

Ethical aspects of risk communication

Shiva H Shanmugaratnam

Adrian Edwards

Abstract

Clinical decision-making is becoming increasingly complex because of greater patient access to information, more clinical options and the emphasis on patient-centred care with informed decision-making. Risk communication should form part of evidence-based clinical practice, and it is important to think about what happens when clinicians adopt different consultation approaches. In this article, the ethical consequences of risk communication are analysed by looking at how the paternalistic and shared decision-making models of consultation demonstrate different ethical implications, based around a clinical scenario. To do this, we have applied the ethical principles of autonomy, utility and justice to these models. We show that the different models of consultation place varying degrees of emphasis on risk communication, patient autonomy and biomedical utility. This has implications for the way care is delivered both for the individual patient and for the population as a whole.

Keywords Biomedical ethics; paternalism; patient-centred care; personal autonomy; risk assessment; utilitarianism

Introduction

Risk is defined as the probability that a hazard will give rise to harm. Risk communication is a two-way discussion about risk that enables a better understanding of the risk in question. The goals of risk communication are to share information, change beliefs and behaviour where relevant and enable patients to make informed decisions based on understanding the risks.

Risk communication is commonly used in clinical practice. There is a substantial evidence base describing the competencies required to perform it effectively.¹ Examples of risk communication include a discussion of cardiovascular risk before commencing a statin for primary prevention of cardiovascular disease, or a discussion of breast cancer risk in an asymptomatic patient who is considering screening.

The National Institute for Health and Care Excellence (NICE) emphasizes that clinicians should take into account patients' needs, values, opinions and preferences, and that patients should be enabled to make informed decisions regarding their care. There is promising evidence to show that effective risk communication facilitates individualized goal-setting, shared decision-

Shiva H Shanmugaratnam *nMRCGP* is a General Practitioner and Associate Academic Fellow at Cardiff University, UK. Competing interests: none declared.

Adrian Edwards *PhD MRCGP* is a Professor of General Practice at the Division of Population Medicine, Cardiff University, UK. Competing interests: none declared.

Key points

- Risk communication is an important part of clinical practice
- Different communication approaches place differing emphasis on risk communication and bring up different ethical issues
- The traditional *paternalistic* model emphasizes utility over autonomy, and risk communication can be omitted if it is not perceived to be in the best interests of the patient
- *Shared decision-making* places the emphasis on 'optional' autonomy, and risk communication is an integral requirement for this. Some feel that this approach can reduce utility with regard to the individual patient and the population as a whole

making and improved adherence to treatment. Different clinicians employ different consultation styles with their patients. These different styles incorporate risk communication in different ways and place differing levels of importance on it.

Communication of risk involves ethical choice. If patients are given all the relevant information and encouraged to make decisions based on this, will this always be helpful or could this be detrimental to someone's health in comparison with the clinician making the decision alone? Might the responsibility of the decision-making worry the patient? What implications does informed decision-making have on healthcare costs and public health?

Here, we discuss the varying degrees to which risk communication is used in different consultation approaches and analyse their ethical implications.

An illustrative case

As stated, risk messages are common in clinical practice. [Table 1](#) outlines a clinical scenario in which risk communication might be employed.

Different consultation approaches and risk communication

Doctors use a variety of consultation approaches, and these can vary in risk communication. In the *paternalistic* model, the

Mr Davies' situation

Mr Davies has just celebrated his 54th birthday. He is currently feeling well but wanted to have a check-up by his GP as his father died of a heart attack when he was 49. Mr Davies smokes 30 cigarettes a day. He drinks around 50 units of alcohol a week and takes very little exercise. He works at a local supermarket.

Examination reveals a body mass index of 34.7 kg/m² and blood pressure of 136/83 mmHg. Blood tests record a total cholesterol level of 5.8 mmol/litre with a high-density lipoprotein cholesterol of 1.3 mmol/litre. The glycated haemoglobin concentration is 39 mmol/litre.

Mr Davies' QRISK2 score is 23% over 10 years.

Table 1

Definitions of ethical principles

	Definition
Autonomy	Deliberated self-rule. If a person has autonomy, they can make their own decisions on the basis of deliberation
Utility	The condition where benefit is maximized and harm minimized
Justice	The moral obligation to act on the basis of fair adjudication between competing claims. For justice to be fair, it is important to treat equals equally and to treat unequals unequally in proportion to the relevant inequalities

Table 2

doctor listens to the patient's story, makes a decision about the nature of the problem and then uses their knowledge to provide the care they believe is in the patient's best interests. Risk communication may be omitted if it is thought to be in the patient's best interests.

With the *shared-decision making* (SDM) model, the doctor again listens to the patient's story but then involves the patient in decision-making to the extent desired by the patient. Risk

communication is integral to the SDM model, particularly at the stage at which options are described and the harms and benefits associated with each option discussed.² At least some information must be both provided and discussed to enable the patient to be involved in the decision-making process.

For the purposes of this article, we discuss the ethical implications of using the *paternalistic* model versus the SDM model when dealing with Mr Davies, described in Table 1.

Paternalistic approach

From looking at Mr Davies' QRISK2 score,³ the general practitioner (GP) is likely to discuss information on dietary and lifestyle changes and then conclude that starting a statin for primary prevention is recommended. The GP explains that NICE guidance suggests that Mr Davies should be started on a statin because of his QRISK2 score. This information is used to justify the GP's decision. The GP does not discuss the extent to which a statin would reduce Mr Davies' cardiovascular risk but does counsel him about the common adverse effects of statins and suggests that he returns if he experiences any of these.

We can consider the ethical implications of risk communication in the paternalistic approach using the three ethical principles of autonomy, utility and justice, as defined in Table 2. The paternalistic approach can easily emphasize biomedical utility over the patient's autonomous choice of best interests. The clinician's aim

Methods used to communicate risk

Risk representations

Absolute risk reduction (ARR) is a more balanced and understandable representation of risk reduction for patients and clinicians than relative risk reduction (RRR) and number-needed-to-treat (NNT). The following example describes the communication of risks related to a screening test where identical benefits are described in terms of ARR, RRR and NNT:

- *ARR*: If you have this test every 2 years, it will reduce your chance of dying from this cancer from around four in 1000 to three in 1000 over the next 10 years
- *RRR*: If you have this test every 2 years, it will reduce your chance of dying from this cancer by around one-quarter over the next 10 years
- *NNT*: If around 1000 people had this test every 2 years, one person would be saved from dying from cancer every 10 years.

Personalizing risk information

Risk is expressed as a numerical estimate or category based on personal risk factors, for example QRISK2 for cardiovascular events. These can often be seen as more relevant by the patient. The use of risk personalization tools such as the Breast Cancer Risk Assessment Tool (<http://www.cancer.gov/bcrisktool/>) has been shown to enhance informed choice and participation in screening.

Decision aids

These help to improve the patient's knowledge, accurate risk perception and participation in decision-making. They can also support shared decision-making between clinicians and patients. Option grids (optiongrid.org) are a set of decision aids that help patients and clinicians choose between alternative treatments options in a variety of conditions.

Framing

'Framing manipulation' is the presentation of equivalent data in different ways. Attribute framing is the positive versus negative description of a specific attribute of a single item or state. For example, a patient recently diagnosed with colorectal cancer could be told that there is a 60% chance that they will survive for 5 years (positive framing) or a 40% chance that they will die within 5 years of the diagnosis (negative framing). Work has shown that interventions are seen as more beneficial by patients when presented using positive framing.

Goal framing, presented as a gain versus a loss, describes the consequences of performing or not performing an act. For example 'taking a statin would increase your chance of not having a heart attack' versus 'not taking a statin would increase your chance of having a heart attack'. Loss messages are seen to be most effective.

Natural frequencies

With natural frequencies, numerical values are expressed as event rates in groups with or without the considered intervention. For example 'among 100 people who take a statin, 95 people will not get heart disease. Among 100 people who do not take a statin, 93 people will not get heart disease'. It is thought that the use of natural frequencies, compared with probabilities and percentages, improves understanding of risk.

Table 3

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