Tidsskriftet Tidsskrift for Den norske legeforening

No guessing, please

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Doctors often need to make decisions in situations of uncertainty. This is not the same as guessing.

Photo: Einar Nilsen

The TV programme *Hva feiler det deg? [What's wrong with you?]* on NRK1 is a medical quiz show where competitors try to arrive at a diagnosis for a patient on the basis of limited information and within a set time (1). Sometimes the team of doctors are the first to find the correct answer, while other times the team of three non-doctors win by searching for information online. The doctors are skilled and empathic clinicians who are good at communicating even difficult medical material. The show is entertaining and instructive. However, in the real-world health services, being able to *guess* a diagnosis that later turns out to be correct is not a good criterion for judging a doctor's skills.

In examining a patient, the doctor's job consists of five elements: listen, search, think, decide and act. The doctor must listen to what the patient says, undertake a clinical examination and request additional tests. Based on their own knowledge and experience, doctors must make a decision about the diagnosis and further steps. Such assessments must often be made on the basis of uncertainty, but this does not mean that the doctor is simply guessing. Diagnostics and choice of treatment are not a guessing game. Clinical assessments must be based on knowledge and sound judgement. Qualified hypotheses, the weighing up of probabilities and intuition can all form part of clinical decision-making processes, whereas pure guessing may not. Acting with resolve is a virtue, but acting on the basis of pure guessing is not. Sound judgement implies knowing when to act and when to wait and see, gather more information or seek assistance. In an urgent case, it is crucial to gather the most important and relevant information, process it quickly, make a decision and act. Pure guessing has no place in emergency departments.

Sometimes, the diagnosis and choice of treatment may be obvious. Often, however – especially for less experienced doctors – the uncertainty is so great that thorough reflection is called for. What information, symptoms and findings are consistent with a relevant diagnosis? Or more basically: What type of disease are we dealing with? Inflammatory? Infectious? Vascular? Autoimmune? Degenerative? Genetic? Malignant? Psychogenic? Trivial or serious? Such questions can be used for symptoms in all organ systems. This type of reasoning and assessment can be challenging and time-consuming. Thinking is more difficult than guessing (2). It may therefore often be tempting to guess, rather than think. Much too often I encounter students – and even doctors – who make guesses.

> ***«Thinking is more difficult than guessing. It may therefore often be tempting to guess, rather than think»***

When we doctors teach medical students, we should first and foremost teach them how to think. Knowledge is something they can obtain elsewhere. We should teach them how to make use of the knowledge they possess, be it in a clinical situation or when asked a question by a patient, a teacher, a superior or a colleague. The best student is not the one who is the first to give the correct diagnosis, but the one who is the first to say something sensible and ensure that there is a sufficient basis to make a statement or proposal for a diagnosis or treatment.

This is a true story: The auditorium is packed. The medical students have come to obtain practical information about the upcoming exam consisting of multiple-choice questions, where they will be asked to tick 'the most correct' out of four response alternatives. The advice given by the head of the exam committee is clear: if you don't know the answer to a question, just guess – after all, you have a 25 % chance of guessing correctly, and you lose nothing by giving an incorrect answer.

This advice illustrates one of many weaknesses of using multiple-choice questions as an exam type (3, 4). The students are not tested on their ability to form a sensible opinion, but on choosing between four response alternatives. In clinical practice, the reality is different – patients do not go to their doctor with four alternative diagnoses delivered on a plate. Moreover, multiple-choice questions have an unfortunate effect on the students' learning behaviour and mindset. By reading previous exam questions in advance, the students learn to recognise correct and wrong answers to questions. They learn how to guess by looking for clues in the response alternatives. Such questions may thus give a false impression of the students' skills (5) and they are a poor test of the ability to think, to act independently and to respond to an academic challenge.

Professors, medical studies and exam types should not encourage future doctors to engage in guesswork, be it before, during or after a virus pandemic.

LITERATURE

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Publisert: 20 April 2020. Tidsskr Nor Legeforen. DOI: 10.4045/tidsskr.20.0069