

# Communicating cardiovascular risk

## – getting your message across

### Key concepts

- The effectiveness with which the results of CVD risk assessment are communicated can have a significant impact on how likely a patient is to make lifestyle changes and accept treatment to reduce their risk.
- Use simple words to explain risk
- Put the risk into context for individual patients - using analogies can be effective
- Visual aids can increase understanding and are a good tool for efficient explanation
- Decide carefully how to frame the risk - risk can be expressed as positive or negative, a loss or a gain
- Check that the patient has understood

Health professionals tell us some patients do not seem interested in knowing their CVD risk and once they do know, they are often not motivated to make changes. Patients, on the other hand, tell us some health professionals suggest substantial changes to their lifestyle for reasons that they do not understand.

Cardiovascular risk assessments are promoted to clinicians and patients as a way of reducing the morbidity and mortality associated with cardiovascular disease. While lifestyle changes and pharmaceuticals can reduce risk, the effectiveness with which the results of the risk assessment are communicated, can have a significant impact on the patient's understanding and motivation to make changes and accept treatment.



# communicating

## What is the role of risk explanation?

It is useful to consider what we are trying to achieve when explaining cardiovascular risk to a patient. Is it simply an understanding of the probabilities, providing sufficient information to make an informed choice, or is it persuading a patient of the benefits of making lifestyle changes and beginning medication?

Health professionals need to balance the responsibility of assisting the patient to make an informed choice against practical considerations such as the time available for explanations.

A number of factors can impact on a patient's understanding of the concept of cardiovascular risk and the benefits of treatment. These include the use of technical language, low levels of statistical literacy, effects of framing (see over page) and the beliefs and experiences of patients. Understanding these barriers helps health professionals to improve the effectiveness of their risk communication.

## What do patients understand by the term "cardiovascular event"?

Although most people will be familiar with the words 'heart attack' and 'stroke', many people are surprised by the consequences associated with these. Often heart attacks and strokes are associated with death. For many

people this may be considered as a reasonably acceptable manner of dying, so they may not be concerned about their risk of such an event or they may not think they can alter the outcome.

Many people are unaware of the considerable morbidity associated with cardiovascular events; therefore it may be useful to discuss the realities of living with the consequences of a heart attack or stroke, as well as the risk of death.

For example stroke is the leading cause of disability in the New Zealand adult population. Of the approximately 8000 New Zealanders who suffer strokes annually, one-third die within the first year after the stroke. For those that survive there is a 70 per cent chance of long term disability. The degree of disability varies from minor inconvenience, to being fully dependent upon others, for all day to day needs.

The morbidity associated with a non-fatal heart attack is also significant including an increased risk of depression, heart failure, further heart attacks, and financial hardship if the patient is unable to return to work.

## Effective strategies for communicating cardiovascular risk

### Use simple words

While it is common in medicine to use technical words to ensure accuracy, most people are more likely to understand common words and phrases (e.g. heart) than technical terms (e.g. cardiovascular).

### Be cautious with quantitative explanations of risk

Patients often prefer quantitative to qualitative explanations of risk, possibly associating numbers with a greater degree of certainty. However quantitative explanations rely on numeracy skills and if these are limited, statistical estimates of risk are often misinterpreted.

“You have a 15% risk of having a heart attack.” could be interpreted as you will have a heart attack but it will only be a mild one (i.e. a 15% heart attack).

If numeracy is an issue, consider avoiding numbers altogether, and instead present the level of risk in terms of the action required.

“Your risk has reached a level where we need to do something about it.”

### Put the risk into context by comparing to familiar events

Simple descriptions of cardiovascular risk such as high and low can be helpful if put into context by comparing the cardiovascular risk to situations or risks with which patients are familiar. Analogies can be used to explain risk in terms of a patient's existing knowledge base. They should be tailored to each patient; the more familiar the

situation described in the analogy the more effective it will be.

“Running across a four lane motorway is much riskier than running over a country road; there's more chance of being hit by a car. Likewise, running your life with lots of risky behaviours (not exercising, eating poorly and being overweight) makes it more likely you will be hit by a heart attack.”

“If you are baking a cake and find you don't have all the ingredients, you can often substitute one and it will turn out okay. But if you start leaving out key ingredients (like eggs and baking powder) the end result probably will not be very nice. Heart health is the same and most of us know the recipe for good health (eat well, don't smoke, exercise). But if we start changing the ingredients to things such as bad eating, smoking and not exercising, we can't expect the recipe to turn out well.”

Whānau concepts may also be useful as a means of explaining the risk. For example, use the concept of a Marae to emphasise what the result of a 15% risk could mean. If the Kaikaranga (caller), the kaikorero (speaker) and ringawera (cooks) had a heart attack, how would this impact on the ability of the Marae to welcome, cook and care for visitors. Would there be others with the skills and experience to take their place?

### Use visual aids

Using visual aids can increase understanding and enhance the time efficiency of a consultation. A range of visual aids should be on hand in order to match the patient's circumstances. These could include professionally produced diagrams and charts, interactive online risk tables or simply drawing a diagram for a patient on a piece of paper (your own art work is often highly memorable).

## Framing

Framing is the expression of equivalent information in different ways.

Framing can be positive or negative, e.g., a 15% chance of a cardiovascular event (negative framing) or an 85% chance of not having a cardiovascular event (positive framing). Clearly negative framing is more likely to encourage patients to take up an intervention and patients may use positive framing to justify inaction.

Framing can also be expressed in terms of loss or gain and this approach may be more relevant to communicating

clinical risks. Loss framing considers the potential losses, from not undertaking an intervention such as loss of health, longevity, and relationships. Gain framing considers the gains from undertaking an intervention such as maintenance or improvement of health

In a similar manner to framing, risk can be presented as either absolute or relative risk; e.g., if an intervention reduces risk from 10% to 5%, this can be represented as 5% decrease (absolute risk) or a 50% decrease (relative risk). Clearly patients are more impressed by the relative risk decrease however this presentation does raise concerns with respect to informed consent.

### Box 1: Making risk communication more effective

**C**ite basic risk data in general terms

**A**dd estimated probabilities for positive and negative outcomes to descriptive terms such as “low risk”

**R**einforce effectiveness of your explanations by using visual aids to help show risks in perspective

**E**xpress encouragement and hope. Reassure patient by detailing all the help that is available.

Increasingly  
effective risk  
communication  
and deepening  
doctor-patient  
relationship

Paling J. Strategies to help patients understand risks. BMJ 2003;327:745-48.

## Check what the patient has understood

Asking if the patient understands or has any questions will not differentiate between patients with a good understanding and those with such a poor understanding they do not know what to ask. The best approach is direct questioning such as “When your partner asks what I said, what will you say?”

Reinforce your explanation with written material to take away. This not only provides the patient with a reference but also provides a useful tool for them to use when discussing the risk assessment with family.



---

## Bibliography

Alaszewski A, Horlick-Jones T. How can doctors communicate information about risk more effectively? *BMJ*, Sep 2003; 327: 728 - 31.

Fletcher R, Fletcher S. *Clinical Epidemiology: The Essentials*. Lippincott Williams & Wilkins, 2005.

Edwards A. Effects of communicating individual risks in screening programmes: Cochrane systematic review. *BMJ* 2003;327:703-9.

Edwards A. Explaining risks: turning numerical data into meaningful pictures. *BMJ* 2002;324:827-30.

Gigerenzer G, Edwards A. Simple tools for understanding risks: from innumeracy to insight. *BMJ* 2003;327:741-4.

Goldman R, Parker D, Eaton C. Patients' perceptions of cholesterol, cardiovascular disease risk, and risk communication strategies. *Ann Fam Med* 2006;4:205-12.

Goodyear-Smith F, Arroll B, Chan L, et al. Patients prefer pictures to numbers to express cardiovascular benefit from treatment. *Ann Fam Med*. 2008 May-Jun;6(3):213-7.

Gordon-Lubitz R. Risk communication: problems of presentation and understanding. *JAMA*. 2003;289:95.

Morris L, Halperin J. Effects of written drug information on patient knowledge and compliance: a literature review. *Am J Pub Health*. 1979;69:47-52.

O'Connor A. Risk communication in practice: the contribution of decision aids. *BMJ* 2003;327:736-40.

Paling J. Strategies to help patients understand risks. *BMJ* 2003;327:745-48.

Slovic P. Perception of risk. *Science*. 1987;236:280-85.

Zikmund-Fisher B, Smith D, Ubel P, Fagerlin A. Validation of the subjective numeracy scale: effects of low numeracy on comprehension of risk communications and utility elicitation. *Med Decis Making* 2007;27(5):663-71.