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Citation for published version (APA):

McCarthy, C. C. L., Daly, B. J. M., & Asimakopoulou, K. G. (2016). Risk communication in the Dental Team. *Faculty Dental Journal*, 7(4).

Citing this paper

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Risk communication for the dental team

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Risk communication within dentistry involves giving patients information about potential risks they may encounter as a result of a dental disease, a clinical procedure or a particular behaviour. It is a personalised communication and allows patients the opportunity to make an informed choice over the provision of clinical care or the choice of a particular behaviour. Risk communication should form part of every patient interaction and is a task with which most dental professionals are familiar. While risk communication is routine practice for dental professionals, evidence from other healthcare settings suggests that clinicians find the process challenging and may not possess the necessary skills and training to be effective. This paper aims to summarise the research findings for risk communication within healthcare and to explain the principles of effective risk communication. By developing a clearer understanding of the complexities of communication and presenting risks to patients, we may reduce misunderstandings and enable more informed decision-making.

The importance of good communication in dental practice

Communication is a form of interaction between people to convey messages that may inform and educate, act to convince or change an opinion, or work to form relationships and help make judgements about people.¹ Effective

communication is essential in all our professional and personal relationships to avoid misunderstandings and clarify doubts.. Good communication is essential to the practice of dentistry and the provision of transparent and holistic treatment, by enabling clinicians to get to know their patients and to glean essential information to reduce barriers and strengthen the treatment alliance.²

Patients need to feel that they can express their worries or hesitations about treatment and have an open channel of discussion with their healthcare provider.^{3,4} Effective communication can indeed have a number of positive outcomes, such as reduced patient anxiety, increased patient satisfaction, motivation and adherence to healthy behaviours, and better oral health outcomes.⁵ The provision of healthcare depends on abiding by the ethical principle of beneficence, whereby practitioners act in the best interests of the patient and do no harm. Dental professionals should have adequate training in this area to develop the skills and techniques required to deliver the principles of patient centred care, as stipulated by the General Dental Council (GDC),⁶ and the National Institute of Health and Care Excellence.⁷

The GDC has stated that patients should be at the centre of decision-making process concerning their care.⁶ Good communication lies at the heart of patient-centred care (PCC), which promotes the provision of treatment and care in a protected, respectful and genuine manner by all members of the healthcare profession, allowing patients to make informed decisions with the support of clinicians.^{8,9,9} PCC is stipulated as an essential competency by the GDC for new graduates.⁶

Effective communication has been well documented in the medical literature and is clearly beneficial for physicians and their patients. However, there is considerably less research in this area within the practice of dentistry. The principles of general communication are, in essence, similar to those in medicine, such as focusing on patient-centred care, avoiding technical and clinical jargon when talking to patients, active listening, seeking clarification and understanding, and giving patients the opportunity to ask questions about their care and express any concerns.^{10,11}

While the basic principles are the same, there are, however, some differences unique to dentistry: here, the consultation is very much geared towards the dental team undertaking treatment that renders the patient in a position that compromises communication. Unlike traditional medical consultations, during which communication can take place throughout, communication in dentistry is limited to the beginning and end of the consultation, with less communicated when the patient is undergoing treatment.¹ This set-up may arguably make communication more challenging in the dental than in the medical setting.

What is risk communication?

Risk communication may be defined as a collaborative process whereby decisions about treatment can be made as part of a transparent and open dialogue between two or more parties.^{12,13} Professionals delivering risk communication are expected to consider each patient's personal circumstances, wants and needs, and reach a mutual agreement that the patient fully supports and understands.¹⁴ It is obvious that it is the responsibility of the healthcare professional to carefully and accurately interpret the available evidence-based research and present it to the patient in an efficient and effective way. Additionally, the clinician must aim to ensure the patient fully understands the probability of an event occurring, and the consequences of an adverse outcome. Edwards states that the decisions made should be acceptable to the individual patient and take into account all potential adverse outcomes, benefits and reasonable alternatives,¹⁵ as patients will ultimately have to live with the consequences, be they positive or negative. As the relationship between clinician and patient is founded on the principle of mutuality, clinical decisions should be determined by exploring and respecting what matters most to the patient; options should only be presented following a thorough examination and diagnosis.¹⁶

Risk communication in dentistry

Within dental settings, some of the communication that takes place between

the patient and the dental team revolves around risks. For example, long established and evidence-based risk factors for oral disease have been identified, such as poor plaque control and ineffective oral cleanliness,¹⁷ a diet high in fermentable carbohydrates,^{18,19} the use of tobacco and related products,^{20,21} and exceeding the weekly recommended units of alcohol for men and women.^{22,23} The World Health Organization (WHO) suggests that enabling people to increase control of their own health and its determinants should be one of the goals of health promotion. Research also clearly demonstrates an association between the common risk factors described here and the incidence of oral and dental disease.^{19,24,25} By discussing and developing a plan to modify these risk factors with processes such as the implementation of smoking cessation programmes, oral hygiene advice and dietary counselling, dental disease may be reduced or even prevented.²⁶⁻²⁸

Effective risk communication for oral healthcare providers consists of, first, engaging the patient and establishing rapport and, second, informing them of the risks of developing a disease or the probability of progression of an existing condition based on the findings of a medical, social and dental history and a clinical examination. Ahmed recommends involving the patient and giving a non-biased account of the evidence relating to the risks relevant to a proposed treatment or course of action.¹⁴

Communicating individual patient risk and providing evidence-based estimates about the likelihood of experiencing a complication should facilitate the decision-making process. It is important that the patient is presented with a personal, rather than a general, risk assessment, as well as how they may compare to the general population. Edwards advises that decisions should be reached following a two-way dialogue and that the decision should reflect the values and attitudes of the person.¹³

Why is risk communication so complex?

There are three main areas that might make risk communication complex.

Risk data are difficult to understand and interpret

Risk information is more often than not, numerical. For example, a dentist may talk about the risk of an implant failing due to continued tobacco use or that of an endodontic procedure on a molar failing due to the complexity of the root anatomy. Interpretation of mathematical terms and numerical information is a problematic area, and risk communication research has found that healthcare professionals and patients alike have trouble understanding health statistics; clinicians in particular have difficulty explaining predictive values, interpreting relative risks and understanding survival rates.¹⁴ What has been termed 'collective health illiteracy' is thus a significant problem for risk communication.²⁹ To effectively and accurately communicate risk, the clinician needs to understand basic statistics, and to focus on using simple language to convey these risks to patients.^{14,30,31} This brings us to the second issue concerning risk communication: namely, risk presentation per se.

Presenting risk information in a clear way can be complicated

How risk is presented is a key factor in the decision process and has the potential to influence a patient one way or the other. How the data are 'framed' may not be conducive to patients' ability to interpret the information. As described by Ahmed,¹⁴ this 'framing manipulation' involves the description of logically equivalent choice situations in different ways, which can have an impact on a patient's reaction and influence their decision. For example, patients can be advised about the prognosis of a tooth that requires a root canal treatment (RCT) using either survival or mortality data. Telling a patient that there is a 95% chance of tooth survival if they choose to have an RCT, as opposed to a 5% chance that the tooth will be lost if they do not have the procedure, presents essentially the same information but the two ways of risk presentation are likely to be interpreted differently.

Patient factors can complicate how risk information is interpreted

Research has shown that people in general, and patients in particular, tend to think that they are not at risk or susceptible to a disease, and are less likely to suffer an adverse event than the next person.³² For example, despite knowing

that tobacco smoking can kill, people continue to smoke, thinking that they are less likely to die from smoking-related illnesses than the 'average' smoker. This phenomenon, referred to as 'unrealistic optimism', explains why some patients continue to engage in unhealthy behaviours despite being aware of the risks. It follows that where there is subjective, unrealistic optimism at work, the communication of objective risk information will be hindered.

In addition, patients' memory for the content of consultations can further complicate what information they recall. A study by Misra et al found that patients remembered very little of the detail from a consultation;³³ in particular, oral health advice or future agreed actions. This may explain why patients often fail to carry out agreed health-related behaviours between appointments and make decisions based on a vague or non-existent memory of what was discussed.

It would therefore appear that an unreliable memory system and unrealistic optimism may compromise the communication of risks during a standard dental consultation.

Objective tools to make risk communication easier

Computerised decision tools may be one method of assisting clinicians to determine risk, as the software will combine clinical parameters inputted by the clinician, such as the presence of bleeding on probing, increasing pocket depths, clinical attachment loss, the extent and distribution of pocketing and carious lesions, with known risks factors or determinants of disease to generate a risk score.

The use of risk assessment tools has become more mainstream and such software allows the clinician to store the generated risk score in the patient's online records as well as print it out for patient education. Based on the level of risk, the clinician is given action prompts on the key points to discuss with the patient, alongside available options to reduce or eliminate risk factors, such as the daily removal of interproximal plaque, reducing smoking and committing to regular professional intervention and maintenance. This type of decision support may prompt the clinician to carry out more comprehensive

assessments of the hard and soft tissues, while incorporating risk factors that will determine a more customised standard of care.

A red, green, amber (RAG) rating is being piloted within the NHS pilot contracts to monitor patients at increased disease risk (red) and determine individual recall intervals between appointments, combined with evidence-based preventive advice, that are matched to each patient's risk needs.²⁷ However, evidence from the pilot report suggests that many clinicians neither used the RAG score nor provided a hard copy of the RAG rating to patients. Clinicians piloting the RAG care pathway also reported that the periodontal component was too in-depth and time-consuming to complete.

PreViser (PreViser Corp, Mount Vernon, WA, USA) is an IT decision support software package that combines clinical parameters such as gingival assessment and inflammation, using percentage bleeding and plaque scores, with approximate probing pocket depths per sextant and lifestyle risk determinants to provide a risk score.^{34–36} Encouragingly, a recent randomised controlled trial comparing routine consultation and an individualised risk assessment using the PreViser software in patients with periodontal disease found that the latter had a positive effect on the psychosocial variables that underpin adherence to recommendations.¹

The strength of calculating potential risks based on objective clinical measurements and modifiable risk factors lies in such tools producing a decision aid for the clinician and patient. The collected data can create guidelines and action points specific to the individual needs of the patient and may also give an estimated risk and the possibilities for future treatment. This information can be stored electronically and a paper copy be given to the patient, following discussion of the key points. Edwards suggests that these electronic tools may also help to visually stimulate the motivation to change, as well as allow the patient to process the information after the consultation has ended.³⁷

How can we improve risk communication in dental surgery?

Risk communication is not as straightforward as one would assume, and there

is currently limited risk communication literature specific to dentistry. The profession is expected to have the skills to accurately and effectively communicate health-related statistics and risk information to patients in a manner that they can easily understand.⁶ The GDC expect that dental professionals can interpret, process and convey the evidence-based literature to patients and give them recommendations based on true, concise and relevant figures. Dental professionals must also have the ability to judge the cognitive ability of each individual, and regulate the pitch of information imparted, the language used and volume of information given at any one time. There is also the need for mutuality when reaching decisions over clinical treatments and a collaborative approach to decision-making, in which patients are given the opportunity to ask questions regarding their care and time to process the options and make informed decisions. Based on the lack of a clear and structured protocol for risk communication in oral health improvement, there is a need for more research in this area to raise awareness and better support clinicians and patients.

Risk communication as a tool to change health behaviour has been used successfully in medical settings and is being explored within dentistry.³⁸ Although there a convincing evidence base is lacking to support the best approach for communicating oral disease risk, the rating of dental disease risk is being widely adopted in clinical dental settings both in the UK and internationally.

Our team is currently engaged in examining how best to communicate risk of poor oral health as a means of supporting patient behaviour change in primary dental care. Future research should focus on identifying the best ways of communicating risk to primary dental care patients using the best available evidence and current NHS guidelines, as well as on developing a toolkit for dental professionals to support their communication of risk in a way that will underpin patient behaviour change in the dental surgery.

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