lines 5–6).

In Extract 13, the physician designs her question with the positive-polarity item "some" (line 1) so as to grammatically prefer the presentation of a concern, and uses the neutral formulation "issues" (line 1) (thus, neither the grammar nor formulation explanations can be used to solve the puzzle).

Extract 13 [MC:6:06]

```
01    DOC:    O:kay. and- (.) are there some (.) other issues? =
02    PAT:    = .h [Uh: *just] still thuh numbness:,* uh:m I'm- (.)
03    DOC:        [(Also,)  ]
04    PAT:    I still have that,
```

After audibly breathing in, ".h" (line 2), and vocalizing "Uh:" (line 2), the patient answers by simultaneously shaking her head (line 2), which embodies a "no"-type answer, and presenting a "non-new problem," "just still thuh numbness:," (line 2), which involves following up on a back condition (i.e., a pinched nerve) for which she was previously diagnosed and treated by the physician. The patient orients to this concern as being accountable by minimizing it (and the request for service it enacts) with "just" (line 2; Grant, 2011; Lindemann & Mauranen, 2001).

Accounting for how patients understand physicians' questions as implicating "new problems"

How do patients come to understand physicians' up-front agenda-setting questions as essentially making relevant "new problems"? In answering this question, it is important to note that "non-new problems" can involve purely biomedical concerns, such as numbness from an ongoing back problem. Furthermore, "new problems" can involve psychosocial concerns, such as when depression is raised for a first time as a chief concern. Thus, the patterns in the data cannot be explained in terms of the tyranny of Engel's (1977) biomedical model prioritizing biomedical concerns over psychosocial concerns. If this were the case, for example, we would not expect the patient in Extract 13 (shown earlier) to orient to her purely biomedical concern (i.e., lingering numbness from a previously diagnosed and treated back condition) as being accountable, yet she does, arguably because it is a "non-new problem."

We argue that there is a much more local, sequential explanation. In all of our data, as in the bulk of primary care, physicians begin visits by soliciting patients' chief concerns. For example, return to Extract 8, reproduced here as Extract 8' because it includes the physician's opening solicitation of the patient's chief complaint (lines 1–3).

Extract 8' [MC:06:05]

```
01    DOC:    How can I help you toda[y.]
02    PAT:                          [.h]hh Well I've been having
03            problems with: uh:m .mtch my: (.) digestion.
              .
              ((Presents digestion problem))
              .
04    DOC:    Okay. (.) .hh u- uhm I'll addre:ss this a l:ittle
05            bit f:urther but are there (0.2) some other issues
06            that you'd like me: .h a:lso (.) tuh cover
07            tuhda[y. ]
08    PAT:         [*.h] I just wanna get my* prescription for r-
09            uhm amitriptyline refilled. wh[ile I'm here.]
10    DOC:                                  [Okay.       ]
```

Prior research has demonstrated that many turn formats that physicians use to solicit patients' chief complaints, such as the physician's "How can I help you today" (line 1), are understood as soliciting "new problems," as evidenced by the patient's response: "I've been having problems with: uh:m . mtch my: (.) digestion" (lines 2–3; Heritage & Robinson, 2006; Robinson, 2003, 2006; Robinson & Heritage, 2005). The physician asks his up-front agenda-setting question immediately after the patient presents her digestion problem (which is elided in the preceding extract).

The physician's "Okay" (line 4) proposes to close down the phase of problem presentation and transition to a new matter (Beach, 1995). When the physician says "I'll addre:ss this a l:ittle bit f:urther" (lines 4–5), he is referring (with "this") to the patient's chief complaint, which was a "new problem." So, although the physician's up-front agenda setting question is polarized toward a "yes"-type answer with the word "some," and although the doctor neutrally formulates concerns with "issues," the question is nonetheless immediately adjacent to his solicitation of, and to the patient's presentation of, a "new problem." Thus, by virtue of contiguous sequential positioning (Sacks, 1987; Schegloff, 2007), the question is prone to

being understood as referring to other "new problems" (note that the relationship between sequential contiguity and action ascription cuts to the heart of conversation-analytic theory; Heritage, 2008). In addition to simple contiguity, it is common for physicians to explicitly "tie" up-front agenda setting questions to patients' presentations of their chief complaints that were "new problems." For example, in Extract 1 (shown earlier), the physician begins with a summary of the patient's chief complaint that is a "new problem," "You know I know that you have (.) thuh diarrhea an' thuh runny no:se," (lines 1–2), and then solicits "other" concerns: "are there some other issues that you need duh discuss during your visit " (line 2) (for similar cases, see Extracts 4, 5, 7, 8, 9, and 12, in the preceding). In sum, physicians' up-front agenda setting questions can be understood as soliciting "new problems" because such questions are sequentially positioned adjacent to—and sometimes explicitly "tied" to—the solicitation and presentation of "new problems."

Discussion

As reviewed in the introduction, patients tend to bring more than one distinct concern to primary-care visits, and the incidence of patients leaving visits with "unmet" concerns (i.e., ones not addressed during visits) potentially negatively affects health care outcomes and utilization. The state-of-the-art communication skill for soliciting the full range of patients' concerns is known as *up-front agenda setting* (Brock et al., 2011; Krupat et al., 2006; Marvel et al., 1999; Wissow et al., 2011). For example, after soliciting patients' chief concerns, physicians can be trained to ask questions such as "Are there some other issues you'd like to address today?" (Heritage et al., 2007). Although this skill is already moderately efficacious, it can stand to be improved (Heritage et al., 2007), and toward this goal, the current article identifies one of its weaknesses. Specifically, patients understand physicians' up-front agenda setting questions as making relevant what the National Ambulatory Medical Care Survey (NAMCS, 2010) classifies as "new problems," at the possible expense of "non-new problems," which patients orient to as being accountable answers. This accountability was evident in the management of "non-new concerns" within patients' responsive turns. That is, relative to the possible completion of physicians' solicitations, patients delayed "non-new concerns," most notably by initially producing "no"-type answers, including headshakes either singly or in combination with verbal, type-conforming (Raymond, 2003) rejections (e.g., *No, Nope, Mm mm*). We argued that these "no"-type answers were designed to respond to physicians' solicitations as ones for "new problems." Additionally, patients engaged in various practices (involving, e.g., interruption, prosody, pace, etc.) for securing additional units of talk in which to present "non-new concerns," and also sometimes explicitly accounted for their production, such as by minimizing or justifying them.

According to the National Ambulatory Medical Care Survey (NAMCS, 2010), every year in the United States, there are more than 1 billion primary-care office visits. Only half of the top 20 reasons why patients visit primary-care physicians involve "new problems" (e.g., new incidences of

cough, knee symptoms, stomach and abdominal pain, throat symptoms, back symptoms, ear ache/infection, skin rash, shoulder symptoms, and visual dysfunctions) (NAMCS, 2010). The other half of these top 20 reasons that drive patients to primary care involve "non-new problems." In our data, "non-new problems" included chronic-care concerns, such as dealing with recurrent migraines (Extract 4) and hypertension (Extract 7). Note that, according to the NAMCS, the number one reason why patients visit primary-care physicians is "progress visit (not otherwise specified)," which subsumes a lot of chronic care. The top 13th and 16th reasons why patients visit primary-care physicians involve diabetes mellitus and hypertension, respectively. Other "non-new problems" in our data included requests for prescription refills (Extracts 8 and 11) and requests for advice about managing weight (Extract 12). This is noteworthy because the top 5th and 12th reasons why patients visit primary-care physicians include "medication visit" and "counseling visit," respectively. Our findings suggest that physicians' up-front agenda setting questions unintentionally bias patients' answers toward "new-problems" and away from "non-new problems," putting the latter at risk of remaining unaddressed during visits. Our findings may help to explain why up-front agenda setting still fails to expose 22% (or more) of patients' unmet concerns (Heritage et al., 2007).

There is at least one caveat to our findings. Although we provided evidence that the social action implemented by physicians' agenda-setting questions at least partially explains why patients might be discouraged from presenting "non-new problems," there are other possible explanatory variables that are beyond the scope of this investigation. For example, patients may differ in the extent to which they feel entitled to present multiple concerns in a single visit. These factors remain to be explored in more extensive cross-sectional analyses and interventions (Robinson & Heritage, 2014).

Assuming that our findings are valid, the question remains as to how the communication skill of up-front agenda setting might be redesigned so as to better optimize its success in reducing the incidence of patients' unmet concerns. We provided a local, sequential explanation for our findings, which was that physicians' up-front agenda-setting questions are understood as soliciting "new problems" because such questions are sequentially positioned adjacent to—and sometimes explicitly "tied" to—the solicitation and presentation of "new problems." One solution, then, involves somehow dissociating agenda-setting questions—which commonly follow the activity of problem presentation—from new-problem-implicative prior talk, its action, and the activity it participates in. Alternatively, prior to the activity of problem presentation, physicians might be trained to engage in agenda setting as a first order of business (i.e., prior to soliciting patients' chief complaints, so as to avoid "activity contamination"; Whalen, Zimmerman, & Whalen, 1988). That is, physicians might begin by soliciting a comprehensive list of patients' goals for visits, where such goals are formulated so as to not bias answers away from "non-new problems." For example, physicians might begin with a statement such as, "Before we start, I'd like to make a list of everything you want to get accomplished during this visit." How these solutions might be

designed and implemented, and whether or not they would be effective, are subjects of future research.

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