



# How and why children instigate talk in pediatric allergy consultations: A conversation analytic account

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## ABSTRACT

Involving children in their healthcare encounter is a national and international priority. While existing research has examined the ways in which children are recruited to participate in the consultation, no work has examined whether and how children instigate talk, and the extent to which their contributions are successful. This paper presents a conversation analysis of a selection of 10 out of 30 video recordings in which children aged 4–10 years instigate talk during consultations they attend with their parents/carers at a UK pediatric clinic. The analysis reveals for the first time that children do successfully instigate talk without being asked or selected in 22 episodes during their consultation with the doctor. Children most frequently address their parent/carer (16/22). They capitalize on specific contexts within the consultation to instigate talk, for example: history-taking questions about what they ate or how they reacted (10/22); or discussions surrounding the child's feelings or sensations following the skin-prick testing (7/22) - aspects of experience to which they have access. Children's non-solicited talk necessarily occurs when they are not currently active participators and children engage in extra interactional work including various verbal strategies (summons and prosodic variations) and non-verbal resources (tapping and gaze) to break into the interaction. The benefits of their contributions include the opportunity to affirm the child's role as a legitimate contributor, and the potential for additional medically-relevant information to arise which could enrich the clinical process. Our analysis shows that the previously overlooked phenomenon of children instigating talk, although not common, can play a crucial role in the consultation. We suggest that strategies to increase such involvement have the potential to augment the healthcare process. Our findings offer a critical baseline for the introduction of new consultations models, such as digital appointments, which may exclude some children completely.

## 1. Introduction

There has been a marked increase in the prevalence and incidence of allergic disease; 39% of children have a diagnosis of atopic conditions such as food allergy, eczema and asthma (AHOI, 2007; Gupta et al., 2004). Proven food allergy is as high as 10% in developed countries, with additional children symptomatic without diagnoses (Prescott et al., 2013; Sacchetti et al., 2019). Diagnosis is dependent on a clinical history; parent and child descriptions of previous allergic episodes and family history are critical in determining future risk, informing medical decision-making and identifying appropriate treatment (Muraro et al., 2007; Muraro et al., 2014; NICE, 2011). Good communication and encouraging children's participation are key for both medical outcomes

and the child's well-being (De Winter et al., 2002; Lewis et al., 1991; Nova et al., 2005). This is evident as paradigms of patient participation and shared decision making have come to the fore, and clinical guidance prioritises taking account of patient needs and encouraging children's active participation (NICE, 2011; Lansdown, 2000).

Particularly relevant to a child's participation in the UK and beyond is the increasing shift towards virtual services and digital appointments (NHS, 2019). This will involve an inevitable change in the communication dynamic, and the possibility that children's opportunities to contribute will be significantly reduced or even eliminated completely. Children express the value of feeling listened to (Donnelly and Kilkelly, 2011), but few studies examine what effective involvement looks like in face-to-face practice (Rivera-Spolijaric et al., 2014). More evidence is

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needed as to what kinds of participation they might engage in, and what might facilitate effective child participation (Kodjebacheva et al., 2016); this would provide a baseline from which we can consider the implications for the increasing digitisation of consultations. In this paper, we extend what is known about a child's role in pediatric consultations by employing the sociological method of conversation analysis to explore some of the subtle strategies used by children to gain participation in what can often be an adult-dominated interaction. To set the scene for our analysis, we begin with the established finding that children's contributions to their consultations are limited. We then discuss more recent conversation analytic studies that detail how and when child participation gets *elicited*, noting that to date, no work has identified and described instances in which children *instigate* talk during consultations.

To begin, we consider the well documented notion that the contribution children make to their own consultation is extremely small. Children in the US, UK and Netherlands have very little meaningful involvement in their consultations (Cahill and Papageorgio, 2007a), to the extent that some early research treated children's contributions as so insignificant they focused exclusively on communication between parent and practitioner (e.g. Strong, 2001, reporting research conducted in the 1970's; and Francis et al., 1987). Studies of children's contributions suggest that they occupy between 4 and 12.5% of the consultation compared to 48.8–61% occupied by physicians (Cahill and Papageorgio, 2007b; Van Dulmen, 2004; Meeuwesen and Kaptein, 1996; Freeman et al., 1971). Children's utterances are described as "information-giving", occurring more commonly in the history-taking and examination phases of the consultation (Aronsson and Runström, 1988; Cahill and Papageorgio, 2007a; Cox et al., 2009; Wassner et al., 2004). Doctors are more likely to direct questions to children than to provide them with information (Van Dulman, 1998), and their questions have been associated with increased child participation (Becker et al., 2018).

The detailed ways in which doctors elicit children's talk are revealed in Stivers' (2001) conversation analysis of primary care. She shows that doctors can unambiguously select a speaker to present the problem by using open formatted questions referring to the child in third person ("What's goin' on with Mae"), referring to the child by name ("Okay Jolyn what's up"), or using the second person to tacitly select the child as the only one eligible ("what's wrong with you"). Ambiguous speaker selection (turns that are typically excluded from coding schemes; Cox et al., 2009) involve the use of the second person pronoun ("what can we do for you today"). In these cases, both child and parent are eligible recipients, and speaker selection is negotiated between child and parent with gaze, gesture, nodding, and withholding or providing a response.

Stivers (2001, 2011) examined the 54 cases in which children were selected, noting that in the examples where children actually went on to present the problem ( $n = 30$ ), employing polar questions and using gaze led to increased participation. This fits with the more generic model of how speakers can hold recipients more or less accountable for responding based on the sequential position of the turn, the use of interrogative lexico-morpho-syntax, interrogative prosody, recipient-focused epistemicity, and speaker gaze, with multiple resources incrementally increasing the accountability to respond (Stivers and Rossano, 2010). Despite some critiques (see Couper-Kuhlen, 2010; Schegloff, 2010), the model nevertheless provides a useful set of features relevant to an examination of how the design of a physician's eliciting turn impacts on the child's response.

A particular strength of this conversation analytic work is the way it preserves both the content of what is being talked about, and the context of each utterance in a specific intelligible sequence or course of action. In this way, the analysis retains details that are otherwise lost in coding categories, and describes interactional patterns that have a powerful

influence on the shape of the medical visit (Gill and Roberts, 2012; Heritage and Maynard, 2006). The findings provide answers as to what effective child participation in their healthcare can look like, and what tools are available to *recruit* children's involvement in a consultation. What remains unaddressed in this body of literature is the role of children instigating talk in this setting. Talk *instigated* by children is missing in studies that code the overall allocation of turns in the medical consultation; the only mention of children instigating talk refers to its absence (Cahill and Papageorgio, 2007b). We remain completely in the dark as to whether it happens and what it looks like, knowledge that could provide a baseline understanding to inform the development of digitized consultations. Given that, so far, there is no descriptive account of how and when children instigate participation during medical consultations, this paper extends existing work by asking the following questions:

- Under what conditions and at which points do children in our pediatric clinic consultations self-select, instigate talk and mobilize responses?
- Which resources do they have available to achieve that participation?
- What are the implications of these episodes for the consultation?

## 2. Method

Full ethical permission was granted by the UK's National Health Service Ethics Committee for two cameras to be set up in the room of a pediatric consultant (aka attending physician) in a secondary care outpatient clinic. Information sheets about the research study were sent to 57 potential participants who met the criteria and were due to attend the clinic during the period of data collection (September–December 2009). On arrival patients were approached initially by nursing staff and if they agreed, then spoke to the researcher. The researcher described the nature of the study to parents and children and obtained signed consent from those willing to participate.

Of the 57 potential participants invited to take part, 48 attended clinic (9 did not attend/had rearranged appointment), four of whom did not meet the inclusion criteria (either due to disability – a factor recognized as important but beyond the scope of this study, or due to limited English, compromising capacity to consent). Of the remaining 44, 14 (32%) declined to take part. The data corpus consists of recordings of one consultant pediatrician, and thirty children aged 2–10 years (mean 5 years 7 months) who were either new - referred by their General Practitioner (or GP: the British term for family doctor) ( $N = 14$ ) or were attending a follow-up appointment having seen the practitioner previously ( $N = 16$ ). (See Table 1). All the children were accompanied by parents/carers and sometimes, siblings. Throughout the recording period 15 additional (consenting) practitioners sat in on consultations as observers.

Many patients ( $N = 23$ ) were being seen for allergy, of which 13 were new patients referred by their GP. When a new patient arrives to be seen for allergy there is a typical structure. The consultant pediatrician sees patients and parents/carers for a consultation that consists of history-taking. In the case of food-related allergy, a series of questions include what the child eats, and what occurred in any episodes in which they have had symptoms/reactions (in the case of follow-up visits, enquiries about health of child since last visit). The pediatrician determines whether testing is necessary and which foods (if any) should be tested for. Child and parent/carer leave the doctor's room for testing with the specialist nurse who places a droplet of solution onto the skin on the forearm, pricks the surface of the skin, measures any reactions and gives

**Table 1**  
Characteristics of participants.

Participant gender Female/male	Participant age Mean	Participant age (range)	Appointment type New/follow up	Reason for visit Allergy/general
16/14	5 years 7 months	2–10 years	14/16	23/7

results to the pediatrician. The patient is called back for a second consultation in which diagnosis (negative/positive reactions and level of severity/risk) and treatment are discussed, including: dietary recommendations; anti-histamine medication; and auto-injector pens (releasing adrenaline to reduce swelling and improve breathing in severe cases).

We recorded 30 consultations, 23 of which took place in the allergy clinic, and 7 in the general clinic. Our initial scan of the data indicated that during 11/30 consultations, the child patient did not engage verbally. Six of these were aged two years old, and the remainder aged 4–7 years. We reserve for future research an examination of these consultations, including any unsuccessful attempts to recruit children. In the current study we examined the remaining 19/30 consultations in which the child patient participated in the talk, including the child being recruited to talk by the doctor or parent. While it is beyond the scope of this paper to provide a detailed description of how children were recruited to talk within our data, we note for context that it ranges from consultations in which a handful of questions were directed towards the child, such as whether they have brothers and sisters and whether they feel well today, to engaging the child as the main recipient of history-taking questions relating to symptoms or allergy episodes, current dietary restrictions and so forth. For the purposes of this paper, we focused on 10 specific consultations in which we found that the children *instigated* some kind of interaction without being asked or selected. It is these 10 consultations that form the focus of this study, and all these involved patients presented with allergy related concerns.

### 2.1. Conversation analysis

Conversation analysis (henceforth CA) is an approach to the study of social and conversational action that was developed by sociologist Harvey Sacks (1972, 1992). It involves the systematic study of what Goffman (1983) termed ‘the interaction order’, building on the assumption that conversation is a fundamental social institution through which most human business is conducted. Since Sacks’ early work, CA has provided an increasingly sophisticated set of tools for exploring how social organization is accomplished (e.g. see Stivers and Sidnell, 2012). The most important fundamental assumption of CA is that interaction is ordered at all points, structurally organized, and exhibits analyzable patterns of identifiable features, which stand independently to the speaker (Heritage, 1991). Tacit knowledge of these organizations influences a speaker’s conduct and their interpretation of the conduct of others, hence contributions to interaction are contextually organized (Heritage, 1991). CA also shows that talk can be analyzed in terms of how participants themselves orient to the actions that talk performs. A speaker’s actions contribute to the ongoing interaction, and in this way are context-shaped and also context renewing, i.e. contributing to how the next action will be understood. CA has been increasingly widely used to study healthcare interactions (e.g. Allwood et al., 2017; Heritage and

Maynard, 2006; Jenkins et al., 2015; Pilnick and Dingwall, 2011; Robinson and Heritage, 2014; Gill and Roberts, 2012). Recordings were initially transcribed verbatim, allowing a search for sequences in which children instigated interaction. These were transcribed using standard conversation analytic conventions (see appendix 1; Jefferson, 2004; Hepburn and Bolden, 2017).

### 3. Analysis

Our analysis focused on 10 consultations in which child patients presenting with allergy related concerns instigated talk in the interaction. Of course, children could instigate talk more than once during a consultation, and in total our collection consists of 22 episodes. In 5/22 of these episodes the child addresses their talk directly to the doctor; the majority (16/22) addressed the parent, and in one case it is ambiguous. We sought to obtain evidence from within each single episode as to how the child’s contribution is treated and understood by the recipients themselves as the talk unfolds. This section is organized in the following way: firstly, we examine the places in which children instigate talk, highlighting aspects of the consultation in which the child has direct epistemic access to the topic underway (e.g. history-taking discussions of what they ate, or what they feel following skin-prick testing). Secondly, we consider the range of conversational resources they use to gain reciprocity.

Finally, having described *when and how* children get involved in the consultation, we then consider the value of a child’s input to addressing the medical problem. We show three examples: a child revealing insights that explain why a medication has been ineffective; a child intercepting a discussion of one allergen to announce another, which is relevant but has to be discussed later on; and finally, a child’s announcement about a bogie (booger) completely irrelevant to the diagnostic process. In each of these cases we show that managing the child’s participation requires effort and skill on the part of the experienced doctor.

### 4. When do children instigate talk in pediatric consultations?

To begin, we examine where in the consultation children instigate talk. One site we observed is the point at which the child returns to see the doctor following the skin prick test (in 7/22 episodes). The first extract demonstrates the overall pattern to one of these sequences in which children instigate talk, involving Raj (5 years and 10 months), who is a new patient referred by his GP in relation to a possible peanut allergy. Following his skin-prick testing, Raj’s forearm is marked with letters indicating the food type which has been tested in each case, and those that reacted positively have become red and itchy. This testing renders aspects of the child’s medical information visible on the child’s body and becomes available for the child to present and talk about. The start of this extract is the beginning of Raj and his Dad’s post-test consultation.

## Extract 1

### Consultation 1b: 1.05–1.25

01 Dr: .hh Ringht\_ hh  
 02 (.)  
 03 Dr: [ Lihke to come in a:nd take a seat.]  
 04 Raj: [ ((enters the room and sits down)) ]  
 05 [ (1.0) ]  
 06 Dad: [((closes door))]  
 07 Dr: Grea::t s:o::.=  
 08 Raj: -> [ =>I got writing on my han',< ]  
 09 Dad: [ ((takes a seat)) ]  
 10 Raj: [((facing Dr holding his forearm out))]  
 11 Dr: Can I se:ez  
 12 [ (0.4) ]  
 13 Dr: [((moves towards Raj))]  
 14 Dr: 'V you got little [ bumps, ] <are they i:tchy,  
 15 Dr: [((points to R's forearm))]  
 16 [ (0.5) ]  
 17 Raj: [((nods))]  
 18 Dr: Yeah?  
 19 (.)  
 20 Dr: °Okay° .h um, [ (.) ] .h [>'e can have some  
 21 Dr: [((points at Raj's arm))] [((gaze to Dad))]  
 22 Dr: antihistamine if he wa:nts if if that's too itchy or you can  
 23 Dr: just let it< (0.3) let them go by themselves <they usually°  
 24 (0.3)  
 25 Dad: °(They'll) probably [ go ] down.°  
 26 Dr: [('settle)]  
 27 Dad: °Yea[h.]  
 28 Dr: °[Ye]ahh.  
 29 Dad: [ °Mm ]  
 30 [((Dr turns back to notes))]  
 31 Dr: Or:wkay. So, [ (1.7) ] in terms of where that  
 32 Dr: [((turns page over))]  
 33 Dr: lea:ves us, (0.6) if we discuss egg first,

This extract shows one place where children have an opportunity to launch their own sequence of talk. On line 7 Dad is still in the process of sitting down when the doctor launches the initial business of the consultation, while also consulting notes on his desk. Raj takes the doctor's delayed delivery on line 7 as an opportunity to announce information about the writing on his hand (line 8). There are several observations we can make about Raj's turn – first it is information that is relevant to the medical consultation, as the writing reveals which substances Raj has reacted to. Second, what Raj has written on his body is squarely in his own epistemic domain (Heritage, 2011) – not only does he have direct access to it, but having had a consultation with an experienced nurse, it would typically be expected that he also understands the general implications of the writing. Third, Raj employs a range of non-verbal resources: he gazes to the doctor, holds out his arm, and speeds up his talk (potentially sensitive to having disrupted the doctor's launch of the session, and/or perhaps pre-empting the doctor's discussion of results by giving him the evidence). Raj therefore draws on a range of interactional strategies to instigate and secure participation in the talk.

The consultant abandons his prior trajectory (which would typically be focused on the results he is reading) and responds to Raj's announcement on line 11, treating the turn as making a response relevant, specifically from the doctor as the relevant next speaker. The doctor does not offer information about what the 'writing' might mean as a launchpad to engage the child in a discussion about test results, instead he treats Raj's turn as a complainable matter and seeks

information about whether the resulting bumps are itchy (line 14). On line 18 the consultant provides Raj with further opportunity to expand with his pursuit 'Yeah?' with questioning intonation. Failing any response from Raj, the doctor treats dad as the relevant person to engage with regarding a potential remedy for Raj's itchiness on lines 20–26, and they both continue with the main business of the consultation without Raj.

In this short sequence Raj successfully enters the interaction, with the doctor directly attending to Raj's potential discomfort, offering a remedy to Dad before re-establishing the main business of the medical consultation: discussing the outcome of the results. This illustrates one common place where children have a chance to instigate talk – at the start of post-test consultation, when results of the test are relevant and where the children themselves have those results literally written on their bodies. Thus in addition to Stivers' (2001) observations that child participation can be *elicited* in various ways at the start of consultations, we show that at the opening of the (in this case second) consultation, the child may also self-select to raise relevant issues with no prior involvement of parent or practitioner when they have something new and medically relevant to report that is squarely in their own epistemic domain.

We move now to an example where the child, Daniel (5 years 7 months), instigates talk during the discussion of results of the skin prick testing, but this time he directs his talk at his mother. Daniel, who was referred for a possible allergy to nuts, has already asked about whether he can scratch the lumps on his arm, as they are itchy. The doctor on line 01 is talking about the likelihood of Daniel's twin reacting to nuts.

## Extract 2 Consultation 3b: 5.33

01 Dr: I 'ink it is (0.8) r:e:lative[ly, ]  
 02 Mum: [Mhm, ]  
 03 Dr: [ but there's no ] [test I could do to= ]  
 04 Dan: [((gaze to forearm))] [  
 05 Dr: [((lateral head shake))]  
 06 Mum: =Okay. ((nodding))  
 07 (.)//((Dr raises both hands))  
 08 Dr: give you more than th[at, ]  
 09 Mum: [°Oka]y.  
 10 Dan: -> ((gaze to Mum)) Was the:t one for?  
 11 Mum: That was just a practice one.  
 12 Dr: That one jus- makes sure the test's working properly.  
 13 (.)  
 14 Mum: °Okay?<'an it's going down already isn' it suh that's good.  
 15 (0.8)  
 16 Mum: †It'll go† soo:n,  
 17 [ (0.8) ]  
 18 Dr: [((clicks pen and glances at notes))]  
 19 Dr: .mtch .hh So. Any questions?

In line 10 Daniel selects Mum as the recipient of his enquiry about one of the bumps on his arm. His information solicit comes at a transition relevant place, both the end of a basic, minimal component of a turn, and the end of a sequence. This sequence reveals some characteristic epistemic dimensions – like the previous extract they display Daniel’s orientation to the relevance of skin prick results to this setting, and they reveal his sensitivity to both turn and sequence boundaries. Daniel also treats Mum as having epistemic access to the cause of the bumps. However, the doctor treats this as something that he should also answer, indexing his elevated epistemic access without orienting to Mum’s prior (incorrect, but perhaps adequate) response. The doctor provides Daniel with an explanation following his information request. Daniel does not acknowledge either of these responses in line 13 and 15,

and on line 16 Mum treats Daniel’s question as indexing a concern about the itchiness of the bumps, as she reassures him that they will be gone soon. Then, as with extract 1, the doctor resumes the main business of the consultation (line 19).

So far, we have seen that children can use the skin prick test results to launch a new sequence in the consultation. We will now examine an example which is one of 10 in which the child instigates talk during history-taking when the doctor is asking the parent about what the child ate or how they reacted. Andy (4 years and 1 month) is visiting the allergy clinic for the first time, and we are close to the beginning of the consultation. Mum begins to recount the details of Andy’s allergic reaction to nuts in breakfast cereal.

### Extract 3 Consultation 10a: 0.35–3.15

01 Mum: .hh An what basically happe:ned is ma sister wuz  
 02 uh:m (0.2) lookin after [im tha]t mor:ning, .hhh  
 03 Dr: [ Yep, ]  
 04 Mum: an:d I try’d steer clear of any kinda nuts,  
 05 b[ut sh]e gave ‘im some uhm: honey nut=  
 06 Dr: [Right.] ((starts writing))  
 07 Mum: =shreddies I think they were,  
 08 (0.2)  
 09 Dr: #Ri:gh[t,  
 10 Mum: [Obviously containin nuts.=  
 11 And:-> ((gaze to Mum))=They were:: sum (.)  
 12 -> honey [ nut (shre- shreddies)]  
 13 Mum: [Dey was honey nut shredd]i[es  
 14 Dr: [Yep,=  
 15 Mum: =.dhhh ehm: (0.2)



Andy addresses Mum at an appropriate unit boundary in lines 11-12, intervening in her telling of the allergic episode prompted by the doctor. He confirms her recollection of the type of cereal ‘honey nut shreddies’ that he had consumed. As Mum notes, she wasn’t present during the onset of his reaction, and she correspondingly downgrades her access to the cereal: ‘I think they were’ on line 7. Thus, of the three people present, Andy was the only one who had direct access to what he ate, details that Mum has indicated some doubt about. Existing research shows that children’s rights to report on aspects of their own experience are complex; their sensations get collaboratively produced within conversations with their parents (Jenkins, 2015). In this example Andy emphasizes his unique access to this information, and spontaneously intervenes in the ongoing interaction – to helpfully confirm details of what he ate. This also illustrates 4-year-old Andy’s close attention to both the topic, to who knows what, and to the ongoing structure of the conversation between Mum and the consultant.

In examining two key places where children enter the interaction, this section has started to examine some of the relevant elements that accompany episodes in which children instigate talk either with the doctor, or, more commonly, their parents. Internal evidence within each episode demonstrates how the doctor and parent treat the child’s turn as engaging in the conversation and making a response relevant from their recipient, with the parent and doctor orientating on each occasion to who is the relevant next speaker. Exploring our four and five-year-old participants’ contributions shows us that even young children such as these can display their sensitivity to the ongoing structure of the conversation, to turn and sequence boundaries, and to contributing to the crucial medical task of confirming information to which they have direct epistemic access. We note that to varying degrees the child’s contribution disrupts the progressivity of the consultation; it takes interactional effort to manage these episodes, to acknowledge the child’s talk or to offer remedies before resuming a doctor-parent interaction addressing the main business of the consultation. In doing so, the parent or doctor

validates the child’s input as legitimate, demonstrating understanding of their concern, accepting their confirmation of information, or offering remedies.

We have also begun to identify a range of non-propositional strategies that children can draw upon to instigate talk. We explore these in more detail in the following section, where we survey some of the common strategies for instigating talk.

## 5. Resources by which children instigate talk

In addition to the interactional resources of turn and sequence organization, children deploy a range of other more subtle initiating practices directed to parents. In this section we explore the most common: embodied actions, summons, gaze and prosodic changes.

### 5.1. Embodied actions

As Hepburn and Bolden (2017) note in their discussion of non-verbal conduct, one of its advantages is that it need not adhere so strictly to turn and sequence boundaries. Indeed, what we commonly find is that children employ preliminary non-propositional moves while the interaction between the parent and consultant is ongoing. We noted in our discussion of Extract 1 that Raj employs a range of non-verbal resources: he gazes to the doctor, holds out his arm, and he speeds up his talk. We also noted that addressing the doctor directly was less common in our corpus. In the next extract we return to Raj’s post-test consultation, around 7 min later than Extract 1. The doctor has given Dad advice relating to Raj’s diet and recommends and prescribes an antihistamine. They then move on to discuss EpiPens (a brand of auto-injector), which the doctor offers on line 1. At this point Raj, who has up to now been quietly sitting still and gazing at either the doctor or around the room, begins to tap his Dad.

### Extract 4 Consultation 1b: 8.15

```

40 Dr: <So if [if you're a family] that would find that helpful (.)
41 Raj: [ ((taps Dad)) ]
42 Dr: [ we'll ] sort it out [( )].
43 Raj: [((taps Dad))]
44 Dad: ((nodding)) [( )].
45 ( 0.4)
46 Dr: [ .hhh ]
47 Raj: [ °°Dad ]
48 Raj [((gaze to Dad))]
49 (0.5)
50 Dad: [°°( )°°]
51 Dad: [((leans forward, looks at Raj))]
52 Dr: [((gaze to Raj))]
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Raj taps his Dad on the arm on lines 41 and 43, seeking his attention. This does not explicitly conflict with the doctor completing his treatment offer on lines 40 and 42. Dad produces an inaudible turn in line 44 whilst nodding at the doctor, signaling a receipt of the doctor's offer, and a place of possible transition to another speaker, and a new project. A small gap of 0.4 seconds follows and as the doctor takes an inbreath signaling further talk, in overlap Raj summons his Dad in whispered voice. A characteristic of the way in which Raj instigates talk and enters into the interaction is that, unlike his use of tapping, he waits for a transition relevant point; he displays an orientation to the ongoing talk and comes in at a point where the previous turn has been completed. A further notable feature is that he uses a term of address to summon his Dad, which we consider in the next section as a second resource available to children in order to signal their entry into the interaction, and to select their recipient.

### 5.2. Summons

Using a term of address to instigate talk can be a useful mechanism to select the person the speaker is addressing as the next speaker (Sacks, 1992). A summons can also help engage a recipient who is otherwise engaged; in the extract above, the talk has until that point remained exclusively between the doctor and the parent. In extract 4, when Raj's tapping is unsuccessful, he adds the summons 'Dad'. Subsequently, in lines 51–53, both the doctor and Dad orient their gaze to Raj, and Dad directs a (inaudible) verbal turn towards him. A child may also use a summons to seek reciprocity when the recipient is engaged in a task. For example, in a consultation in which the Mum is searching through her bag to find the auto-injectors the consultant has requested, her daughter Ava, age eight, calls her by the term of address "Mu:m?" before asking a question about the injections (Consultation 22 b:1.38). Terms of address often have final rising intonation which is a feature of interrogative prosody, and functions to signal that 'questioning' is being done in a manner that mobilizes response (Stivers and Rossano, 2010). These

resources demonstrate an orientation to the fact the child does not currently hold the adult's attention. The way that Raj escalates his attempts to gain the floor show that his restricted rights are a practical concern in terms of getting involved in an otherwise exclusively adult interaction.

### 5.3. Prosodic variations

A third resource we observe is prosody: aspects of speech delivery such as rhythm, stress and intonation. Within the delivery of a term of address it is possible to express numerous orientations through different prosodic variations. For example, in a consultation with Andy, who is four years old, his Mum and the consultant have discussed several issues relating to the diagnosis and treatment of Andy's allergy in depth, and Andy has not been involved. Andy then enters the interaction in overlap with the doctor's turn summoning his mum "Muhmee:?" (Consultation 10 b: 3.49–4.33). This example is atypical in our collection, in the sense that the child launches a turn during the doctor's on-going talk, and it is treated as a breach of turn-taking rules by Mum who asks Andy to wait. Stretching enables the speaker to hold the floor for longer, and this may attend to the fact that the term of address is delivered in turn-incursion, so stretching provides for the single-word turn competing for the interactional space. Further, the stretched nature of this intonation, which has a sense of pleading, may orient to the projected talk as being a favor (he goes on to ask if he can return to play with the toys).

Perhaps a more tacit way a child may select a specific recipient is by reducing volume. In extract 4 Raj summons his Dad in very quiet whispers. As he is sitting very close to his Dad, this is one way of signaling that his verbal turn is directed at his Dad, rather than projected towards the doctor. Similarly, in the next extract, whilst the doctor is searching through the notes for information, Leah asks her Mum for permission to roll her sleeve back down, which has been rolled up for the skin prick testing.

## Extract 5 Consultation 13b: 9.36

3 (16.7)  
4 Leah: [^(Can/shall I put my sleeve down now)^]  
5 [((Leah holds out arm facing Mum))



## Extract 6

### Consultation 19: 7.22–8.35

01 Dr: ((pointing to medicine, gaze to Alex)) <Taking tha:t,> what're  
 02 your symptoms li:ke.  
 03 (3.8)//((Mum gazes to Alex, Alex gazes to Mum, Dr gazes to both))  
 04 Dr: Better?  
 05 (0.8)  
 06 Alex: I don't know what symptom mea:nds.  
 07 Dr: ((mouths ['Oh']))  
 08 Mum: [Q::h (.) ehm ((nodding to doctor))  
 09 Dr: How about your no:se.=How was it when you're doing th[at.=  
 10 Alex: [Er::  
 11 (0.8) .mtk it's fi:ne fer abou::' the wh:ole d- n:ight and  
 12 five minutes.  
 13 Mum: It d- it- The first bottle [it did it y- [did miracles.  
 14 Dr: [Yep, [ ]  
 15 Alex: [YEah. [( )]  
 16 Dr: [An that was=  
 17 Mum: ((open hand gesture)) [(S'th-)  
 18 Dr: =the same stuff.  
 19 (.)  
 20 Mum: [Yeh i's the same stuff. Exa<sup>c</sup>ly. Yeah.=  
 21 Dr: [He- he- Yeah. ]  
 22 Mum: =But it['s- it's n-]  
 23 Alex:-> ((to Mum)) [Maybe I:- ] Maybe now Dad's giving me only o:ne  
 24 ↓spoonful or something,↓  
 25 Mum: We:ll you normally do get one °spoonful. °Yeah. It's five mil  
 26 isn' it.  
 27 Dr: We:ll\_ the o↑riginal instructions on this is to take two five  
 28 mils.=So d'you know if you [started off] on tha:t.=On-  
 29 Mum: [.H H h ]  
 30 Alex: [Yeah I started off (with) two.]  
 31 Mum: [ Oh : : : : : ] I bet that's what's happened.  
 32 Dr: That may be what's happened.

As in the extract with Raj and his Dad, Leah is sitting directly adjacent to her Mum. She turns to face Mum, and holds out her forearm, signaling the topic of her turn, and then requests in very whispered tones permission to replace her sleeve. The turn's volume orients to Leah's close proximity to Mum, and as with Raj in Extract 4, excludes the doctor as intended recipient. Mum treats herself as the relevant recipient of Leah's request for permission, and responds with agreement in the next turn. These examples demonstrate that children are drawing upon additional, often subtle and/or non-verbal resources, with a tendency to address a parent rather than the doctor. This is an interactional demonstration of children's reduced rights in practice; children are employing additional practices in order to establish participation in the consultation. We note that Leah turns to face Mum in this extract, and this brings us to the final resource – gaze.

#### 5.4. Gaze

In conjunction with embodied actions and/or delivering a term of address, a child may also signal the target of their talk with gaze. As in extract 4 above, Raj, whilst summoning Dad on line 48, looks up at him. As we have pointed out, in this instance, the combined resources of gaze and summons are successful in obtaining reciprocity. Body movement can be a successful technique for eliciting reciprocity, and gaze specifically has been argued to be a key feature in mobilizing response (Heath, 1984; Stivers and Rossano, 2010). Simply moving the head and directing gaze can change the rhythm of the body movement in a way that signals something new without standing out as itself the focus of attention. Instead it works on behalf of the talk it accompanies (Heath, 1984).

In summary, our analysis begins to identify the subtle range of resources that children employ to secure participation in a medical setting where the adults are exchanging often complex and technical details of symptoms and their management. Children's verbal turns can be accompanied by embodied actions, gaze, and prosodic shifts, which can signal their sensitivity to ongoing talk, their move to secure participation, and a means by which to identify either the parent or practitioner as a recipient and so mobilize a response. By drawing upon additional resources to secure participation in the consultation, children orient to their reduced rights and the extra work required to join in the medical consultation.

#### 6. Some advantages of, and challenges presented by, children's contributions

In this section, we start to explore the content of children's contributions and the benefits of, and challenges involved in these episodes. We examine three episodes: the first example involves a child contributing vital information about a change in medication dosage that explains why it has stopped working; in the second example the child offers a relevant potential allergen to discuss in history-taking, but it is out of sync with the ongoing talk and gets deferred; and in the final example the child announces that she has a bogie (or in US terms, a booger), a completely unrelated matter, but the doctor uses the episode as a springboard to engage the child in an examination.

In this first example, we demonstrate that a child can not only successfully enter the consultation, but also contribute a valuable perspective. Like 10 out of 22 of our examples, it takes place during history-taking when the doctor is asking questions about the child's symptoms, and other relevant medical background. Alex (7 years and 10 months) is new to the allergy clinic. Mum and doctor have discussed symptoms (constant runny nose) and we join the clip as the doctor turns to investigating the efficacy of Alex's existing medication.

Following a lengthy gap (line 3) and the doctor's pursuit of a response to his initial question on lines 1–2, Alex confesses to not understanding the term 'symptom' (line 6). This instance of an elicited response (rather than talk instigated by the child, our focus here) highlights one important explanation for children's lack of participation in medical consultations – failure of recipient design by the adults present, e.g. using overly technical vocabulary, resulting in the child's failure to understand what is needed of them. This relates to our earlier illustrations of children's participation stemming from their experience of primary epistemic access to the topic underway (e.g. what they ate, what they feel). Clearly tailoring speech towards the child and creating opportunities in which they can experience epistemic primacy, are key to increasing participation.

This extract also shows one important reason why children and young people's perspectives should be included in medical consultations. The doctor has been including Alex throughout the consultation, addressing questions to him as in lines 1–4 and 9. Following a reissuing of the doctor's initial question, discussion ensues about the medication, which Alex visibly attends to. However, it is his self-initiated intervention on lines 23–24 that is crucial to the whole discussion about his symptoms, as he reveals a change in dosage from two spoonfuls to one, something that explains why the medication has suddenly become less effective. Mum confirms that Alex is receiving a single dose of 5 ml, revealing her understanding that this has always been the dose, conflicting with Alex's claim about reduced dosage. In this sense, Alex's self-initiated turn is successful in achieving reciprocity as part of the ongoing medical interaction, and is a crucial element in the Consultant's successful diagnosis of the problem.

We note, tentatively, seven-year-old Alex's sophisticated interactional competence compared to the participants we have primarily focused on thus far – Dan, Andy and Raj who are two years younger, saving a fuller investigation of developmental competencies and the repercussions for successful participation in healthcare, for future work. In our next example we return to Andy, age 4, who we met in Extract 3 talking about breakfast cereal. Andy, like Alex, raises a relevant topic, but this time it is not quite delivered at an appropriate time. Mum has been detailing how he broke out into 'white lumps' following his allergic reaction to the nuts in the cereal.

On line 22 Andy announces information relevant to the medical consultation, but his contribution is sequentially and topically out of place. Although the doctor has just gazed over to him, Mum is still midway through her turn, detailing Andy's nut-induced rashes, and it also emerges that the doctor has more questions to ask about this. Mum and Andy collide in overlap on lines 21 and 22, and eventually Mum drops out, perhaps due to Andy's elevated volume, and the fact that the doctor maintains gaze on him (line 23). The context for Andy's intervention is the doctor's prior gaze to him on line 20, which can be an interactional strategy for mobilizing response (Stivers and Rossano, 2010). Another contextual element that may elicit Andy's turn is that both Mum and doctor have been discussing how the rash made him feel – itchy. This is something squarely in Andy's own area of knowledge. The doctor responds to Andy's turn (line 24), validating his turn as response worthy, and deferring Andy's participation until it is topically relevant by asking Andy to remind him later (line 30), thereby encouraging his future participation. The failure of Andy's turn to introduce something immediately to the consultation is tied to the relevance of his turn to the local sequence and topic, but his contribution is nonetheless significant to the diagnostic process. It is essential to identify all food triggers, as new potential allergens are key information that underpin investigation, management and prognosis. The fact that the topic of fish does not result in immediate discussion does not mean Andy has failed to contribute –

Extract 7  
 Consultation 10a: 0.35–3.15

06 Mum: .hh [erm but >by the time they got 'im to the<  
 07 And: [((resumes leg swing))  
 08 hospital ['e was comple:te[ly covered.  
 09 Dr: [(( gaze up to M [then down to notes=  
 10 [=gaze back up))  
 11 [ (0.2)  
 12 Dr: ((gaze down to write)) °Ka[:y,  
 13 Mum: [From head to toe.=  
 14 =[Sorta whoite looms:\_  
 15 Dr: =[((writing))  
 16 Mum: It felt (°it[chy) ((mimes scratching cheek))  
 17 Dr: ((gaze up)) [i- (.) an itchy:  
 18 (all- [all that.])  
 19 Mum: ((nod)) ['E generall[y s-] it's= ((scratches))  
 20 Dr: [Yep,] ((gaze to Andy))  
 21 Mum: =[generally 'is hands an 'is-] ((hands to face))  
 22 And:-> =[< AHM ALLERGIC TE >] UMm: FIsh:.  
 23 Dr: [((open mouthed smile to Andy))  
 24 Dr: Oka:y:=well ahm hearin about the cereal,=  
 25 but then we need to f- f:ind out  
 26 [ all about the fish as WE:ll.]  
 27 Mum: [We're talkin about the (nuts) fir]:st.=  
 28 Mum: =[Okay? ] ((patting Andy's knee))  
 29 Dr: =[But w'll] W'll talk about= ((points to A and up))  
 30 =the fish in a minute.=so you r- you remind us.  
 31 Dr: Yep?= ((nodding to Andy))  
 32 And: =Yeah.  
 33 Dr: Okay? .snhh ((looking to notes))  
 34 (.)  
 35 Dr: So:: (0.2) wi:despread ra:sh, any other symptoms.=

the doctor has noted his allergen for subsequent discussion, and the ostensible disruption to progressivity in this case has relevant medical repercussions.

In our third and final example, two-year-old Lucy introduces something that is irrelevant to the consultation – the discovery of her bogey (or boogar). What this extract shows us is that a child’s participation, even when it is not directly relevant to history-taking, requires interactional attention from one or more adults, but can be used as a springboard to directly engage the child. In this case, the doctor has just asked both parents about family history of asthma and following their response is writing in the notes when Lucy first announces her bogey. Dad responds with sarcastic assessment (“Oh lovely”) and begins to ask the doctor “Is there a” to which the doctor signals to the tissues. We join them as Lucy re-issues her announcement.

On lines 4–7, the doctor stops writing and topicalizes Lucy’s announcement (line 1), while simultaneously turning to reach for his stethoscope. The doctor then makes a request to perform an exam (lines 10–11). In this way the doctor capitalizes on the reciprocity resulting from the child instigating talk to transition into asking her permission to listen to her breathing. This shows that although the content of Lucy’s talk is irrelevant (and in some ways antithetical) to the progress of the ongoing consultation, it nevertheless provides an opportunity to transition into an important medical examination.

In this section we have explored the content of talk instigated by children, and the extent to which it leads to immediate topicalization. We have seen that children’s contributions can range from: crucial information at timely points; relevant information delivered out of sync with the ongoing talk; to information irrelevant to the diagnostic process

### Example 8 Consultation 25a: 8.30

01 Lucy: It’s (0.3) I got a bo:gi[e:.  
 02 Mum: [Huha ha  
 03 [ha ha ha ] ha ha .hhhi hh  
 04 Dr: [Have you.] ((twists round for stethoscope))  
 05 Dr: Got any mo:re.  
 06 Dad: Huh huh [(No)  
 07 Dr: [Just leave them where they are:.  
 08 Lucy: (0.2)/((gaze to stethoscope, hand on nose))  
 09 Mum: ((to Lucy)) Let’s not do [that.  
 10 Dr: ((to Lucy)) [Can I have a quick  
 11 check of your chest and breathing,  
 12 (0.6)  
 13 Mum: .Huh! Like (ninja’s with the) ba:bies.  
 14 Dr: M↑m: Give my hands a quick clean,

but that nonetheless requires interactional attention to resolve. Even in the latter case, it is possible to use these sequences to engage the child in important aspects of the consultation.

## 7. Discussion

We have described, for the first time, the ways in which children instigate talk in pediatric allergy consultations and how clinicians and parents deal with the real dilemmas of child contributions. In doing so, we have addressed three key issues.

Firstly, *where* children instigate talk – children showed a sensitivity to sharing medically relevant information that lies within their primary epistemic domain. This included the slot following the skin-prick testing when children had the visual results and accompanying sensations of the test evident on their forearm. Another place that children entered the talk was during history-taking discussions about what they ate, or reactions the child had experienced. [Stivers \(2001\)](#) argues that there may be critical differences in participation across the activities within the encounter. Ongoing analysis will seek to differentiate the context of talk instigated by children to examine how the type of ongoing activity taking place when the child enters the talk impacts the way in which the child recruits reciprocity.

Secondly, we examined *how* children instigate talk. The analysis demonstrated that children select doctors or, more often, parents. We described a range of propositional and non-propositional strategies which include gaze, summons, prosodic changes and non-verbal resources such as tapping. This develops [Stivers' \(2001; Stivers and Rossano, 2010\)](#) findings, demonstrating that the resources used by pediatric practitioners to select the next speaker and gain reciprocity are also used by children to instigate talk and mobilize response during the interaction. We build on [Stivers' \(2001\)](#) work that emphasizes the crucial role of non-verbal signals both in children's talk being elicited and instigated. Our finding that children rely on additional, often subtle, non-verbal resources to break into the interaction, and that frequently they address parents rather than the doctor, raises questions about whether, with the increasing shift towards virtual services and digital appointments there is a danger that children will be entirely excluded from the conversation, either by having no agency to instigate their input or by not even being present when their carer logs onto the service. This paper shows that children have a legitimate role that they already work hard to fulfil, and therefore a lot is at stake if that role is diminished. In addition, our description of *how* children instigate talk begins to address social science questions about children's rights to participate in medical interactions ([Coyne, 2008; Kodjebacheva et al., 2016](#)); we have shown that children in our data orient to being bystanders of a dyadic conversation in practical ways, using subtle non-verbal resources to intercept exclusive talk between adults.

Finally, we analyzed the *content* of children's contributions, showing that children can provide information relevant to the medical process, either timely, or in a way that means their contribution has to be delayed. Children can also announce information entirely irrelevant to the diagnostic process. In each of these scenarios the child's contribution requires interactional effort and skill to address and has the potential to disrupt the progressivity of the consultation. However, the pay-off of these contributions includes attending to the child's needs, providing remedies, and often, the introduction of medically relevant information that shapes the course of the diagnostic and treatment trajectory. While

the initiation of completely irrelevant information on the part of the child may at times be challenging, we also show an example of how such an episode can be used to transition into the doctor seeking permission to examine the child. We argue that these episodes contribute to validating the child in their capacity to contribute, which has two potential advantages: firstly, to potentially improve the clinical history which underlies diagnosis and decision-making; and secondly, to contribute to the process of the child becoming increasingly independent in managing their own medical condition. Strategies to increase such involvement have the potential to augment the healthcare process.

As the work on this project continues, the aim is to examine patterning in terms of a child's multiple attempts to break into the interaction, and the escalation of interactional devices. Further, we aim to examine unsuccessful bids to enter the interaction, to potentially further develop [Stivers and Rossano's \(2010\)](#) model of mobilizing response. These findings reveal important insights into children's practices and competencies within pediatric consultations and provide the bedrock for future analytic developments using a broader corpus.

We have applied the rigorous approach of conversation analysis to episodes in which children instigate talk in pediatric consultations, interrogating each individual case for evidence as to whether the turns the children produce are recognized as moves to enter the conversation, and are effective in doing so. We demonstrate that doctors and parents systematically treat these practices as initiations to engage in the medical interaction, as evidenced by the adults displaying reciprocity and producing responsive turns. In addition to the existing evidence that children can be *recruited* to take part in their medical consultation by asking questions, we have demonstrated for the first time that children can and do successfully *instigate* talk in their own consultation in ways that can play a crucial role in the process of establishing the nature of the child's allergy and determining appropriate treatment. In light of our findings that children's contributions are rare, take effort to accomplish, and are often valuable, we argue that such participation is worth protecting as face-to-face consultations are increasingly dropped in favor of digitized alternatives.

## Author contributions

Laura Jenkins: Conceptualization; Funding acquisition; Investigation; Methodology; Project administration; Writing - original draft; Writing - review & editing; Alexa Hepburn: Conceptualization; Formal analysis; Funding acquisition; Methodology; Supervision; Writing - review & editing; Colin MacDougall: Resources; Investigation; Writing - review & editing.

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**Appendix 1. Transcription Notation based on Jefferson (2004) and Hepburn and Bolden, 2017**

(.)	Just noticeable pause
(2.6)	Figures in brackets indicate timed pauses (in seconds)
↑↓	Onset of noticeable pitch rise or fall
A: [word]	
B: [word]	Square brackets denote overlapping talk
.hh	In-breath
hh	Out-breath
wo(h)rd	Laughter bubbling within a word
wor-	Sharp cut-off demonstrated by dash
wo:rd	Colons show stretched preceding sound
(words)	Unclear speech is shown as a guess in parenthesis
( )	Unclear talk
word=	No discernible pause between two speakers' turns or words run together word
WORD	Louder speech
<sup>o</sup> word <sup>o</sup>	Quieter speech
>word word<	Faster speech (opposite arrows indicate slower speech)
((Anna looks))	Notes on visual information in double parenthesis
w*ord	Asterisks precede a 'squeaky' vocal delivery
Yeh,	'Continuation' marker, speaker has not finished; marked by fall-rise or weak rising intonation, as when delivering a list.
y'know?	Question marks signal stronger, 'questioning' intonation, irrespective of grammar.
Yeh.	Full stops mark falling, stopping intonation ('final contour'), irrespective of grammar, and not necessarily followed by a pause.
sto(h)p	Aspirated speech is signalled by h's in round brackets.
°°help°°	Whispering – enclosed by double degree signs.
.shih	Wet sniff.
.skuh	Snorty sniff.
~grandson~	Wobbly voice – enclosed by tildes.

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