Closing the Deal: A Cross-Cultural Comparison of Treatment Resistance

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Abstract

This study investigates patient resistance to doctors' treatment recommendations in a cross-national comparison of primary care. Through this lens, we explore English and American patients' enacted priorities, expectations, and assumptions about treating routine illnesses with prescription versus over-the-counter medications. We perform a detailed analysis of 304 (American) and 393 (English) naturally occurring treatment discussions, and conclude that American and English patients tend to use treatment resistance in different prescribing contexts to pursue different ends. While American patients are most likely to resist recommendations for non-prescription treatment and display an expectation for prescription treatment in these interactions, English patients show a high level of resistance to recommendations for all types of treatment and display an expectation of cautious prescribing. These behavioral trends reflect broader structural forces unique to each national context, and ultimately maintain distinct cultural norms of good-practice prescribing.

Keywords: prescribing rates, treatment resistance, doctor-patient communication, conversation analysis, cross-national comparison

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I don't like to take drugs unless I absolutely have to.
- *Patient 105, England Primary Care*

Does it work pretty quick, pretty strong?
- *Patient 211, United States Primary Care*

It has been well established that prescribing rates have a considerable direct impact on such diverse aspects of patient care as overall assessments of patient quality of life, mortality rates, medication abuse, and antibiotic resistance (Cicero et al., 2007; Ford et al., 2007; Gossens et al., 2005; Moriarty et al., 2016). Yet countries such as the U.S. and England, that are arguably similar in many ways, have dramatically different prescribing rates. The U.S. has the highest rates of prescription drug utilization and spending worldwide (Squires, 2011), consuming 80% of the global supply of opioids (Nowak, Nader & Stettin, 2014), writing 262.5 million outpatient prescriptions for antibiotics annually (Hicks et al, 2015), and spending over 373.9 billion dollars annually on pharmaceuticals (Aitken et al., 2015). Relative to other high-income countries, England has below-average rates of prescription drug utilization and spending (Squires, 2011), yet has consistently scored top ratings in overall quality and effectiveness of care provided (Davis et al., 2014). These differences are striking, and present a question of what intersecting roles patient-physician interaction and the structure of healthcare systems may play in prescribing.

For many adults, the burden of attending a physician and suffering from non-serious illness is markedly lower in England than the U.S. Many legislative factors play into this. The United Kingdom provides tax-funded universal healthcare coverage to all citizens, and citizens are entitled to access primary care consultations at no charge (Schoen et al., 2010). The United Kingdom also

mandates that all full-time employed individuals have the right to a minimum of four weeks paid leave annually. Paid leave can be used, for example, to ensure that one has had full recovery from a cold before returning to work (Casey & Maldonado, 2012). In addition, wait time for scheduling a primary care visit is significantly shorter in the U.K. than the U.S. (Davis et al., 2014).

The United States, in contrast, plays host to an amalgamation of private and public healthcare providers, and access to care is typically a combination of fee-for-service and buy-in entitlement to access. Patient access to care varies significantly by income, and is significantly lower overall than the United Kingdom (DeNavas-Walt, Proctor, & Smith, 2013). By national law employers are not accountable for providing any paid leave (Claxton et al., 2014).

Thus, patients in the U.S. health system face structural disincentives to visit their primary care physician until a condition proves itself to be unmanageable, and when they do visit there may be greater pressure for the visit to "count," leading patients to expect a solution that would provide speedy recovery from the health problem, since they have taken time off of work and paid money for a co-payment. Conversely, patients in England are not only protected from these structural biases, but may even have a structural incentive to visit the primary care doctor before a condition becomes unmanageable. Because visits have no financial cost and minimal other costs this could facilitate a view by patients that they do not need to rush treatment.

At the level of the provider-patient visit, previous studies have also established that patient and physician communication also shapes prescribing outcomes. Evidence suggests that the recommendation type, action and design is shaped not only by observable signs, but also by patient communication of concerns (Stivers, 2002; Stivers & Heritage, 2001), and physicians' perceptions of expectations (Mangione-Smith et al., 1999). For instance, in the American pediatric primary care context, both parents and physicians routinely orient to over-the-counter

(OTC) treatment recommendations as second-rate or less-than-adequate. This has been evidenced in parents' increased resistance towards non-antibiotic treatment plans, particularly when they take the form of negative recommendations (e.g., "It doesn't look like she needs an antibiotic"). Existing research has documented that in the context of treatment resistance of non-antibiotic recommendations, physicians may make alterations to the treatment plan (Stivers, 2005b). It is possible that English patients are less likely to resist non-prescription (OTC) medication and that this could contribute to the discrepancy in prescribing outcomes.

Non-antibiotic recommendations are also treated by American physicians as less preferred as evidenced by the fact that they more frequently include accounts (e.g., "Her throat doesn't look too bad") and minimizations (e.g., "I'd just give her Ibuprofen") (Stivers, 2005a; Mangione-Smith et al., 2006). However, there has been no systematic analysis of patients' and physicians' enacted orientations towards prescription versus OTC treatment during adult primary care consultations in the United States or United Kingdom (but see Buchbinder et al., 2015 on patient requests for painkillers; Stevenson et al., 2003 on the acceptability of discussions of self-treatment).

In this paper, we ask whether English patients respond to treatment recommendations with less resistance than U.S. patients in order to investigate what role doctor-patient communication plays in prescribing discrepancies between the U.S. and England. It is possible that patients behave similarly and physician behavior alone explains the difference in prescribing rates, or that patient behavior primarily accounts for the difference. To address this question, we examine (a) the contexts of patient resistance (i.e., which treatment types patients respond to with resistance); (b) patients' accounts for resisting the treatment plan; and (c) physicians' subsequent justifications of the recommended treatment and concessions to perceived patient desires. We aim

to see whether and how patient resistance to the recommended treatment may differ systematically in two national contexts, and how patients' enacted priorities and expectations in resistance affect the treatment decision-making process.

Method

We identified 304 (United States) and 393 (England) physician-initiated treatment recommendations for a new medication, whether self-administered OTC or prescription, out of a sample of video- or audio-recorded adult primary care consultations. The data were collected from large urban centers in the Western United States and Southern and Western England. The primary sampling unit is the practitioner; a total of 57 American internists and 36 English general practitioners participated in the study. Participating practitioners' adult patients were eligible to participate in the study if they had a primary care consultation scheduled with the practitioner during the data collection interval.

In line with our project goals, recommendations for physician-administered treatment (e.g., tetanus shot) and home remedies (e.g., gargling salt water) are not coded as treatment recommendations (Stivers & Barnes, in press). All identified treatment recommendations were coded for whether the patient (a) accepts the physician's treatment recommendation at the first opportunity space, (b) offers an acknowledgement token, nod, or continuer (Schegloff 1982) in the turn following the treatment recommendation, (c) shows no immediate response to the recommendation (e.g., silence), or (d) actively resists the recommendation, for instance by offering an account for non-acceptance or by questioning the recommendation. As outlined by Stivers (2005b), cases in coding category (a) are considered patient *acceptance* of the treatment

recommendation, cases in categories (b) and (c) are considered *passive patient resistance*, and cases in category (d) are considered *active patient resistance*.

Patient resistance could be associated with a variety of other contextual factors surrounding the visit, diagnosis and treatment. Thus, this study makes use of other dimensions of the coding scheme designed for the larger project: (1) whether the condition being treated was acute, chronic or recurrent; (2) whether the illness was newly diagnosed versus previously diagnosed; and (3) the type of condition being treated, based on presenting symptoms and interpreted with the International Classification of Primary Care (ICPC-2). For further description of the project coding scheme see Stivers and Barnes (in press).

The first author also coded whether the patient could reasonably recognize the recommended treatment as either purchasable over-the-counter (e.g., "Take some Ibuprofen to bring the fever down.") or purchasable by prescription only (e.g., "What I'll do is put you on a few days of antibiotics."). If it was determined that the patient could not reasonably recognize the treatment as either over-the-counter or prescription (e.g., "We'll get you symptomatic treatment."), the treatment recommendation was coded as unspecified, even if the treatment is later specified.

Analytic Strategy

This paper consists of a qualitative and quantitative analysis of contexts of treatment resistance, and a qualitative analysis of patients' accounts for resisting treatment. In both the English and American datasets, multivariate logistic regression is used to assess the relative effect of context and national difference on patient resistance while accounting for potentially confounding characteristics of the patient's illness. Specifically, we rely on a dichotomous measure of patient resistance as the dependent variable. In line with prior research (Stivers 2005b), patient resistance

was construed as a dichotomous variable by combining acknowledgements, nods, and active resistance categories and contrasting these with cases of acceptance. A dichotomous measure of treatment type is also used in the logistic regression analysis, in which over-the-counter (OTC) and unspecified treatment recommendations are considered non-prescription treatments and contrast with recognizable prescription treatment recommendations.

In the basic descriptive statistics and all regression models, 'general practitioner' is specified as the primary sampling unit to account for the stratified sampling procedure. One final model is presented for each country. Inclusion of confounding variables in the regression analyses is largely informed by qualitative analysis of these data (as outlined in this paper) and on prior qualitative work on these issues in the pediatric setting (Stivers, 2005b). The STATA 13.1 survey procedures were used to calculate descriptive statistics and estimate logistic regression models. An alpha of 0.05 for statistical significance is assumed.

Results

Context of Patient Resistance

Patient resistance to a given treatment recommendation is one way that patients initiate negotiation of the final treatment (Stivers 2005b). Thus, our first question is whether resistance is associated with the type of medicine being recommended, and whether there is a difference by country. In both countries passive resistance constitutes the vast majority of resistance cases (85% and 78% of resistance cases in the U.S. and England, respectively). Patients use active resistance sparingly in both countries. However, the context of resistance is different in the two countries. Table 1 displays the rates at which patients in England and the U.S. resist the recommended treatment (instances of

treatment resistance over total recommendations for treatment) by treatment type. One can see that rates of resistance to prescription versus non-prescription treatments vary considerably in the two countries. American patients have a higher rate of resistance to non-prescription treatment recommendations than to prescription treatment recommendations, whereas English patients have a high rate of resistance across all medication contexts.

[TABLE 1 ABOUT HERE]

Table 2 displays the results of multivariate logistic regression analyses predicting, for each country, patient resistance by treatment type (prescription versus non-prescription, i.e. OTC or unspecified), while accounting for potentially confounding aspects of the patient's health condition and the stratified sampling procedure. Medication type is a significant predictor of patient resistance in the American dataset. Net of patient condition factors, receiving a recommendation for prescription treatment almost halves the odds that an American patient resists treatment, compared to receiving a non-prescription treatment recommendation. However, in the English dataset, medication type is not a significant predictor of treatment resistance.

Patient condition variables were not significant predictors of treatment resistance, with the exception of *newly diagnosed condition* in the U.S. dataset. Despite variable insignificance, in the English sample, odds of resistance increase if the patient's condition is newly diagnosed versus previously diagnosed. In contrast, in the U.S. sample, odds of resistance increase if the patient's condition has been previously diagnosed versus is newly diagnosed. Thus, there is some evidence that English patients may be more hesitant to accept treatment for newly diagnosed conditions,

whereas American patients may be relatively more disposed to receive treatment for new conditions, relative to previously diagnosed conditions.

[TABLE 2 ABOUT HERE]

Patient Accounts

As has been shown, American patients discriminate between non-prescription and prescription medications, resisting the former more frequently. As such, patient resistance may drive up the recommending of prescription medications in the American context. However, English patients do not differentiate between medication types but have a relatively higher rate of resistance of all medications, thus possibly helping to minimize prescribing overall.

The next question is whether other aspects of patient response might provide further insight into the basis for patient resistance: their enacted priorities, expectations and biases during treatment negotiations. Our goal in the next section of this paper is to get a more comprehensive picture of what these 'cultures of prescribing' look like on the ground, and how prescribing rates and cultures of prescribing intersect through the social action of recommending treatment. To address this, analysis now turns to patients' accounts for resistance and the preferences embedded therein. Because resistance, when it occurs, tends to be passive and thus lacking accounts, a smaller sub-sample of active resistance cases is analyzed. There is evidence that American patients tend to enact an expectation for prescription pharmaceuticals while English patients typically display a preference for physicians to prescribe conservatively.

Two of the most commonly cited reasons for resisting recommended treatments are that the medication (1) may not be effective; and (2) may cause side effects (also see Barnes, in press). This

paper also discusses cases in which patients resist medications on the basis of (3) perceived excessive prescribing. The trends described in these three sub-categories are treated as largely representative of the trends found across the broader collection of patient accounts for resistance. These accounts are not evenly distributed across prescription and non-prescription contexts in the two countries so this provides important insight into the basis for patient resistance in the U.S. and England.

Treatment resistance: Potential inefficacy of the medication. No instances in which American patients resisted prescription medications on the basis of their potential inefficacy were located; however, this sort of resistance occurred regularly in the context of OTC recommendations. American patients typically cite an attempt at self-medicating with an OTC drug just prior to visiting the doctor; they then either state or imply that the OTC medication was insufficient to manage the illness. In this way, American patients display themselves as having come to the doctor in order to secure some alternate form of relief (relevantly, some prescription medication). Through this logic, it may be argued that American patients enact an expectation for prescription medication. In (1) an American patient resists a physician's recommendation for Tylenol or Advil (OTC pain relievers) to treat what has just been diagnosed as the flu.

(1) United States
(Transcripts follow conversation analytic conventions (Hepburn & Bolden 2012))
1 Doc: The best thing that we can do is- .h Your body fights viruses on
2 their o:wn. So the=things that we do is try to make you feel better,
3 (0.2) Ya know, So (0.5) symptomatically treat your symptoms.=
4 =[Okay,
5 Pat: [((nod))
6 (1.5)
7 Doc: .hh For your body a:ches and yer fever. (0.5) °yeah:?° You're trying
8 to take Tylenol or Advil. (0.3) Something like that.=
9 > Pat: =I took Robitussin:, (0.2) like the pills?
10 Doc: Mmhm?
11 > Pat: But they weren't helping me at all.
12 Doc: The Robitussin what that does is- .hh depending what type you

13 took, it- th-those are good for co:ugh, if you have a lot of cough,
14 er if you have a lot of mucus 'n congestion it'll help loosen it
15 up. .hh [You know? Um, you might- (0.4) also need some Sudafed.
16 Pat: [°Ye:ah.°
17 (0.5)
18 Pat: Mmm. ((nod))
19 Doc: Mkay? .hhh Umm I have some samples of some medicines you can try:
20 it's: combination of Robitussin and Sudafed. [.hhh The other thing
21 Pat: [((slight nod))
22 Doc: i:s that would really help I think is uhhm maybe some gargling,
23 for your sore throat=[your throat doesn't look terrible. [y'know,
24 Pat: [°Mmm.° [((nod))
25 Doc: Your tonsils are a little swollen, but they're not terrible.
26 you know they're not- .hhh doesn't look like they're infected with a
27 bacterial infection.[=so I don't think you need any[=antibiotics.
28 Pat: [(All right.) ((big nod)) [((nod))

The recommendation for OTC symptomatic treatment (lines 7-8) is done as a straightforward pronouncement, assuming full deontic authority over the treatment decision (see Stivers et al., in press). Resistance is less common in the pronouncement context, yet here, the patient immediately responds that she has already tried Robitussin – another common OTC medication for cold and flu symptoms, though used for cough and congestion rather than pain relief – and that it did not relieve her symptoms (lines 9/11). Here, the patient makes an upgraded negative assessment of the drug's efficacy ("they weren't helping me *at all*"), treating the drug's failure as definitive. The physician can now begin to piece a story together – the patient gets the flu, the patient tries to self-medicate with an OTC, the OTC does not work, and only then does the patient visit the doctor. In this way, the patient indicates that she chose to visit the doctor in part *because* she has already concluded that the current disease is unmanageable with OTC medications. Having provided an implicit account for her passive resistance of Tylenol and Advil, she becomes hearable as lobbying for prescription treatment. The fact that the patient categorizes Robitussin (a cough medication) with Tylenol and Advil (pain medications), presumably on the basis that they are all common OTC treatments for cold

and flu, provides further evidence that the patient is not seeking an alternate OTC recommendation, but rather access to prescription medicine.

Importantly, there is evidence in the physician's subsequent talk that he understands the patient as lobbying for prescription treatment. In this case, the physician does significant work to account for his non-concessive response and to secure the patient's acceptance of an OTC-only treatment regimen. In lines 12-15, the physician works to dismantle the patient's implied argument of ineffectiveness. He begins with an account of what the Robitussin is good for (lines 12-15) which implicitly contrasts with his recommendation for Tylenol or Advil (lines 7-8). He then shifts to offer samples of an alternative medication, a combination of Robitussin and Sudafed (a decongestant) which would mean that the patient could avoid paying for another OTC medication.

Still not receiving patient acceptance, the physician accounts for the OTC-only regimen by citing observable evidence that symptoms are minimal in the throat and tonsils. Ultimately, this is used as support for his non-bacterial diagnosis and to substantiate his account for not providing antibiotics; "so I don't think you need any=antibiotics" (line 27). Notably, physicians commonly state a lack of need for antibiotic recommendations when faced with various forms of perceived patient lobbying for antibiotic treatment (Stivers, 2005a).

What is important is the way that the patient resists an OTC medication and the way that this resistance is treated by the physician as working to advocate for a prescription medication. Note that, finally, the patient produces an acceptance token "All right" in overlap with the diagnostic information but because that diagnostic information was in the service of justifying the OTC recommendation, it is also understandable as finally acquiescing.

One might have expected a similar sort of priority among the English sample. After all, they too can visit their local pharmacy and buy OTC medications and thus could also visit physicians

largely in search of prescription medication. However, not only do English patients fail to discriminate in resistance at the aggregate level (as discussed in the previous section), but when they account for resistance in terms of efficacy, this is more likely regarding *prescription* medication. Case 2 illustrates this: the patient's primary concern is her recently heightened stress level. She shows signs of distress during the visit and is crying throughout this extract (lines 3, 7, 14, 19).

(2) England
1 DOC: What about seeing our ↑coun's'llor. W'd ↑that help.
2 (0.5)
3 PAT: HHhhh
4 (0.5)
5 PAT: ↑↑°°I don't know°°↑↑ ((crying))
6 (1.2)
7 PAT: HHh .HHhh
8 (0.3)
9 PAT: ↑That's=it I caan even de↑cide [fings. ((crying))
10 DOC: [Mm:::.
11 (1.2)
12 DOC: There's also medication as ↑we:ll.
13 (0.3)
14 PAT: T(h).hh
15 DOC: [Anti-de↑pressants.
16 > PAT: [(H)hh .Hhh ( ) ↑yeah but I don't know if tha::s
17 > gonna ↑'elp me. ↑I don't ((crying))
18 (0.5)
19 PAT: T(H)hhh
20 (0.8)
21 DOC: ↑D'pends how low you ↑are Anne.

The physician's recommendation for prescription antidepressants using a minimally endorsed assertion (lines 12/15) already embodies a cautious stance towards prescribing (see Toerien, this issue and Stivers et al., this issue). The patient nonetheless resists, challenging the appropriateness of the medication by countering with the possibility that the antidepressant may be ineffective (lines 16-17). In this way, the patient displays an assumption that even the potentiality of the medication being ineffective may be enough to warrant a refusal to accept the prescription. The patient also provides no indication that she came to the clinic with an expectation for prescription medications

for her mental health concerns. In fact, quite the opposite is evident; the patient displays her entitlement to openly hold the doctor accountable to standards of cautious prescribing.

The physician does not immediately back down from the recommendation, but does respond in a way that acknowledges that the recommendation may not be appropriate in this case (line 21). The response also allows the patient's judgment of her own condition to be the key deciding factor in the question of whether the medication is appropriate. Ultimately, the physician does not end up prescribing an antidepressant medication for this patient. Thus, in cases like this one sees the potential for patient resistance to reduce physicians' recommendations for prescription medication.

The theme of cautious prescribing is even more evident in (3) where the patient specifically indicates that the basis for her resistance is efficacy. Here, the patient's primary concern is her recurrent acne. She has previously been prescribed Panoxyl 3% and 5%, and neither has resolved her acne problems.

(3) England
1 DOC: There's a hi- even high- stronger one than that.
2 PAT: Is there.
3 DOC: D'you know that.
4 (.)
5 DOC: Yeah, there's a, I think there's a 10% as well.
...
50 DOC: Okay.
51 (.)
52 DOC: Are you happy to use the 10% and give that, give that a go.
53 > PAT: ↑U::m hh if you honestly think it'll be any different than the
54 > stuff that I've been using before.
55 (.)
56 > PAT: If you don't think it'll be any different now I jus sort'ov don't
57 > see the point. To be honest.

The physician's initial treatment recommendation is a minimally endorsed assertion and does not assume patient acceptance of the new treatment plan (line 1). The patient initially resists the treatment plan with a non-committal acknowledgement. Later, at line 52, the physician upgrades his recommendation slightly to an interrogatively formatted proposal (Stivers et al., this issue)

relinquishing much of his deontic and epistemic authority over the treatment decision. The patient again resists but does so in a way that provides the physician with a contingent way forward to acceptance -- if he can argue that it will be effective in a way that the other medications have not.

With her response to the doctor's proposal, the patient displays that she is *not* working under the assumption that he is practicing conscientious prescribing. In contrast to (1), this treatment resistance sequence does not place pressure on the physician to prescribe some alternate medication, but instead unapologetically places pressure on the physician to prescribe conscientiously (i.e., only prescribe a medication that would really work for this patient). The patient displays herself as wary of increasing the dosage of a medication that has so far not made a difference for her.

There is a clear trend in the American sample towards the patient's immediate treatment resistance placing social pressure on physicians to prescribe an alternate medication to the OTC originally recommended (6 of 7 cases). In the English sample, we simply see social pressure to re-consider whether the current recommendation is truly necessary in the majority of cases (9 of 12 cases). Though we are now drawing on a small sub-sample of cases, this suggests that patients in these two countries use treatment resistance for fundamentally different projects. American patients resist OTC medication in the service of securing prescription medication. English patients' resistance to prescription medication appears to be in the service of reducing medication use altogether or at lease minimizing it. Thus, they indicate a preference to 'go without' medication if the efficacy of the medication is in question. These patients may cite a comparable past medication that they decided to drop and not replace, in this way showing themselves as willing to take steps to eliminate any perceived unnecessary prescribing.

In addition, English patients were uniquely seen to resist symptoms-only treatment solely on the basis that it would not address the underlying illness. This was never observed as a basis for resistance among American patients. Recall that in (1) the patient's concern was that the OTC Robitussin did not address her symptoms.

In this section we have shown that American and English patients use inefficacy in different contexts and to different ends. American patients predominantly rely on inefficacy as an account for resisting OTC medication in the service of securing a recommendation for prescription medication. English patients predominantly rely on inefficacy in the service of minimizing prescribing.

Treatment resistance: Medication side effects. In these data, both English and American patients resist prescription recommendations on the basis of possible side effects, and in all cases this resistance places pressure on the physician to practice cautious prescribing. Regardless, significant differences in how English and American patients approach this type of resistance are still seen. The differences are based on how resistance is delivered. English patients typically treat this basis of resistance as routine and non-problematic, whereas U.S. patients treat this basis for resistance as accountable and reserved for exceptional situations. Although quite rare in both contexts, resistance based on side effects concerns is still three times more common in England (present in 6% of treatment recommendations[n=22]) than in the U.S. (2% of recommendations[n=5]).

In presenting concerns about side effects, English patients show no hallmarks of deference -- hesitancy, mitigation, and/or accounts (Atkinson & Heritage, 1984). Physicians, in turn, are attentive to this class of resistance and respond to patients' concerns straightforwardly. Consider (4) in which an English patient is prescribed co-codamol to help with severe pain while she waits to follow up with a specialist.

(4) England
1 Doc: So >what I'm gonna do< is I'm gonna prescribe you some co-
2 co:damol.=which has got co:deine and paracetamol in it.
3 for the pain.
4 Pat: Will that hurt me?
5 Doc: It shouldn't do.
6 Pat: All right. (0.5) I'll try it,
7 Doc: So take two four times a da:y. (3.0) and I'm going to refer you off
8 to see: (2.0) the specialist,

The patient's immediate active resistance to the treatment recommendation ("Will it hurt me?") is built as routine and non-problematic. The question is direct, yes-preferring in design (Heritage, 2010) and is produced without delay, mitigation, preface, or account. The question also frames the medication as its own agent, capable of causing injury. In this way the patient displays an orientation towards a standard of conservative prescribing. In his disconforming answer, the physician provides a transformation from "will" to "should" (Stivers & Hayashi, 2010) thus acknowledging the possibility of harm, legitimizing the patient's inquiry while still indicating this is unlikely. In this way, the patient and physician orient to concerns about side effects as a routine surface issue in the context of prescribing. In this case, the patient treats the physician's response as adequate assurance and immediately accepts the medication.

Physicians in England appear to broach prescribing in anticipation of patient resistance. Consider (5) where the physician moves to a recommendation for an antidepressant with an assertion, this time particularly tentatively through the inclusion of "possibility".

(5) England
1 Doc: Thun, the other (.3) possibility would be a course of
2 antidepressants.
3 (0.7)
4 Doc: U::m (0.7) what you [might want to do is, [is
5 > Pat: [((*Sniffs*)) [That scares me.
6 Doc: ( ), .hh what you- Does it? Okay,
7 (0.5)
8 Doc: What=y- well what you might want to do is: e:m (.) see
9 the practice counselor, [an (0.6)
10 Pat: [((*Blowing nose*))

11 Doc: have the antidepressants as an [option up our sleeves if
12 Pat: [Hhhh
13 Doc: you li:ke [fo-
14 > Pat: [Yeah. >I don't wanna [get
15 Doc: [so with
16 > Pat: sort'uv< h:ooked on something, reliant on something?
17 (0.3)
18 Doc: .Hh ↑if we did need to [prescribe for you then I could
19 Pat: [((*Sniffs*))
20 Doc: promise you that we could prescribe you something that
21 would not be addictive.
22 (0.3)
23 Pat: .Tk oka:y

The patient first passively resists the treatment recommendation with extended silence (lines 3-4). Once the physician returns to expand his treatment recommendation, however, the patient produces in overlap a straightforward and unmitigated concern regarding the side effects of the medication. The citation of concern is not accounted for through personal experience or otherwise. The physician does not treat this as problematic, and immediately acknowledges the concern (line 6) and then provides a concession to the patient, suggesting that the patient see a practice counselor first but that they will "have the antidepressants as an option up our sleeves" (lines 7-8/11/13).

The patient agrees with this adapted treatment recommendation, and then expands on her initial concern; ">I don't wanna get sort'uv< h:ooked on something, reliant on something?" (lines 14/16). Again, the turn is straightforward and unmitigated. The patient furthermore does not treat the statement as requiring further accounts by, for example, citing family and friends' experiences with similar medications. Following the physician's second concession ("I could promise you that we could prescribe you something that would not be addictive" lines 20-21), the patient reverses course and agrees to the treatment plan. However, the point remains that there is an orientation by English patients and physicians towards minimizing prescribing on grounds of side effects.

American physicians and patients, in contrast, broach side effects as a basis for resistance less frequently and with greater caution and accountability. For instance, patients typically provide

an account for resisting on the basis of side effects. Accounts generally take the form of citations of past experience with side effects from comparable medications, or references to possible drug interactions. Furthermore, American physicians tend to show hesitancy to respond and concede to patient concerns regarding prescription side effects. Taken together, these actions project a normative stance that having concerns about the side effects of prescription medications is not as reasonable as it is treated in England. Consider (6) in which an American physician suggests antidepressants with a strong, unmitigated endorsement (lines 1-3).

(6) United States
1 Doc: So yeah you're at a big pivotal time right now .hh Um. There are
2 antidepressant medications that would work very good for you.
3 Y'know.
4 Pat: Mm hm,
5 (.)
6 Doc: But they donaren't ma:gic pi:lls y'know you need other kinds of
7 therapy also.
...
39 Doc: It works:: (.) slowly. [(.) .hh You know so maybe after one or two
40 Pat: [((nod))
41 Doc: weeks or three weeks of taking the medicine you're ((head shake))
42 not gonna feel any different. [(Kay,)
43 Pat: [Exce:pt my question was about those
44 me:dicines, is that if I was to start ta:kin' i:t? .hh
45 Doc: Mm hmm,
46 Pat: An' then I feel like I can't take it anymo:re, if I don't have it am
47 I gonna be worse than what I am [no:w? o:r_
48 Doc: [((head shake)) No. No no no. .hhhh
49 Pat: Oka:y,
50 Doc: That- That kind of phenomenon (0.2) doesn't happen with these
51 medicines. [If .hh you've been taking it for six months and all of a
52 Pat: [((nod))
53 Doc: sudden you stop (0.4) you know,
54 Pat: Mm hmm:,
55 Doc: Yeah you're gonna lose the effect that the medicine has given you:.
56 but you're just gonna drop back to where you are no:w.
57 Pat: Oh 'cause I seen my mom go through that. She's been on Prozac for a
58 while now. .hhh an' she couldn't take it 'cause I guess weight
59 ga:in? she tried to stop it? .hh and she just went crazy. ((head
60 shake)) an' I never seen my mom r:eact like that. because she didn't
61 have [it.
62 Doc: [It's: (.) It's It's not like tha:t. It's It's one of the
63 medicines though that if it does work for you and you do: you are
64 taking it consistently. then [it's one of those I would recommend
65 Pat: [((nod))
66 Doc: that you not stop, [(.) just because it's doing you a benefit.
67 Pat: [Mm hmm, ((nod))

68 Pat: M[m hmm,

At line 4, the patient passively resists the treatment recommendation. Following the physician's elaboration and patient's continued resistance (transcript not shown) and hesitancy (lines 43-44), the patient accounts for her resistance by inquiring about side effects associated with medication discontinuance (lines 46-47). The physician unequivocally rejects the possibility of side effects (line 48) and the patient accepts this rejection (line 49). The physician then clarifies his response, doing additional work to present the medication as harmless (lines 55-56). The physician validates the patient's concern by providing a non-minimal answer, but the answer is built to resist any implication of side effects, despite the fact that such side effects frequently do occur when antidepressants are discontinued without tapering (Haddad, 2001).

The patient marks this as news, but does not accept the treatment (line 57). Instead, she resists the physician's claim and accounts for her question, citing severe side effects experienced by her mother (lines 57-61). The patient does significant work to legitimate her resistance here, asserting a clear causal link between her mother's antidepressant discontinuance ("because she didn't have it") and very visible side effects ("she just went crazy"). The doctor responds with another straightforward assertion, again rejecting the possibility of side effects (line 62). Not only does the physician not make concessions to his treatment plan, but he also does not concede to the implication that mood instability could be a side effect of antidepressant discontinuance. Shortly thereafter, the patient accepts the treatment recommendation.

In this section we documented that in the U.S. and England, physicians and patients orient to side effects of medication differently. U.S. patients treat the broaching of side effects as a basis for resistance to be used sparingly, and as necessitating caution and account. U.S. physicians do not show much willingness to concede to patient concerns regarding side effects. English

patients, on the other hand, treat side effects as a common and legitimate basis for resisting medication of all sorts. Physicians second this, exhibiting some degree of anticipation for resistance and being relatively quick to acquiesce to concerns about side effects.

Treatment resistance: Unwarranted or excessive prescribing. In the previous section a concern with cautious prescribing emerged via a concern with side effects. However, English, but not American, patients also resist medications directly on the basis of excessive prescribing. English patients resisted in the service of eliminating the prescription.

For English patients, a variety of recommendation types can constitute "excess." Patients cite a lack of need for medications when resisting symptomatic treatments for self-identified low-intensity symptoms; prescription medications for diagnoses in which an intermediary treatment may be relevant; continuing medications for chronic-intermittent conditions; and supplemental medications for an already complicated multi-drug treatment regimen (N=21 total cases). In (7), an English physician recommends Quinine to provide a patient with relief from painful leg cramps during the night (line 2).

(7) England
1 Pat: [I used to suffer with it really (.) ba:d years ago.
2 Doc: Yeh. (0.3) Sometimes Quinine:. can help?=which is a (.) drug you
3 take a bedti:me,=
4 Pat: I used to be on that.=
5 Doc: =You used to be on that?
6 (0.5)
7 Pat: .hhh Uhm: Doctor Williams. when I had me ulcer. (he was the
8 doctor: [at uhm: (.) Saint Noah's.) They put me [on that,
9 Doc: [Right. [Yeah. Mhm.
10 Doc: Does it help?
11 Pat: Yes. >Yeah yeah.<
12 Doc: Well i- it's a- they [say
13 Pat: [But it's more pills. An I'm fed up.=
14 [I'm ^on thirty odd pills a [day an
15 Doc: [Yeah. ^Okay. [Right. Okay.
16 Doc: Okay. Right. Well I don't really want=to give you more pills,
17 Pat: I do[n't-
18 Doc: [.hh Uh: an:d (.) uh (.) although people (0.3) find it helpful. 19 (1.0) the evidence is it prob'ly doesn't make a lot of difference,
20 Pat: If it gets any wor:se [then I'll come back.

21 Doc: [Yeh.
22 Doc: I would have a go: with your: with massaging the stuff in I've
23 just given [you,
24 Pat: [Yeh.
25 (0.3)
26 Doc: Three >times a day.< .hh Shall I give you a ring: abo:ut
27 Wednesday::,
28 (1.0)
29 Doc: and see how that's going,

At line 2 the clinician recommends Quinine. In response the patient appears to be on her way to resisting the recommendation, first citing prior experience. The physician asks whether the medication helped. Although the patient confirms it, she goes on to resist taking it now citing that "it's more pills" and "I'm fed up. I'm ^on thirty odd pills". In this way, the patient orients to any additional medications as excessive. The physician responds with an immediate concession to the patient's resistance including her basis in excessive medication as she states that she does not "want=to give you more pills" (line 16). Notably, she frames this as a first-position assertion as opposed to an agreement, subtly pushing back against the patient's implication that the physician may have misjudged levels of appropriate prescribing.

In (8), we see the patient resisting on the basis of excessive prescribing as well, but in this case the issue is taking a medication for the sole purpose of symptom management. Here, an English physician recommends paracetamol for pain. The patient has been diagnosed with a muscle strain.

(8) England (audio)
1 Doc: Aright? Th- eh- There is not a single tablet that will make th-
2 a::ny difference .h to whether this gets better. (.) quickly or
3 slowly.
4 (0.5)
5 Doc: It mi::ght (0.3) f::eel better? (.) as a result of taking a tablet
6 to just diminish the pain.=but that's all the tablet we'd be
7 doing.=
8 Pat: =Yeah. .hh No. [I wouldn't-
9 Doc: [S- So if the pain isn't too ba:d, I wouldn't take
10 a strong tablet. [I would just use paracetamol. .h And if quite
11 Pat: [( ),

12 Doc: honestly [.hhh
13 Pat: [I won't take them [( ).
14 Doc: [the pa:in (.) really isn't that bad
15 at all it's just you were worried what the pain wa:s.=
16 Pat: =I was (0.3) that's [just where I'm comin' [from. I'm more worried
17 Doc: [I was- [Yeah. Then I would say-
18 Pat: [what it is. I think it's all in me mind.=
19 Doc: =I would suggest don'[t-
20 Pat: [I can take pain there, [I ( )-
21 Doc: [I would suggest
22 don't bother with the painkillers.
23 Pat: I won't. .h I'm not that type of person.

The physician's recommendation orients to the patient's symptoms as minimal, and minimizes the capacity ("that's all the tablet we'd be doing") and potency ("I wouldn't take a strong tablet") of the medication. The patient rejects the suggestion straightforwardly, without mitigation or account (line 13). In response, the physician presents a candidate understanding of the situation; the patient was not seeking symptomatic treatment, but rather a diagnosis (lines 14-15). The patient confirms this (lines 16/18) and makes a claim of resilience (lines 18/20), indicating that treatment for manageable pain would be unwarranted, framing the pain as something that can be overcome "in me mind". The physician then makes a treatment concession, recommending against his initial suggestion (11). Ultimately, the patient not only commits to avoiding OTC painkillers, but returns to his earlier indication that symptomatic treatment would be unwarranted. The patient then contrasts his character to the "type of person" that would accept painkillers (lines 21-22). This provides further evidence towards our claim that English patients typically resist treatment within the broader project of questioning whether the recommended treatment is truly necessary and appropriate, and that physicians treat this line of reasoning as to-be-expected.

Discussion

This paper began with the puzzle of how U.S. patients receive vastly more prescription medication than English patients. It was argued that the systematic study of clinical discussions could shed light on variability in social orientations towards medicating, thus giving us a fuller understanding of the intersecting roles that social interaction and institutional protections play in prescribing.

The data have indicated that American patients resist OTC medications in favor of prescription medications, which can lead to a higher number of prescription recommendations. English patients do not exhibit this same distaste for OTC medications. Relatedly, English and American patients resist on different bases. American patients resist OTC medication on the basis of inefficacy whereas English patients resist all medication types on this basis. Both English and American patients raised side effects as a basis for resistance of prescription medication. However, the way that they did so and the way physicians responded were revealing of alternative orientations to taking medication. English patients raised side effects straightforwardly, without hesitation, mitigation, or further accounts, and their physicians routinely accepted these concerns as warranting the elimination of the recommendation. American patients raised side effects with hesitancy, mitigation and accounts, and their physicians treated side effects as not necessarily a sufficient warrant to discard a recommendation that has utility for the problematic symptoms. Finally, English patients directly cited concerns with excessive use of medication and resisted on this basis. In these data, American patients did not ever resist on the basis of excessive medication usage.

This paper provides a detailed analysis of (1) frequency of patient resistance to GP recommendations for OTC versus prescription medications; (2) patients' accounts for treatment resistance; and (3) GPs' responses to treatment resistance in the English and United States

primary care contexts. Drawing on the methodology of Conversation Analysis, and building on previous treatment-relevant medical communications studies in this tradition (Stivers 2002, 2005a, 2005b; Koenig 2011), new insights have been provided in the largely unexplored domain of cross-national comparison of clinical communication behavior. With access to the "black box" of naturally occurring clinical encounters in two distinct national contexts, to the data reveal two very different sets of patient and physician priorities, expectations, and assumptions about medicating as enacted during the healthcare consultation.

Quantitative analysis shows that American patients' odds of resisting the treatment plan are significantly lower in the context of recommendations for prescription treatment as compared to non-prescription treatment. In contrast, English patients' odds of resisting the treatment plan are high in all treatment contexts. This paper stresses that GP's understandings of the social desirability of OTC versus prescription medications may be strongly influenced by the normative biases embedded in these trends of resistance.

It may be proposed that while in United States primary care there is typically a normative expectation for prescription treatment recommendations, in English primary care there is generally a normative preference for cautious prescribing. These are orientations displayed *both* in patients' resistance to treatment and doctors' responses to resistance. Of course, there are always exceptions to a rule. However, trends in patient accounts for resistance, as well as physician responses to resistance, seem to substantiate this claim across the data overall. Example case analyses also provide a more nuanced understanding of how cultural definitions of good-practice prescribing are jointly constructed by patients and physicians during the clinical encounter.

Future Directions

This study has provided one example of how patient and physician orientations towards prescribing can be examined through detailed analysis of treatment discussions and systematically compared across healthcare contexts. In so doing, this study makes a bid for the continued collection of larger datasets of naturally occurring interaction in clinical encounters, and the collaboration of researchers across national and systemic contexts. It is hoped that this study will prompt further academic discussion of the on-the-ground treatment decision-making process to improve understanding of treatment disparity and patient health outcomes.

Finally, it is important to revisit the broader legislative and structural context in which this paper was drafted. Notably, the United States has recently passed legislation allowing for individual states to voluntarily transition to a tax-funded universal healthcare coverage plan. Of course, a causal link between any specific legislative measures and patient enactments of distinct "cultures of prescribing" cannot be claimed. However, it is clear that cultures of prescribing are largely influenced by the structural and legislative contexts that bend and constrain them. Recalling that currently, adults in the United States have significant structural incentive not to visit the primary care doctor until a condition proves itself to be unmanageable, and furthermore to expect a solution that would provide speedy recovery from the health problem, one can begin to hypothesize about how cultural norms of prescribing will shift if and when American patients are provided with the same protections as their English counterparts. Future research in this vein could specifically study the transition period, with an eye towards establishing how patients make sense of entitlement, expectation, and "appropriate prescribing" in this transition away from the fee-for-service and buy-in entitlement to access systems.

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Table 1: Rate of Patient Resistance to Physicians' Recommendations for Prescription versus Over-the-Counter & Unspecified Pharmaceutical Treatment in English and American Primary Care (N_{ENG}=393, N_{USA}=304 Treatment Recommendations)

	Prescription		**Over-the-Counter & Unspecified**	
England	**0.81**	(0.025)	**0.81**	(0.027)
	N=239		N=154	
United States	**0.57**	(0.050)	**0.69**	(0.038)
	N=164		N=140	

Note: Sample specified as stratified by practitioner
Numbers in parentheses denote linearized standard errors

Table 2: Logistic Regression Predicting Patient Resistance to the Recommended Treatment in British and American Primary Care (N_{ENG}=393, N_{USA}=304 Treatment Recommendations)

	England (M1)		**United States (M2)**	
	b	e^b	b	e^b
Prescription Medication	0.059	1.061	-0.586 **	0.557
	(0.266)		(0.271)	
Patient Condition:				
Respiratory Condition	0.078	1.081	-0.003	0.997
	(0.339)		(0.297)	
Musculoskeletal Condition	0.303	1.354	-0.167	0.846
	(0.286)		(0.312)	
Newly Diagnosed Condition	0.059	1.061	-1.136 ***	0.321
	(0.302)		(0.415)	
Acute Condition	-0.082	0.921	0.620	1.859
	(0.319)		(0.379)	
Intercept	1.325		1.385	
	(0.265)		(0.483)	

† p<0.10 * p<0.05 ** p<0.01 *** p<0.001 (two-tailed t-test)
Note: Numbers in parentheses denote linearized standard errors
M1: Number of Strata = 1 (Practitioner); Number of PSUs = 13
M2: Number of Strata = 1 (Practitioner); Number of PSUs = 58