

Co-constructing the case: Physicians' responses to parents' "candidate diagnoses" in pediatric acute-care office visits

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Abstract: *Research demonstrates an association between perceived parent pressure to prescribe antibiotics and inappropriate antibiotic prescription by physicians; accordingly, Stivers (2007) sought to determine the sources of these physician perceptions in parents' communicative behavior. Using the methodology of conversation analysis, Stivers examined data drawn from pediatric office visits. She identified two practices, which she labeled 'symptoms only' and 'candidate diagnosis'; in the first, the parent merely described the child's symptoms, while in the second the parent added a possible explanation in the form of a diagnosis. She found that where a parent's 'candidate diagnosis' identifies a condition treatable with antibiotics, pediatricians interpret it as displaying the parent's expectation that antibiotics will be prescribed, even where parents do not intend to convey this expectation. This paper builds on Stivers' research. While Stivers focuses on the source of physicians' perceptions in parents' communicative behavior, I focus on physicians' displayed understandings. I argue that patient or parent pressure, while interactionally triggered, is actually self imposed, and inheres in the responsibilities of the physician role. Through an analysis of physicians' displayed understandings, I show how physicians' orientation to the activity of diagnosing itself exerts pressure that shapes their interpretations of parents' contributions.*

The physician-patient relationship has long been of interest to social scientists, who have examined its social and interactional features from a number of perspectives. Thus a primary focus of the study of medical discourse in the fields of conversation analysis and discourse analysis has been physician-patient interactions in acute-care settings (see, e.g., Heritage & Maynard, 2006; Robinson & Heritage, 2005; Heritage & Stivers, 1999; Gill, 1998; Heath, 1992; Silverman, 1987; Fisher & Todd, 1983; Atkinson & Heath, 1981). Drawing upon theories developed in sociological research (e.g., Parsons, 1975; Freidson, 1970), a number of such studies have

emphasized the asymmetry of these interactions in which the patient is evaluated and the physician is the evaluator, thus constructing the physician as ‘powerful’ and the patient as ‘powerless’ (e.g., Fisher, 1991, 1986; Waitzkin, 1991, 1985; Mishler, 1984; West, 1984; but see Maynard, 1991 for contrary view). However, Stivers (2007), who examines the triadic interactions of pediatric office visits, suggests that, in the context of physician-parent interactions, parents can negotiate a shift of power by exerting pressure on the physician to prescribe antibiotic treatment for their child’s condition.

Research demonstrates an association between perceived parent pressure to prescribe antibiotics and inappropriate antibiotic prescriptions (see, e.g., Mangione-Smith et al., 2006, 1999). Nevertheless, Stivers (2007, 2002a) found that overt requests for antibiotics are rare, and that other, less direct behaviors may be interpreted by physicians as exerting pressure, even where parents do not intend to communicate such pressure. Using the methodology of conversation analysis (see Sacks, Schegloff & Jefferson, 1974), Stivers examined data drawn from audio- and videorecorded acute-care office visits in private pediatric practices, and identified two practices, which she labeled ‘symptoms only’ and ‘candidate diagnosis’ (2007: 25-36). In the first, the parent merely described the child’s symptoms (“She’s developed an itchy rash”), while in the second the parent offered, in addition to the symptoms, a possible explanation in the form of a diagnosis (“He’s fussy and he keeps pulling at his ear, so I thought it might be an ear infection”). Stivers compared pediatricians’ responses to these two types of reports. She found that, while pediatricians treat the ‘symptoms only’ reports as simple requests for medical

evaluation (2007: 36-39), they treat ‘candidate diagnosis’ reports as calling for confirmation or disconfirmation (2007: 39-49). In addition, she found that where a candidate diagnosis identifies a condition treatable with antibiotics (e.g., a bacterial infection), pediatricians treat it as displaying the parent’s expectation that antibiotics will be prescribed (2007:39-49). Yet Stivers also found that candidate diagnoses are infrequent, and are tentatively advanced, thus indicating that parents treat them with some delicacy (Stivers, 2007: 28). This suggests a ‘disconnect’ between what physicians perceive and what parents intend to convey (Stivers, 2007: 10).

This paper builds on Stivers’ research. I argue that patient or parent pressure, while interactionally triggered, is actually self-imposed, and inheres in the responsibilities of the physician role. Through an analysis of physician’s turn-by-turn displayed understandings (Maynard, 2003: 65), I show how physicians’ orientation to the activity of diagnosing *itself* exerts pressure that shapes their interpretations of parents’ contributions.

Background and methodology

Conversation analysis (CA) examines speech as coordinated social action in which the meaning of an utterance derives from its place in an organized sequence of talk (Heritage & Maynard, 2006: 10). Working from detailed transcripts of naturally-occurring interactions, conversation analysts describe the structures and strategies by which speakers perform various types of utterances (Heritage & Maynard, 2006: 10). The key insight of CA is that, because each contribution builds on prior talk, utterances are both context *shaped* and context *shaping* (Heritage &

Maynard, 2006: 10-11; Drew & Heritage 1992: 18); thus meanings are emergent (Tannen & Wallat, 1987: 206) and are locally determined (Heritage & Maynard, 2006: 12).

While CA's theory is grounded in the study of ordinary social interactions, the basic mechanisms that it describes are present in institutional contexts as well. Indeed, institutional settings provide a rich field for the application of CA's methodology, for the predetermined formal structure of institutional interactions yields large numbers of similar examples which may be analyzed to identify the practices by which participants display their orientation to the institutional task at hand. In one sense, CA's imperative that analysis be grounded in the displayed understandings of the participants—that is, in the concrete details of their talk and related nonverbal behaviors—poses no particular problem to the analysis of institutional interactions, for institutional conventions frequently require overt, often highly-stylized, orientations to specific roles, relationships, and activities. However, as Cicourel observes, the nature of institutional interactions “underscore[s] the importance of context at different levels of analysis” (1992: 296). This is particularly true where participants' contributions and understandings draw on specialized technical, scientific or professional knowledge. In such cases, ethnographic information may be used to complement CA's methodology in order to provide descriptive information about settings and identities, to define technical or unfamiliar terms, and to explicate patterns of interaction that CA's sequential analysis reveals but does not fully explain (Maynard, 2003: 73-76).

In this paper, I apply this approach to expand on Stivers' research by

examining and analyzing excerpts from her own data, which provide particularly clear examples of the practices that she identifies. However, while the focus of Stivers' analysis was parents' communicative behavior, I focus my analysis on physicians' displayed understandings and their source in physicians' background orientations (Heritage & Maynard, 2006: 4). In so doing, I draw on my experience, during my career as a lawyer, as a member of a legal team assigned to represent the obstetrical department of an urban teaching hospital in cases alleging medical malpractice (see [cite to own work]). During the two years that I performed this work, I spent hundreds of hours in formal meetings and informal conversations with physicians and nurses, during which I observed and internalized their orientations and perspectives. I learned to read and interpret medical records, to identify the medical issues raised by the information that they contained, and to discuss the patient's medical management, clinical course and outcome with my physician-clients at a level that accorded with their demanding expectations. I bring these practice-based understandings to my analysis of the data examined here.

The logic of medical reasoning

In order to provide medical treatment, the physician must determine the cause of the patient's illness; this occurs through a process of medical reasoning that is commonly referred to as diagnosis.¹ Diagnosis is the application of a fund of medical knowledge to a specific set of facts, namely, the patient's reported symptoms and the signs revealed by history, physical examination and laboratory testing (see Atkinson, 1995: 70; Hunter, 1991: 9-10). What physicians seek to identify are constellations or clusters of symptoms and signs that are associated

with known disease entities (Fauci et al., 1998: 3). Identifying these ‘syndromes’² involves both bringing the relevant information to light and sifting out that which is irrelevant, which is referred to as ‘noise’ (Erickson, 1999: 119; Sinclair, 1997: 213; Rees, 1981: 56). The signs and symptoms will thus ‘suggest’ a specific and limited range of diagnostic possibilities, together with the relative likelihood of each (ten Have, 2001: 252; Sinclair, 1997: 224-225; Hunter, 1991: 55).

The stages of analysis are learned during medical education and training, when medical students are initiated into clinical practice by learning to ‘work up’ patients: to take the patient’s medical history, perform a physical examination, review the results of any laboratory tests or radiographic (x-ray) or imaging (CT, MRI) studies, and then to formulate a diagnosis on the basis of the information obtained (Weinholtz, 1991: 156). This process of medical socialization continues after graduation, when novice physicians who elect to pursue specialty training in hospital-based residency programs assume primary responsibility for writing the diagnostic and treatment notes that document patients’ care (Hobbs, 2004: 1582).

The form of residents’ notes is based upon a model introduced in the 1960s by Dr. Lawrence Weed, and known as the ‘SOAP method’, an acronym for Subjective, Objective, Assessment and Plan (Weed, 1969; see also Hobbs, 2004: 1588-1589; Erickson, 1999: 112; Easton, 1974: 77-92). The subjective component of the note records the patient’s ‘presenting complaint’ or ‘history’, that is, the symptoms that prompted the patient to present for medical evaluation; the objective component records the information obtained from the physical examination of the patient and from any laboratory tests or radiographic (x-ray)

reports; the assessment component records the physician's diagnostic impression; and the plan component records the physician's plan of treatment (see Hobbs, 2004: 1588-1589; Hobbs, 2003: 454-456; Easton, 1974: 76-92 for fuller descriptions of the SOAP note). These topics and their sequence reproduce the logical processes of medical reasoning that are endlessly rehearsed by medical residents in the progress notes and oral case presentations that are core components of their professional socialization (Hobbs, 2007: 49-50; Erickson, 1999: 112), and ultimately become engrained (cf. Sinclair, 1997: 224-225). Thus a number of studies of physician-patient interactions have documented this sequential structuring of the medical consultation in acute-care settings (see, e.g., Heritage & Maynard, 2006: 14; Robinson & Heritage 2005: 481; Robinson, 2003: 30; Waitzkin, 1991: 27; Byrne & Long, 1976).

This sequential structuring provides a framework for the organization of medical work; importantly, however, the work itself is performed both *within* and *across* these sequences. As Hunter explains:

Beginning with the preliminary data the physician assembles a list of possible hypotheses—the differential diagnosis—that could account for the signs and symptoms. Then he or she sets about gathering more data, not at random, but along lines indicated by the differential diagnosis. Using the new information, the physician then can rule out all that is now known. This may leave one highly probable diagnosis or it may narrow the possibilities so that additional and narrowly focused data must be gathered in search of a determining fact that will enable the physician to distinguish between the remaining possibilities by the criterion of adequacy.

(1991:15-16).

Accordingly, medical students must learn to begin considering possible diagnoses as soon as they begin to elicit the patient's history (Stivers, 2007: 52). As explained by a first-year medical student in Sinclair's ethnographic study, "You

have to think ahead of what question to ask [the patient], but try not to let this influence your current attention” (1997: 225; bracketed material in original). Eventually these processes are internalized, and occur automatically in a continuous process of online reasoning and analysis (Sinclair, 1997: 225; Hobbs, 2004: 1602; Goldman, 1998; see also Heritage & Stivers, 1999). Thus Robinson, who studied acute care office visits to examine asymmetries in physician-patient communication, describes “a large-scale structure of social action that organizes physician-patient interaction during acute visits” (2003: 29), and although he does not explicitly reference the SOAP methodology, his description reproduces the formal logic of medical reasoning:

The project has, as its ultimate objective, the solution of patients’ problems, which is treatment. However, treatment is contingent upon diagnosis, which is itself contingent upon physicians obtaining information about patients’ problems, which is initially garnered from patients’ presentations of their problems and subsequently from history taking and/or physical examination. Importantly, physicians are accountable for progressing in a directional fashion through the project’s roughly ordered sequence of medical activities to its completion.

(2003: 47).

In the following analysis, I demonstrate how the physician’s accountability for arriving at a diagnosis shapes the physician-parent interactions that Stivers has described.

Analysis

‘Symptoms only’ reports

People typically consult a physician when they believe that they are ill, or that ‘something is wrong with’ some part of their body, and their descriptions of their

symptoms often include an explanation of the symptom’s apparent cause (Gill, 1998: 342), e.g., “I lifted a heavy suitcase and that’s when I felt the pain”. In most cases, however, they do not offer their own diagnosis (Stivers, 2002b: 302-303). Given the fact that people seek medical help in order to obtain the benefit of the physician’s expertise (cf. Heath, 1992: 262-263), this is not surprising. Moreover, it is the symptoms themselves that physicians seek to elicit in taking the patient’s history, for in 60 to 70 per cent of cases a diagnosis can be made on the basis of the history alone (Sinclair, 1997: 200-201; Easton, 1974: 84). Thus one would expect that an acute-care visit that opens with a ‘symptoms only’ report will progress according to the SOAP methodology.

This expectation is confirmed by Stivers’ data. In the excerpt below, the beginning of each stage of the SOAP framework is indicated in brackets at the right of the transcribed material.

(1) “Eyes stuck shut” [Stivers, 2007: 37]

1 DOC: And so: do- What’s been bothering her. [SUBJECTIVE]
 2 (0.4)
 3 MOM: Uh:m she’s has a cough?, and stuffing-stuffy
 4 no:se, and then yesterday in the afterno: on she
 5 started tuh get #really goopy eye:[s, and every=
 6 DOC: [Mm hm,
 7 MOM: =few minutes [she was [having tuh-].
 8 DOC: [.hh [Okay so she ha-
 9 so when she woke [up this morning were her eyes=
 10 MOM: [()
 11 DOC: =all stuck shut,
 12 MOM: Yeah but- Well actually during tuh middle of the
 13 ni:ght[she woke u[:p_ and they we[re struck shut n’_
 14 DOC: [Okay, [Okay_ [Okay_
 15 1→ An’ how about fever. Any fever at all?
 ((33 lines of history taking-examination not shown)) [OBJECTIVE]
 49 DOC: 2→ Basically she’s mov- i-she’s:>y’know<kinda: [ASSESSMENT]
 50 2→ developed the co:ld an’ respiratory thing
 51 2→ that’s goin’ arou:nd.
 52 MOM: [Uh huh,

53 DOC: [.hh
54 DOC: 2→ An' it's moved into her eyes, so she's got like #uh:#
55 2→ pink eye or conjunctivitis. .hh and so huh: cou:gh, [PLAN]
56 and the stuffiness I would treat symptomatically
57 with uh cough an'cold medicine like Pediaa:re,
58 Dimetapp, whatever:.
59 DOC: .hh And then I'm gonna give you some eyedrops to put
60 in her eyes_
61 MOM: Okay?,
(DOC continues on to detail dosage))

In this example, after the pediatrician elicits a report of the reason for the visit, the mother relates the history of her child's problem in lines 1 through 15, following which the pediatrician examines the child in an omitted section of the transcript. The pediatrician then states his diagnostic impression in lines 49 through 55, which is followed by his detailing of his plan of treatment in lines 56 through 60. The consultation thus proceeds according to the analytic framework instantiated in the SOAP method.

The physician's online reasoning and analysis are also evident in this example. After the mother reports the symptoms of cough, stuffy nose and "#really goopy eye:s" (lines 3-5), the physician interrupts her ongoing description to ask, "Okay so she ha- so when she woke up this morning were her eyes all stuck shut" (lines 8-11). This question indicates that, based upon the mother's description, which appears to index the mucous secretion that is a sign of acute conjunctivitis (see Berkow, 1992: 2371, Table 2-2), the physician is already entertaining the diagnosis that he later announces, and that the immediate purpose of the question is to clarify the meaning of "goopy eye:s". The physician's orientation to the activity of diagnosing is thus procedurally consequential to the talk (Schegloff, 1992: 110-111), because his analytic process motivates his insertion of the question into the

mother's narrative: By describing a characteristic feature of the mucous discharge (which oozes out onto the lashes during sleep and dries), and prompting the mother to confirm its presence, the physician ensures that he has accurately interpreted her lay description.

This sequence thus illustrates the structuring of medical knowledge and medical reasoning, in which symptoms and signs are indexical of conditions with which they are associated, and knowledge of the 'typical' presentation is critical to making sense of observed or reported information (Hobbs, 2004: 1590; Rees, 1981: 66).

'Candidate diagnosis' reports

While the information contained in 'symptoms only' reports is limited to the presenting complaint and history, the offer of a candidate diagnosis changes the shape of the interaction. A diagnosis is adduced by a physician from the analysis of symptoms and signs; thus a parent who proffers a candidate diagnosis, while lacking in medical training and thus relying on lay knowledge and perceptions, arrives at that conclusion through the same analytic processes of matching observed symptoms and signs with recognized descriptions of disease categories (cf. ten Have, 2001: 252). The candidate diagnosis thus implies that this inferential process has taken place, and accordingly acts to index a 'clinical orientation' (cf. Lingard et al., 2003: 607). In addition, the parent will often make the connection between symptoms and 'diagnosis' more or less explicitly, as seen in the following excerpt:

(2) "Not necessarily" [Stivers, 2007: 29]

8 MOM: An' she's been complaining of headaches.
9 (.)
10 MOM: → So I was thinking she had like uh sinus in[fection=
11 DOC: [.hhh
12 MOM: → =er something.=
13 DOC: → Not necessarily:, Thuh basic uh: this is uh virus
14 basically:, an' =uh: .hh (.) thuh headache seems tuh
15 be:=uh (0.5) pretty prominent: part of it at fir:st
16 uh: (0.2).hh

Institutional speech is characterized by inferential frameworks in which signs associated with particular communicative activities cue context-specific processes of interpretation that serve to foreground certain terms and their relationship to one another, yielding situated meanings (Drew & Heritage, 1992: 22; Gumperz, 1992a: 307, 1992b: 232). Here the mother describes her child's symptom ("she's been complaining of headaches") and then offers candidate diagnosis ("I was thinking she had like uh sinus infection") prefaced by the word 'So' (lines 8-10), thus positing a link between the two (see Gill & Maynard, 2006: 118). This formulation reproduces the logical processes of medical reasoning in which signs and symptoms are matched with syndromes in order to narrow the field of investigation and suggest further action (laboratory tests, x-rays, etc.) that may lead to a definitive diagnosis (Fauci et al., 1998: 3; Golden, 1998: 9).

In this context, the phrase "I was thinking", although apparently designed to mark the mother's explanation as tentative (Stivers, 2007: 40; see also Gill, 1998: 343-344), acts to index the negotiation of meaning that occurs during medical education, as students who are told that they must learn to 'think like doctors' are continually pressured to do so by the question, 'What [disease, syndrome] are you thinking of?', and its follow-up admonition, 'You should be thinking of X' (Sinclair,

1997: 223-224). This can be seen in the physician's response, which displays his orientation to this medical framing.

The physician begins to draw his breath as the mother presents her candidate diagnosis of sinus infection (lines 10-11), causing her to hedge by adding "er something" (line 12). He then counters her conclusion with a flat "Not necessarily" (line 13), which conveys its forcefulness, despite its mitigated form, by its latching onto the mother's turn (Stivers, 2007: 40), thus illustrating a key difference between the lay and medical registers: Although hedges in colloquial speech most often serve as markers of imprecision (as in the mother's "er something"), they function in scientific discourse as evidential markers of precision and detail (Hobbs, 2003: 460-461; Hyland, 1998: 162). Here the precise information conveyed by the physician's "Not necessarily" is that what the mother is saying is inaccurate, and is therefore incorrect, because a sinus infection is *only one* of the possible conditions that the symptom suggests, and the overall presentation is indicative of a virus (cf. Hyland, 1998: 162-163). Moreover, the forcefulness of his response is a product of his experience with this sign/symptom complex, which allows him to immediately identify its etiology (origin) with a high degree of probability,³ resulting in a display of "the dogmatism and certainty of personal experience" (Atkinson, 1977: 103). As Atkinson explains:

In the world of medicine and medical education, competence is warranted by reference to a stock of ‘experience’ which has been acquired in the context of ‘real medical work’. . . .

* * *

First-hand experience must be built up in the development of the practitioner’s biography. . . . Direct exposure to ‘reality’ in the ‘clinic’ provides the practitioner with the warrant of such personal knowledge. Such expertise is held to inform the practitioner’s actions in applying the rules of diagnosis and care; it is a prerequisite to the competent use of such methods in actual settings.

(1977: 88, 100-101; see also Freidson, 1970: 86).

The physician’s orientation to the mother’s ‘medical’ framing is further demonstrated by his explanation, which is couched in the technical language of clinical teaching: By describing the headache as a “prominent: part” of a viral infection (lines 14-16), he explains to the mother that, in considering a diagnostic possibility, she should be thinking in terms of connecting the symptom to the global picture of the hypothetically entertained condition in order to determine if there is a match. He thus constructs her as an understanding recipient of the medical reasoning he makes available to her (Peräklyä, 2006: 221).

It can thus be seen that the physician’s response in rejecting the proposed diagnosis does not, as it may appear, depreciate the mother’s contribution as a lay assessment, but quite the opposite: In dogmatically disputing the diagnosis, the physician treats it as ‘medical’—as something that must be ruled in or ruled out (cf. Stivers 2006: 309, fn 3). He thus frames the situation, not as one in which the parent is disqualified to offer opinions about the subject, but in which his own opinions, grounded in his clinical experience, have a superior claim to validity (cf. Freidson 1970: 86).

Such exchanges index a rejection of the lay-expert dichotomy in favor of a framing of the situation as a collaborative undertaking between individuals with

different responsibilities and different levels of expertise (see Hobbs 2005: 279; Atkinson 2004: 18; Cicourel 1999: 193). An even clearer example of this can be seen in the following example from Stivers' data:

(3) "I could see the yellow spots" [Stivers, 2007: 33-34]

9 MOM:→ And then uh- I looked down her throat yesterday-
10 → last ni:ght, an' could see thuh yellow:_
11 DOC: ^Okay.
12 MOM:→ #spo:[t so: ((trails off))
13 DOC: [.hh Well open up rea::l big. let's take
14 uh look an' (say-) say # "Ah:::[:::."=hh
15 GIR: [Ah:::]=hh
16 DOC: .hh (0.5)
17 DOC: °Yeah:° You know actually what those a:re °pre=h°
18 .hh are primarily blisters back there.
19 MOM: Yea:h?
20 DOC: It's almost like she's got cold sores in thuh
21 back of 'er throa:t.
22 MOM: (Oh:[:::)]/(Aw:::.)
23 DOC: [And u:sually that'll go along with this just
24 being viral.
25 (.)
26 MOM: [Really.=
27 DOC: [#er-#
28 DOC: =Y:eah.
29 DOC: .hh
30 MOM:⇒ One 'v thuh teachers told me it might be stre:p
31 ⇒ so:[:_
32 DOC: [mlk Yeah we are starting to see some strep
33 so I'm gonna culture just in case .hh she's got
34 both going on at the same t_i:me but- .hh when you
35 see: (you know)/(any uh) those #uh:# (that)(that)
36 white stuff you see back there is- is really not:
37 like pus pus but it'[s ya know like she's got blisters n'
38 MOM: [Oh yeah:_
39 MOM: Oh:::.

This excerpt presents an example of an "implied candidate diagnosis" (Stivers, 2002b: 311-312). As Stivers explains, parents who present physicians with such implied diagnoses do not identify a named disease as the cause of their child's illness, but

employ a level of “technical specificity” that is relevant for a health professional rather than for an ordinary recipient (e.g., mentions of the color of nasal discharge or the color of spots in the throat) and is for that reason understood to imply a particular diagnosis. For example, a parent might mention that her child has a “barky” cough to index croup, she might mention green nasal discharge to index sinusitis, or she might mention white or yellow spots on the child’s throat to index strep throat.

(2007: 32).

The reports of specific symptoms that Stivers describes assume the availability of ‘background knowledge’—culturally-constructed relationships of cause and effect that are deemed to be intuitively obvious—by virtue of which mention of the signs and symptom alone unmistakably implicates the presence of the associated disease (Hobbs, 2004: 1590-1591; Hobbs, 2002; see also Giltrow, 1994). It thus constitutes parents and pediatricians as a community of speakers whose shared experience includes knowledge about common childhood illnesses. Moreover, the pediatrician does not reject this framing of the situation, but proceeds with the examination by asking the child to open her mouth and say ‘Ah’. He then comments upon and evaluates the mother’s report before delivering his diagnostic assessment.

After acknowledging, by his “Yeah”, that he has located the problem, he begins with the prefatory phrase, “°You know actually” (line 17), which frames what he is about to say as a disagreement (Stivers, 2007: 33). He then explains that the ‘spots’ in the back of the child’s throat are “primarily blisters” (line 18). Following the mother’s response (“Yea:h?”) acknowledging this explanation in line 19, he continues with a second formulation, “It’s almost like she’s got cold sores in the back of ‘er throat” (lines 20-21). He thus prompts a second acknowledgement (line 22) before offering his own diagnosis, “And usually that’ll go along with this just

being viral” (lines 23-24). This elicits a surprised “Really” from the mother (line 26), indicating that it was not what she expected to hear.

She then offers an additional piece of information, that one of her child’s teachers suggested the possibility of a strep infection (lines 30-31), thus stating the diagnosis that her description implicated, while identifying a third party as its source. However, while this attribution may function as a disclaimer of responsibility (cf. Gill & Maynard, 2006: 127-128; Gill, 1998: 354-355), it also raises the possibility that the child has been exposed to streptococci at school. The physician confirms this possibility at line 32 (“Yeah we are starting to see some strep”), prior to announcing his plan:

33 so I’m gonna culture just in case .hh she’s got
34 both going on at the same t_i:me but- .hh when you
35 see: (you know)/(any uh) those #uh:# (that)(that)
36 white stuff you see back there is- is really not:
37 like pus but it’[s ya know like she’s got blisters n’

The physician’s formulation, “so I’m gonna culture just in case she’s got both going on at the same time” acts to reaffirm that the signs observed index a viral infection, while admitting the possibility that a strep infection could also be present. His implied differential diagnosis, “viral upper respiratory infection, rule out strep”, forms the basis for his plan, which is for further investigation by means of a throat culture to check for the presence of streptococcal bacteria.

At this point, he could simply conclude the visit without explaining his own findings; however, instead, he resumes his description of the clinical signs, explaining that the “white stuff you see back there” is “not like pus” (i.e., the purulent discharge that indexes a bacterial infection) but “blisters” (thus indexing a

viral infection). Moreover, his explanation is notable for its purposeful avoidance of medical terms: By substituting the words ‘blisters’ and ‘cold sores’, the physician not only adopts a lay register, but offers examples of conditions that a lay observer can recognize on sight. He thus coaches the mother on how to ‘see’ the clinical sign. Such powers of observation do not come naturally, but are the product of experience gained by exposure in the clinical setting (Atkinson, 1995: 47), a process captured by Sinclair in this first-person account:

Gerry, a first-year clinical student, explained. . . how this learning and teaching worked, referring to a recent demonstration by a consultant of the physical signs of **visible peristalsis**: ‘At first you don’t know what you’re looking for. With that patient, for example, I saw a movement. Whether that was **visible peristalsis**, I don’t know. Later, you see exactly the same as them [doctors]’.

(1997: 202: emphasis and bracketed material in original).

Accordingly, while the pediatrician’s explanation invalidates the mother’s interpretation, it does not disqualify her from engaging in this activity on the basis of her lay status. On the contrary, by assuming the role of preceptor (clinical instructor) and schooling her in medicine’s craft skills (cf. Atkinson, 1995: 78), he constructs her as competent to acquire the knowledge that he seeks to instill, and thus ratifies her participation in this phase of the consultation (cf. Heath, 1992: 249; see also Stivers, 2006: 309, n. 3).

Discussion

Drew and Heritage note that institutional interactions are characterized by an orientation, on the part of at least one of the participants, to some core goal, task or identity that is conventionally associated with the institution in question (1992: 22). In the case of physician-patient and physician-parent interactions in acute-care

settings, the core goal to which both parties are demonstrably orienting (Schegloff, 1992: 110) is the diagnosis and treatment of the patient's disease or condition. As Heath observes:

Diagnosis and assessment are the foundation of the general-practice consultation. The interview and the practitioner's examination of the patient are undertaken *in order to produce* a professionally warranted version of the condition or the state of health of the patient.

(1992: 260; emphasis added.)

Accordingly, in these interactions, the physician's orientation to the activity of diagnosing is procedurally consequential (Schegloff, 1992: 111), not only to the surface features of the talk, i.e., the sequential ordering of the interaction, but to how the talk is input into the physician's medical analysis, due to the role of medicine's inferential frameworks in shaping the physician's interpretations of patients' and parents' contributions.

The physician brings his or her medical knowledge to bear upon the factual information that the patient or parent presents and the signs revealed in the clinical examination, using skills acquired during medical education and training. As a result of this lengthy process of professional socialization, in which physicians learn to exercise clinical judgment by translating knowledge into action (Pecker & Siegler, 2003: 51; Easton 1974: 92), medical concepts and their descriptions are effectively fused, so that a one- or two-word descriptive label evokes whole categories of related knowledge, subsumed into background knowledge (see Hobbs, 2002), and activates the analytic processes by which the relevant topics are selected for investigation. And although the physician is conscious of the analytic process itself, the individual inferences by which it proceeds become habitualized through

practice, so that they occur automatically and largely outside conscious awareness (see Sinclair, 1997: 224-225).

Parents' candidate diagnoses and implied candidate diagnoses trigger these processes by their use of medicine's descriptive categories; thus Stivers notes that physicians treat candidate diagnoses as calling for confirmation or disconfirmation (2007: 48), for they respond to them as proffered differential diagnoses. The candidate diagnosis acts to index the physician's background knowledge about the disease or condition identified, including the appropriate treatment; accordingly, what the physicians hears is not only the diagnosis itself but the treatment recommendation that the diagnosis implies. The diagnosis functions as a warrant that a particular form of treatment is required (cf. Toulmin, 2003: 91); as a result, once introduced, it must be evaluated. This can pose a dilemma for physicians where the candidate diagnosis proposed is not supported by the clinical findings.

The consultation involves two related processes: information gathering and analysis. Because the physician takes the history and performs the physical examination prior to announcing the diagnosis and treatment plan, these processes may appear to occur consecutively; yet in fact they occur *simultaneously*, for the physician reasons through the information as it is being presented, applying the recursive processes of medical reasoning in which each additional piece of information adds to the evolving picture, and can thus suggest or rule out possible diagnoses. As Goldman explains:

[E]xperienced clinicians begin to form hypotheses based on the chief complaint and on the responses to initial questioning, and they ask further questions in a sequence that allows them to evaluate the initial hypotheses and, if necessary, shorten or amend the list of possibilities. . . . This process, termed *iterative hypothesis testing*, is an efficient approach to diagnosis and is preferable to attempts to gather every conceivable piece of information prior to formulating a differential diagnosis.

(1998: 9; emphasis in original.)

The fact that parents' candidate diagnoses occur while this analytic process is ongoing helps to explain why physicians may experience these contributions as 'pressure': During history-taking the physician is eliciting information that is simultaneously being evaluated and organized according to the diagnostic possibilities that it suggests; thus "[e]ach answer to a history-taking question furthers the physician's progress toward a particular diagnosis" (Stivers, 2007: 52). However, a candidate diagnosis presents, not raw data, but a hypothesis to be evaluated, thus activating a reanalysis of the physician's own hypothesis. This reanalysis is instantaneous and automatic, because the proffered diagnosis itself calls forth the disease description; nevertheless, it serves to add to the information load that the physician is dealing with (cf. Tannen & Wallat, 1987: 205).

Yet the physician's orientation is not only to the immediate task, but to the role of the physician that it enacts, and the attendant responsibilities that this entails. Diagnosis involves both investigation and the application of medical knowledge, reasoning and analysis in order to reach a conclusion that is objectively either correct or incorrect. That is, the diagnosing physician will either correctly identify the disease or condition (or, alternatively, correctly conclude that there is no medical problem), or will fail to do so. Yet the physician's responsibility to assemble and make clinical sense of the patient's signs and symptoms (Lingard et

al., 2003: 607) means that failure is not an option, for the whole purpose of seeking medical attention is to obtain a correct evaluation of the patient's condition. Thus the pressure to be correct inheres in the very nature of the physician role: In the words of Dr. Lawrence Weed, "The basic criterion of the physician is how well he [sic] can identify the patient's problems and organize them for solution" (1969: 3).

Conclusion

Stivers states that a parent's candidate diagnosis

by virtue of suggesting a diagnosis that is treatable with antibiotics, may communicate an expectation for antibiotics to physicians. If this is true, then it may be possible to begin to disentangle the link between physician-parent communication and physician perceptions of expectations.

(2002b: 333).

This paper has attempted to do just that by demonstrating how the structuring of medical reasoning and medical knowledge shapes physicians' orientations to specific features of physician-parent interactions (cf. Candlin & Candlin, 2003: 133).

Physician-parent interactions in acute-care settings are conducted through the medium of talk; thus the structuring of the interaction necessarily requires the physician to switch between frames (Tannen & Wallat, 1987: 205): the external, interactional frame in which information is elicited from the patient or parent, and the internal frame in which observations are accompanied by a thought process that weighs the accumulating evidence and rules in or rules out conditions. Yet because the purpose of the interaction is to obtain a diagnosis, it is important that the physician retain a clinical orientation throughout. In this institutional context,

parents' use of terms that index medical framing are assigned their medical meanings by physicians, despite differences in the idiomatic values in lay and professional vocabularies (cf. Gumperz, 1992a: 307). Moreover, because data of questionable value cannot be rejected out of hand, the request requires a considered analysis of the possibilities that it implicates. Thus the pressure the physician experiences, while interactionally triggered, is actually self-imposed and inheres in the responsibilities of the physician role, which crucially include the responsibility to correctly diagnose, and appropriately treat, the patient's disease or condition.

This suggests that a possible solution to the problem of patient pressure is to make physicians aware of the extent to which their perceptions of patient or parent pressure may result from their own unconscious processes. However, further research is needed to investigate the mechanisms that produce discrepancies between what physicians hear and what patients and parents intend to convey. Specifically, additional research is needed to investigate the processes whereby lay contributions are 'translated' into medical classifications by physicians for input into the ongoing clinical analysis. This is an area in which conversation analysis and ethnography can work hand in hand. It is hoped that the present analysis will contribute to the ongoing research on this subject.

Notes

1. Physicians themselves avoid the use of this term, which in medicine connotes unmistakable certainty, as illustrated by this advice found in Easton: “Don’t call it a diagnosis unless it is ABSOLUTELY PROVEN without a doubt” (1974: 88; emphasis in original); the preferred terms are ‘impression’ or ‘assessment’. In this paper, I use the term ‘diagnosis’ interchangeably with the terms ‘assessment’ and ‘diagnostic impression’.

2. As Fauci et al. explain, “*The syndrome is a group of symptoms and signs of disordered function related to one another by means of some anatomic, physiologic, or biochemical peculiarity. . . . A syndrome usually does not identify the precise cause of an illness, but it narrows the possibilities and may suggest certain special clinical and laboratory studies*” (1998: 3; emphasis in original).

3. The leading category of illnesses that pediatricians are called upon to treat is upper respiratory tract infections, 65% to 70% of which are viral in nature (Mangione-Smith et al. 2006: 945).

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