

## Risk work in dental practices: an ethnographic study of how risk is managed in NHS dental appointments

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**Abstract** Ideas about disease risk underpin many preventive health strategies. These have assumed even greater importance in recent years as health policies place a growing emphasis on personal responsibility. This is reflected in new national contracts for National Health Service (NHS) dentistry that emphasise informing patients on their oral health risk status to persuade them to be accountable for their health. Thus, ‘risk’ is now central to the practice of dentistry, particularly primary care delivery. An ethnographic study in dental practices in England looked at how risk is acted on in dental settings. 368 dental appointments were observed in five dental practices over a year. The analysis shows three interrelating forms of risk work. Dentists position risk work as administrative to gain consent, translate risk through temporality to encourage action, whilst protecting rapport and their professional reputation through interactional risk work. This qualitative study demonstrates that the everyday nature of risk work in NHS dental practices is often implicit, defensive and focused on social interaction rather than the explicit discussions of individual lifestyle risks that policymakers assume. The study contributes to the literature on ‘risk work’ by illustrating how health professionals use risk to manage situationally sensitive contexts.

**Keywords:** risk, work, communication, health education, oral health, dentistry

### Introduction

‘Risk’ is central to the delivery of modern, preventively orientated health care. Clinical decision support tools which stratify patients by risk of disease for a range of conditions such as coronary heart disease, diabetes and breast cancer are now commonplace; and used to focus resources and anticipatory care efforts on patients most in need (Haas *et al.* 2017, Harris *et al.* 2017). The implementation of risk stratification tools in the clinical setting is an important issue for practitioners since their everyday practice routinely involves the challenge of balancing adherence to professional care protocols regarding educating their patients to adopt healthier behaviours while maintaining courteous, long-term and professional relationships with people who may not be receptive to such advice (Hill *et al.* 2010). A key issue here is how ‘risk’ is presented in ‘front stage’ social interactions between providers and patients where both actors are physically in each other’s presence. Goffman (1967: 45) articulates the finely balanced nature of this type of encounter; identifying that conversation and behaviours are governed by (unspoken) rules concerning the distribution of feelings and practices employed

to maintain a kind of 'ritual equilibrium'. Since risk communication involves judgements and evidence from others, this has the potential to upset this equilibrium, threatening the faces of both parties, and even the longer term relationship between the two.

A recent systematic review identifies that there has been relatively little previous work on how risk is acted upon and communicated in routine clinical practice (Gale *et al.* 2016). Working practices that occur under the guise of risk, or 'risk work', includes: how healthcare professionals translate risk information to patients, how healthcare professionals amplify or minimise risk when giving patients information and how health professionals provide care to patients when addressing risk (Gale *et al.* 2016, Horlick-Jones 2005). 'Risk work' research helps explore what discussions of risk *do* in practice as well as taken-for-granted assumptions when people handle the topic of 'risk' in various settings. Gale *et al.* (2016) call for more 'risk work' research, particularly involving different types of risk and contexts. Our paper contributes to filling this gap, by providing an empirical study of the communication of risk in the setting of general dental practice. Since behaviours which sit behind increasing 'risk' of poor oral health involve personal habits such as tooth-brushing (a hygiene-related behaviour which comes within the scope of personal responsibility) discussing these matters in a clinical setting comes with associated moral overtones of judgment and shame. This makes dental practice a particularly interesting, if previously under-researched, context to study (Exley 2009).

The relative lack of research on 'risk work' is surprising given the current dominance of risk in official health policy discourse which reflects a growing interest in the use of risk stratification as a means to optimise the efficiency of care in an era of constrained budgets (Lavery and Harris 2018, Moreira 2007). Policymakers are attracted to risk stratification because it offers a means of reducing variation in the delivery of care, as well as a way to target early intervention and reduce overall costs (Lewis 2015). Risk stratification strategies are also an expression of wider values concerning reciprocity between patients and health services, where patients are understood to not only have a right to health care but to have a responsibility to take care of their own health too (Horlick-Jones 2005). Recent reforms in National Health Service (NHS) dentistry reflect this approach, with risk assessment of dental patients tied to standardised clinical preventive practice protocols, a fundamental part of a new model of dental practice contract being piloted in England (Department of Health 2015). Very little, however, is known about how risk is *currently* communicated in NHS dental services. We, therefore, aim to explore risk communication in the context of 'risk work' in NHS dental practices in England. Our paper starts by outlining the general context relating to risk work research in which the study is positioned and then a more particular dental policy context, before describing the empirical work itself.

### *Risk work and risk perspectives*

Previous research has categorised clinical risk discourse into three types of approaches: firstly 'explicit risk talk' (where 'risk' is used as a term during the consultation, or where professionals individualise information on health risk); secondly 'implicit risk talk' (talk about risk which is indirect, or anonymised); and thirdly where there is an avoidance of talking about risk altogether (Linell *et al.* 2002). In most previous work, the second two strategies appear to predominate. For example, Hoffmann *et al.* (2003) in a study of hormone replacement therapy appointments found that the explicit use of the word 'risk' was infrequent, while Linell *et al.* (2002) also observed that there were very few explicit mentions of the word 'risk' in five different healthcare situations involving doctors, nurses, midwives and patient interactions.

There is evidence that professionals tend to adapt their approach depending on the type of patient seen: when talking to high-risk patients, nurses were observed to use more implicit forms of risk talk to avoid offending patients (Adelswärd and Sachs 1996); and in

conversations around genetic risk health professionals used a range of tactics to escalate or de-escalate present and future risk, as needed (Sarangi *et al.* 2003). Thus, the tactics employed by professionals may vary between different staff groups, and in different situations, and between patients. For example: although doctors would sometimes use numerical values (such as 1/5) as a proxy for risk, midwives were found to minimise risk talk during appointments (Linell *et al.* 2002). Explicit risk talk is thought to be more likely to occur when risk is understood to be high and manageable and when there is adequate time and expectation of risk discussions (Linell *et al.* 2002).

When explicit risk talk is present, it appears to serve a variety of purposes: for example, it may be used to offer explanations for policy and procedures, as observed in an acute hospital ward, where ‘risk’ discourse was used by staff to account for their practices that sometimes prioritised risk prevention of falls over patient dignity (Hillman *et al.* 2013). Where the purpose of the conversation is to avoid blame associated with adverse outcomes, this is termed ‘secondary risk’ discourse (limiting damage to reputation, litigation, and other outcome failures) (Hillman *et al.* 2013, Power 2004). ‘Risk’ provides a vocabulary whereby people are held accountable (Douglas 1992: 22); and this can concern judgements about professional behaviour as well as patients.

#### *Risk work in dental settings*

Policy documents provide a tangible means by which the purpose and assumptions about ‘risk’ can be examined. In a range of international dental policy contexts we see that ‘risk work’ generally involves either ‘communicating risk’ or ‘managing resources’. The former is seen most obviously in United States, Australia and UK policies which all recommend that individual risk assessments be undertaken during routine dental check-ups (COAG Health Council 2015, Department of Health 2015, U.S. Department of Health and Human Services 2000). In Australia, in recognition that the frequency of dental visits is limited among some population groups such as children and the elderly, it is also recommended that ‘oral health risk assessments’ are incorporated into general health risk assessments (COAG Health Council 2015). Nevertheless, there seems to be a common intent: that risk assessments be incorporated into the structure of the healthcare system with this, at least in part, intended to lead to advice and improvement in patients’ oral health behaviours.

Material from the American Academy of Pediatrics illustrates how risk assessment is directly connected to the giving of anticipatory guidance to patients (Hale 2003). In transferring such knowledge, however, at least some onus for poor oral health is also transferred, and ‘risk’ is enacted as something neutral, objective and measurable (Sarangi *et al.* 2003: 156). The Australian Oral Health Strategy does position individual risk assessment as part of a wider prevention programme (such as community actions and social marketing). The UK dental contract reform focuses on individual behaviours and the professional–patient relationship (Laverty and Harris 2018). This reflects more traditional medical models that assume that there is a relatively straightforward transfer of knowledge from an expert to the layperson with consequent changes in behaviour.

In the United States, risk assessments are also being used to allocate resources based on risk categorisation:

By compiling such factors and sorting them by risk category, patients can be classified into high- or low-risk groups, enabling providers to make more comprehensive diagnoses and identify patients who would benefit from more aggressive prevention strategies.

(U.S. Department of Health and Human Services 2000: 192).

More recent approaches in public health have moved away from the targeting of additional resources to the 'high need' end of the spectrum since 'targeting' often implies labelling with all the attendant hazards of stigma. A philosophy of 'proportionate universalism' has now been incorporated into the public health lexicon, which advocates that resources should be universally applied, not targeted, but applied with a scale and intensity that is proportionate to the level of disadvantage (Marmot 2010). Certainly, this approach is evident in Australian government dental policy documents (COAG Health Council 2015), although the way this might be operationalised in the dental clinical setting is hampered by a lack of precision by which patients are assigned across a spectrum of risk categories.

### *Context of study*

Primary care dentistry in the UK is delivered in the main either through independently owned general dental practices contracted to the NHS and abide by NHS contractual and governance arrangements or through private practice where reimbursement is received either directly from patients or through third-party payers such as insurance companies (Harris *et al.* 2014). Following a review of dental services (Department of Health 2009), Steele led a move away from current NHS dental contracts with a focus on bands of activity (treatment) to a new contract with a focus on prevention, currently being piloted. A fundamental part of the new contract model is the undertaking of a risk assessment during dental check-ups, categorising patients as high, medium or low risk, leading to different care protocols, including health education advice as laid out in national guidance 'Delivering Better Oral Health' (Public Health England 2014). There is a need, therefore, to examine how risk is currently addressed to understand how the new contract may impact dental settings.

## **Methods**

This paper comprises one arm of a wider study that aimed to explore risk communication preferences in dental settings (Harris *et al.* 2018). This part of the study aimed to explore what currently happens in routine dental practice, with a focus on 'risk work'. To best address this aim, ethnographic methods were used for drawing on interpretive approaches (Denzin 2001). Ethnography is a well-established methodology that has come to characterise naturalistic approaches to research by focusing on understanding the perspectives and everyday activities of participants through observation in local settings, rather than relying on accounts or experimental methods (Wolcott 1999).

Ethical approval (reference number 14/NW/1016) was obtained before the start of the study. Ethnographic fieldwork took place in five NHS dental practices in areas of relative deprivation in the North of England. Each practice was studied intensively over a 4–12 week period and included direct observation of routine dental appointments, the practice environment, and formal and informal interviews of staff and patients. In total, the researcher, a medical sociologist (LL), observed and took detailed fieldnotes of 368 dental appointments (cf. Harris *et al.* 2020 for further reflective discussions on the methods). Observations included twenty dentists, one pre-registration (vocational training [VT]), dentist, three dental hygiene therapists, two prevention nurses, nineteen dental nurses, and three trainee dental nurses. The number of observations carried out at each practice varied by the size and skill-mix of the setting, and the average number of observations in each practice was 74.

Although policy advises that oral health risk information is given at NHS check-up appointments (Department of Health 2015), given that there is no current research showing this to be the case, observations included a range of appointments in dental practices including check-

ups, emergencies, treatment and review appointments. Most of the observed appointments were NHS-funded except for 22 private appointments and a further 40 appointments that started as NHS appointments but later included some discussion, or procedures, of private treatment (such as white fillings, white crowns, whitening, private scale & polish).

Anonymous fieldnotes were recorded in notebooks during appointments and then typed up fully at the end of the day. Initial fieldnotes were broad and then more focused over time as the observer became familiar with the structure of appointments. After a few weeks, the observer developed a structured observation-coding sheet for greater efficiency (participants, appointment type, length of appointment, descriptions of appointment and backstage interaction). Talk during the appointment was recorded verbatim when possible alongside descriptions of action and the non-verbal aspects of the appointment. This is important given that dental patients often have limited scope to speak during parts of the appointments when the dentist examines or is carrying out treatment in their mouth. Audio or video recordings of the appointments would have been preferable but may have led to consent issues for staff involved in the study.

The approach to analysis was predominantly inductive to ensure that themes were derived from the data (Pope 2005). A constant comparison method was used, starting with a preliminary coding framework that was refined throughout the analysis to interrogate the similarities and differences within the data (Mays and Pope 1995). Data were stored and sorted using NVivo (QSR International Pty Ltd. Version 11, 2015; Doncaster, Australia) software. As the analysis progressed, the coding framework was developed and adjusted in response to promising themes amongst the research team. Qualitative analysis proceeded iteratively with data collection to allow themes to be incorporated and explored in subsequent interviews.

The analysis of the observational data draws on approaches from previous research into medical encounters and communication. The analysis focused on the interpretation of meaning and action in appointments to explore the recurring themes and patterns that help explain the observations (Emerson et al. 2011). The analysis explored the form (Coleman and Burton 1985, Emanuel and Emanuel 1992, Silverman 1984), structure (Pryce 2000, Ten Have 1991) and interaction (Goffman 1967, Hillyard 2010, Maynard 1991, Pilnick and Dingwall 2011) in the appointments whilst paying attention to the dental setting and context (what are the explicit/implicit ethos of the practices and how do they impact on patients). The aim was to capture the range of activity that goes on in dental practices, from the organisation of care activities to the delivery of services. During the second round of fieldwork in each team, anonymised fieldnotes were presented to participating dental staff to 'member-check' the observations and ensure that they were representative of their experience of delivering care.

Data are presented using acronyms indicating their professional group: D – dentist, DN – dental nurse, HT – hygiene therapist, P – patient), the appointment type (Dentist Initiated Check-Up Consultation [DICUC], Dentist Initiated Treatment Consultation [DICTC], and Patient Initiated Consultation [PIC], (Coleman and Burton 1985)), and length of appointment.

## Analysis

### *The limits of explicit risk communication*

In NHS guidance, dentists are expected to communicate oral health risks to patients to encourage behaviour change (Department of Health 2015), as well as part of the consent process (Bright *et al.* 2017). NHS patients are advised that during a dental visit 'your dentist will assess your current oral health, any risk of future disease and advise you on the care of treatment required to secure good oral health' (NHS England 2018). Therefore, we looked for

examples of explicit risk talk within the appointments. We classified explicit risk talk as the use of the term 'risk', its derivatives, and numerical values to express probabilities (Hoffmann *et al.* 2003, Linell 2002). Very little explicit risk talk was observed, however. In an analysis using NVivo, the word risk and its derivatives do not feature in the list of the 200 most frequent words. Instead, in the 368 appointments, there were just 33 instances of explicit risk talk across 26 appointments, often focusing on treatment risks. This suggests that it may not be useful to focus on explicit risk talk *per se*, given its infrequency and brevity, but instead we should look at the other ways in which risk is communicated and managed in dental settings.

#### *Positioning risk work as administrative*

In appointments where the dentist determined that treatment was necessary (at the time or a later date), risk discussions were often positioned as administrative. In doing this, health professionals outline their professional obligations to gain consent and also distance themselves from offence and blame. Discussing treatment risks is part of the consent process required following the 2015 Montgomery ruling which states that patients should be informed of risks and potential outcomes of treatment and alternatives. The priority should not be about the risk of occurrence, but about the potential significance and meaning of the risk to an individual (Main and Adair 2015). Fieldnote example 1 shows a treatment risk discussion during an emergency appointment where the patient presents with pain. After an initial examination and radiograph, the dentist reports the following assessment to the patient [emphasis added].

*PIC (Emergency appointment), 30 minutes, P is male in 50s, D and DN*

[Start of appointment omitted]

- D: There is cracked filling and decay around the root. I agree it should come out, just to let you know that because of the decay by the root *there is a risk of fracturing. Just need to let you know the risks*
- P: *So what does that mean?*
- D: Because of where the decay is the top could fracture off leaving the root and you would have to go to hospital. Has the painkiller kicked in?
- P: No, no have a go, I need it out [D gives another injection]
- D: All done. Well done. OK? Have a rinse out, if you don't numb up will give you some antibiotics and then get you back in. The infection can sometimes block the painkiller. Doing OK? [P laughs] Feeling numb?

[End of appointment omitted]

#### Fieldnote Example 1

In this example, the dentist summarises their assessment of the physical examination and their treatment recommendation whilst outlining the potential risk of a negative outcome (explicitly). The dentist is indirectly seeking consent from the patient and also asking the patient to accept the risk (and responsibility). In doing so, the dentist is protecting themselves from complaint and blame. Consent is implicitly given by the patient after asking for further information. The dentist states that they have a professional obligation to give this information, that they 'just need to'.

There were several similar instances where the dentist used terms such as '*I need to*', and '*I have to*' to introduce the risk-related discussion. In delivering risk information in this way, as something they 'have' to do rather than 'want' to do, the dentist can distance themselves from negative feedback from patients (Horlick-Jones 2005). This was particularly evident when discussing lifestyle behaviours. In fieldnote example 2 a patient comes in for a dental check-up and during the first part of the appointment is asked to confirm current medications and smoking status:



*DICUC (check-up), 20 minutes, P is male in 60s, D and Dn*

[Start of appointment omitted]

- D: How is everything in your mouth?  
 P: Everything is alright  
 D: And OK medically?  
 P: Alright  
 D: OK going back in the chair? Here are some glasses for you. Do you smoke?  
 P: Yes, 20  
 D: Not here to nag you, but do need to tell you about *risks* of smoking. It is the no.1 cause of tooth loss and increases your risk of mouth cancer. Interested in giving up?  
 P: No  
 D: Stick your tongue right out, other side. Experience dry mouth?  
 P: Yeah  
 D: On any medication  
 P: Yeah loads

[exam omitted]

- D: With smoking there is less than ideal oral hygiene which will lead to bone loss. Gums are like the cement around a lamppost. In regards to your sugar what's your intake? It's the frequency – have it in your tea?  
 P: I have sweetener in my tea  
 D: So do I, sweetener is better.  
 P: Back in 6 months?  
 D: Back in 6 months

#### Fieldnote Example 2

Notable in this example is that the risk discussion is preceded by a distancing manoeuvre from the dentist: it takes place when the dentist is seated behind the patient, with the patient reclined in a dental chair and using protective glasses – there is no eye contact, and the topic is introduced apologetically with the statement that giving this information is their duty. Smoking is a lifestyle behaviour imbued with moral meanings (Chapple *et al.* 2004) and we could interpret these distancing moves as the dentist wanting to avoid offending or shaming the patient that may lead them to not return for future appointments. Instead, the dentist gives a statement and metaphor to translate the risk of smoking to the patient and moves on. Given the other information gathered from the patient, such as their dry mouth, it could be that the dentist recognises there are wider issues to address before tackling smoking. These two examples show the dentist using explicit risk language, illustrating that when it is discussed it is often positioned as administrative to distance the dentist from any moral implication whilst fulfilling any necessary action within the appointment (informing patients, gaining consent).

#### *Translating risks through temporality*

Implicit lay discussions of risk were found throughout the appointments and were frequently used to encourage action through reference to temporality. This mirrors findings in other settings where health professionals tend to 're-contextualise', or translate, risks for patients (Linell *et al.* 2002). Temporal discourses can be used to express both an orientation towards time and space (Cox and McKellin 1999), in other words, to convey the proximity and strength of the risk to the person. These strategies can help translate risks for patients that may be unknown and exist in the background into the concrete present (Samimian-Darash 2011). In these situations, both the past, present and future are simultaneously brought together (Luhmann 1998).

Here, temporal language was used to imply action in the present that is needed to prevent future negative outcomes whilst hedging language expressed uncertainty. These two approaches were not mutually exclusive and often occurred together to express future contingency.

In this study, we found a range of terms that were used by dentists to express the temporality of risk (such as 'future', 'long-term', 'later') as well as terms to *imply* the future (such as 'going to', 'will get', 'eventually'). These are followed by a summary of the consequences or outcomes. In fieldnote example 3, a nervous patient is attending the first of a series of treatment appointments. After planning amalgam fillings, the dentist chooses instead to use temporary fillings and is explaining this to the patient alongside the potential limitations of the treatment. Although the dentist does give some health behaviour advice regarding diet at the end of the appointment, the focus of concern for both dentist and patient remains on the operative aspects of care [emphasis added]:

*DICTC (Treatment appointment), 30 minutes, P is male in 20s, D and Dn*

[start of the appointment omitted]

- D: Going to put in a medicinal filling which is better for decay. It is tooth coloured [p: oh] semi-permanent and then in 6 months we'll do a permanent and can choose silver or white. When no more decay will put permanent ones in
- P: So does the medicine leak liquid?
- D: Leaks fluoride. If I'm not going to see you for a month need to seal these off to stop food trapping. *This tooth may have the nerve impacted so may continue to be a problem in the future, just so you are aware.* On the x-ray it looks like its dying – prefer to keep an eye on it? Options are root canal or extraction
- P: Prefer to keep an eye on it
- D to Dn: Can I get some floss please? Would you mind changing to GI on notes?
- D to P: Want a rinse out there?
- P: Yeah
- D: *OK, be careful for eating in the next hour or so. Need to reduce your sugar intake massively*

[End of appointment omitted]

#### Fieldnote Example 3

The dentist is managing several forms of risk in the interaction. At the start of the appointment, the patient positions himself as a nervous patient requiring the dentist to provide reassurance and manage the interaction. As the treatment is forced to change, the dentist uses temporal language to bring an uncertain future into the present. This is explained to the patient who has to accept the risks outlined, decide on next steps and give renewed consent. The responsibility for the risk moves from the dentist to the patient. The dentist ends the appointment by outlining the preventive action needed now (treatment risks) and in the future (lifestyle risks).

Dentists sometimes drew on visual aids to help with the risk translation. In example 4, a patient is having a series of treatment appointment (fillings). Towards the end of the session, the dentist uses the radiograph images to help show the patient why a change in the treatment plan is needed:

*DICTC (treatment appointment), 25 minutes, P is female in 50s, D and Dn*

[Start of appointment omitted]

- D: Almost done for today, OK? Just check bite. OK, do you want to come along to the computer? *The decay is down to the bone level, so we can't save the tooth long term*
- P: *OK*



- D: *I've cleaned it out, normally the next option is root canal, but I can't restore it. It needs to be pulled out*
- P: What happens in the gap?
- D: Well, this is the worst-case scenario so we will review in a week and see if symptoms have decreased. We'll discuss the options to restore the gap later.

[End of appointment omitted]

#### Fieldnote Example 4

The dentist emphasises the temporal nature of the treatment and outlines the probable future outcome for the tooth (extraction). The patient has to decide to accept the new treatment. Here, the dentist postpones the decision with the promise to revisit the risk in a week. The dentist reassures the patient following their concern about having a gap that it will be managed at a later stage.

Dentists in the study used hedging phrases to soften or qualify statements about outcomes. Other disciplines have suggested that these phrases, such as 'might', 'may', 'could', are used by health professionals to state imprecision (Sarangi and Clarke 2002). In the current study, these hedging phrases are often combined with the temporal discourses but are also sometimes used in place of more explicit temporal language. In example 5, a boy is brought in for his check-up with his mother who asks the dentist to check one black baby tooth that they believe is the result of a trauma. The dentist conducts the examination and begins to excavate the black tooth:

*DICUC (check-up), 20 minutes, P is male under 10 with mother, D and DN*

[Start of appointment omitted]

- D to mum: Its decay – it shouldn't come out like that. It's not dead, it's just decay. I am going to put in a medicinal filling which leeches fluoride and then seal it off.
- D to P: So you are better at brushing the top than the bottom.
- D to mum: So the decay is not active which means it is non-progressive. So I can scoop the decay out of this black one now, and won't need to numb him. *Just to warn you the permanent tooth might be discoloured as well.* Are you ok with me cleaning this? Mum just for your reassurance everything else looks great.
- D to P: Is it hurting or OK? [P puts thumbs up]. Nearly done now sweetie.
- D to mum: I have taken out the soft decay it's just hard now. No problem with it. *It might still progress but try and protect it until his adult teeth come in.* Going to put on a fluoride wash now

[End of appointment omitted]

#### Fieldnote Example 5

In communicating that an outcome or event 'may', 'might', 'can' happen, the dentist is saying that there is a risk of occurrence but that it is unclear at this stage what will happen with future adult teeth. The dentist is also trying to manage the interaction and prevent the risk of offence, reassuring the mother and checking in with the young patient. It is about giving the patient or in this case the parent, pertinent information from which to decide and consent while acknowledging that some risks are 'unknowable' and there is an element of uncertainty about the future (Beck 1992, Luhmann 1998).

These examples illustrate how the dentist uses temporal language to express uncertainty about the outcomes of treatment and also to prepare the patient for potential negative outcomes. In doing so, the dentist is moving a possible distant threatening future into the present. The examples also show how treatment plans in dentistry are responsive, dentists have to deal with what is found during the appointment, which means that dentists have to be prepared to get patients to give renewed consent and accept their decision about the risk. Communicating

risk in examples 3 and 4 stops planned treatment in the face of unanticipated decay, whilst in example 5 communicating future risk enables treatment to go ahead. The job in many appointments for dentists, therefore, is translating risks to enable patients to take action.

*Interactional risk work*

Discussions of risk and uncertainty in this setting are also about managing the interaction and avoiding secondary risks of blame, offence and litigation. Dentists have to manage the interactional risks that happen in these settings: providing reassurance, reducing discomfort, managing distress whilst carrying out intimate procedures. In example 6, the dentist has to juggle carrying out a treatment procedure whilst managing the patient's distress:

*DICTC (treatment), 45 minutes, P is female in 40s, D and DN*

[Start of appointment omitted]

- D: Will do this now. Yes, there is decay in there. Raise your hand if you want me to stop [starts]
- [p raises hand]
- P: No it's ok [d starts but p puts hand up again]
- P: No, no
- D: I can give you a little bit more [pain-relief]
- P: Sorry, I'm finding it a bit upsetting [starts crying]
- D: Need a moment? You're in charge here. If you want me to stop
- P: No I'd rather get it done. I wasn't worried about it at all!
- D: Better to get it done – you might not come back!
- P: No!

[End of appointment omitted]

Fieldnote Example 6

The patient has been told how to control the treatment (by raising their hand) and uses this. The dentist offers to stop, but when the patient asks to continue, the dentist is honest about the risks of not continuing – the patient may not return to complete it. Patient and dentist are both involved in managing the interaction. The dentist attempts to manage the comfort of the patient who apologises to the dentist for stopping the treatment.

Dentists have to get patients to accept risks and responsibility whilst also protecting themselves from blame if negative outcomes occur. This is often achieved by showing that they have completed due diligence – giving patients information to make decisions, gaining consent – which is recorded in clinical notes. Ultimately, however, the dentist has to get the patient to accept responsibility to make the decision. In example 7 during a treatment appointment the dentist and patient enter a discussion about the next steps for one tooth:

*DICTC (Treatment), 30 minutes, P is male in 20s, VT and DN*

[Start of appointment omitted]

- D: It's evident you have an abscess on that tooth so there is a couple of options
- P: Yeah, know what you're going to say – root canal or out
- D: We can get it added to the denture – up to you
- P: I hate taking pain killers
- D: I know but if you are in pain. You need antibiotics
- P: Can't take it out today then?
- D: I'd rather give you the antibiotics and then get you back. It would cause pain and the abscess might block the numbing
- P: Just my luck. Woke up and see it in the mirror, well I didn't even need the mirror, could see it in my eyelid

- D: Always a risk with a deep fill  
 P: I remember him saying he was trying to save it but at that point I was still terrified of the dentist.  
 D: It's definitely that tooth. Want to have a look  
 P: Yeah  
 D: When it's like that I wouldn't recommend a root canal when it's so deep and already next to the nerve. But, it's within your rights if you want to try and I'll do my best for you. I just don't to waste your time  
 P: Seems like more effort than it's worth

[End of appointment omitted]

#### Fieldnote Example 7

Here, the dentist communicates treatment risks (pain, failed root canal) and the patient is invited to look at the tooth in question, and given options (even against recommended treatment), but the patient is left with the decision. The dentist can note that they have given the patient their options and mitigate being held culpable.

## Discussion

This paper set out to explore risk work in dental practice by looking at how risk is managed and translated within dental appointments (Gale *et al.* 2016). Explicit risk talk was rare within the dental encounters observed and did not focus on individual behaviours. Instead, we found that dentists actively translate risks in implicit ways to perform several functions within the social interaction. The study demonstrates the multiple ways that risk work operates and the complex negotiating that professionals have to undertake to act in the best interest of their patients whilst protecting rapport and their professional reputation. These findings will be discussed alongside the existing literature.

The risk work observed in the current study centred on the management of the interaction. It could also be characterised as defensive. In informing patients of possible negative outcomes dentists are fulfilling their legal requirements in terms of gaining consent whilst also protecting themselves (Bright *et al.* 2017). This finding supports the perspectives of classic and contemporary risk theorists but offers an alternative approach. Douglas (1992) previously described doctors as acting in risk-averse ways to avoid blame using scientific discourses of risk. Horlick-Jones (2005) also reported that professionals use expertise, facts, and claims of objectivity to distance themselves from any offending statement. In the examples shown here, dentists avoid scientific and technical discourses but instead distance themselves from blame using language to suggest that discussing risk is something they need to do rather than want to.

Dentists translated risk to patients using temporality and hedging terms to refer to contingency. Samimian-Darash (2011: 942) suggests that 'risks are always perceived in relation to time', and previous work looking at the language used in dental appointments suggests that time, particularly the terms before/after, are a common feature (Boiko *et al.* 2011). Anderson (2007) talks about how temporality can be used as a form of 'anticipatory work' in which the questions becomes about 'when' something might happen rather than 'if' something might happen. This is perhaps particularly important in dentistry where patients may present with asymptomatic problems. As such, there is a possibility that a patient may reject their dentists' prognosis if the risk is felt to be distant or unreal. In this case, dentists use temporal language to encourage patients to act as if the future was both real and present (Luhmann 1998). Failure to act on these dangers, therefore, is vulnerable to blame (Douglas and Wildavsky 1982).

Avoiding offence is important in clinical encounters. Research, in a variety of settings, shows that health professionals avoid language that may lead to conflict (Hughes 1988, Linell 1998, Linell *et al.* 2002). Risk talk, in particular, may have negative outcomes on patient compliance and motivation (Edwards *et al.* 2001). As such, dentists have to balance giving patients enough information whilst mitigating the secondary risks of a patient complaining, becoming non-compliant or leaving. This offers one explanation of why dentists minimise explicit risk talk. It may also offer a reason for the use of hedging language that can allow the dentist to translate risk information to patients using softer, less offensive, language.

The context of dental appointments is distinct compared to other healthcare settings, as is the health system in which they operate. A particular feature of the system is that patient co-payment for care is often required for all except those in certain exempt groups (e.g. those on a very low income). This makes avoiding the offending patients who are paying 'customers' and whose long-term loyalty is the basis on which the financial viability of the practice is secured, an important priority (Harris and Holt 2013). Caregiving is 'relational and reciprocal' (Kleinman 2015) but can be distorted when care is perceived as paid for rather than altruistic. The culture and setting of dental practices may mean that defensive risk work is more dominant than in other health settings.

This study is one of the largest ethnographic studies of dental practice to be undertaken. The study was conducted in five practices, looking at multiple members of staff, over time that enables us to draw some conclusions that may be generalisable with further research in other dental systems. A limitation of the study is the lack of audio or video recordings allowing exploration of the use of risk language in more detail. Furthermore, the current study was conducted in NHS practices based in areas of relative deprivation. It may be the case that dentists translate and engage with risk differently with particular groups. Further research exploring risk work in more affluent and private dental settings where patients are likely to have more control and say over the appointment and outcomes is needed. Lastly, it is important to note that this study looked at risk work under the existing dental contract that incentivises treatment. Further investigation into how risk work in dental settings change under the new contract that incentivises prevention and emphasises communicating risk-status would be timely.

## Conclusion

This study demonstrates how dentists use multiple forms of risk work in their clinical encounters. Dentist use risk work to demonstrate that they are fulfilling their professional obligations, translate risk through temporal discourses and distance themselves from potentially morally sensitive situations. The findings challenge existing assumptions in clinical guidelines and policy about the role of risk in dental settings. Guidance to advise patients on their risk status and lifestyle behaviours ignore the tricky work dentists have to do to get patients to accept and act on risk whilst maintaining professional relationships and rapport. Whilst guidance focuses on individual behaviour, in practice, it is the interaction between healthcare professionals and patients that is pertinent. This adds to the existing literature by highlighting how risk work operates in situationally sensitive settings.

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## Author contribution

**Louise Laverty:** Conceptualization (lead); data curation (lead); formal analysis (lead); investigation (supporting); methodology (lead); project administration (equal); validation (equal); writing-original draft (lead); writing-review & editing (equal). **Rebecca Harris:** Conceptualization (supporting); data curation (supporting); formal analysis (supporting); funding acquisition (lead); investigation (lead); methodology (supporting); project administration (equal); resources (lead); supervision (lead); validation (equal); writing-original draft (supporting); writing-review & editing (supporting).

## Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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