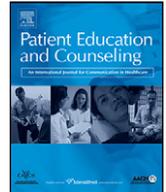




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## The interaction order and clinical practice: Some observations on dysfunctions and action steps

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### ABSTRACT

**Objective:** This paper examines three dysfunctional communication processes in the primary care consultation using conversation analysis theory and methods: dysfunctions in problem presentation, medical questioning that limits the expression of additional concerns, and the emergence of discordance between physicians and patients in the context of treatment recommendations.

**Results:** It is proposed that these dysfunctions arise from the transfer of normative conventions that function well in the practice of ordinary conversation into medical contexts where they serve to limit the effectiveness of communication. Because these conventions are rooted in, and reinforced by, the activities of daily life, they may be difficult to eradicate from the medical visit.

**Practice implications:** Reduction of these dysfunctional practices is most likely to emerge when physicians recognize the nature of these dysfunctional practices and their roots in everyday social life. Recognition of these practices together with their functions and dysfunctions may hold a solid prospect for improvements in medical communication.

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### 1. Introduction

This paper presents a conversation analytic (CA) view of some well-known forms of dysfunctional communication in the primary care medical visit. A CA perspective involves both specific turn-by-turn analyses of interaction sequences, and interpretations based on extensive knowledge both of the conversational practices that underlie them and the role that these practices play in ordinary conversation. The paper begins with some background on the CA perspective, followed by the examination of three exemplary types of communication dysfunction: (i) problem presentation and the nature of conversational 'news' delivery; (ii) physician questioning that limits the expression of patient problems and conversational norms of optimization and relevance that influence this questioning; and (iii) the emergence of discordance between physicians and patients over treatment plans in the context of processes of activity contamination.

#### 1.1. Background

In his Presidential Address to the American Sociological Association, Goffman [1] presented the view that the domain of face-to-face interaction can be construed as a social institution

and, hence, as a site of systematic sociological inquiry. Goffman termed this domain 'the interaction order' and the main burden of his Address commented on the relationship between this order and other social institutions and elements of social organization. Many of his comments are of considerable significance for the study of communication in medicine. For example, there is, as he put it, the obvious fact that

a great deal of the work of organizations – decision making, the transmission of information, the close coordination of physical tasks – is done face-to-face, requires being done this way, and is vulnerable to face-to-face effects. Differently put, insofar as agents of social organizations of any scale from states to households, can be persuaded, cajoled, flattered, intimidated, or otherwise influenced by effects only achievable in face-to-face dealings, then here, too, the interaction order bluntly impinges on macroscopic entities [1].

This statement could hardly be more cogent for students of medical practice. Yet, as a sociologist, Goffman offered a distinctive institutional perspective on the world of face-to-face interaction. His construal proposed a 'syntax' of social conventions that has evolved to manage the enablements and risks of co-presence [1,2]. In particular, Goffman strenuously resisted the idea that the interaction order is a colorless and frictionless medium, permitting analytics drawn "directly and simply from chi-squaredness" that merely mark "the geometric intersection of actors making talk and

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actors bearing particular social attributes” [3]. Missing from this is the dense array of understandings, normative conventions and inferential procedures that inform interactions between specific persons in particular situational contexts.

This point of view was adopted by Goffman’s students Harvey Sacks and Emanuel Schegloff, who were the founders of conversation analysis [4]. Schegloff characterizes conversation as ‘the primordial site of human sociality,’ and echoes Goffman’s observation that it mediates the operation of all human institutions [5]. It may be added that conversation also antedates those institutions in the development of societies (clearly conversation existed before law courts or medical consultations), and it is the primary means of socialization in the lives of individuals – we listen to talk and learn its practices in a pervasively conversational environment. The practices of human conversational interaction, then, are deeply embedded in our history and ontogeny as a species [6,7], and are profoundly ingrained in the ontogenesis of our lives as individuals. These practices, however, were not developed for the purpose of medical conversations. They are, rather, directed to fundamental issues in the management of human communication and social relations, including such issues as identifying and distributing the units of talk that make up turns in conversation, making reference to objects, persons and places, locating and fixing problems in speaking, hearing and understanding talk, regulating information management and epistemic rights in interaction, managing social solidarity and affiliation in social relationships, and so on. These practices are a significant part of our human *habitus*. We unavoidably carry them with us into every and all social situations, including those in which we enact the roles of physician and patient.

It is the thesis of this paper that interactional practices developed for ordinary conversational contexts can have dysfunctional consequences when they are unreflectingly implemented within the medical visit. In what follows I will offer three illustrations of dysfunctional communication choices made by clinicians and patients that have their roots in the ordinary interactional practices of quotidian life. These focus on (i) practices and norms for news delivery, (ii) the design of yes/no (or polar) questions, and (iii) ‘activity contamination’ in the presentation of information.

## 2. Problem presentation and the norms of news delivery

A fundamental norm for information transmission is that speakers should not tell others what they already know [8,9], thereby casting them – inappropriately – as ignorant or uninformed. This norm is pervasively and quite relentlessly enforced, as in the following exchange between two friends in which Shirley tells her friend Geri about the health status of a mutual friend (see Appendix A for transcription conventions):

(1)	[Frankel TCI: 211–222]
1	Shi: In any eve::nt?h h h h h That’s not all thet’s ne:w.
2	Ger: W’t e:lse.
3	Shi: .t.h h h h h W’l Wendy’n I hev been rilly having p:roblems.
4	Ger: M-hm,
5	Shi: ((voice becomes confiding)) h h En yesterday I talk’tih
6	→ her. .h h h h A:n’ (0.3) apparenly her m:other is t:terminal.
7	(0.5)
8	Ger: → .tch Yeh but we knew that befo:re.
9	Shi: [.h h h Ri:ght. Well, (.)
10	now I guess it’s offic:ial.
11	Mm-hm.
12	Shi: .t.h h h So she’s very very upset.

Informed that the friend’s mother “is terminal” (line 6) Geri comments on the status of the information as ‘no news’ with “Yeh but we knew that befo:re.” (line 8) and, in turn, Shirley defends

herself with the claim that “Well, (.) now I guess it’s offic:ial.” (lines 9–10).

This norm of news delivery is important enough for specific sequential practices to be dedicated to its management. One of the most important of these is the preannouncement sequence [9]. In this sequence, an initial pre-announcement prefigures the valence of an upcoming announcement (as good or bad news) and as of recent origin, as in the first two lines of (2):

(2)	[Terasaki 2004: 176]
1	Ron: I fergot t’tell y’the two best things that
2	happen’tuh me t’day.
3	Bea: Oh super. =What were they
4	Ron: I gotta B plus on my math test,
5	Bea: On yer final?
6	Ron: Uh huh?
7	Bea: Oh that’s wonderf:ul
8	Ron: And I got athlet:ic award.
9	Rea: REALLY?
10	Ron: Uh huh. From Sports Club.
11	Bea: Oh that’s terrific Ronald.

This sequence allows the recipient, Bea, to align as an unknowing recipient to putatively good news (line 3) and invite its delivery. Ron can now proceed with his news with the safe assurance that what he has to say is truly news (line 4 et seq.). The significance of the sequence is underscored by cases such as the following. In (3) A and B are a couple visiting another couple C and D. At line 1, A preannounces ‘good news’ on behalf of himself and his wife:

(3)	[Terasaki 2004: 189]
1	A: Hey we got good news.
2	C: [What’s the good news,
3	D: [I k n o: w.
4	(.)
5	A: [Oh ya do::?
6	B: [Ya heard it?
7	A: Oh good.
8	C: Oh yeah, mm hm
9	D: Except I don’t know what a giant follicular
10	lymphoblastoma is.
11	A: Who the hell does except a doctor.

Here, while C – one member of the other couple – invites the projected news delivery, the other (D) indicates that it is already known (line 3). Subsequently, both A and B – the couple with the news to tell – focus on D’s knowledgeable status rather than going ahead with the news as invited by C (lines 5 and 6), and the news delivery is subsequently aborted.

While this simple norm, and the conversational practices devoted to complying with it, may seem distant from the medical encounter, this is not in fact the case. In American medical visits, patients ordinarily present their reason(s) for the visit twice: first in an initial conversation with a medical assistant who takes the patient’s vital signs and enters them, together with the presenting concern(s) into the patient’s chart, and second in the medical consultation with the doctor [10]. With this in mind, consider the ‘information situation’ just before the patient presents her concern(s) at the beginning of the medical visit. First from the patient’s point of view:

- (i) The patient has conveyed her presenting concern to the MA and seen that it was written into her chart. When asked the reason for the visit, the patient may experience discomfort because “the doctor already knows why she’s there.”

Moreover, from the doctor’s point of view:

- (ii) The doctor knows the patient’s reason for the visit from the chart. She may be reluctant to ask for it again, either because it

might appear that she had not read the chart and hence that the conversation with the medical assistant was pointless, or because she “shouldn’t ask the patient to repeat information that she already knows.”

In case this claim is thought to be fanciful, consider the following:

---

(4)	[P3:51:07]
1	DOC: .hhhhhhh A::lrihty. (.) m = well they were
2	talkin'- (0.2) thuh n̄urses told me a little
3	bit about [your (.) pr̄o:blem,
4	PAT: [Yeah.
5	(.)
6	DOC: .hhh Doesn't sound like fun.
7	PAT: N̄g:.
8	DOC: .hhhhhhhhh (d)- Is 'is something you had
9	befo:re? = [or is it bran' new [pr̄oblem
10	PAT: [No [J'st some:thin'
11	PAT: n̄g:w.
12	DOC: Hm: (0.2) .mtch = .h tell me a little bit more
13	about it.they wrote d̄own [a couple a n̄otes but uh
14	PAT: [n = 'K̄ay.
15	PAT: We:ll, (.) 't started like Wednesday. I started
16	like F- f̄eeling a p̄ull in my n̄e:ck = h
17	DOC: Mm hm,

---

Here the doctor begins by acknowledging that he is somewhat informed about the patient’s concern, but his reference to being told “a little bit” (lines 2–3) is not sufficient to tempt the patient to add more information. Moreover neither of his subsequent prompts at lines 6 and 8–9 are successful in attracting more than minimal responses. It is only after the doctor’s open request to the patient at lines 12–13, coupled with a more explicit acknowledgment of the limits of his information, that the patient begins a narrative of her present concern (line 15 et seq). In this case, it is clear that the behavior of both doctor and patient is guided by our norm: the doctor is apparently concerned to avoid asking for the patient’s concern ‘for another first time’ by acknowledging the partial information he has received from the medical assistant, the patient is reluctant to elaborate, until she is assured (at lines 12–13) that what she has to say will be news for the physician.

If our norm only resulted in minor interpersonal discomfort that, as in (4) above), is brief and infrequent, it would not be a matter for great concern. However the norm is more deeply entangled with the institutional arrangements of primary care than this example suggests. In a study of opening questions in 302 primary care visits, Heritage and Robinson [10] found that 30% of physicians’ opening questions made reference to information from the medical assistant either overtly (as in (4) above) or by presupposition. These questions drastically curtailed the length and extent of patient problem presentations. While responses to ‘open’ general inquiries (such as “What can I do for you today?”) had a mean length of 27 s, the mean length of response of the other more information acknowledging questions was a little under 12 s. Here the implementation of a norm from ordinary conversation about the management of new information has a significantly adverse effect on patients’ abilities to present their concerns and, as it turns out, on patient satisfaction with communication in the visit [11]. Given that the opportunity to present medical concerns *in extenso* is associated with favorable health outcomes [12–18], the recommendation here is clear. By *ignoring* the conversational norm, physicians will improve both health outcomes and patient satisfaction. Awareness of the norm, and of the value of ignoring it, will facilitate favorable medical outcomes.

### 3. Question design, optimization and relevance

Yes/no (or polar) questions, by their very nature, present a hypothesis [19] or candidate version of a state of affairs [20] for confirmation. For this reason, it is very difficult to frame polar questions such that they are not tilted to convey an expectation for, or prefer [21], a particular response [22–24]). In consequence physicians, when formulating polar questions, are without a hiding place: they will unavoidably communicate their expectations and beliefs about likely or desirable patient responses.

Given that question design communicates information to patients about physicians’ expectations, are there general principles that inform the design of questions in primary care? Two fundamental principles are discernable. The first is the principle of ‘optimization’ [24–26]. Most obviously manifest in ‘systems review’ and well visits, this principle mandates that in circumstances where the clinician does not anticipate anything amiss, questions depicting favorable socio-medical outcomes should be yes-preferring, while those depicting unfavorable socio-medical outcomes should be no-preferring, as in (5):

---

(5)	[MidWest 3.4]
1	DOC: → Are your bowel movements normal?
2	(4.0) ((patient nods))
3	PAT: °(Yeah.)°
4	(7.0)
5	DOC: Tlk Any ulcers?
6	(0.5) ((patient shakes head))
7	PAT: (Mh) no,
8	(2.5)
9	DOC: → Tl You have your gall bladder?

---

Here the questions about the patient’s bowel movements and gall bladder are grammatically designed to invite ‘yes’ responses, while the question about ulcers (line 5) is designed to invite a ‘no’ response. It does so through the word ‘any’ which has what linguists describe as negative polarity: ‘any’ is concordant and appropriate in statements containing other negatives (such as “I don’t have any samples”), but discordant and inappropriate in positively framed statements (such as “I do have any samples”).

The use of ‘any’ to bias responses towards ‘no’ is evidenced in a study focused on patients with multiple concerns [27]. Physicians were randomized into two interventions in which, after patients had described their presenting concerns, physicians were to ask if they had “any other concerns” or, alternatively, “some other concerns”. Among those patients who had indicated in a pre-visit survey that they had more than one concern to deal with, 90% responded affirmatively with an additional concern to the “some” version of the question, while only 53% responded affirmatively to the “any” version. Significantly, the odds of patients leaving the visit with all their concerns addressed were six times greater for patients in the “some” condition [27].

It is striking that most physicians pursue additional concerns and invite requests for information using the ‘any’ form of polar questions (“Anything else you want to deal with today?”, “Any questions? etc.). Indeed many textbooks of medical interviewing illustrate their recommendation to survey patients’ additional concerns using the ‘any’ form [28–30]. As it turns out, there are strong pressures to select this form arising from practices that are indigenous to ordinary conversation, rather than its primary care counterpart.

To understand these pressures, it is necessary to note that the principle of optimization in medical questioning is counter-balanced by the principle of ‘recipient design’ [31]. According to this principle, questions should be fitted appropriately to the known circumstances of the recipient. For example, it is plainly inappropriate to question a patient presenting with an acute

concern in an optimized fashion. Rather the patient should be questioned in ways that will facilitate the report of relevant symptoms – as in (6), where the patient (an eleven year old girl) presents with ear pain:

(6)	[Heritage and Stivers 1999[32]]
1	DOC: → Which ear's hurting or are <u>both</u> of them hurting.
2	(0.2)
3	GIR: Thuh left one,
4	DOC: °Okay.° This one looks <u>perfect</u> , .hh
5	MO?: (U[h:??])
6	DOC: [An:d thuh right one, <u>also</u> loo:ks, (0.2) even
7	more perfect.
8	GI?: ( )
9	DOC: → Does it hurt when I move your ears like that?
10	(0.5)
11	GIR: No:.
12	DOC: No?,
13	DOC: → .hh Do they hurt right now?
14	(2.0)
15	GIR: Not right <u>now</u> but they were hurting this morning.
16	DOC: → They were hurting this morning?
17	(0.2)
18	DOC: M ka:y,

Here each of the arrowed questions invites a 'yes' response to questions that focus on the patient's presenting concern in a 'problem attentive' fashion [33].

Depending on the circumstances, these two principles can exert conflicting pressures on questioners. These constraints are sometimes visible in the moment-to-moment reformulation of questions. In (7), the mother had previously described how the baby had become stuck for a time in the birth canal:

(7)	[1A1:14]
1	HV: =So you had a- uh:
2	(1.0)
3	→ You didn't- Did you- You didn't have
4	forceps you had a:
5	M: =Oh no:: nothing.

Here the clinician's question oscillates between optimized and problem attentive versions of the method used for the baby's final delivery.

In other circumstances, however, the two principles may cooperate, conducing to the same outcome. This is the case with questions about additional concerns. When the patient has given no indication that additional concerns are on the horizon then, from a recipient design point of view, there are no grounds for aggressively pursuing other concerns. Moreover, it is after all a desirable thing that the patient has no other health concerns and an unexamined inclination towards optimization may conduce to the same outcome. Under these circumstances, a patient who in fact does not have additional concerns (around 60% of primary care visits) may struggle to understand the motivation of an aggressive pursuit of additional concerns, for example, "What other concerns do you have?" Such a patient may conclude that the presenting concern was not sufficient grounds for the visit and physicians, anticipating the possibility of visit delegitimation, may be reluctant to go down this path.

In sum, all polar questions inevitably communicate the questioner's beliefs about likely, expectable or desirable responses. This fundamental visibility of questioners' expectations is institutionalized within the context of the medical visit in the principles of optimization and recipient design. In the context of questions about 'additional concerns,' both these principles collaborate to drive questioners towards the 'any' or 'no problem preferring' version of the question. This collaboration is powerful, but not particularly accessible to consciousness. The collaboration can rapidly sediment into a habitus-based disposition to ask the 'no

preferring' version of the question which, more often than not, will attract the expected 'no' response. In turn, through a small-scale, but pernicious, self-fulfilling prophecy, these responses will offer empirical validation for the use of the 'any' version of the question.

Overcoming the habitual pressures described here requires considerable vigilance on the part of clinicians, especially at the beginning of the learning process, until a new clinical habitus is formed. It is surely valuable to educate clinicians as to where these pressures arise, and the desirable outcomes that can follow from overcoming them.

#### 4. Discordance over treatment recommendations and activity contamination

With the topic of activity contamination we encounter a distinctly less attractive feature of human communication. The term was introduced by Whalen et al. [34] in an analysis of a 911 emergency call in Dallas, Texas that went disastrously wrong. The call, which was placed on behalf of the caller's seriously ill mother, devolved into an argument between the caller and 911 staffers, an ambulance was not dispatched, and the caller's mother died. In activity contamination, a cooperative interaction becomes a dispute organized around a succession of oppositional acts that reject or otherwise counter what came before [35–37]. As part of this process, statements of fact are no longer treated in terms of their truth value, but rather for their positioning as elements of oppositional action within an argumentative structure. In such a context facts, no matter how well grounded, are ignored or actively opposed. These processes were manifestly present in the Dallas call. As Whalen et al. [34] have shown, the caller did say many things that contain information of the sort that call-takers need. Here is a partial list of the caller's information-bearing utterances that focus on the problem itself.

(8)	[Whalen, Zimmerman, and Whalen 1988:341]
	She is having <u>difficult</u> in <u>breathing</u>
	She.. <u>seems</u> like she's incoherent
	Well this is a <u>life</u> threatening <u>emergency</u> .
	[She's <u>dying</u> ]
	[She] can't <u>breathe</u> .
	Sh' <u>having</u> difficult in breathing. She <u>cannot</u> talk,
	She is <u>incohe:rent</u> .
	She can <u>not</u> talk at all

However when these statements are placed within their sequential contexts in the call, a different picture emerges.

(9)		
59	Nrs:	May I speak with her, please.=
60	Clr:	=No you <u>can't</u> , she ca- (can't) (.) <u>seems</u>
61		like she's incoherent.
122	Nrs:	Okay <u>sir</u> , I need to <u>talk</u> to her still
123	Clr:	You <u>ca:n't</u> , she is <u>incohe:rent</u>
89	Sup	Well I'll tell you what.=If you <u>cuss</u> one more time
90		I'm gonna hang up the <u>pho:ne</u> .=
91	Clr	=We- I'll tell <u>you</u> what. What if it was <u>your</u> mother
92		in there and can't <u>breathe</u> . What would <u>you</u> do.

As these extracts clearly show, the information content of the caller's statements are fatally caught up in opposing or rebutting what has previous said by the 911 agents. Thus the first two remarks about the mother's 'incoherence' implement rejections of the agent's request to speak with her. In the third case, the caller's claim that his mother "can't breathe" is embedded within, and subordinated to, a defense against the charge of having cursed.

Of course, activity contamination of this order is surely vanishingly rare in primary care, and yet echoes of it are to be found in the context of disputed treatment recommendations.

(10)	[Stivers 2007: #13 p.150]
1	DOC: I th:ink from what you've told me (0.2) that this is
2	pro:bably .h uh kind of (0.2) v:irus infec[ti]on,
3	DAD: [Uh huh,
4	DOC: (0.4) th:at I don't think antibiotics will ki:ll,
5	(0.2)
6	DAD: → Well-
7	DOC: [Thee other-
8	DAD: [( )
9	DOC: >Go=ahead_<
10	DAD: → Yeah. .hh ( ) I had it- I had thuh symp[toms
11	DOC: [I understand.
12	DAD: → Three weeks ago.
13	DOC: [Right.
14	DAD: → [hh An:d I've been taking thuh over the counter cough
15	→ [( )
16	DOC: [(Good_)
17	DAD: → Uh s- ( ) coughing syrup, Nothing take away .hh
18	→ Especially my sor- my [th- my throat was real=
19	DOC: [Mm hm
20	DAD: → =sore [for (awhile- et- that) w:eeek.
21	DOC: [Uh huh
22	DOC: °Right,°
23	DAD: → an:d (.) I start taking thuh antibiotic (0.5)
24	→ yesterday.
25	DOC: Right,
26	DAD: → And it (.) seemed to take care of the problem.
27	DOC: [(Well) that's why we're doin' a throat [culture.
28	DAD: [( ) [Yeah.
29	DOC: [is TUH SEE if they need antibiotics.
30	DAD [( ) Yeah yeah.
31	(0.2)
32	DOC Cause <I don't th::ink they do.
33	DAD O[kay.
34	DOC: ⇒ [Now if you (.) absolutely insist_ I will give you
35	⇒ antibiotics_ but I don't think that's the right=
36	⇒ medicine for 'em,

In this case, the physician begins by ruling out antibiotics as an appropriate treatment for the child (lines 1–4). Encountering fairly determined resistance from the child's father, the physician retreats to the defense that a throat culture will settle the issue (line 27), and then subsequently concedes that he will prescribe if the parent “absolutely insists” (line 34–5).

This kind of parent resistance to non-antibiotic treatment plans significantly contributes to pediatricians' perceptions that the resistant parents expect antibiotic treatment for their children [38]. In turn, these perceptions are the major factor driving inappropriate antibiotic prescribing [38,39]. Yet, paradoxically, episodes of resistance like that in (10) above are not associated with a pre-existing demand for antibiotics that antedates the actual medical encounter [38]. Instead they are 24% more likely when the physician, as in (10), rules out antibiotics as an appropriate treatment strategy, raising the frequency of parental resistance to the treatment plan from 17% to 41% of encounters [38].

While not as dramatic as the Dallas 911 call, it appears that ruling out antibiotics initiates a process of activity contamination. In an effort to educate parents about appropriate treatment options, physicians may inadvertently establish an adversarial relationship with parents at just the point when cooperation is most desirable [33]. They do so by casting parents as having wanted an antibiotic prescription all along and, in the very same moment, rejecting that treatment preference as inappropriate. Under these circumstances the increased likelihood of physician–parent disputes is perhaps not so surprising.

What is the lesson to be drawn from these observations. It is that because treatment recommendations require parental support [33], they tend to be a moment at which physicians feel accountable for their decisions [40,41]. There is an understandable temptation at this moment to combine justifying a treatment recommendation with patient education about antibiotics and

their inappropriate use in the context of viral infections. However the findings presented here suggest that this is a flammable combination that is generative not only of disputes, but of outcomes – coerced prescribing – which neither party can truly feel is appropriate. Here again, good intentions may lead to a perverse outcome.

## 5. Discussion and conclusion

### 5.1. Discussion

Let me return to my starting point. It is the notion that there is an interaction order – an institutional framework of norms, principles and associated inferential practices – that undergirds the structure and sense-making involved in human social interaction. This order has evolved and become sedimented into the habitus of human societies as a method of regulating social relationships of all kinds ‘in the wild’ [42,43]. It is very stable and ontogenetically ‘early’ in the life of society, and of the individual persons who live therein. It is a resource through which all social institutions are sustained and, beyond and within them, identity, personhood and agency are renewed. The interaction order was not designed for the practice of medicine, the objectives and constraints of which are of very recent origin.

### 5.2. Conclusion

In these observations, I have tried to illustrate some simple ways in which human conduct that is engineered and entrained by deeply habituated patterns of inference and action deriving from the everyday interaction order, can have dysfunctional consequences for medical outcomes and for the doctor–patient relationship. These illustrations exemplify relatively pervasive problems of communication between doctors and patients, though they are unlikely to be the most important of the problems arising from the interaction order. Maynard's [8] discussion of good and bad news delivery is another case in point, as are Jefferson's findings [44,45] that exiting from difficult conversations about troubles ordinarily is accomplished by optimistic projections (“It's bound to turn out OK in the end”), no matter how formulaic. The significance of these observations in understanding the avoidance of end-of-life conversations, which lack such easy exit lines, and the complicity of physicians, patients and families in decisions to take demeaning, redundant and costly ‘heroic measures’, rather than address the core issues head on, is hardly to be doubted.

Some of the patterns of inference and action entrained by the interaction order are relatively simple to overcome; others may require a good deal of serious and sustained effort by educators and professionals to address. However the results of these efforts will likely be rewarding for all concerned, and especially for patients and the clinicians who work to serve them.

### 5.3. Practice implications

Communication dysfunctions in the medical visit that originate in conversational norms and practices from the world of everyday life, may be more effectively countered if clinicians are able to understand their origins as well as to recognize their consequences. Communication training might usefully be adjusted to address this possibility.

## Conflict of interest

There are no conflicts of interest.

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**Appendix A. Transcription conventions**

The typed or printed examples embody an effort to have the spelling of the words roughly indicate how the words were produced. Often this involves a departure from standard orthography. In addition:

?,	<b>Punctuation</b> is designed to capture intonation, not grammar and should be used to describe intonation at the end of a word/ sound at the end of a sentence or some other shorter unit. Use the symbols as follows: Comma is for slightly upward ‘continuing’ intonation; question mark for marked upward intonation; and period for falling intonation.
[	<b>Left-side brackets</b> indicate where overlapping talk begins.
]	<b>Right-side brackets</b> indicate where overlapping talk ends, or marks alignments within a continuing stream of overlapping talk.
(0.8)	<b>Numbers in parentheses</b> indicate periods of silence, in tenths of a second.
:::	<b>Colons</b> indicate a lengthening of the sound just preceding them, proportional to the number of colons.
becau-	<b>A hyphen</b> indicates an abrupt cut-off or self-interruption of the sound in progress indicated by the preceding letter(s) (the example here represents a self-interrupted “because”).
<u>He says</u>	<b>Underlining</b> indicates stress or emphasis.
dr <sup>ˆ</sup> ink	<b>A “hat”</b> or circumflex accent symbol indicates a marked pitch rise.
=	<b>Equal signs</b> (ordinarily at the end of one line and the start of an ensuing one) indicates a “latched” relationship – no silence at all between them.
( )	<b>Empty parentheses</b> indicate talk too obscure to transcribe. Words or letters inside such parentheses indicate the transcriber's best estimate of what is being said.
hhh .hhh	<b>The letter “h”</b> is used to indicate hearable aspiration, its length roughly proportional to the number of “h”s. If preceded by a dot, the aspiration is an in-breath. Aspiration internal to a word is enclosed in parentheses. Otherwise “h”s may indicate anything from ordinary breathing to sighing, laughing, etc.
◦	Talk appearing within <b>degree signs</b> is lower in volume relative to surrounding talk.
((looks))	Words in <b>double parentheses</b> indicate transcriber's comments, not transcriptions.
→	<b>Arrows</b> in the margin point to the lines of transcript relevant to the point being made in the text.

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