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In the era of patient participation in health care decision making, we know surprisingly little about the ways in which treatment recommendations are made, the contexts that shape their formulation and the consequences of these formulations. There is a growing body of conversation analytic work concerned with how treatment decisions are reached in a range of clinical settings, including pediatrics (Stivers, 2007); general practice (Koenig, 2011); oncology clinics (Collins, Drew, Watt, & Entwistle, 2005; Costello & Robert, 2001); and a range of others (Hudak, Clark, & Raymond, 2011; Pilnick, 2008; Quirk, Chaplin, Lelliott, & Seale, 2012; Toerien, Shaw, & Reuber, 2013). Yet this work remains quite narrow in scope and is scattered across a variety of medical specialties that are far from uniform. This lack of systematic examination of treatment recommendation action, design, and reception inhibits comparative work whether by national context, medical specialty, or patient demographics.

This project is part of a tradition that blends conversation analytic work with interaction coding in order to facilitate comparisons or investigations that are otherwise impossible. Comparisons can be quantitative such as comparing questioning across different historical time periods (Clayman, Elliott, Heritage, & McDonald, 2006) or comparing speed of turn taking across languages and cultures (Stivers et al., 2009). However, comparisons can also remain qualitative. Regardless of whether the comparison is quantitative or qualitative, conversation analysis requires a collection of particular behaviors. This means that rules are necessary to discriminate what "counts" as a particular communicative behavior (Dingemanse & Enfield, 2015). This becomes all the more critical when attempting to understand behaviors across
national contexts and across medical specialties where we can expect big differences in recommendations.

This special issue is organized around a systematic collective investigation of how recommendations for medications are responded to and made. This establishes a framework within which we are beginning to examine how recommendations are shaped by whether or not the recommendation took place in primary vs. secondary care, in the US vs. the UK, and whether the medication was over-the-counter vs. by prescription. The five core contributions to this special issue address these three main topics: 1) what constitutes a recommendation for new medication? 2) how are recommendations designed actions and formulated?, and 3) how do patients respond to these recommendations?

First, in terms of what constitutes a medication recommendation, we were very broad. The general goal was to identify utterances that patients typically treated as clear recommendations. In order to ascertain the parameters for these types of recommendation, preliminary work across the range of different data sets was done to inform the final coding scheme. In line with this, we included vague and general recommendations "for treatment" or for "something" since patients typically treat these as recommendations. We included medication recommendations that were for pre-specified periods of time (e.g., 7 days), 'as needed' medication recommendations (e.g., cough medicine), and recommendations that were prescribed for indefinite periods (e.g., cholesterol medication). Finally, we included in our definition of medication both over-the-counter recommendations and prescription medications.

Our pilot analyses suggested the exclusion of a variety of medical recommendations on the grounds that they would introduce more variation than we could hope to understand at this point in time. Thus, for purposes of these analyses, we excluded five types of recommendations.
First, we did not include any non-medication recommendations -- referrals, medical tests, and treatment such as massage, icing, bandages, wraps etc. Relatedly, we excluded medication recommendations initiated by the patient through, for instance, a request. Recommendations that were nth recommendations for the same medication in the same visit were also excluded, as were dosage changes to the same medication. We also excluded recommendations that were "contingent" on the future presence of symptoms or other factors not currently present. Thus recommendations for medication "if you start having headaches" in a patient who has not reported any headaches would not have been included. Finally, utterances such as "Have you tried Robitussin?" were not included as recommendations because these were rarely treated as such and were normally understood as preliminary to actual recommendations (Barnes, in press).

With these concepts and issues in mind, we had a goal to identify 120 encounters that contained at least one recommendation for a new medication in each clinical context. However, in specialty care there were often no recommendations for new medications, so the data sets were not necessarily large enough to identify this many. In the end, we identified 794 recommendations for medication of which, 62% were from the UK primary care data and 38% were from US data. Of the UK data, 80% were from primary care. The remainder were from specialty care practices. Within a central focus on how treatment recommendations are presented to patients, and whether and how patients received them, each article in this issue examines a subset of the data focusing either on a particular type of medical recommendation and its implementation within a medical specialty and/or cross-national comparisons within primary care.
The dimensions on which our coding scheme focused are summarized in Table 1. Although this special issue will not explore all of these, we provide them as background because they nonetheless informed our thinking about treatment recommendation delivery and reception.

*Place Table 1 about here*

**Interactional coding categories**

Our coding scheme is squarely focused on interactional aspects of the treatment recommendation turn and its reception, together with a range of non-interactional variables itemized below under "Covariates." Our codes were informed by both prior work by the authors and pilot work examining a smaller subset of our data to identify the dimensions of variation present in the data. Seven aspects of the treatment recommendation sequence were ultimately identified and coded.

1) We identified the main **social actions** being relied on by physicians to present recommendations. These actions differ broadly in terms of who is being treated as the instigator of the recommendation; who is treated as the decision maker; and highlights different aspects of the recommendation in terms of whether it is, for instance, optional or speculative.

2) Within each social action type, we assessed the **strength of the physician's endorsement** of the medication. We did this by holistically rating the recommendation as strong to weak, relative to other recommendations within the same action type.
3) We examined whether or not patients were presented with recommendations for **multiple medications** including situations in which patients are presented with a list of medications indicating that patients can choose from any in a class (e.g., "I'd recommend X, Y, or Z or whatever your favorite cough medicine is" where each is the name of a cough medicine) and fixed alternatives for patients to choose among.

4) We coded how the physician's **reference to the medication** is done. We identified four possibilities: by drug name, drug class, a pronominal reference or a "generic" reference (e.g., "some treatment" or "something").

5) Some of the recommendations physicians made invoked a **reference to partnership** with the patient through the invocation of "we" or "us." We coded for this, excluding physicians' use of the "institutional we" as in "We usually prescribe X for this."

6) Because utterances containing recommendations normally have identifiable turn-constructional unit boundaries inviting of response, we examined whether those boundaries were clearly present or were, alternatively, obscured by grammatical continuations or other practices for turn extension. Where turn constructional unit boundaries were clear, we coded an **"opportunity space" for response** as present. The motivation for this code was to assess whether patient responsivity is affected by the clear presence of an opportunity space for response or not.
7) We assessed the patient's uptake of the treatment recommendation turn as absent, acknowledging, nodding, accepting or resisting. We based our assessment on the first form of uptake in the event that there were multiple forms of uptake, and on the strength in the event that, for instance, nodding and verbal acceptance were done simultaneously.

Covariates

We coded five classes of covariates: (i) national and specialty context; (ii) physician and patient demographic information including gender, age and race/ethnicity; (iii) type of medical condition (chronic, intermittent or acute, on the one hand, and existing or new, on the other hand); (iv) medication variables including primary class; whether the prescription was over-the-counter vs. by prescription in the national context; and risk of addiction; and (v) outcome variables including diagnosis and whether the medication being recommended was ultimately prescribed/recommended.

Future studies on these data will provide more analysis of the relationship between covariates and interactional variables. In the present collection we focus primarily on the interactional dimensions of the study.

This issue

In this volume, Stivers et al. examine the most common ways that primary care providers in the US and the UK recommend treatments, what conditions the use of particular treatment recommendation actions, and whether the actions relied on to recommend treatment are associated with patient uptake. They also explore the similarities and differences between the UK and US cases. Thompson and McCabe take us to UK Psychiatry to examine recommendation
action and the relationship between recommendation actions and patient uptake. Toerien examines the use of one particular type of action, assertions, in the neurology clinic context, which provides a deeper analysis of the affordances of this recommendation action.

Barnes explores where the boundary lies between pre-recommendations -- inquiries that are hearable as testing the waters for a treatment recommendation -- and actual treatment recommendations for new medications in general practice care in the UK. She asks whether recommendations that are preceded by pre-recommendations are different from those that are not, and what effect these pre-recommendations might have on patient uptake. Finally, Bergen et al. examine treatment resistance with an eye towards explanations for resistance that are similar versus at odds in the UK and the US primary care contexts.

This collection focuses on the treatment recommendation action and uptake, from both a qualitative and a quantitative perspective. We believe that this area is particularly rich with regard to cross-national and cross-specialty comparisons. With these studies, we hope to open up new areas for research that have previously been unexamined. In particular, although researchers have compared patients’ responses and physicians’ orientations to patient uptake following diagnoses and treatment recommendations and other work has identified a difference between positively presented recommendations for medication versus negative recommendations, our work is the first to explore the range of ways physicians actually positively recommend medications.

Together, the papers arising from this focused comparative study will make a substantial contribution to literature on doctor-patient communication, treatment decisions and shared decision making. That we do this through data collected in two different healthcare systems makes our collection particularly novel.
References


