Patients' use of the internet to negotiate about treatment

Abstract

The internet provides access to a huge variety of information, including health information. There is, however, a dearth of evidence as to how, and to what ends, patients raise prior use of the internet during medical visits.

Analysis is based on the ((STUDY TITLE REMOVED)) study. Drawing on data from 281 video-recorded primary care consultations, we use conversation analysis (CA) to systematically inspect the data for instances in which patients reveal that they have accessed publicly available online resources regarding their illness, symptoms, or treatment concerns.

Patients invoke the internet to support three types of action: to (i) justify concerns about a serious illness; (ii) provide a warrant for treatment where they have been unable to find a solution; and (iii) advocate in relation to treatment.

Although invoking the internet risks potential encroachment into the doctor's domain of authority, patients carefully design their turns when raising the internet so as to orientate to the final decision about treatment as residing firmly within the doctor's domain of authority.

The work demonstrates how detailed interactional analysis can be used to illuminate the local work that patients and doctors engage in to manage the rise in availability of information from the internet.

Keywords

Internet, primary care, doctor-patient interaction, video-recorded consultations, conversation analysis, UK

Patients' use of the internet to negotiate about treatment

In 2019, 93% of UK households had internet access, and 63% of adults reported using the internet for health-related information - an increase of 9% from the previous year (ONS 2019). The potential benefits of using the internet, such as supporting people to be informed about their health, as well as potential issues such as causing anxiety, have been debated in the UK and other Western countries (c.f. NBC news online 2019, Van Riel et al 2017, Alves et al 2019, Mail Online 2017, The Telegraph 2017).

The internet is reported to be commonly used prior to consulting a doctor (Moreland et al 2015, Fiksdal et al 2014), providing the basis for requests and questions (Hu et al 2012), enabling people to make the best use of the limited time available in the consultation (Stevenson et al 2007, Bowes et al 2012). It is however important to note that when seeking out health information via the internet people can access information primarily intended for health care professionals as well as material produced for patients and the public (Ziebland and Wyke 2012).

In addition to research outlining people's intentions in relation to information they have found on the internet, other work has highlighted fears expressed by patients of provoking a negative reaction from doctors by appearing to challenge the doctor as the ultimate authority in the consultation (c.f. Diviani 2019, Baker & Watson 2020) and appearing to encroach on the health provider's "turf" (Imes et al 2008). Such hesitations are reported as stemming from either the patient's own perceptions about the provider's feelings or from something the provider or other providers had communicated in the past (Imes et al 2008).

In 2006 Kivits called for research on the effect of information from the internet by studying what happens in medical consultations. This was echoed by Wang et al's (2018) systematic review on

patients' or clinicians' perceptions of the effect of online searches on the patient-clinician relationship which reported a dearth of information on what happens in medical interactions in relation to use and discussion of the internet.

Previous work using detailed analysis of medical consultations indicates that although patients may have well developed opinions or views about what is wrong with them, they may be guarded about introducing their ideas into the consultation (Gill and Maynard 2006). Heritage and Robinson (2006) point to the idea that patients may orientate to diagnosis as the task of the physician and as an area in which the physician has legitimate expertise. As such, patients may be cautious in presenting their own ideas due to anticipating disagreement from the physician – a circumstance in which lay opinion is unlikely to win the day. This indicates that introducing information from the internet may be perceived as interactionally problematic.

Peräkylä, (2006), however provides a counter to this, with his suggestion, again based on detailed sequential analysis of delivery of diagnosis, that the doctor's authority is so deeply rooted in the details of medical interaction that it allows for the possibility of patients expressing their own ideas without the doctor's authority being called into question.

In this paper, data from primary care consultations are used to consider how, and to what end, patients refer to the internet in relation to their illness, symptoms, or treatment concerns. We argue that patients invoke the internet to evidence concerns about the possibility of a serious illness, to support a request for treatment and to advocate for or against specific treatment. Following a description of the data and methods, we consider how patients invoke the internet while managing the risk of potential encroachment into the doctor's domain of authority.

Methods

This paper uses data from the ((STUDY TITLE REMOVED)). The data set consists of 281 video-recorded primary care consultations, with pre-consultation questionnaires completed by all patients, interviews with all 10 participating doctors and 28 selected patients. Participating practices varied in size and urban/suburban/rural classification across London and the southeast of England, UK. Further details about recruitment and data collection are provided elsewhere (REF REMOVED). On average, six sessions (half days) were recorded per primary care doctor to reach our target of 30 consultations per doctor. The overall aim of the study was to gain insights into perceptions about, and discussion of, the internet in primary care consultations.

Ethical Approval was obtained from a UK NHS Research Ethics Committee (Reference 16/LO/1029), and governance approval from the Health Research Authority.

We sought to undertake a detailed study of the organisation of interaction between patients and practitioners (Robinson 2003). To this end we employed conversation analysis (CA). CA is concerned with the social scientific understanding and analysis of interaction (Maynard 2012) and is a well-established method for analysing naturally occurring institutional encounters such as communication in health care (Leydon and Barnes 2020).

Data were transcribed verbatim and anonymised. We reviewed all 281 recorded consultations and included in our collection any case where the patient referred to the internet in relation to looking up or finding information about their illness, symptoms or treatment concerns. Use of the internet was generally referred to as going 'online', on the 'internet', 'the web', or 'googling'. We also included references to having 'looked things up' or 'reading' where the surrounding talk made it clear this referred to the internet. Any type of online resource including parent forums, social media, medical sites or clinical journals were included.

Sections relating to the internet were selected for additional transcription using the Jeffersonian system (Jefferson 2004), which includes details such as overlaps in talk, pauses, emphasis on particular words and changes in the tempo of interactions. A key to the notation used in the transcribed extracts presented is shown in appendix 1.

Data were then examined for commonalities and differences focusing on how and in what ways patients introduced the internet and the work accomplished through references to searching.

The data presented have been anonymised, with personal and place names removed. Doctors' contributions are marked as 'Doc', patients' as 'Pat' and companions' as 'Com'. Key lines are marked in bold.

Findings

How often, and in what ways, is the internet raised?

In the pre-consultation questionnaire 28% of patients (79/281) reported 'going online' to seek information regarding the health issue about which they were consulting, however the internet was only explicitly mentioned 28 times in 19 consultations (slightly less than 7%). This raises the possibility that patients might only invoke the internet in the pursuit of specific outcomes.

In considering how the internet is harnessed as a resource within the consultation, analysis across our collection of 28 instances demonstrated that patients invoke the internet to do three things: (i) evidence concerns about the possibility of a serious illness; (ii) provide a warrant for treatment in cases in which they have been unable to find a solution; and (iii) advocate for or against treatment. This involves adopting a stance that (potentially) encroaches into the doctor's domain of authority

(Peräkylä 2006) and we show how the way patients invoke the internet works to support the reasonableness of the outcomes sought.

Use of internet to evidence concerns about the possibility of a serious illness

Here concerns are raised about the possibility of a serious problem that might require action on the part of the doctor, such as referral or treatment.

In Extract 1a, use of the internet is presented as both reasonable and expected, with the patient reporting 'obviously' having looked online. The patient consulted following treatment for an acute kidney infection at the hospital, having been discharged back to the care of the primary care doctor. In the consultation she expresses her concerns that she has an ongoing problem with her kidneys.

Prior to the extract the patient presents a number of examples of ongoing issues with pain and constant 'water infections' reporting "you know I don't always come". The transcript starts as the patient reiterates that she gets quite a few urinary tract infections and starts to make a case for the possibility that she has a 'kidney thing'. The doctor responds by stating a need for medical evidence, namely the results of tests.

Extract 1a

01 Pat: =Yea:h.=An' that's what apparently like I mean I get a

02 few of 'em:, bu' .Hh **they was just adding all these**

03 things u:p, and then obviously I've had a look online

04 and I thought it was tickin' all these boxe:s fer:

05 (1.1) like a kidney: (0.6) thing an' my brother's got

06 **some'ing similar.**

07 (1.5)

08 Pat: Mcht an' I jus:t um::

09 (0.2)

10 Doc: We need the results coz they've done (.) they've

11 done:(1.2) they've done an ultrasound,

12 Pat: Y:eah.=They've done all o' them:, yeah,

13 Doc: (Right.)

GP1_R119

The patient works to build a case for an ongoing issue with her kidneys, referencing the internet as part of this. She sums up her evidence by saying "they was just adding all these things u:p" (lines 2-3) followed by further support that she had 'obviously' had a look online which led her to think "it was tickin' all these boxe:s". The third point to support her case is that her brother has something similar. Thus, she provides an accumulation of evidence in support of a diagnosis of a problem with her kidneys, despite the risk of being seen to stray into the medical domain of diagnosis.

The use of the word *obviously* (line 3) works to present the normality of looking online. Notably, rather than reporting what she found on the internet, she provides a generalised account that supports the narrative she is building based on the accumulation of different forms of evidence.

The doctor does not readily endorse her position, seen by the delay in responding (line 7). After a gap of 1.5 seconds and no uptake from the doctor, the patient produces the beginning of a turn "**Mcht an' I jus:t um::**" which seeks a response to her previously stated concerns and then

trails off (line 08). Again, the doctor does not respond and after a gap of 0.2 seconds, the doctor references the need for biomedical evidence in the shape of the results of medical tests before he can respond (line 10).

There follows a discussion of what happened during her recent hospital visit and the doctor tries, unsuccessfully, to access the results from the tests done in the hospital. After the patient restates her concerns, the doctor draws a diagram of a kidney to accompany an explanation of kidney infections (data not shown). In Extract 1b, we see an escalation of the patient's previously expressed concerns about the possibility of having an ongoing problem with her kidneys.

Extract 1b

((3.38 minutes on from extract 1a))

01 Pat: °okay° (0.4) and if it was **anything else more sort of**

02 sinister you know like u:::m, (0.4) the beginnings of

03 like u::m (0.6) kidney disea:se or anythi:ng,

04 Doc: **.hhhh (.) what what do you mea:n by kidney**

05 di[sease].

06 Pat: [we::]ll hh (.) d'you know what **>it's it's< me:**

07 reading up, (.) I suppo:se (0.4) but the questions

08 they was asking me: .tch (0.4) when I looked

09 £onli:(h)ne£ (1.0) it was all to d- it said kidn- >i-

10 it< was flashing up kidney disea::se all th- all the

11 questions that they seemed to be asking me about .hhh

12 (0.4) .tch er where I'd got i::t a::nd .hhh (0.6) loads

13 of different (.) °b-° bits and pieces and how of- (0.8)

14 like with the infectio:ns and how I felt (.) like

15 fati:gue and things like that (0.4) and it all sort of,

16 (0.4) that's what was flagging u:p and it just worried

17 me,

18 Doc: but your kidney [function,]

19 Pat: [when you] said uro- urology: I

20 th[ought] o:::h,

21 Doc: [°yea:h°]

22 (0.4)

23 Doc: .hhh so your kidney function (0.6) that's the test

24 ((points to screen to illustrate as he speaks))

25 from eleventh of august it's absolutely perfect.

26 Pat: Right,

27 Doc: So there's no problem with the way the kidneys are

28 working,

29 Pat: Right good,

GP1R119b

Across this extract, we see the patient and physician at odds over the legitimacy of a concern about kidney disease. The patient returns to her concern about having a problem with her kidneys, framed

as ‘anything else more sinister like the beginnings of kidney disease or anything’ (line 2-3). We can see a shift from extract 1a, in which her concern was expressed as a ‘kidney thing’ to the expression of a concern about kidney disease, immediately made less specific by the additional of ‘or anything’.

The doctor seeks clarification of her concern (lines 04-05), and the patient responds in overlap, starting with ‘well’, which has been shown to mark the ensuing talk as privileging the speaker’s perspective (Heritage 2015), followed by an extended turn in which the concerns expressed previously are restated. Again, in the context of the more serious diagnosis, the patient refers to the questions ‘it’ (the internet) was asking when she looked online (line 08-09). The term ‘online’ is produced with a smiley voice and laughter particles (line 09) marking the delicacy of both the action and the information source (Haakana 2001). The turn works to minimise the act of searching for information, while at the same time justifying her concern and reasoning for encroaching into the doctor’s diagnostic domain.

The patient then initiates self-repair from “it was all to d- it said kidn-“ and then another self-repair “it was flashing up kidney disea::se” (lines 09-10). In this way she presents a graphic image of kidney disease ‘flashing up’ which increases the impact of the message, while diminishing her agency in terms of actively seeking this diagnosis. This is combined with other evidence based on her experience of symptoms, all of which culminate in the idea of it all ‘flagging’ up kidney disease (line 16), justifying her concern. The doctor responds by referring to her kidney function but drops out as the patient references, in overlap, earlier talk about urology (specialist in kidney problems) which amplified her concerns (lines 19-20). The doctor’s response in line 23 starts with an audible in-breath signalling a shift in the talk and uses an extreme case formulation (Pomerantz 1986) stating that the test results of her kidney function are “absolutely perfect”. This is accompanied by him showing her the results on the computer screen, pointing to the relevant numbers. This works to close the topic and talk continues about general monitoring.

The patient's repeated reference to the internet works to build a case to justify her concerns about the possibility of a serious illness. Diagnosis of a serious problem would normally fall squarely in the domain of the clinician (Jutel 2014). By pushing for discussion of this possibility the patient might be seen to be overstepping the boundaries of the role of a patient. However, combining concerns raised by internet searching with experiences of family members and references made by the doctor to urology works to diffuse responsibility for raising concerns (Heritage and Robinson 2006). Finally, projecting the normality of searching on the internet diminishes the focus on the *act* of seeking out information on the internet.

Extract 2 provides further support for the claim that the internet is used to justify movement into the doctor's domain regarding concerns about a serious illness. Here, rather than justifying use of the internet as a routine activity, use of the internet is presented as a medical misdeed (Bergen and Stivers 2013). Presenting use of the internet in this way works to demonstrate the extent of the mother's concerns about her daughter's health which has led her not only to use the internet but also to disclose this action to the doctor.

The case concerns a mother who states at the outset of the consultation that her child has had a sickness bug but also that for the past month she has suspected her child may have diabetes.

Extract 2

01 Com2: I have been (.) a bit (0.2) **w'l not neurotic** about it but

02 **I've just been so worried** [coz .hh **I know you sh:ouldn't=**

03 Doc: [Yea:ea:eah,

04 Com2: =do i:t, b[ut I've been g o o g l i n : g¿

05 Doc: [Yeah but if your kid's got diabe- >is it< a uh:

06 **>>do(h)o(h)o(h)o(h)[h<< don't google, .fs:::: ((inbreath))**

07 Com2: [Um:: (0.3) an' I've just pu-

08 convinced myself that it was a diabetic,

09 (0.7)

10 Doc: Yeh [yeh, don't [↑well just to be fair I think that is:=

11 Com1: [Yeah.

12 Com2: [t- k e t o s i s t h i n g :¿

13 Doc: =y'know if it was you would wanna know about [it so,

14 Com2: [Totally:[:.

15 Doc: [.hh

16 Is there any family history on eit[her side of diabetes.

17 Com2: [.h h h h I- ↑I've

18 got- I've got loads of type two:, but there is type one

19 but quite far back.=

20 Doc: Oh okay.

GP9_R273

Use of the internet by the mother is initially framed in a way that seeks to manage the line between appropriate and inappropriate concern, with the presentation of herself as "not neurotic" but rather "so worried" (lines 01-02). This is immediately followed by characterisation of use of the internet as a misdeed by saying "I know you shouldn't" (line 02) which then sets up her report of 'googling' (line 04). The 'admission' of 'googling' is produced in overlap with the doctor's turn receipting the

mother's statement of her level of concern and initiating reassurance that the mother's concerns are understandable (line 05).

However as the doctor hears the next part of the mother's turn, that she has been googling, she responds with a laughing reprimand ">>do(h)o(h)o(h)o(h)[h<< don't google" (line 06) thus also orientating to the misdeed. This is produced in overlap with the mother, who does not respond to the rebuke, but rather continues to vocalise her concerns in terms of having 'convinced herself' it was diabetes (line 07 and 08). The mother's use of the medical term (ketosis), from which she then works to shift back into the 'lay' domain by adding the tag word 'thing', clearly presents her awareness of a key medical indicator of diabetes but also orientates, via the vocabulary switch, to a potential infringement into the doctor's territory.

Both the doctor and the mother orientate to use of the internet as a medical misdeed, but it is not explicitly pursued as a topic by either of them. Despite the negative assessment, the doctor can be seen to validate the mother's reason for looking on the internet by saying that if the child did have diabetes you would want to know about it (lines 10 and 13) and in her question about the family history of diabetes (line 16). Crucially, invoking the internet worked to support the mother's use of it as a diagnostic aid and justified her move into the doctor's domain of determining a diagnosis.

All three extracts present the internet as informing concerns about symptoms. Supporting evidence for concerns relating to kidney disease are minimised and combined with other sources of information, while internet searching about childhood diabetes is presented as a medical misdeed. Searching for information on the internet is presented as problematic and as a potential encroachment into the doctor's domain of authority.

Use of internet to demonstrate treatability

Here we show how patients invoke the internet to demonstrate the need for treatment for a specific problem. In Extract 3, the patient begins by introducing a problem that he has "researched on the internet". Presenting efforts to understand and facilitate management of medical problems by using the internet prior to 'bothering' the doctor works to address the moral accountability associated with consulting and evidence the presenting problem as doctorable (Heritage and Robinson 2006). The problem is labelled as "delicate" and "embarrassing" which works to further underscore that the patient wouldn't be seeking help if he could have solved the problem himself. Only then is the problem named as an issue with the patient's foreskin. The extract starts following receipt of a prescription for the initial presenting problem (nasal congestion).

Extract 3

01 Pat: .hh[h (.) I do have **another problem.**

02 Doc: [Mcht .HHh

03 Doc: Okay¿

04 (0.9)

05 Pat: U::m, (0.5) .Hh an' I- I: (0.3) r:esearched on the

06 internet,

07 Doc: Mm hm,

08 Pat: ((sniffs)) Um: °it's uh- d- a bit°[(1.7) °d'n'if°=

09 Doc: [((gaze to P))

10 Pat: =£delicate is the [right wor:d?£

11 Doc: [£Tcht <heh huh huh heh .Hh=

12 Pat: =U:m: (0.2) embarrassing?

13 Doc: Yep,

14 Pat: U:m: .hh mcht .hh my:: (0.5) f:oreskin=

15 Doc: =Mm hm¿

16 Pat: =seems to 'ave tighten[ed.

17 Doc: [Mcht yep, ((nods))

18 Pat: An' it keeps splittin'?

19 Doc: Mcht Yep,

20 (0.2)

21 Doc: Sounds quit[e (0.2) unpleasant, yes:,

22 Pat: [That's quite sore,

23 (0.2)

24 Doc: Okay,

25 Pat: U:m: Is there anything you c'n::

26 Doc: [.h An' what have you read about wh- [w h a t s i t=

27 [((turn to screen, starts typing))

28 Pat: [°(Do for it)°

29 Doc: =c[ome up with for you.

30 Pat: [.h H H w'l I <can't remember.=It w's:[:

31 a=

32 Doc: [Yeh,

33 Pat: =while ago when I read abou[t it, but [it was: (.)

34 sayin'=

35 Doc: [Yeh, [Yeh,

36 Pat: =that it's not uncommon [for it to shrink,

37 Doc: [Yeah::,

38 [((nodding))

39 Doc: Yeah, and it [can sort've (.) yeah get (0.6) mcht

40 almost=

42 Pat: [An:d,

43 Doc: [=eczemary almost it just gets very[: the skin gets

44 very:=

45 [((g a z e to p a t i e n t))

46 Pat: [Yeah.

47 Doc: =the skin gets kind've tight.=Sometimes a [bit white

48 an'=

49 Pat: [Y e s : .

50 Doc: =you can't p[ull it back prop[erly,

51 Pat: [Y e s :, [Y E s:,

52 Doc: Yeah, [all of that sort'[ve stuff, .HHHHHHh

53 yes:.=Uh::=

54 Pat: [Y e s :, [All of that yes.

55 Doc: =↑Wh:[at I'd like to do is have a really quick look

56 just

57 Pat: [((clears throat))

58 Doc: to confirm that, .h mcht .H and then if that is that

59 case what I can do is give you some s:teriod cream to

60 use on there[:, (.) that again m:ight manage the

61 situation.

62 Pat: [Tcht ((nods))

GP9_R243

The patient presents the problem as 'another problem' (line 01), which he has researched on the internet (lines 05-06) and as delicate and embarrassing (line 10 - 12). The problem is not named as relating to his foreskin until line 14. Reference to the internet delays having to name the issue. The patient's turn at line 25, (U:m: Is there anything you c'n::) with the stretch on "can" projects completion of the turn and a request for action on the part of the doctor. It is important to note that any treatment offered at this juncture would be based on the patient's account of the problem and without examination. The doctor however does not offer treatment at this juncture but rather references the patient's previous talk (in lines 05-06) about the internet to ask what the patient already knows about the problem, (w h a t s i t= come up with for you) (line 26-29). In this perspective display invitation (Maynard 1989) the doctor uses an open question allowing for a range of responses, one of which could be the patient's expectations in relation to treatment.

In responding to the doctor's open question, the patient initially explains that he can't remember (line 30), supported by a reference to time (it was a while ago) (lines 33) and then frames a further response in terms of the fact the problem is not uncommon (line 36). The patient's equivocation in relation to his internet searching can be characterised as an epistemic hedge (Weatherall 2011). The doctor's question potentially puts the patient in the position of encroaching into the doctor's domain of authority in relation to diagnosis and treatment. In his response the patient places the

decision about the actual treatment firmly within the doctor's domain. The internet is invoked to provide a warrant for securing help (i.e. treatment) to solve a problem he's been unable to solve.

The doctor then takes over the description, with the patient providing markers of agreement. This is followed by the doctor proposing an examination, which is minimised as "a really quick look" (line 55), which is fitted with the presentation of the problem as delicate (seen in the delayed naming and previous attempt by the patient to shift to treatment without an examination). Searching on the internet was central to the problem presentation but also used to support an appeal for the need for treatment.

In Extract 4, we provide further evidence that patients invoke the internet to appeal for treatment beyond what they have been able to identify themselves. The patient presents with ringing in one ear. The extract starts after history taking and a physical examination at the point at which the doctor delivers a diagnosis.

Extract 4

```
01  Doc:     a hissing noise a buzzing noise sometimes >er er<
02           kind of (source of a) condition called c- called
03           tinni[tu:s which i:s],
04   Pat:          [yeah yea:h    ] (0.4) I did look it up on the
05           [inter]net I have to £sa:y£.
06   Doc:    [sure.]
07   Doc:    and what >kind of thing< did you read up on there,
08   Pat:    u::m, (0.4) well yeah it, (.) u:::m, (0.4) nothing
09           much you can do about it really is the:re °it's just
10             e[:r°],
11   Doc:       [we]ll there there are some distraction
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techniques and okay we can make it bet- e:r to
>kind of< control and manage>it really< it's more
about managing the condition.
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GP4_R106

The patient starts in overlap with the doctor's naming of a diagnosis of tinnitus, with the phrase "yeah, yeah" (line 03), asserting recognition and affiliation with the diagnosis while also working to close down the diagnostic talk and shift from the position of recipient of talk to speakership (Jefferson 1984). The repeating of 'yeah' provides a rushed quality to the talk indicating the possibility that the patient could be being told something she already knows (Stivers 2004). After a short pause (0.4) the patient presents the source of her knowledge as the internet (line 05). She tags on "I have to say" (line 05) which has the quality of a confession as opposed to a statement of knowledge. Her turn is also delivered with a 'smiley voice' thereby marking the delicacy of looking on the internet and the potential encroachment into the doctor's territory of diagnosis (Haakana 2001). The doctor hears the patient as bidding for closure of the diagnosis as evidenced by his cut off after "which is" (line 03) and that he does not explain the condition any further, despite this being potentially projectable. Instead, the doctor asks the patient what she found on the internet (line 07).

The patient, despite volunteering that she investigated the problem on the internet, produces disfluent talk indicating a struggle to respond (line 8), and finally settles on the idea there is not much that can be done for the problem. Yet, this is also hearable as an appeal for help or correction with the "is there it's just" (line 09). In response the doctor starts with talk about treatment to solve the problem, with a cut off of "bet-" (line 12), which is projectable as 'better', and then shifts to management of the problem; "it's more about managing the condition" (line 13-14). The doctor's talk, in response to the patient's negative assessment about the possibility of treatment, works to upgrade from nothing much can be done to techniques to manage the condition.

The patient's reference to the internet made relevant talk about treatment by presenting an appeal for information or treatment beyond what she was able to access from outside the boundaries of the medical consultation.

In this section, we have seen that patients invoke the internet in environments where they are crossing into the doctors' domains of authority and work to provide a warrant for doing so. Crucially in neither case did the patient expand on what they had found on the internet despite being invited to do so. The lack of detail of what they had seen on the internet suggests that the internet may be invoked as a tool to leverage treatment but not necessarily bid for a specific intervention. In this way patients avoid acting in a way that could be perceived as shifting into the doctor's domain of authority.

Employing the internet in relation to treatment

The internet was also invoked to make direct requests for treatment or to reframe, or resist, treatment. Prior to Extract 5, the patient had been openly lobbying for a referral for a knee replacement. Following the doctor's agreement, the patient moves, in overlap, to advocate for a referral to a named hospital, invoking the internet to support the request.

Extract 5

01 Doc: so lets do that referral (0.4) u::m en get you back in
02 to seeing the (.) (specialist) doctors (0.6) .hhh
03 u::::m, we:::[::,]
04 Pat: **[wh]ich o:nes, would I be able to go to**
05 **((hospital name)), because (0.4) I've I've (.) I've I've**

06 **heard excellent reports about ((named hospital)) >and**

07 **and <I've also researched them online** and.

08 Doc: mm[:::,]

09 Pat: [they] are the top guys and because I'm (.) rea:lly

10 **nervous having had other operations that have gone °wrong°.**

11 Doc: **.hh I see.**

12 ((32 seconds of patient description of a femoral artery

13 operation that was a result of a failed angiogram then

14 followed by a deep vein thrombosis. Doctor asked which

15 hospital this happened at and patient responds this happened

16 at local hospitals other than the one to which she is

17 requesting a referral))

18 Doc: Okay um::: fine so um::: >I mean< when it comes to the

19 orthope::dic service um:: it is um we-we're not able to

20 select specific hospitals um it's not like a sort of choose

21 and book service where:: you can. .hh umm **however I can**

22 **put on the letter that that's that's your preference=**

23 Pat: **=It is my preference yes.**

GP3_R74

The request for referral to a specific hospital is only produced by the patient once the decision to refer had been confirmed by the doctor, and action which sits directly within the doctor's domain of authority. The patient overlaps with a query as to which team, and then initiates repair, requesting referral to a named hospital (lines 04-05). The internet is used as a resource to support the request. The patient accounts for her request in terms of what she has "heard" and what she has "researched" (lines 06-07). The use of the term researched, which is contrasted with the less precise term 'heard', presents the request as an informed decision. The patient completes her turn by orientating to previous negative experiences, in this way minimising the chance of being perceived

as demanding rather than informed but also understandably concerned and cautious (lines 09-10). The doctor responds with an in breath and "I see" (line 11). In response, having gained minimum traction, the patient expands on her previous medical problems. A question by the doctor as to the hospital associated with these problems provides her with the opportunity to make it clear the problems arose in hospitals other than the one to which she is requesting a referral (lines 12-17). The doctor comes back in (lines 18 – 22) to present the organisational constraints on granting the patient's request for a specific hospital but with the offer of stating a preference. The patient's latched repetitional response (Heritage and Raymond 2005) can be seen to confirm rather than affirm her assent to the offer (line 23), indicating this as an acceptable compromise to her request.

Reference to the internet is placed between having heard excellent, (although unspecified), reports about her hospital of choice and her previous negative medical experiences. In this way, the request for a particular outcome (referral to a named hospital) is presented as informed by accounts from others, information from the internet and her previous medical experiences, which are then expanded on in response to resistance from the doctor to her request. The sources of support work together to present this as an appropriate request (Curl and Drew 2008), mitigating the patient's move into the doctor's domain of authority.

In Extract 6 we see further evidence of how patients partially leverage the internet according to their own agendas. In contrast to Extract 5 where the patient was advocating for a particular referral, here the patient resists the doctor's attempt to talk about treatment by foregrounding use of the internet amongst other lay resources to attempt to understand the cause of his disease.

The patient had been diagnosed as having high blood pressure in a previous consultation with a different doctor. The consultation started with the doctor establishing how high blood pressure was "picked up". Just prior to the extract the doctor asked the patient about smoking and alcohol

consumption and the patient had acknowledged his alcohol consumption was above the recommended limit.

Extract 6

01 Doc: .hh And have you done any research on high blood
02 pressure and uh ha- the managements o- the management
03 opt[ions that you've got.
04 Pat: [Yep yep since- since I s- since I first h[ad
05 the:=
06 Doc: [Mm,
07 Pat: =the the higher reading, uhm yess **I've been uh**
08 looking online, I've been talking to people, [.hh uh
09 somebody=
10 Doc: [Mm hm,
11 Pat: =plays football:, uh had a heart attack about eight
12 years ago,
13 Doc: Mm [hm,
14 Pat: [.hh U:m Yeah so (0.6) talking to people and [( )
15 Doc: [And
16 what have you:: (.) found so far in terms of how we
17 manage your blood pressure.
18 (.)
19 Pat: Mcht .hh ↑Um (.) I ↑hadn't really: look at that.=Uh

20 I've been: trying to- to look at yeah what're what're

21 some of the reason[s .hh uh that that could be

22 GP: [Mm hm,

23 behi:nd that.=

GP8_R211

The doctor asks whether the patient has done any research into the management options he has to choose from to treat high blood pressure (lines 01-02). With a diagnosis of high blood pressure already confirmed, the doctor's circuitous approach to topicalising management might be heard as a pre-recommendation (Barnes 2018) – a move towards talk about treatment. However, the patient's response treats the prior as a straightforward information-seeking question. He informs the doctor that his 'research' has consisted of "looking online" and "talking to people" (line 08). Cutting the patient's narrative short, the doctor attempts to retopicalise talk about treatment - interrupting the patient to ask what he has "found so far about how we manage your blood pressure" (line 16). Following some perturbation, the patient admits that he hadn't looked at that, but had been trying to understand why he had developed high blood pressure and continues to report his theories for another 37 lines. The doctor subsequently changes tack, to suggest monitoring of the patient's blood pressure (not shown).

In this example, the patient can be seen to invoke the internet, in combination with talking to friends, in order to progress his own agenda - understanding why he has developed a diagnosis of high blood pressure, resisting the doctor's attempt to move towards medical management. This impasse is reminiscent of the tension Mishler (1984) highlighted between the voice of medicine and the voice of the lifeworld. It is however notable in this instance that the invocation of the internet

was occasioned by a different sequential trajectory to that of the previous examples, namely as a response to a direct question from the doctor about any research the patient had done. The patient mentions the internet alongside other sources of information but provides no detail of what he found and therefore does not risk encroachment into the doctor's domain of authority.

In Extract 7, resistance to a proposed preventative intervention – a flu vaccination – is based on something the patient had read on social media. The case concerns a woman asked to make an appointment to discuss her poorly controlled diabetes. The extract starts as the doctor says she cannot force the patient to have a vaccination.

Extract 7

01 Doc: I'm not I can't make you [have i::t it's]=

02 Pat: [I'm not I'm not,]

03 Doc: completely up to you.

04 Pat: I'm not sayi::ng that [you] don't know more than me=

05 Doc: [but,]

06 Pat: =I just feel [that at the] moment no I don-,

07 Doc: [no:: it's,]

08 Pat: [I'll probably do] my resea::rch and then like=

09 Doc: [it's your decision,]

10 Pat: =if I feel [that (.) maybe] I should get it I'll get=

11 Cmp: [hhhhhhhhhhhhh]

12 Pat: =back to you (.) bu:t, .hhh (0.4) at the moment no hh.

13 Doc: okay (.) if there's anything specifically:: that you

14 look up that you're worried abou::t (0.4) that you (.)

15 [want to talk about],

16 Pat: [I've seen a few] videos that have like (0.4) the

17 effects it's had on people after the flu jab, (0.6)

18 and that actually put me off it as well so,.hhhh

19 Doc: okay.

20 Cmp: °what was it?°,

21 Pat: .hhhh (0.8) um I'll show you: something on facebook or

22 instagram (.) it's [this lady],

23 Doc: [I think] you need to think

24 about where you get your information from (0.4) yea:h,

25 Pat: .hhh [but] it was researchers, (0.8) I'm sure it's=

26 Doc: [( )]

27 Pat: =in america some lady,

28 Doc: °okay° (.) >I mean I think< with (.) with any:

29 medication or any kind of,

30 Pat: [yeah that's why] I said I'll do some more resea::rch=

31 Doc: [then (?)]

32 Pat: =and then,

33 Doc: okay,

34 Pat: if I if I:,

35 (1.0)

36 Doc: that's fine,

GP6_R162

The extract opens with the doctor's statement that she cannot make the patient have the vaccination and that it is her choice (lines 01-03). The patient asserts she is not challenging the doctor's knowledge (line 04) but that she will do some research and get back to the doctor (lines 08-12). The doctor responds with an offer of discussing anything the patient looks up in her research that she wants to talk about (line 13-15). The patient then reports she has seen some videos about the effects which have put her off (lines 16-18). The source of the videos is revealed in an aside to her friend as from Facebook or Instagram (lines 21-22). The doctor initiates her turn in overlap with the patient's talk to challenge the credibility of the source of the information (line 23-24), but the patient presents the information as from "researchers" that she thinks are from "America" and returns to her earlier assertion that she will do "some more research" (line 30). It is important to note that the sharing of the nature and source of the patient's resistance (something she had seen on social media) was occasioned by the doctor offering to discuss anything the patient found in her planned research, and a softly delivered aside from her friend asking for (non-specific) details of what she had seen. Moreover, that the forms of persuasion deployed by the doctor was responsive to the resistance presented by the patient (Stivers and Timmermans 2020).

Unlike previous examples the patient only stated her information source as the internet (in this case social media), following a direct prompt from her friend. This suggests an awareness that the source of her information would not be deemed an appropriate basis for resisting the doctor's offer, and their authority in this area.

Discussion

We have explored how patients invoke the internet in consultations with their primary care doctors. Our analysis revealed the ways in which patients manage the tension between active management of their health while not encroaching on the doctor's domains of authority in relation to diagnosis (Jutel 2014) and treatment (Heritage 2012). We showed how patients invoke the internet to evidence concerns about a serious illness, the need for treatment (in general) and to advocate for or against a specific treatment. Each of these activities involves patients adopting a stance that is (or potentially is) at odds with that of the doctor, and we have unpacked the interactional delicacy with which the internet is introduced and demonstrated the ways in which patients invoke the internet to support the reasonableness of the outcomes sought. These include presenting information from the internet as they might present advice from friends and family, thus diffusing responsibility for raising concerns (Heritage and Robinson 2006) and minimising the *act* of seeking out and presenting information in the consultation. We have also examined the various sequential trajectories that led up to raising the internet, which include patients raising the internet in support of a concern (extracts 1a, 1b, 2, 3, 4), a desired action such as a referral (Extract 5) but also invoking the internet in response to a query from the doctor (Extracts 6, 7). Although we have presented our data according to three actions, strategies to mitigate potential encroachment into the doctor's domain of authority were similar across the whole collection.

References to the internet were combined with other sources of information (such as previous experiences or accounts of advice from medical professionals) to build a case for (or against) action while seeking to minimise the likelihood of negative reactions associated with appearing to challenge the doctor in their role as the ultimate authority on patient care (Imes et al 2008, Diviani 2019, Baker & Watson 2020). While the normalisation of internet searching was presented, in other cases, patients explicitly marked the delicacy of both looking online and referencing information from the internet through use of 'smiley voice' and laughter particles (Haakana 2001), orientated to

use of the internet as a medical misdeed (Bergen and Stivers 2013) and not naming it as the source of their information.

Across the dataset doctors did not orientate to mentions of the internet as a source of information in 22/28 mentions (c.f. Extracts 1a, 1b, 5, 6). The internet was only mentioned by doctors in response to patients citing it when use was presented by the patient as a misdeed – either directly or indirectly (Extracts 2, 7) or to seek clarification when patients directly referred to the internet to support their knowledge of a specific problem (Extracts 3, 4). Thus, despite concerns expressed by patients about raising the internet as a source of information (Diviani 2019, Baker & Watson 2020), in our data raising the internet was only problematic when marked as such by the patient. This could be due to patients carefully constructing mentions of the internet to minimise appearing to challenge medical authority. However, as Peräkylä (2006) suggests, "the doctor's authority is deeply rooted in the details of medical interaction" (p. 247). Our study provides further evidence that doctor's authority can easily accommodate the possibility of patients expressing their own ideas or 'knowledgeability' without being called into question.

Other contributions to this special issue focus on instances of contesting medical recommendations, such as further hospital treatment (Kushida, Kawashima & Abe, this issue) or treatment for mental health (McCabe, this issue; Bergen & McCabe, this issue). In this paper we have shown how invoking the internet may be used as leverage by patients when advocating for their own agenda, be it diagnostic or treatment related, however it is notable that the internet is presented in general terms, and the specifics of what have been found is not shared, even where opportunities to do so are explicitly offered by the doctor (see extracts 3 and 4). This presents an element of uncertainty about patients' knowledge, given the range of material available on the internet. It is clear from the analysis that despite access to a wide range of health information, invoking the internet is both

relatively rare and when it does happen it is minimal in terms of details shared and discussed by both patients and doctors.

Our detailed analysis of video recordings of unselected consultations goes some way to addressing the dearth of evidence as to how, and to what end, patients raise the internet in consultations (Wang 2018). However, our analysis only draws on 28 explicit mentions of the internet in 19 consultations and as such the findings would benefit from further consideration using a larger dataset.

Conclusions

The increasing accessibility of medical information via the internet, what Nettleton (2004) referred to as 'e-scaped medicine', has been said to present a potential challenge to doctors' legitimacy in medical consultations (Naghieha and Parvizi 2016). Work by Stevenson et al (2019) on doctor's use of the internet in consultations demonstrated how doctors reframed resources from the Internet imbuing them with medical expertise such that it supported their use and recommendation. Our detailed analysis considers when, how, and to what end, patients raise prior use of the internet in the medical visit, focusing on talk about treatment in general. We argue that patients carefully design their turns at talk to make a case for, or against, treatment to achieve their aims with the minimum of disruption to the smooth running of the consultation.

In conclusion, detailed interactional analysis is important to illuminate the local work that both patients and doctors engage in to manage the rise in availability of information from the internet. The delicacy with which this is managed by both doctors and patients presents the internet as both an important resource and potential challenge in the management of health care for all concerned.

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