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How can doctors communicate information about risk more effectively?

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Effective communication of risk can improve both individual and national health, and there has been substantial investment in such communication. Has this yielded the anticipated improvements in health?

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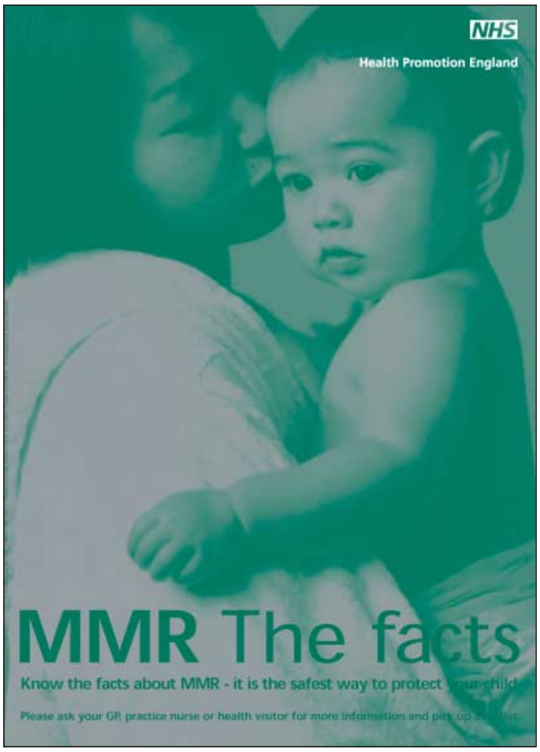
In recent years risk has become a mature cross disciplinary topic of study, and during this time social science research into risk has experienced a rapid growth. Despite the existence of much relevant social science knowledge about risk, the extent to which such knowledge has been applied in the health field has been perhaps surprisingly limited. In 2001-2, two UK research councils (the Economic and Social Research Council and Medical Research Council) commissioned us to examine the potential for applying social science knowledge about risk to practical medical and health issues. We have used our findings to tackle the thorny issue of physician-patient communication about health risks.

Although there has been a substantial growth in the knowledge about the risk factors associated with ill health, the full benefits of such knowledge can be gained only if the experts such as doctors can communicate this knowledge effectively and patients are willing and able to use it in their decisions about treatment and lifestyles. However, we consistently overestimate the dangers and undervalue the benefits we obtain by living in a complex society. For various reasons, we do not think rationally about risk, and this has reached a level where perverse judgments are damaging to society—for example, issues surrounding risks associated with rail travel and the MMR vaccine.[1]



Assumption that patients rationally review evidence

There is little evidence that knowledge of risk as embodied in professional assessments influences the ways in which the general public perceives and responds to risks and dangers.[2] Epidemiologists have identified a range of risks associated with different patterns of behaviour—such as the harmful consequences of smoking, alcohol consumption, drug misuse, and "unsafe" sex—and the beneficial consequences of changes in behaviour that will reduce preventable disease and premature deaths. The public health response has been to try to reduce risk factors at a population and individual level, especially by communicating information about risks. This approach is clearly exemplified by current campaigns to persuade parents to choose the MMR vaccine. Hobson-West has examined the nature of the current health promotion and identified three assumptions:

- Parents make decisions through a comparison of individual risk
- Parental concern about vaccination is due to a miscalculation of risk
- A policy of providing more risk statistics is the best response to the controversy.[3]

This approach to the communication of health risk assumes that the target audience is made up of individuals who rationally review evidence to identify and choose the best course of action—that is, the one that will maximise benefit to health.[4] There is little evidence that these approaches have made a major impact, despite the investment in health promotion and public health targeted in particular at "at risk" groups—for example, young adults and smoking.[5] In contrast, however, there is some evidence that interventions that try to put generalised risk information into specific contexts can be more effective. Recent systematic reviews of behaviour change in the context of health threats indicate the importance of providing information about the effectiveness of protective actions.[6] Psychological work on changing behaviour which takes account of environmental influences has been regarded as particularly successful.[7] Thus there is evidence that interventions that tackle risk issues within the social context of individuals' lives have some effect in changing behaviour.[8]

Social factors that influence response to risk information

The limited success of many health promotion campaigns highlights the difficulties of communicating health risks. For doctors to communicate risk effectively to their patients and, more widely, to the general public they need to be aware of and take into account the ways in which their audiences are likely to interpret this information and to be aware of the factors that affect such interpretations.

Frewer and Miles have explored the factors that influence the ways in which individuals respond to information about health risks, especially those associated with food.[9] They argue that while individuals are influenced by the nature of specific arguments they are also influenced by the social context—for example, the perceived relevance of the information and the extent to which they trust the source of the information. Frewer and Miles argue that trust is particularly important when lack of time or information or the perceived threat of a hazard complicates decision making.

Given the considerable resources that have been devoted both to communicating the health risks of HIV infection and AIDS and to researching the effectiveness of such communication, it is perhaps not surprising that the HIV/AIDS topic provides important insights into what does and does not work. In his overview of HIV/AIDS, Bloor noted that individuals' response to information about risks was strongly influenced by their interpersonal interactions and expectations.[10] In the early stages of the HIV/AIDS epidemic homosexual men who were at risk attached particular importance to the knowledge and expertise of individuals who shared their everyday life experiences and did not trust other sources. Expert opinion was often confusing, and government and media sources were seen as having an explicit or implicit anti-homosexual agenda. In judging the trustworthiness of risk information, individuals give particular priority to personal knowledge and experience, and official bodies need to work hard to overcome such barriers through engaging the public.[11]

MALCOLM WILLETT

Box 1: What influences responses to information on risk?

Individual and group responses to information on health risk are influenced by a range of social factors including:

- The extent to which the source of the information is trusted
- The relevance of the information for everyday life and decision making
- The relation to other perceived risks
- The fit with previous knowledge and experience
- The difficulty and importance of the choices and decisions

Even when official sources of information about the health risks are accepted and individuals may be aware of the risks such as HIV infection, other factors and risks may be seen as more important and may influence continued exposure to the risk of infection or delays in seeking treatment. For example, in a study of HIV in east Africa Wallman noted that individuals living in an urban community were aware of the threat that HIV posed to their health and that biomedical treatment offered at the local hospital was the most effective treatment.[12] However, other non-medical risks, such as the threat of social stigma and loss of sexual partners, meant that many chose to delay seeking diagnosis and treatment.

Not only is receptiveness to information on risk affected by the source of information, it is also shaped by the nature of risk. Psychometric studies have identified characteristics of risk that increase individuals' awareness or sensitivity. Individuals are likely to be more sensitive to and overassess the likelihood of low probability or high consequence risks (such as being injured or killed by a tornado or a train crash) and tend to underestimate the risk of harm from more common causes (such as cancer or diabetes).[13] Individuals are likely to be more sensitive to a risk if it is involuntary, inescapable, poorly understood by science, or subject to contradictory statements.[14] The role of expert or scientific opinion may be particularly important. Technological change disrupts the "normal" basis of risk assessment and risk management in which past experience or events are used to predict and manage future hazards. Technological change can create new hazards that are "virtual" risks in the sense that there is no evidence or experience on which to base judgments about the future. In such circumstances expert opinion is particularly important, but opinions about risk and safety are often divided. Individuals have to choose which opinion they accept. In such circumstances new evidence can have a disproportionate effect on perception of risk. This can be seen in the case of food panics such as "mad cow disease." While there was considerable media coverage of BSE (bovine spongiform encephalopathy) and the risk of eating beef in 1990, this died away and it seemed that the public accepted reassuring messages until March 1996, when the secretary of state for health announced that there was a link between BSE and vCJD (variant Creutzfeldt-Jakob disease). This caused a major shift in perceptions of safety and behaviour.[15]

The mass media play an important part in shaping perceptions of risk. Philo provides evidence that individuals give precedence to media accounts of people with mental illness being dangerous and violent over their own contradictory experiences, even when they recognise that the media accounts may be fictional, as in soap operas.[16] Furedi argues that the media emphasise the hazards associated with new technologies, foodstuffs, and dangers to children.[17] While experts can measure risk and (attempt to) communicate their measurements to the public, this information is filtered through various media and interpreted by social groups and individuals.[18]

Ways of improving risk communication

The communication of risk related to HIV/AIDS provides a good example of the role of the media and the effectiveness of risk communication. During the early stages of the epidemic, the media reporting, which blamed high risk groups such as homosexual men, was not effectively counteracted by governments, and these high risk groups rejected what they perceived to be a false and stigmatising link between their lifestyle and the spread of the disease.[19] While there is little evidence that generalised communication emphasising the effects of HIV/AIDS changes behaviour, there is evidence that targeted information coming from or endorsed by trusted sources—for example, gay rights groups—and linked to community resources, such as the provision of condoms, does reduce high risk behaviour.[20]

If doctors want to communicate risk effectively to their patients and the public they need to be aware that they are just one source of information and may no longer be the most trusted. Doctors can communicate risk information more effectively if they develop relationships with their patients and if they take into account knowledge and perceptions of health risks in the general public.

Dibben and Lean have examined ways in which doctors who are managing patients with chronic ill health can use opportunities provided in outpatient clinics to build up a relationship of trust.[21] They identified several strategies that doctors used to build up trust and effective communication.

Developing shared understanding and experience—Doctors often engaged in general and personal conversation with patients, indicating that they were interested in more than just the medical matters, and the exchange was not restricted to functional issues.

Demonstrating willingness to cooperate with patients—Doctors often volunteered information and showed willingness to share information. This openness demonstrated that they were willing to trust the patient and engage in a reciprocal relationship.

Competence development—Doctors often played up the competence of patients—for example countering patients' self criticism or blame—and at the same time played down their own knowledge, again emphasising the equal nature of the exchange.

While process is important, doctors need to be aware of the social context and especially the nature of general knowledge about health related matters. The recognition that ordinary people have informed understanding of risk, by virtue of their everyday experiences of health, illness, and related matters, has prompted the coining of the term "popular epidemiology" to capture this notion of "unofficial expertise."[22] Recent research in perception of risk suggests that gaining access to such knowledge is an important prerequisite for effective risk communication[23] and that the specific ways in which language is used to communicate risk information affects the ways in which that information is received, interpreted, and used.[24]

Box 2: How to improve communication

To improve communication of risk with patients doctors need to:

- Build relationships of trust
- Be aware of the multiple and conflicting sources of risk information that patients access
- Be sensitive to the psychological and social factors that influence the ways in which patients respond to risk information

Summary points

Medicine has developed a body of knowledge on health risks and the ways in which they can be effectively managed. However, little evidence exists that such knowledge is being effectively communicated to patients and the public

Most approaches to communication of risk are based on the assumption that the target audience comprises individuals who rationally review evidence to identify and choose the course of action that will maximise benefit to health

Social context influences the ways that individuals respond to information on risk. Individuals evaluate the trustworthiness of sources and the relevance of information for their everyday lives

Doctors can improve the ways in which they communicate risk information

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Influence of the law on risk and informed consent

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Patients are now routinely given information on risks of treatment as part of informed consent. This has occurred partly in response to legal judgments, but further issues continue to be raised by modern medicine and research that need to be approached proactively

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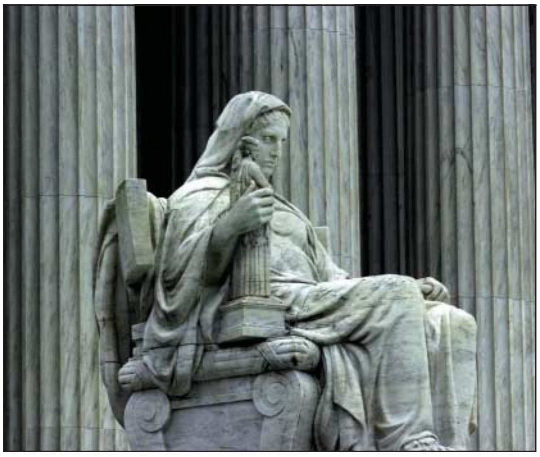
Obtaining informed consent is now a routine part of both clinical practice and research, but the focus on giving information about risk has evolved differently in each setting. Whereas the law has played a large part in determining how informed consent is handled in clinical practice, consent in clinical research has been codified in international regulations and is much more formalised. I describe the evolution of informed consent in clinical care and clinical research and discuss the aspects that are still controversial.

Evolution of consent in clinical practice

In clinical care, disclosure of risk developed from the obligation on doctors to obtain their patients' consent before intervening medically. In absence of emergency, doctors who acted without their patients' consent were initially accused of battery or intentional harm and later of negligence. Gradually the notion of consent evolved into informed consent, with the emphasis being on information about risks.

The professional standard of consent to treatment has been espoused as a judicial concept since a British case in 1767.[1] In that case the physician initially set the patient's femoral fracture in accordance with practice at the time but at a follow up visit rebroke the healing fracture and placed the rebroken bone in a mechanical device with teeth. Physicians called into court to testify reported that physicians usually secured their patients' consent before embarking on a medical intervention, but there was little said in the judge's written opinion about what should be said to patients before an experimental intervention, as opposed to a clinical intervention. The judge concluded that obtaining a patient's consent was a custom of physicians and ruled for the patient that consent should have been obtained by the particular physician as part of the duties of his profession. It was much later that the notion of information became linked to consent.



US Supreme Court

KENNETH LAMBERT/AP

The term "informed consent" was first introduced into the judicial lexicon in 1957 in the written opinion of an appellate judge in California.[2] It too was considered under a professional standard of disclosure. The judicial, medical, and ethical interpretations of informed consent

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Two boxes on informed consent forms and data protection are available on bmj.com