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This week in the BMJ

Individualised risk communication increases screening but not informed choice



STEVE L'HERGEX

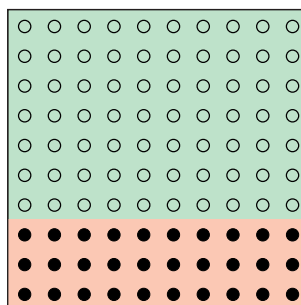
Interventions communicating individualised risk to patients lead to an increase in the numbers undergoing screening, but this may not be based on informed choice. In this week's special issue on communicating risks Edwards and colleagues (p 703) present a systematic review on communicating individualised risk and screening choices. Individualised risk interventions included using specific risk estimates based on the individual's own risk factors for a condition (such as age or family history). They found that such interventions lead to increased participation in screening programmes overall but argue that the increased uptake cannot be attributed to informed decision making by people invited to screening.

Public perceptions do not equate to risks, but reflect controversies

Public reactions do not necessarily relate to real risks to health, and these are fed by mass communication. On

p 725 Bellaby uses three examples to contrast the varied public perceptions of risks to children's health: autism caused by MMR vaccination, variant Creutzfeldt-Jakob disease (vCJD) from food containing the agent that causes bovine spongiform encephalopathy (BSE), and injuries and death from road crashes. Perceived risks are filtered through mass media and the medical and scientific communities, which often miscommunicate true risk. As a result, Bellaby argues, parents tend to ignore the most obvious risks to their children (road crashes), reject experts' assessment (over BSE), and amplify a virtually non-existent risk (autism after vaccination). The author says that parents' concerns are reasonable if they are understood in light of the controversies that perceived risks can cause.

Do you ever mix up sensitivity and specificity?



The perfect test

Sensitivity and specificity are common and seemingly simple conventions—so why are they so hard to grasp? Loong (p 716) tackles this conundrum by offering a visual approach to understanding the sensitivity, specificity, and positive and negative predictive values of tests. Emphasising the importance of applying the right side of the brain, he uses a real clinical example to illustrate the distinctions and relationships between these concepts. Contrary to usual belief, Loong says that high

sensitivity, which implies a test is effective at correctly identifying people who have the disease, is not necessarily a good thing. In addition, the positive and negative predictive values of tests are not fixed, but change if the prevalence of disease changes.

Falls in elderly women are more often due to chronic disease than to drug use



PATRICIA MCCONOUGH/PHOTONICA

Having a chronic disease or comorbidity is a better predictor than polypharmacy of falls in elderly women. Using cross sectional data from 4050 British women aged 60-79, Lawlor and colleagues (p 712) show that the risk of falling increases with the number of simultaneous chronic diseases and the number of drugs taken. However, the association with multiple diseases was stronger than that with polypharmacy and was independent of drug use and other confounders. Circulatory disease, chronic obstructive pulmonary disease, arthritis, and depression were associated with an increased risk of falling, as were two classes of drugs: antidepressants, and anxiolytics and hypnotics. Falling is common among elderly people and is associated with greater morbidity, disability, social isolation, and reduced quality of life.

Midazolam calms agitation faster than haloperidol-promethazine

Midazolam works faster than haloperidol-promethazine in calming agitated patients. In a pragmatic randomised clinical trial in Brazil (p 708), 301 agitated or aggressive patients

were randomised to intramuscular midazolam or intramuscular haloperidol plus promethazine. Almost 90% of patients given midazolam were tranquil or asleep after 20 minutes, compared with two thirds of those given haloperidol-promethazine. One potentially severe adverse event occurred with each treatment.

POEM*

Herbal tea helps reduce the pain of acute pharyngitis

Question Can herbal tea help reduce the symptoms of pain associated with acute pharyngitis?

Synopsis Demulcents have been used for many years to treat sore throat. They are not topical anaesthetics but are soothing and relieve irritation. This double blinded randomised controlled study evaluated the effectiveness of a demulcent mixture containing licorice root, elm inner bark, marshmallow root, and licorice root aqueous dry extract (a herbal tea called Throat Coat). Sixty outpatients with acute pharyngitis were randomly assigned to use the herbal tea, or a placebo tea that tasted and smelled similar, four to six times daily for as long as symptoms remained. No other treatment was allowed. Treatment allocation was concealed from the enrolling physician. Patients rated pain relief after 1 minute then every 5 minutes for 30 minutes, then at 3 and 24 hours after the first dose, and then daily using a scale from 0 to 10. Analysis was by intention to treat and compared the degree of change in pain scores at each period, as well as the total amount of pain relief by using the total area under the curve of changes in pain. Details on the statistics that were used are sketchy, which is odd considering the great detail in which other aspects of the study were reported.

Changes from baseline pain after the first dose differed significantly at 5 and 10 minutes: the sum of differences in pain intensity occurring in the first 30 minutes of treatment was about twice as good in the treatment group ($P=0.041$). Pain relief was also greater in treated patients at 10 minutes after the first dose. By intention to treat analysis, however, total pain relief over the first 30 minutes was not different between the two groups.

Bottom line A herbal tea containing a mixture of traditional demulcents (soothing agents) was more effective than a placebo tea in the short term relief of pain in patients with acute pharyngitis. The effect does not last long—less than 30 minutes—so requires frequent tea drinking throughout the day. For my next sore throat, I'm going to reach for an analgesic and a topical anaesthetic, but herbal tea may be useful for patients who prefer a more active approach and who wish to avoid the feeling of a partially anaesthetised mouth.

Level of evidence 1c (see www.infoPOEMs.com/resources/levels.html); all or nothing randomised controlled trial.

Brinckmann J, Sigwart H, van Houten Taylor L. Safety and efficacy of a traditional herbal medicine (Throat Coat) in symptomatic temporary relief of pain in patients with acute pharyngitis: a multicenter, prospective, randomized, double-blinded, placebo-controlled study. *J Altern Complement Med* 2003;9:285-98.

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* Patient-Oriented Evidence that Matters. See editorial (*BMJ* 2002;325:983)

Editor's choice

Communicating risk: the main work of doctors

"Dr Smith, your serum potassium is at the upper limit of normal."

"What does that mean?"

"Nothing really. You shouldn't worry."

"Well, why did you tell me?"

"We thought you wanted to be kept informed."

Many doctors are not good at communicating about risk—yet increasingly it is one of their central tasks. Readers have asked us to produce this theme issue because they would like to be helped to do better. This is an issue, I suggest, that deserves perhaps two hours' reading—as opposed to the more usual 30 minutes. All doctors—including those in laboratory based disciplines and public health—have to communicate risk to people.

This has become especially important because of the changing nature of the doctor-patient relationship. When doctors made decisions for patients—as many still do—they didn't need to communicate risk. The doctor would decide on a treatment and then help the patient feel good about it, perhaps—with good intentions—slightly exaggerating the benefits and playing down the risks. Numbers were not involved. Even the "calculation" of the risk benefit ratio was internalised: doctors' experience told them what to do.

Increasingly this is not good enough. There is a need for numbers, and many doctors don't feel easy with numbers. "Can you," asks Tze-Wey Loong, "explain why a test with 95% sensitivity might identify only 1% of affected people in the general population?" (p 716) My guess is that not one *BMJ* reader in a thousand could answer that question, but the numbers are in many ways the easy bit. The communication is the harder bit.

There is an increasing array of aids and tools for presenting the numbers (p 736 and p 741), although they can't overcome the problems of uncertainty and of moving from populations to individuals. The low point in risk communication in Britain was a government minister feeding his young daughter a hamburger and assuring the population that beef was "perfectly safe" (p 726). Uncertainty was swept aside, the public was patronised, and trust badly damaged.

Trust is the key to communicating risk—as it is to so much. Lying destroys trust, but deluging patients with numbers doesn't build it. Several contributors point out that we don't think about risk rationally. A risk is a combination of a probability of something happening (where statisticians might be able to help you but often can't), a feeling of the dreadfulness of that event (which is very personal), and a context for the event. To improve communication of risk, write Andy Alaszewski and Tom Horlick-Jones, doctors must build trust, be aware that patients have many other sources of information (including some they may trust more than doctors), and be sensitive to the psychological and social factors affecting patients (p 730). Things good doctors do all the time.

Richard Smith *editor* (rsmith@bmj.com)

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