Title

Making Conversation Analysis Accessible: A Conceptual Guide for Health Services Researchers

Author

White, Anne Elizabeth C

Publication Date

2022

Peer reviewed

Research Article

Making Conversation Analysis Accessible: A Conceptual Guide for Health Services Researchers

Qualitative Health Research
1–13

DOI: 10.1177/10497323221090831
journals.sagepub.com/home/qhr
SAGE

Caroline K. Tietbohl[1] and Anne E. C. White[2]

Abstract

The quality of healthcare communication can impact both experiences and outcomes. We highlight aspects of communication that can be systematically examined using Conversation Analysis (CA) and provide guidance about how researchers can incorporate CA into healthcare studies. CA is a qualitative method for studying naturally occurring communication by analyzing recurrent, systematic practices of verbal and nonverbal behavior. CA involves examining audio- or video-recorded conversations and their transcriptions to identify practices speakers use to communicate and interpret behavior. We explain what distinguishes CA from other methods that study communication and highlight three accessible CA approaches that researchers can use in their research design, analysis, or implementation of communication interventions. Specifically, these approaches focus on *how* talk is produced (specific words, framing, and syntax), by *whom,* and *when* it occurs in the conversation. These approaches can be leveraged to generate hypotheses and to identify patterns of behavior that inform empirically driven communication interventions.

Keywords

conversation analysis; qualitative methodology; doctor–patient interaction; health services research; healthcare communication

Introduction

Communication between stakeholders—including providers, patients, family members, caregivers, interpreters, teams, departments, and institutions—is at the core of healthcare delivery. The quality of this communication can impact not only the effectiveness of patient care (Barnes, 2019; Drew et al., 2001; Gill & Roberts, 2013; Heritage & Clayman, 2010; Heritage & Maynard, 2006; Parry & Land, 2013) but also provider job satisfaction or burnout (Armstrong & Holland, 2004; Chang et al., 2018; Congiusta et al., 2020). In this article, we highlight different aspects of communication that can be systematically examined using the method of Conversation Analysis and provide conceptual guidance about how health services researchers can incorporate this method into future studies aiming to understand and improve healthcare.

Conversation Analysis (CA) is a method for studying naturally occurring communication by analyzing recurrent and systematic practices of verbal and nonverbal behavior. CA involves examining audio- or video-recorded conversations in both everyday and institutional contexts (e.g., patient visits, hospital discharges, 911 calls) to identify practices that speakers use to communicate (Schegloff, 2007; Sidnell, 2010; Sidnell & Stivers, 2013). In healthcare settings, these practices can then be further analyzed and linked to medical outcomes (Robinson & Heritage, 2014), healthcare provider experiences and patient experiences (Hood-Medland et al., 2021; White et al., 2021). Although CA is a prominent method in sociology, linguistics and social psychology, it can be perceived as having a steep learning curve (Barnes, 2019).

This article is a conceptual guide to introduce researchers to the method of CA and some accessible analytical approaches that can be incorporated into health services research. While CA can be used to analyze many aspects of communication—including silences, prosody, overlapping talk, and more—in this article, we focus on three

[1]Adult and Child Center for Health Outcomes Research and Delivery Science, Department of Family Medicine, University of Colorado Anschutz Medical Campus, Aurora, CO, USA
[2]Department of Family Medicine, Sanford Institute for Empathy and Compassion, University of California San Diego, La Jolla, CA, USA

Corresponding Author:
Caroline K. Tietbohl, Department of Family Medicine, University of Colorado Anschutz Medical Campus, 1890 N Revere Ct, Third Floor, Mail Stop F443, Aurora, Colorado 80045-2559, USA.
Email: caroline.tietbohl@cuanschutz.edu

approaches that reflect each component of the primary analytical question underlying CA: Why did *this person* say *that, now?* (Schegloff & Sacks, 1973). Specifically, we discuss how researchers can use CA to analyze how and what participants say (turn design), who said it (who does what), and when (timing) in order to better understand the impact of communication in healthcare. We highlight relevant articles that use these three analytical approaches and include a purposeful sample of studies that reflect (a) both classic and more recent publications, (b) a variety of healthcare settings, and (c) clear implications that have been (or can be) translated to pragmatic research studies (e.g., comparative effectiveness research, randomized controlled trials). To contextualize these three approaches to CA, we provide a brief history of the method, background information about how CA compares to and can be used with other methods, and an overview of the steps involved in analysis. We conclude by describing the practical knowledge that can be gained from these analyses and highlighting how researchers can incorporate CA findings into their own work (e.g., in research design, analysis, or interventions).

Brief History of Conversation Analysis and Applied Medical Conversation Analysis

Conversation Analysis was founded in the 1960s by sociologists who viewed conversation as a social institution that could be systematically studied (Pomerantz, 1997). These founders sought to show that talk was not altogether random and chaotic, but rather offered the possibility of demonstrating "order at all points" (Sacks, 1992) by looking at its sequential organization. That is, talk (and nonverbal communication) is replete with recurring patterns such that even the smallest elements (e.g., "oh" (Heritage, 1984), "ow" (Heath, 1989), in-breaths (Schegloff, 1996), eye gaze (Rhodes et al., 2008; Rossano, 2013)) are subject to analysis in terms of the interpersonal and relational work they perform. CA can be used to identify generalizable patterns "which do not arise from or depend upon participants' idiosyncratic styles, particular personalities or other individual or psychological dispositions" (Drew et al., 2001, p. 60). The method is used to examine ordinary conversations in both everyday and more specific contexts (e.g., medicine, classrooms), and can account for universal practices across languages as well as local cultural variations in language use (Stivers et al., 2009).

Clinicians and academics have long recognized that the therapeutic benefit of patient visits extends beyond clinicians' medical expertise, but also includes social and relational aspects of patient–clinician communication and time together (Balint, 1957; Heritage & Maynard, 2006; Korsch et al., 1968). As US physician Eric Cassel described, "Spoken language is our most important diagnostic and therapeutic tool and we must be as precise in its use as is a surgeon with a scalpel" (1985, p. 4). Studying naturally occurring conversations in medicine became an established research agenda across various disciplinary groups (including psychoanalysts, medical educators, and sociologists) in the mid-20th century when portable recording devices allowed for medical encounters to be captured (Barnes, 2019). In the 1970s, Patrick Byrne and Barrie Long, a UK general physician and social scientist, respectively, led a groundbreaking study that audio-recorded 2500+ consultations, transcribed them verbatim, and enabled these researchers to theorize what the facilitators and barriers were to patient-centered care (Byrne & Long, 1976). This study, in addition to other pioneering communication studies based on recorded medical encounters, is still broadly cited today in both medical education and research (Cassell, 1985; Mishler, 1984).

Conversation analysts have been interested the in life and death consequences of communication since the field's inception. Indeed, one of the founders of the method, Harvey Sacks, wrote his dissertation based on recorded phone calls to a suicide-prevention hotline (Sacks, 1987). While CA as a theory and method was originally developed "to build a formal science that would provide for the interactional organization of conversation" (ten Have, 2001, p. 3), *applied CA* can refer to (a) "applying" the findings of "pure" CA to institutional settings (e.g., medical visits) and (b) "applying" CA findings to advise people and organizations how practical problems in communication might be resolved to improve outcomes (ten Have, 1999). Christian Heath was the first conversation analyst to specifically situate his research in the medical setting with his examination of "The opening sequence in doctor–patient interactions" (Heath, 1981). Paul Drew and John Heritage's book, "Talk at work: Interaction in Institutional Settings" (Heritage & Drew, 1992) was the first collection of applied CA work, which included studies on clinician–patient interactions in addition to analysis on news-interviews, court proceedings, and service encounters. Since these early days applied CA studies of medical consultations have become widespread (see Heritage & Clayman, 2010; Heritage & Maynard, 2006 for in-depth reviews), with thousands of hours of recordings gathered across medical specialties (Bergen, 2019; Tate, 2018), countries (Kawashima, 2017; Wang, 2020), and geographic areas (Bergen et al., 2018).

Distinguishing Conversation Analysis From Other Methods

Conversation Analysis is one of many methods used to study healthcare communication, but a few features make it distinct from other approaches (Parry & Land, 2013). First, CA research studies *naturally occurring conversations*,

while other methods (e.g., interviewing, focus groups, surveys) rely on participant *recall* of previous interactions. Second, CA analyzes *audio-* or *video-recordings* and their transcriptions, which allows other researchers to examine the data themselves (Sacks, 1984). This is distinct from other observational methods (e.g., ethnography) that can also study naturalistic conversations but do not permit (re) watching recordings for more granular analyses or for reliability. For example, ethnographic fieldnotes may allow researchers to count *how many* questions patients asked during visits, while CA researchers can analyze *how exactly* patients formulated their questions. Third, CA is specifically focused on the *interactive* and *collaborative* nature of talk. That is, CA is concerned with understanding the interaction between two or more people talking "live" in the "here and now" and examines the ways in which each speaker's talk can affect what is said next. This differs from, for example, critical discourse analysis which can be used to examine how communication in many forms (e.g., text, media, or graphics) can shape and limit the roles, relationships, or practices within a healthcare institution (Hodges et al., 2008). Fourth, CA identifies patterns of communicative *behavior* rather than common topics of conversation (e.g., thematic or content analysis (Forman & Damschroder, 2007)). Lastly, CA takes a *sequential* approach to analysis, linking speaking turns to what was said before and after. CA researchers work chronologically through a conversation to understand what speakers are trying to achieve at each moment by considering factors such as the knowledge of each speaker, their relationship, and the context in which the conversation occurs. This differs from deductive coding systems (e.g., Roter Interaction Analysis System (Roter & Larson, 2002)) that extract talk into predefined variables and do not account for the surrounding sequential context.

Using Conversation Analysis With Other Methods

Conversation Analysis is a versatile qualitative method and is well suited for mixed- and multi-method studies of varying size and scope. Scholars can also use CA to analyze data across cultures, languages, and teams. For example, Henry et al. (2020b) explained how CA can help maximize the clinical relevance of video-recorded data through interdisciplinary research to ensure that research questions will be based on scholarship from the social sciences, resonate with clinical practice, and produce results that fit educational needs. CA projects can examine communication practices in single-case analyses (Gill et al., 2001; Schegloff, 1987) while also identifying robust patterns across large datasets (Drew et al., 2001). Large datasets are even publicly available for other researchers to analyze (Jepson et al., 2017). While CA is most commonly used as an inductive method, CA findings can also be used deductively such as in randomized controlled trials (Kronman et al., 2020; Opel et al., 2020).

Conversation Analysis is especially useful for mixed-methods studies because analysis allows for the quantification of certain sorts of practices (Stivers, 2015; White, 2020a). Thus, the same dataset can be analyzed both qualitatively and quantitatively. For example, researchers can qualitatively identify consequential communication practices (e.g., techniques to elicit patient concerns) and then analyze their prevalence or association with certain variables. Additionally, CA can relate specific communication practices to outcome measures (Barnes, 2019), including measures observable *in the recording* (e.g., physician responses to requests (Henry et al., 2020a; Pichonnaz et al., 2021)), survey measures (e.g., patient/physician visit experiences (Hood-Medland et al., 2021; White et al., 2021)), treatment decisions (e.g., vaccine acceptance (Opel et al., 2015)), or more distal outcome measures (e.g., treatment adherence (Lutfey, 2004)).

Researchers can also use CA to better understand how to use other methods in these settings. For example, researchers have described how CA can improve response rates to telephone interviews. Maynard et al. (2011) analyzed recorded telephone interviews and found that interviewers were more successful at recruiting participants when they tailored their requests to how the talk developed in the early moments of the call. That is, more successful interviewers adjusted their talk (see Sacks et al., 1974 on recipient design) by calibrating their requesting practices to the vocal and non-vocal (e.g., silences, intonation) cues of potential participants rather than strictly following a recruitment script.

Conversation Analysis Research Conventions

This article is a conceptual guide to introduce researchers to the method of CA and some accessible analytical approaches that can be incorporated into health services research. In this section, we highlight a few key points regarding recommended standards for CA and reference additional resources that discuss the processes of data collection and analysis in more detail. First, while CA makes use of particular transcription conventions (Jefferson, 2004) that capture the details of spontaneous communication more fully (e.g., silences, overlapping talk, and intonation), we recommend first completing a basic verbatim transcription. This provides a helpful starting point for CA projects and also leaves the data ready for other analyses (e.g., video elicitation interviews (Henry & Fetters, 2012)).

Analyzing data then follows in four broad stages: collection-building, individual case analysis, pattern-identification, and accounting for or evaluating patterns

(Toerien, 2014). Collection-building includes inductively and systematically reviewing data for all candidate cases of a particular practice in the dataset (e.g., expressing empathy). Individual case analysis includes careful examination of both the design of each speaker's utterance and the order in which they are spoken (i.e., sequence organization) (Schegloff, 2007). These first two stages are intertwined and iterative; for example, individual case analyses can clarify what "counts" as an instance for the collection, thereby shaping which phenomenon will then be analyzed in more detail (e.g., defining which responses count as "expressing empathy"). In the pattern-identification phase, analysis of individual cases and cross-case comparisons are conducted to identify patterns within a collection (again, attending to both design and sequence organization). Collections can take a cross-sectional approach or a longitudinal approach (White, 2017), affording different research questions to be examined. Conversation analysts have written about considerations involved in collection-building elsewhere (Clift & Raymond, 2018; Higginbotham & Engelke, 2013; Mondada, 2013). The final stage of accounting for and evaluating patterns moves beyond describing the pattern to address its interactional and social consequences (e.g., "so what?"). That is, examining not only what the particular communication pattern looks like, but also its practical implications for the participants involved (e.g., how the format of a patient's request can influence the treatment they receive (Feldman et al., 2006).

Three Analytical Approaches to Conversation Analysis: Why Did This Person Say That, Now?

In the sections that follow, we highlight three approaches to CA that reflect each component of the primary analytical question underlying CA: Why did *this person* say *that, now?* (Schegloff & Sacks, 1973). These approaches can be leveraged during collection-building and subsequent analyses in health services research.

Approach #1: Turn Design

How speakers formulate their speaking turns, or utterances, is consequential in communication research because the ways in which people speak to one another builds shared meaning during interactions. Turn design refers to how a speaker constructs their utterance (Drew, 2013). Speakers employ a variety of resources when building their speaking turns, and we will focus on three resources (word-choice, topic framing and syntax) as we find these to be the most approachable to researchers across disciplines. Examples of other turn design resources speakers use include phonetics, prosody, morphology, gesture and other bodily movements (e.g., eye gaze), which can require a more specialized training or use of software (e.g., Praat to study prosody, ELAN to study eye gaze) for analysis.

There are many ways to say the same thing, so understanding the choices that speakers make about how to communicate are important. The resources people use to describe themselves, others, circumstances—and everything else—can impact outcomes. In medicine, for instance, the variability in how physicians design their speaking turns to conduct verbal "standardized" questionnaires is shown to affect patients' scores (Antaki, 1999; Fujimori et al., 2014). There are multiple ways to investigate turn design, and Table 1 presents examples of studies investigating the three resources this article highlights: specific word-choice, topic framing, and syntax.

Focusing on a specific word can be a useful way to reveal how people understand a situation and to test the impact of small changes in communication. For example, Heritage et al. (2007) found that changing a single word (from "*any"* to "*some"*) when physicians solicit additional concerns significantly increased the number of concerns that patients voiced without significantly increasing visit length. One benefit of analyzing specific words is that transcripts can easily be searched. Sikveland and Stokoe (2020) analyzed how the verbs *talk* versus *speak* can disparately impact crisis negotiations, showing that persons in crisis were more likely to overtly reject proposals to engage in dialogue formulated with *talk* compared to *speak*. Additionally, examining specific words lends itself to quantitative investigations which test communication behavior associations with one another (Stivers, 2002) or with exogenous variables such as questionnaire responses (Mangione-Smith et al., 2003; Stivers, 2005b; Stivers et al., 2003).

Another way to examine turn design is to focus on how a topic is framed; that is, examining the collection of words used to describe something. This may include features such as the degree to which a topic is described (e.g., with qualifiers: "*a lot," "sometimes"* (White, 2021); or mitigations: "You *might* have . . ." (Heritage & McArthur, 2019)), the valence (i.e., negative or positive) of the words involved (Callon et al., 2016), or their social meanings (Tietbohl, 2022). For example, Stivers (2005a) found that pediatricians framed treatment recommendations either *for* or *against* a medication and that parents were more likely to resist recommendations *against* treatments (e.g., "We don't need to put her on any antibiotics."). Analyzing framing can also help determine the best ways to discuss sensitive topics such as end-of-life concerns (Maynard et al., 2016) or bad news (Maynard,

Table 1. Examples of Conversation Analysis Research using Approach #1: Turn Design.

Article	Level of analysis	Research question	Example	Impact
Heritage et al., 2007	Specific word-choice	Is there a specific word physicians can use to more effectively solicit patients' additional concerns?	"Is there *something* else you want to address in the visit today?" versus "Is there *anything* else you want to address in the visit today?"	The "some" intervention eliminated 78% of unmet concerns
Sikveland & Stokoe, 2020	Specific word-choice	How does word-choice impact crisis negotiation with individuals who threaten suicide?	"I just want to *talk* to you." versus "I'd like to *speak* to you."	Persons in crisis were more likely to overtly reject proposals formulated with *talk* (vs. *speak*)
Bergen, 2020	Topic framing	How does physician delivery of behavior change advice impact the likelihood that patients will accept?	*Treatment-implicative advice*: "You have to take your medicines every day . . . we really need to get that [cholesterol] under control." versus *Plain advice*: "Maybe you can increase the walks during the day."	Patients were significantly more likely to accept behavior change recommendations that were framed as treatment-implicative advice (vs. plain advice)
Tietbohl, 2022	Topic framing	How should physician expressions of empathy be designed and when are they most effective?	*Validation*: "Nobody wants to hear that diagnosis." versus *Bright side*: "But at least you have a companion."	Empathic validation is accepted when it matches the valence of the patient's feelings but rejected when it does not (e.g., giving a "bright side" when the patient reports negative feelings)
Opel et al., 2018	Syntax	How does the physician's format of childhood vaccine discussions impact vaccine acceptance?	*Presumptive*: "Well, we have to do some shots." versus *Participatory*: "How do you feel about vaccines?"	Presumptive (vs. participatory) discussion formats are associated with increased immunization
White, 2021	Syntax	How does the design of patient initiations of additional concerns impact the likelihood of receiving help?	*Interrogative*: "I wanted to ask you if you've looked at how my shins get red sometimes . . . is there any certain thing that's causing that?" versus *Informing*: "I just got an injection in my knee."	Physicians were significantly more likely to help patients who used an interrogative design (vs. informing) when presenting additional concerns

2017). For example, McCabe et al., (2017) used CA to examine how healthcare professionals assess suicide risk and found that *negatively* phrased questions bias patients' responses towards reporting no suicidal ideation.

Finally, turn design can also be analyzed in terms of syntax, or the study of sentence construction. Medical training often discusses the importance of syntax in terms of open- or closed-ended questions, and CA expands on this logic. For example, one study found that physician assertions ("We need to . . .") set up expectations of agreement and therefore reduced opportunities for patients to participate in shared decision-making (Jackson et al., 2017). Such analyses elucidate not only what variations in syntax look like and how they impact outcomes, but also contextual factors that shape the use of one type over another (Bonnin, 2017; Stivers et al., 2017). Further, expectations around what people should talk about (and how) changes with time, meaning that turn design should be continually examined and reexamined.

Approach #2: Who Does What

In CA research, another analytical approach is to examine *who* is doing what in a conversation (e.g., *visit role*: patient, clinician, caregiver; *demographics*: gender, age, race; *physician type*: intern, attending; specialty). Who asks the questions? Who opens the clinic visit? Who brings up a certain topic? Who switches the topic? The list of "who" questions is indefinite, can be analyzed for every conversation, and can be tailored for specific contexts depending on the research question. Answering "who does what?" can inform empirical questions, reveal more nuanced insights, and contribute to systemic changes. For instance, early work on healthcare communication focused on the asymmetrical distribution of questioning between physicians and patients (Frankel, 1984; West, 1983), highlighting not only a dearth of patient questioning but also a preference for patients *not* to do so. These findings about "who asks the questions?"

Table 2. Examples of Conversation Analysis Research using Approach #2: Who does What.

Article	Topic	Finding	Impact
Frankel, 1984 West, 1983	*Who* asks questions during patient visits?	Frankel found the majority of physician talk consisted of questioning patients. In contrast, patient talk almost *never* included questions. West, building on Frankel's discovery, sought to understand why patients questioning physicians is "dispreferred" and uncovered the structural patterns of communication that have led to this outcome	The realization that patients barely asked questions during visits galvanized research to promote patient-empowered care
Maynard, 2003 Pino et al., 2016	*Who* broaches difficult topics like delivering bad news (Maynard) and initiating end-of-life discussions (Pino et al.)?	Physicians use communication techniques (e.g., forecasting, shrouding) that guide patients towards difficult conversations. Creating space for patients to initiate certain topics and make inferences for themselves promotes patient autonomy	Changing the way that information is delivered can promote active patient participation in medical care and make difficult topics easier to discuss
Plug et al., 2009	*Who* first brings up the topic of the patient's illness experience?	Patients with epilepsy volunteered accounts of seizures, while patients with non-epileptic seizures waited for accounts to be solicited	Recognizing communication patterns in different patient populations can shape a differential diagnosis
Bergen et al., 2018	*Who* (by *nationality*) resists treatment recommendations in primary care?	American patients typically resist recommendations for non-prescription treatment while English patients typically resist recommendations for all types of treatment and display an expectation of cautious prescribing	Communication trends reflect broader social contexts and cultural norms

helped galvanize the recalibration of healthcare towards a patient-centered care approach. Table 2 presents examples of studies using this approach.

Some analyses of "who does what" highlighted in Table 2 have identified communication practices that physicians can use to discuss difficult topics. In studies about how physicians deliver diagnoses, Maynard (2003) discovered that it was actually patients (or parents) *who* first articulated the diagnosis. This counterintuitive discovery led to an analysis of the communication techniques physicians use to *forecast* bad news, which allows recipients to slowly come to the diagnostic realization themselves, be the first to articulate it, and consequently have a better experience accepting and understanding the diagnosis. Similarly, Pino et al., (2016) found that in palliative care settings there is a preference for patients to introduce the topic of end-of-life care because this allows them to take control of their dying experience. In Fosgerau and Davidsen's (2014) study comparing how general practitioners and psychiatrists differentially responded to patient expressions of shame related to their experience with depression, general practitioners prompted patients to elaborate on their reflections while psychiatrists did not, resulting in different levels of shared decision-making. In addition, CA studies have highlighted the important roles that other members of the medical team—such as interpreters—can play through the use of particular communicative strategies (Bolden, 2000; Raymond, 2014a, 2014b).

Conversation Analysis also exposes the ramifications of participants occupying certain communicative roles. In an era of patient-centered and team-based care, the issue of who is responsible for different aspects of communication is important. Changing expectations around each person's role (e.g., increased patient responsibility to raise concerns, division of labor across team members caring for the same patient) means that it is important to examine *who* is bringing up which topics and to understand what impact this can have on outcomes or the experience of care delivery (Hood-Medland et al., 2021; White et al., 2021).

Approach #3: Timing

Timing is another principal focus in CA. For instance, *when* a topic gets discussed can be consequential because the same phrase can be heard—and responded to—differently depending on its timing. Using an example from everyday life, imagine a friend asking "How are you?" at the beginning of the call versus later in the conversation. The former is typically heard as a standard greeting and elicits a perfunctory "fine" response, while the latter is heard as a genuine question and elicits more elaboration. Thus, the same exact phrase asked at different "times" can be construed as two different questions, resulting in two different answers.

Timing helps to paint the interaction with context, and when analyzing data, it is important to first work through

Table 3. Examples of Conversation Analysis Research using Approach #3: Timing.

Article	Topic	Finding	Impact
Mangione-Smith et al., 2003	*When* do physicians share physical examination observations?	Sharing "no problem" findings *during* the examination is a communication technique that may provide an effective and efficient method for physicians to resist perceived expectations to prescribe antibiotics without increasing visit length	Analyzing *when* physicians share examination findings revealed that doing certain tasks at specific times can impact the frequency of antibiotic prescribing
White, 2018	*When* do general surgery patients initiate additional concerns?	Unlike acute, primary care visits (J. White et al., 1994) patients in general surgery visits do not wait to present "door knob concerns." 60% of patient-initiated concerns in surgery visits occurred *before* the physical examination, compared to 14% *after* the physical exam	Comparing *when* communication practices occur in different medical settings can inform more tailored recommendations about the best way to conduct certain activities
Robinson et al., 2016	*When* should physicians solicit additional concerns?	Physicians were significantly more likely to elicit patient's additional concerns when they asked about them *earlier* versus *later* in visits	Asking the same question but at different *times* in a visit can result in different patient responses
Ford et al., 2020	*When* should physicians administer a diagnostic questionnaire?	Physicians can administer the Patient Health Questionnaire (PHQ-9) *before* or *after* delivering a treatment recommendation for anti-depressants. Depending on when physicians administer this tool, it can facilitate either (a) diagnosis or (b) resolving patient treatment resistance	Physicians can leverage an objective and diagnostic tool to facilitate communication about different topics depending on *when* the tool is administered
Barnes et al., 2018	*When* should physicians deliver an intervention?	Physicians were trained to use an intervention called "BATHE" to screen for psychosocial issues. When administered *too early*, these screening questions were misunderstood by patients as pertaining to their chief complaint rather than the psychosocial context for their problems	Dynamically evaluating both how and *when* an intervention is delivered can increase an intervention's efficacy

the transcripts chronologically to understand what the participants themselves knew up until that moment of the conversation. This fine-grained, sequential approach to understanding *when* something occurs relative to another activity is a core principle of CA (Schegloff, 2007) that is underutilized in communication interventions. Table 3 presents examples of studies that analyze timing.

To demonstrate the analytic relevance of timing in a medical setting, consider *when* additional concerns—that is, medical concerns that are unrelated to the main reason for the visit—are brought up (Robinson, 2003; White, 2018). By looking at *when* concerns are initiated in relation to the *phase* of acute primary care visits, researchers found patients often raise them during the *closing phase* of the visit, commonly referred to as "door knob presentations" (Rodondi et al., 2009; White et al.,1994). This finding exposed a timing problem and subsequent communication interventions sought to mitigate their occurrence by having physicians solicit additional concerns *earlier* in the visit (Robinson et al., 2016). A recent study set in a general surgery clinic found that *when* patients initiate additional concerns affects how likely surgeons were to help them (White, 2021). Surgeons were significantly more likely to help concerns initiated *earlier* in the visit (White, 2021), which aligns with research that shows earlier topics get discussed for longer durations of time versus later topics (Tai-Seale & McGuire, 2012).

Another way to examine timing using CA is to look at communication practices *relative* to another activity or discussion. For example, in a study about *when* surgeons raise additional concerns (White, 2020b), the timing of these concerns was not tied to the visit phase but to *when* the surgeon noticed it. Similarly, primary care physicians examining children for potential bacterial infections were found to share their observations *while* still examining them (Heritage & Stivers, 1999). Researchers found that this particular timing of sharing "no problem" examination findings helped to curtail parental resistance for non-antibiotic treatment recommendations later in the visit (Mangione-Smith et al., 2003).

Applications in Medicine

In addition to highlighting three techniques to using CA that can be used independently or together, we suggest how CA can benefit health services research and delivery science. A close analysis of communication practices is important for understanding what macro-level changes (e.g., in structure, policy, and technology) look like in practice (Antaki, 2011). For example, the coronavirus

disease 2019 pandemic necessitated the rapid development and implementation of technology solutions, leading many in-person conversations to be conducted via phone or video calls. CA has been used to understand how the shift to electronic communication may impact healthcare (Meredith & Potter, 2014). Additionally, microanalysis of communication can also elucidate how macro-level patterns emerge, such as how communication practices contribute to variations and disparities in care (Stivers & Majid, 2007; Waitzkin & Stoeckle, 1976).

As a qualitative method, CA is especially useful for inductively generating hypotheses that can then be expanded on in future studies involving a range of study designs. For example, in an initial cross-sectional observational study, Opel et al. (2015) found that the framing of a healthcare provider's communication about vaccines was related to the likelihood of parental vaccine acceptance. Opel et al. subsequently expanded on these findings with a prospective cohort study (2018) and then a cluster randomized controlled trial (2020) to test the effectiveness of the communication strategy that was first identified in the original study. By examining *how* talk is designed, *who* is speaking or carrying out particular actions, and *when* different activities occur, CA can identify patterns of behavior that inform empirically driven communication interventions (Heritage et al., 2007), randomized controlled trials (Kravitz et al., 2005; Kronman et al., 2020), and communication skills training (O'Brien et al., 2018; Parry et al., 2018; Stokoe, 2014).

The level of detail from CA analyses can provide precise insights about how to conduct research at all stages. CA can be used to more effectively recruit and consent participants (Wade et al., 2009) and can also inform the structure of interventions. For example, by using one of the three analytic approaches highlighted in this article, researchers can use CA to identify *what* exactly clinicians should say (Heritage et al., 2007) *who* should say it (Maynard, 2003), and *when* to maximize positive outcomes (Opel et al., 2020). Researchers can also use CA to better understand factors that may promote an intervention's effectiveness (Robinson & Heritage, 2014). Moreover, CA can facilitate evaluation when used to assess the intervention's implementation fidelity (Barnes et al., 2018) and to identify predictors of future success or best practices (Albury et al., 2020).

While findings from larger-scale trials are impactful, studies that are more limited in scope or that involve a smaller qualitative component can also use CA to make valuable contributions. For example, influential CA studies have drawn on fewer than 100 patient visits (Barnard et al., 2010; Heritage & Lindstrom, 1998) or even single-case analyses (Gill et al., 2001; Schegloff, 1987). Findings from smaller studies can serve as the foundation for robust lines of inquiry that provide evidence for a range of practical dilemmas that clinicians and patients encounter. For example, early work on how to elicit patient agendas (Beckman & Frankel, 1984) examined only 74 office visits, yet, these findings have since informed thousands of research articles as well as medical education and clinical practice. Given its focus on the collaborative nature of talk, CA is especially useful for uncovering the ways in which new health policies or technologies can impact what happens in "real life" (Barnes, 2019), an important goal in a changing world.

Limitations to Conversation Analysis

Conversation Analysis shares similar limitations to other qualitative methodologies. Studies are limited to the specific participants and geographic location involved and, depending on the study size and design, may not generalize to other settings or populations. For example, some CA studies are cross-sectional and capture only a single encounter of a patient or clinician behavior, which may not capture the full range of participant behavior over time. Additionally, it is possible that only certain types of patients or healthcare providers might consent to being video recorded. Research on the effects of recording encounters (i.e., the Hawthorne effect) are inconclusive, but prior work suggests that audio recording of clinic visits does not significantly affect the topics discussed (Henry et al., 2015).

While CA has its limitations, efforts can be made to manage them. For instance, CA studies can combine data sets collected across geographic locations to help strengthen generalizability (e.g., through collaboration with other researchers who possess comparable data sets). CA researchers have also become more vigilant in their research design and recruitment procedures to collect purposeful samples that include a wider range of participants who better represent their local populations.

Furthermore, CA employs a strict protocol of only analyzing what is publicly available to the participants in the recorded material (e.g., what they say aloud, visible nonverbal behaviors). Patients may also have unspoken reasons for their behaviors which CA does not address, such as their level of health literacy (Koenig, 2011). As such, CA studies may not account for contextual factors that come to bear on the interaction (e.g., clinic running late, staffing changes or shortages) or other conversations patients have had with the healthcare team (e.g., with the check-in nurse; online portal messages). In order to conduct such investigations, researchers can combine CA with other methods such as in-depth interviews, ethnographic observations, document review, or video elicitation interviews.

Conclusions

The quality of healthcare communication is an important factor that can influence medical outcomes, and Conversation Analysis is one useful tool that researchers

can use to understand and improve it. The healthcare system involves constant communication across individuals and contexts, and there are many possible ways that speakers can choose to communicate with one another. In this conceptual guide, we have introduced the method of CA and described three accessible analytical approaches that researchers can employ in studies of healthcare communication. Specifically, these approaches focus on *how* talk is produced (specific word-choice, topic framing, and syntax), by *whom,* and *when* it occurs in the conversation. These approaches can be leveraged to generate hypotheses and to identify patterns of behavior that inform empirically driven communication interventions. CA is versatile in terms of its analytical approach and compatibility with multiple disciplines and methods, and we hope that this article provides a helpful starting place for future CA collaborations.

Acknowledgments

We express sincere gratitude to our colleagues who provided insightful commentary on this article, particularly Chase W. Raymond, Juliana Barnard, Stephen G. Henry, and the reviewers.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

ORCID iD

Caroline K. Tietbohl https://orcid.org/0000-0002-9540-3050

References

Albury, C. V., Ziebland, S., Webb, H., Stokoe, E., & Aveyard, P. (2020). Discussing weight loss opportunistically and effectively in family practice: A qualitative study of clinical interactions using conversation analysis in UK family practice. *Family Practice*, *38*(3), 321–328. https://doi.org/10.1093/fampra/cmaa121

Antaki, C. (1999). Interviewing persons with a learning disability: How setting lower standards may inflate well-being scores. *Qualitative Health Research*, *9*(4), 437–454. https://doi.org/10.1177/104973299129121983

Antaki, C. (2011). *Applied conversation analysis: Intervention and change in institutional talk*: Springer.

Armstrong, J., & Holland, J. (2004). Surviving the stresses of clinical oncology by improving communication. *Oncology*, *18*(3), 363–368.

Balint, M. (1957). *The doctor, his patient and the illness*. Pittman.

Barnard, R. A., Cruice, M. N., & Playford, E. D. (2010). Strategies used in the pursuit of achievability during goal setting in rehabilitation. *Qualitative Health Research*, *20*(2), 239–250. https://doi.org/10.1177/1049732309358327

Barnes, R. K. (2019). Conversation analysis of communication in medical care: Description and beyond. *Research on Language and Social Interaction*, *52*(3), 300–315. https://doi.org/10.1080/08351813.2019.1631056

Barnes, R. K., Jepson, M., Thomas, C., Jackson, S., Metcalfe, C., Kessler, D., & Cramer, H. (2018). Using conversation analytic methods to assess fidelity to a talk-based healthcare intervention for frequently attending patients. *Social Science & Medicine*, *206*, 38–50. https://doi.org/10.1016/j.socscimed.2018.04.008

Beckman, H., & Frankel, R. M. (1984). The effect of physician behavior on the collection of data. *Annals of Internal Medicine*, *101*(5), 692–696. https://doi.org/10.7326/0003-4819-101-5-692

Bergen, C. (2019). *Health-promoting behaviors or preventive health behaviors: Patient disclosures and physician lifestyle advice in the primary care consultation.* UCLA.

Bergen, C. (2020). The conditional legitimacy of behavior change advice in primary care. *Social Science & Medicine*, *255*, 112985. https://doi.org/10.1016/j.socscimed.2020.112985

Bergen, C., Stivers, T., Barnes, R. K., Heritage, J., McCabe, R., Thompson, L., & Toerien, M. (2018). Closing the deal: A cross-cultural comparison of treatment resistance. *Health Communication*,*33*(11),1377–1388.https://doi.org/10.1080/10410236.2017.1350917

Bolden, G. (2000). Toward understanding practices of medical interpreting: Interpreters' involvement in history taking. *Discourse Studies*, *2*(4), 387–419. https://doi.org/10.1177/1461445600002004001

Bonnin, J. E. (2017). Formulations in psychotherapy: Admission interviews and the conversational construction of diagnosis. *Qualitative Health Research*, *27*(11), 1591–1599. https://doi.org/10.1177/1049732316686333

Byrne, P. S., & Long, B. E. L. (1976). *Doctors talking to patients: A study of the verbal behaviours of doctors in the consultation*. Her Majesty's Stationary Office.

Callon, W., Saha, S., Korthuis, P. T., Wilson, I. B., Moore, R. D., Cohn, J., & Beach, M. C. (2016). Which clinician questions elicit accurate disclosure of antiretroviral nonadherence when talking to patients? *AIDS and Behavior*, *20*(5), 1108–1115. https://doi.org/10.1007/s10461-015-1231-7

Cassell, E. (1985). *Talking with patients, volume 2: Clinical technique*. MIT Press.

Chang, B. P., Carter, E., Ng, N., Flynn, C., & Tan, T. (2018). Association of clinician burnout and perceived clinician-patient communication. *The American Journal of Emergency Medicine*, *36*(1), 156–158. https://doi.org/10.1016/j.ajem.2017.07.031

Clift, R., & Raymond, C. W. (2018). Actions in practice: On details in collections. *Discourse Studies*, *20*(1), 90–119. https://doi.org/10.1177/1461445617734344

Congiusta, S., Ascher, E. M., Ahn, S., & Nash, I. S. (2020). The use of online physician training can improve patient experience and physician burnout. *American Journal of Medical Quality*, *35*(3), 258–264. https://doi.org/10.1177/1062860619869833

Drew, P. (2013). Turn design. In J. Sidnell & T. Stivers (Eds.), *Handbook of conversation analysis* (pp. 131–149). Wiley-Blackwell.

Drew, P., Chatwin, J., & Collins, S. (2001). Conversation analysis: a method for research into interactions between patients and health-care professionals. *Health Expectations*, *4*(1), 58–70. https://doi.org/10.1046/j.1369-6513.2001.00125.x

Feldman, M. D., Franks, P., Epstein, R. M., Franz, C. E., & Kravitz, R. L. (2006). Do patient requests for antidepressants enhance or hinder physicians' evaluation of depression? A randomized controlled trial. *Medical Care*, *44*(12), 1107–1113. https://doi.org/10.1097/01.mlr.0000237202.96962.fd

Ford, J., Thomas, F., Byng, R., & McCabe, R. (2020). Use of the Patient Health Questionnaire (PHQ-9) in Practice: Interactions between patients and physicians. *Qualitative Health Research*, *30*(13), 2146–2159. https://doi.org/10.1177/1049732320924625

Forman, J., & Damschroder, L. (2007). Qualitative content analysis. In *Empirical methods for bioethics: A primer*. Emerald Group Publishing Limited. https://doi.org/10.1016/S1479-3709(07)11003-7

Fosgerau, C. F., & Davidsen, A. S. (2014). Patients' perspectives on antidepressant treatment in consultations with physicians. *Qualitative Health Research*, *24*(5), 641–653. https://doi.org/10.1177/1049732314528813

Frankel, R. (1984). From sentence to sequence: Understanding the medical encounter through microinteractional analysis. *Discourse Processes*, *7*(2), 135–170. https://doi.org/10.1080/01638538409544587

Fujimori, M., Shirai, Y., Asai, M., Kubota, K., Katsumata, N., & Uchitomi, Y. (2014). Effect of communication skills training program for oncologists based on patient preferences for communication when receiving bad news: A randomized controlled trial. *Journal of Clinical Oncology*, *32*(20),2166–2172.http://jco.ascopubs.org/cgi/doi/10.1200/JCO.2013.51.2756T

Gill, V., Halkowski, T., & Roberts, F. (2001). Accomplishing a request without making one: A single case analysis of a primary care visit. *Text*, *21*(1/2), 55–81. https://doi.org/10.1515/text.1.21.1-2.55

Gill, V., & Roberts, F. (2013). 28 Conversation Analysis in Medicine. *The handbook of conversation analysis*, 575.

Heath, C. (1981). The opening sequence in doctor-patient interaction. In P. Atkinson & C. Heath (Eds.), *Medical work: Realities and routines* (pp. 71–90). Gower.

Heath, C. (1989). Pain talk: The expression of suffering in the medical consultation. *Social Psychology Quarterly*, *52*(2), 113–125. https://doi.org/10.2307/2786911

Henry, S. G., & Fetters, M. D. (2012). Video elicitation interviews: A qualitative research method for investigating physician-patient interactions. *The Annals of Family Medicine*, *10*(2), 118–125. https://doi.org/10.1370/afm.1339

Henry, S. G., Gosdin, M. M., White, A. E. C., & Kravitz, R. L. (2020a). "It sometimes doesn't even work": Patient opioid assessments as clues to therapeutic flexibility in primary care. *J Gen Intern Med*, *35*(6), 1635–1640. https://doi.org/10.1007/s11606-019-05421-9

Henry, S. G., Jerant, A., Iosif, A.-M., Feldman, M. D., Cipri, C., & Kravitz, R. L. (2015). Analysis of threats to research validity introduced by audio recording clinic visits: Selection bias, Hawthorne effect, both, or neither? *Patient Education and Counseling*, *98*(7), 849–856. https://doi.org/10.1016/j.pec.2015.03.006

Henry, S. G., White, A. E. C., Magnan, E. M., Hood-Medland, E. A., Gosdin, M., Kravitz, R. L., & Gerwing, J. (2020b). Making the most of video recorded clinical encounters: optimizing impact and productivity through interdisciplinary teamwork. *Patient Education and Counseling*, *103*(10), 2178–2184. https://doi.org/10.1016/j.pec.2020.06.005

Heritage, J. (1984). A change-of-state token and aspects of Its sequential placement. In J. M. Atkinson & J. Heritage (Eds.), *Structures of social action* (pp. 299–345). Cambridge University Press.

Heritage, J., & Clayman, S. E. (2010). *Talk in action: Interactions, identities and institutions*. Blackwell-Wiley.

Heritage, J., & Drew, P. (1992). Talk at work. *Interaction in institutional settings*. Cambridge University Press.

Heritage, J., & Lindstrom, A. (1998). Motherhood, medicine, and morality: Scenes from a medical encounter. *Research on Language & Social Interaction*, *31*(3–4), 397–438. https://doi.org/10.1080/08351813.1998.9683598

Heritage, J., & Maynard, D. (Eds.). (2006). *Communication in Medical Care: Interactions between primary care physicians and patients*. Cambridge University Press.

Heritage, J., & Maynard, D. (Eds.). (2006). *Communication in Medical Care: Interactions between primary care physicians and patients*. Cambridge University Press.

Heritage, J., & McArthur, A. (2019). The diagnostic moment: A study in US primary care. *Social Science & Medicine*, *228*, 262–271. https://doi.org/10.1016/j.socscimed.2019.03.022

Heritage, J., Robinson, J. D., Elliott, M. N., Beckett, M., & Wilkes, M. (2007). Reducing patients' unmet concerns in primary care: The difference one word can make. *Journal of General Internal Medicine*, *22*(10), 1429–1433. https://doi.org/10.1007/s11606-007-0279-0

Heritage, J., & Stivers, T. (1999). Online commentary in acute medical visits: A method of shaping patient expectations. *Social Science and Medicine*, *49*(11), 1501–1517. https://doi.org/10.1016/S0277-9536(99)00219-1

Higginbotham, D. J., & Engelke, C. R. (2013). A primer for doing talk-in-interaction research in augmentative and alternative communication. *Augmentative and Alternative Communication*, *29*(1), 3–19. https://doi.org/10.3109/07434618.2013.767556

Hodges, B. D., Kuper, A., & Reeves, S. (2008). Discourse analysis. *BMJ*, *337*, a879. https://doi.org/10.1136/bmj.a879

Hood-Medland, E. A., White, A. E. C., Kravitz, R. L., & Henry, S. G. (2021). Agenda setting and visit openings in primary care visits involving patients taking opioids for chronic pain. *BMC Family Practice*, *22*(1), 1–11. https://doi.org/10.1186/s12875-020-01317-4

Jackson, C., Land, V., & Holmes, E. J. (2017). Healthcare professionals' assertions and women's responses during labour: A conversation analytic study of data from One born

every minute. *Patient Education and Counseling*, *100*(3), 465–472. https://doi.org/10.1016/j.pec.2016.10.004

Jefferson, G. (2004). *Glossary of transcript symbols. Conversation analysis: Studies from the first generation* (pp, 13–31) John Benjamins.

Jepson, M., Salisbury, C., Ridd, M. J., Metcalfe, C., Garside, L., & Barnes, R. K. (2017). The 'one in a million'study: Creating a database of UK primary care consultations. *British Journal of General Practice*, *67*(658), e345–e351. https://doi.org/10.3399/bjgp17X690521

Kawashima, M. (2017). Four ways of delivering very bad news in a Japanese emergency room. *Research on Language and Social Interaction*, *50*(3), 307–325. https://doi.org/10.1080/08351813.2017.1340724

Koenig, C. J. (2011). Patient resistance as agency in treatment decisions. *Social Science and Medicine*, *72*(7), 1105–1114. https://doi.org/10.1016/j.socscimed.2011.02.010

Korsch, B., Gozzi, E. K., & Francis, V. (1968). Gaps in doctor-patient communication. *Pediatrics*, *42*(5), 855–871. https://doi.org/10.1542/peds.42.5.855

Kravitz, R. L., Epstein, R. M., Feldman, M. D., Franz, C. E., Azari, R., Wilkes, M. S., & Franks, P. (2005). Influence of patients' requests for direct-to-consumer advertised antidepressants: A randomized controlled trial. *JAMA*, *293*(16), 1995–2002. https://doi.org/10.1001/jama.293.16.1995

Kronman, M. P., Gerber, J. S., Grundmeier, R. W., Zhou, C., Robinson, J. D., Heritage, J., & Warren, L. (2020). Reducing antibiotic prescribing in primary care for respiratory illness. *Pediatrics*, *146*(3). https://doi.org/10.1542/peds.2020-0038

Lutfey, K. (2004). Assessment, objectivity, and interaction: The case of patient compliance with medical treatment regimens. *Social Psychology Quarterly*, *67*(4), 343–368. https://doi.org/10.1177/019027250406700402

Mangione-Smith, R., Stivers, T., Elliott, M., McDonald, L., & Heritage, J. (2003). Online commentary during the physical examination: A communication tool for avoiding inappropriate prescribing? *Social Science and Medicine*, *56*(2), 313–320. https://doi.org/10.1016/S0277-9536(02)00029-1

Maynard, D. (2017). Delivering bad news in emergency care medicine. *Acute Medicine & Surgery*, *4*(1), 3–11. https://doi.org/10.1002/ams2.210

Maynard, D. (2003). *Bad news, good news: Conversational order in everyday talk and clinical settings*. University of Chicago Press.

Maynard, D., Cortez, D., & Campbell, T. C. (2016). 'End of life' conversations, appreciation sequences, and the interaction order in cancer clinics. *Patient Education and Counseling*, *99*(1), 92–100. https://doi.org/10.1016/j.pec.2015.07.015

Maynard, D., Schaeffer, N. C., & Freese, J. (2011). Improving response rates in telephone interviews. In *Applied conversation analysis* (pp. 54–74): Springer.

McCabe, R., Sterno, I., Priebe, S., Barnes, R., & Byng, R. (2017). How do healthcare professionals interview patients to assess suicide risk? *BMC Psychiatry*, *17*(1), 1–10. https://doi.org/10.1186/s12888-017-1212-7

Meredith, J., & Potter, J. (2014). Conversation Analysis and Electronic Interactions: Methodological, Analytic and Technical Considerations. In H. Lim, & F. Sudweeks (Ed.), *Innovative Methods and Technologies for Electronic Discourse Analysis* (pp. 370–393). IGI Global. https://doi.org/10.4018/978-1-4666-4426-7.ch017

Mishler, E. (1984). *The discourse of medicine: Dialectics of medical interviews*. Ablex.

Mondada, L. (2012). The Conversation Analytic Approach to Data Collection. In J. Sidnell, & T. Stivers (Eds.), *The Handbook of Conversation Analysis*. https://doi.org/10.1002/9781118325001.ch3

O'Brien, R., Goldberg, S. E., Pilnick, A., Beeke, S., Schneider, J., Sartain, K., & Harwood, R. H. (2018). The VOICE study–A before and after study of a dementia communication skills training course. *Plos One*, *13*(6), Article e0198567. https://doi.org/10.1371/journal.pone.0198567

Opel, D. J., Mangione-Smith, R., Robinson, J. D., Heritage, J., DeVere, V., Salas, H. S., & Taylor, J. A. (2015). The influence of provider communication behaviors on parental vaccine acceptance and visit experience. *American Journal of Public Health*, *105*(10), 1998–2004. https://doi.org/10.2105/AJPH.2014.302425

Opel, D. J., Robinson, J. D., Spielvogle, H., Spina, C., Garrett, K., Dempsey, A. F., & Pahud, B. (2020). 'Presumptively initiating vaccines and optimizing talk with motivational interviewing'(PIVOT with MI) trial: A protocol for a cluster randomised controlled trial of a clinician vaccine communication intervention. *BMJ Open*, *10*(8), Article e039299. https://doi.org/10.1136/bmjopen-2020-039299

Opel, D. J., Zhou, C., Robinson, J. D., Henrikson, N., Lepere, K., Mangione-Smith, R., & Taylor, J. A. (2018). Impact of childhood vaccine discussion format over time on immunization status. *Academic Pediatrics*, *18*(4), 430–436. https://doi.org/10.1016/j.acap.2017.12.009

Parry, R., & Land, V. (2013). Systematically reviewing and synthesizing evidence from conversation analytic and related discursive research to inform healthcare communication practice and policy: An illustrated guide. *BMC Medical Research Methodology*, *13*(1), 1–13. https://doi.org/10.1186/1471-2288-13-69

Parry, R., Whittaker, B., Pino, M., Watson, S., Hamlyn, S., & Faull, C. (2018). *21 Real talk–a novel evidence-based, video-based communication skills training resource*. British Medical Journal Publishing Group. http://doi.org/10.1136/bmjspcare-2018-ASPabstracts.21

Pichonnaz, D., Staffoni, L., Greppin-Bécherraz, C., Menia-Knutti, I., & Schoeb, V. (2021). "You Should Maybe Work Together a Little Bit": Formulating Requests in Interprofessional Interactions. *Qualitative Health Research*, *31*(6), 1094–1104. https://doi.org/10.1177/1049732321991508

Pino, M., Parry, R., Land, V., Faull, C., Feathers, L., & Seymour, J. (2016). Engaging terminally ill patients in end of life talk: How experienced palliative medicine doctors navigate the dilemma of promoting discussions about dying. *Plos One*, *11*(5), Article e0156174. https://doi.org/10.1371/journal.pone.0156174

Plug, L., Sharrack, B., & Reuber, M. (2009). Conversation analysis can help to distinguish between epilepsy and non-epileptic seizure disorders: A case comparison. *Seizure*, *18*(1), 43–50. https://doi.org/10.1016/j.seizure.2008.06.002

Pomerantz, A. (1997). Conversation Analysis: An approach to the study of social action as sense making practices. *Discourse As Social Interaction*, *2*, 64.

Raymond, C. W. (2014a). Conveying information in the interpreter-mediated medical visit: The case of epistemic brokering. *Patient Education and Counseling*, *97*(1), 38–46. https://doi.org/10.1016/j.pec.2014.05.020

Raymond, C. W. (2014b). Epistemic brokering in the interpreter-mediated medical visit: Negotiating "patient's side" and "doctor's side" knowledge. *Research on Language and Social Interaction*, *47*(4), 426–446. https://doi.org/10.1080/08351813.2015.958281

Rhodes, P., Small, N., Rowley, E., Langdon, M., Ariss, S., & Wright, J. (2008). Electronic medical records in diabetes consultations: Participants' gaze as an interactional resource. *Qualitative Health Research*, *18*(9), 1247–1263. https://doi.org/10.1177/1049732308321743

Robinson, J. D. (2003). An interactional structure of medical activities during acute visits and its implications for patients' participation. *Health Communication*, *15*(1), 27–57. https://doi.org/10.1207/s15327027hc1501_2

Robinson, J. D., & Heritage, J. (2014). Intervening with conversation analysis: The case of medicine. *Research on Language and Social Interaction*, *47*(3), 201–218. https://doi.org/10.1080/08351813.2014.925658

Robinson, J. D., Tate, A., & Heritage, J. (2016). Agenda-setting revisited: When and how do primary-care physicians solicit patients' additional concerns? *Patient Education and Counseling*, *99*(5), 718–723. https://doi.org/10.1016/j.pec.2015.12.009

Rodondi, P.-Y., Maillefer, J., Suardi, F., Rodondi, N., Cornuz, J., & Vannotti, M. (2009). Physician response to "by-the-way" syndrome in primary care. *Journal of General Internal Medicine*, *24*(6), 739–741. https://doi.org/10.1007/s11606-009-0980-2

Rossano, F. (2013). Gaze in conversation. In J. Sidnell & T. Stivers (Eds.), *The handbook of conversation analysis* (pp. 308–329). Wiley-Blackwell.

Roter, D., & Larson, S. (2002). The roter interaction analysis system (RIAS): Utility and flexibility for analysis of medical interactions. *Patient Education and Counseling*, *46*(4), 243–251. https://doi.org/10.1016/S0738-3991(02)00012-5

Sacks, H. (1984). Notes on Methodology. In J. M. Atkinson & J. Heritage (Eds.), *Structures of social action* (pp. 21–27). Cambridge University Press. (Edited by Gail Jefferson from various lectures).

Sacks, H. (1987). You want to find out if anybody really does care. *Talk and Social Organisation*, 217–225.

Sacks, H. (1992). *Lectures on conversation Vol.1 (Fall 1964-Spring 1968)*. Blackwell.

Sacks, H., Schegloff, E. A., & Jefferson, G. (1974). A simplest systematics for the organization of turn-taking for conversation. *Language*, *50*(4), 696–735. https://doi.org/10.1353/lan.1974.0010

Schegloff, E. A. (1987). Analyzing single episodes of interaction: An exercise in conversation analysis. *Social Psychology Quarterly*, *50*(2), 101–114. https://doi.org/10.2307/2786745

Schegloff, E. A. (1996). Turn organization: One intersection of grammar and interaction. In E. Ochs, S. Thompson, & E. Schegloff (Eds.), *Interaction and Grammar* (pp. 52–133). Cambridge University Press.

Schegloff, E. A. (2007). *Sequence organization in interaction: A primer in conversation analysis volume 1*. Cambridge University Press.

Schegloff, E. A., & Sacks, H. (1973). Opening up closings. *Semiotica*, *8*(4), 289–327. https://doi.org/10.1515/semi.1973.8.4.289

Sidnell, J. (2010). *Conversation analysis: An introduction*. : Wiley-Blackwell.

Sidnell, J., & Stivers, T. (2013). *Handbook of conversation analysis*. Wiley- Blackwell.

Sikveland, R. O., & Stokoe, E. (2020). Should police negotiators ask to "talk" or "speak" to persons in crisis? Word selection and overcoming resistance to dialogue proposals. *Research on Language and Social Interaction*, *53*(3), 324–340. https://doi:10.1080/08351813.2020.1785770

Stivers, T. (2002). Presenting the problem in pediatric encounters: "Symptoms only" versus "Candidate Diagnosis" Presentations. *Health Communication*, *14*(3), 299–338. https://doi.org/10.1207/S15327027HC1403_2

Stivers, T. (2005a). Non-antibiotic treatment recommendations: Delivery formats and implications for parent resistance. *Social Science and Medicine*, *60*(5), 949–964. https://doi.org/10.1016/j.socscimed.2004.06.040

Stivers, T. (2005b). Parent resistance to physicians' treatment recommendations: One resource for initiating a negotiation of the treatment decision. *Health Communication*, *18*(1), 41–74. https://doi.org/10.1207/s15327027hc1801_3

Stivers, T. (2015). Coding social interaction: A heretical approach in conversation analysis? *Research on Language and Social Interaction*, *48*(1), 1–19. https://doi.org/10.1080/08351813.2015.993837

Stivers, T., Heritage, J., Barnes, R., McCabe, R., Thompson, L., & Toerien, M. (2017). Treatment recommendations as actions. *Health Communication*, *33*(11), 1335–1344. https://doi.org/10.1080/10410236.2017.1350913

Stivers, T., & Majid, A. (2007). Questioning children: Interactional evidence of implicit bias in medical interviews. *Social Psychology Quarterly*, *70*(4), 424–441. https://doi.org/10.1177/019027250707000410

Stivers, T., Mangione-Smith, R., Elliott, M. N., McDonald, L., & Heritage, J. (2003). Why do physicians think parents expect antibiotics? What parents report vs what physicians perceive. *The Journal of Family Practice*, *52*(2), 140–148.

Stivers, T., Enfield, N. J., Brown, P., Englert, C., Hayashi, M., Heinemann, T., & Levinson, S. C. (2009). Universals and cultural variation in turn-taking in conversation. *Proceedings of the National Academy of Sciences*, *106*(26), 10587–10592. https://doi.org/10.1073/pnas.0903616106

Stokoe, E. (2014). The Conversation Analytic Role-play Method (CARM): A method for training communication skills as an alternative to simulated role-play. *Research on Language and Social Interaction*, *47*(3), 255–265. https://doi.org/10.1080/08351813.2014.925663

Tai-Seale, M., & McGuire, T. (2012). Time is up: Increasing shadow price of time in primary-care office visits. *Health Economics*, *21*(4), 457–476. https://doi.org/10.1002/hec.1726

Tate, A. (2018). *The interactional negotiation of complex treatment: Physician authority and patient agency in cancer care.* UCLA.

ten Have, P. (1999). *Doing conversation analysis: A practical guide*. Sage.

ten Have, P. (2001). Applied conversation analysis. In *How to analyse talk in institutional settings: A casebook of methods* (pp, 3–11).

Tietbohl, C. K. (2022). Empathic validation in physician–patient communication: An approach to conveying empathy for problems with uncertain solutions. *Qualitative Health Research*, *32*(3), 413–425. https://doi.org/10.1177/10497323211056312

Toerien, M. (2014). Conversations and conversation analysis. In *The SAGE handbook of qualitative data analysis* (pp, 327–341).

Wade, J., Donovan, J. L., Lane, J. A., Neal, D. E., & Hamdy, F. C. (2009). It's not just what you say, it's also how you say it: opening the 'black box' of informed consent appointments in randomised controlled trials. *Social Science & Medicine*, *68*(11), 2018–2028. https://doi.org/10.1016/j.socscimed.2009.02.023

Waitzkin, H., & Stoeckle, J. D. (1976). *I*nformation control and the micropolitics of health care: Summary of an ongoing research project. *Social Science & Medicine*, *10*(6), 263–276. https://doi.org/10.1016/0037-7856(76)90070-6

Wang, N. C. (2020). Understanding antibiotic overprescribing in China: A conversation analysis approach. *Social Science & Medicine*, *262*, 113251. https://doi.org/10.1016/j.socscimed.2020.113251

West, C. (1983). "Ask me no questions . . .": An analysis of queries and replies in physician- patient dialogues. In S. Fisher & A.D. Todd (Eds.), *The social organization of doctor-patient communication* (pp. 75–106). Center for Applied Linguistics.

White, A. E. C. (2017). *Additional concern initiations in general surgery visits: A longitudinal analysis of doctor-patient communication.* UCLA dissertation.

White, A. E. C. (2018). Patient-initiated additional concerns in general surgery visits. *Patient Education and Counseling*, *101*(12), 2219–2225.https://doi:10.1016/j.pec.2018.08.012

White, A. E. C. (2020a). Authority and camaraderie: The delivery of directives amongst the ice floes. *Language in Society*, *49*(2), 207–230. https://doi.org/10.1017/S0047404519000721

White, A. E. C. (2020b). When and how do surgeons initiate noticings of additional concerns? *Social Science & Medicine*, *244*, 112320. https://doi.org/10.1016/j.socscimed.2019.05.025

White, A. E. C. (2021). Expanding the scope of the visit: Which patient-initiated additional concerns receive help? *Health Communication*, *37*(5), 535–547. https://doi.org/10.1080/10410236.2020.1856537

White, A. E. C., Hood-Medland, E. A., Kravitz, Richard L., & Henry, Stephen G. (2021). Visit linearity in primary care visits for patients with chronic pain on long-term opioid therapy. *Journal of General Internal Medicine*, *37*(1), 78–86. https://doi.org/10.1007/s11606-021-06917-z

White, J., Levinson, W., & Roter, D. (1994). "Oh, by the way . . .": The closing moments of the medical visit. *Journal of General Internal Medicine*, *9*(1), 24–28. https://doi.org/10.1007/bf02599139