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Evidence-based medicine in general practice: a hindrance to optimal medical care?

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This article is the second part of a "pro et contra session" about evidence-based medicine at the 13th Nordic Congress in General Practice 2003 in Helsinki. Marjukka Mäkelä's arguments in favour of evidence-based medicine may be found in the preceding article.

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Evidence-based medicine (EBM) has become the theoretical basis general practitioners (GPs) are supposed to act in accordance with if they aim at being regarded as good doctors. It is, however, possible that the salience of EBM is overestimated and that its current status might act as a hindrance to optimal medical care.

To underline the central points in my critical reflection concerning EBM in primary care, I have chosen three of "The seven theses for general practice" that have recently been outlined by the Norwegian College of General Practitioners (1). According to them, a GP should:

- Do what is most important for his/her patients.
- Pay most attention to persons with the highest needs.
- Use health-promoting language.

To be able to adhere, GPs need a body of knowledge grounded on a broad scientific basis whereof EBM is but one element, which, when scrutinized consequently, seems to be overestimated (2) (Table I).

GENERAL PRACTICE

GPs encounter the total population. For the sake of characterising this general practice population quite roughly, a four-category model has been introduced (3) (Fig. 1).

Category 1 comprises persons who both feel healthy and are found to be healthy by means of the biomedical standards. In contemporary medicine, a major proportion of the population are, for different reasons, channelled to the GP's office to get their health attested (4).

Category 1 is diminishing steadily. Biomedical norms and current definitions tend to "move" people from category 1 to category 4. Two causes can be identified. First, even if people feel healthy, medical tests can identify risk markers for future diseases. Next, the number of "non-diseases" that may be addressed in the GPs' office is increasing (5).

Category 2 consists of people seeking help because they experience suffering. The GP cannot, however, find any objective signs of disease. Consequently, she/he most often fails to help them, as their experiences and complaints do not fit in with authoritative biomedical knowledge and accepted disease categories (6). The typical patient in this category is a woman with chronic pain, or an adolescent addicted to drugs. One-fifth of all consulting patients in general practice have been shown to belong to this category (6). These patients often tend to experience that their health problems are ignored, and they may feel disregarded as human beings (7). Only a few of them report having received meaningful explanations that help them to comprehend and to cope with their problems in a constructive way (7).

Category 3 encompasses persons with organ diseases, i.e. where the patient feels ill and the GP is able to find objective signs of a disease. A typical example is a person with chest pain and clinical signs of a myocardial infarction. Patients in this category are exposed to an increasing amount of technology. New technology is continuously being added to the existing, in order to refine the degree of diagnostic and therapeutic precision in these patients. For example, a patient with heart failure may be defined as undertreated unless he receives four or five drugs for his heart disease alone, regardless of what kind of additional diseases the patient might have. And as

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Table I. EBM is of hindrance to optimal medical care in general practice.

- By upgrading and over-emphasizing information from randomized control trials (RCTs), meta-analyses and systematic reviews, whilst downgrading and devaluating other research without being explicit on which knowledge is needed for which purpose
- By contributing to the value-ladenness of facts
- By veiling the need for choices of value in medicine

the effect of each drug has been studied separately in clinical studies, and most often with co-morbidity as exclusion criteria, the effectiveness of each drug is unpredictable when implemented in general practice.

People in Category 3 are given priority in hospitals and in specialist medicine. Patients' contact with specialists and hospitals is, however, of short duration. As a consequence, GPs are obliged to follow up treatments initiated by these specialists and to perform activities that may seem meaningful in the hospital. The activities may not necessarily make the same kind of sense in general practice.

Category 4 consists of persons who have risk factors for future diseases. They are most often not aware of their potential health problem until informed by their doctor. The discovery of risk factors can actually turn everybody into a patient. Risk assessment may start at the time of conception (8,9) and continue until death.

While persons may see GPs to reassure themselves that they are in good health, they may end up falling into "risk ditches", especially the elderly (Fig. 2). Consequently the GP is obliged to "help them up again" by telling them it is not "that bad" (Fig. 2). A message about risk is, however, irreversible (8,9). It resembles a drop of ink in clear water, which renders the water permanently unclear (9).

Scientists continuously define risk factors in an ever-increasing number and speed (10). Biomedical research seems to have changed the focus from investigating diseased people to assessing risk for future diseases among the healthy population (10). This shift of focus opens up an unlimited potential for the introduction of new studies. There are already many "risk conditions" to be considered in general practice, such as hypertension, diabetes type 2, osteoporosis, and abnormal pap-smears from the uterine cervix. For the majority, evidence-based biomedical therapies are available.

EBM AS A HINDRANCE TO OPTIMAL MEDICAL CARE IN GENERAL PRACTICE

Category 1 consists of "the true healthy", i.e. people in whom diseases, early organ damage, risk factors, or unfortunate genes have not yet been discovered (Fig. 3). However, since good health does not equal the absence of these factors (11), GPs need to know about enhancing factors in people's lives, so that they do not interfere accidentally (12). In addition, GPs need to know which coping strategies people use in everyday life in order to support them (13). And, despite all the effort in the healthcare system, postponement of suffering, diseases, and death is the best to hope for, after all. Consequently, an important role for the GP is to be a professional companion for her/his patients when needed (1).

Epidemiological research describes factors associated with diseases on a group level, whereas qualitative research seeks to understand the meaning of these factors for the individual. EBM does not contribute substantially to an understanding of the elements that constitute health. On the contrary, a rigorous application of the results of EBM may even endanger health by means of its implicit tendency

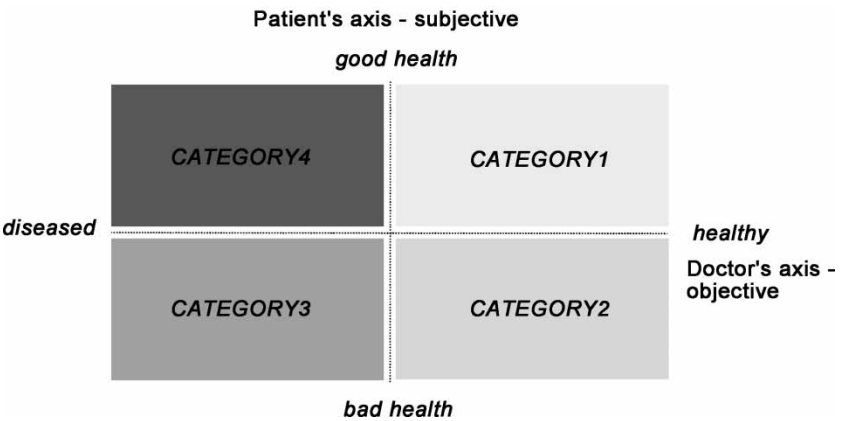

Fig. 1. General practitioners meet the total population. A person may experience good health or some degree of bad health. The doctor is presumed to be objective when dividing persons with disease, i.e. fulfilling the contemporary medical diagnostic criteria, from persons without disease.

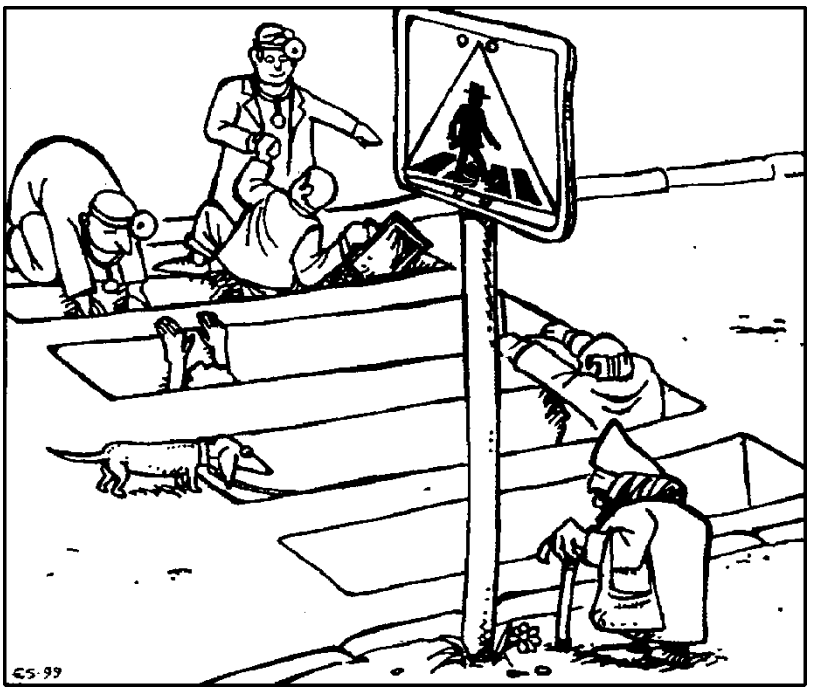

Fig. 2. When people go to see their general practitioner to secure their health, they often fall into risk ditches, especially if they are old.

towards medicalization (14). Thus, the definitions constituted by the healthcare system itself, may – in the name of beneficence – transfer people from category 1 to 4, where, in turn, they are subjected to biomedical, evidence-based solutions (14).

Category 2 consists of people who have been dismantled by medicine as "the imagined ill" (see Fig. 3). These are often labelled as suffering from functional or somatization disorders (6). Biomedical knowledge is inappropriate to understand and help these patients (6). It is necessary to build a more comprehensive theory that encompasses the way human beings embody their lives in order to improve knowledge about diseases and suffering (15). If we are misled into believing that this kind of knowledge is integrated into the EBM concept as it functions today, EBM will represent a hindrance to a better understanding of these biomedically "unexplainable" conditions in people who feel ill.

Category 3, i.e. the "true ill" (see Fig. 3), require evidence-based treatment as one of their needs. However, since life is 100% lethal, despite the biomedical repertoire, these patients also need professional companionship at one time or another (1). The meaning of such companionship does not seem to be an EBM research issue, even if it may be the most important.

As every new therapy is most often added on top of those instituted previously, the complexity increases,

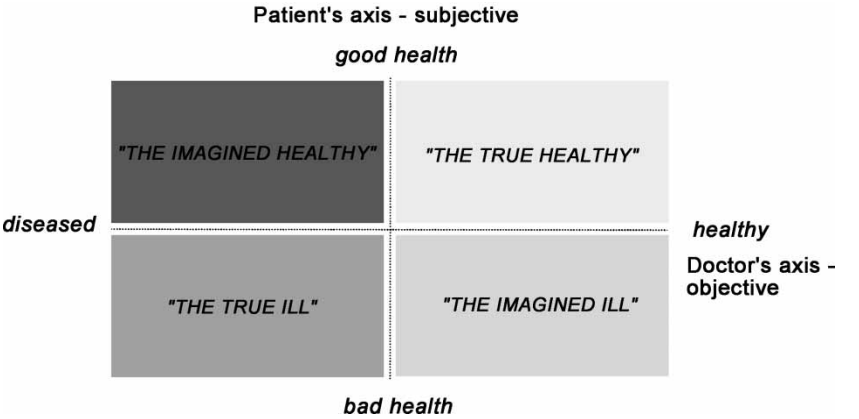

Fig. 3. Some things seem to be true, whilst others seem to be regarded as imagined.

such as in the drug management of patients with heart failure. GPs have to deal with many of these complex regimes at the same time in one patient, whereas a specialist more or less can concentrate on one disease. As a consequence, adherence to and compliance with the total amount of recommendations are difficult, with lack of effectiveness and even danger for the patient as a possible consequence (16). This increasing complexity could legitimize the question: How simple can the biomedical treatment of "the true ill" patient be and still be acceptable, both for the patient and for society? EBM has, however, not shown great interest in addressing this complex field.

Category 4 – "the imagined healthy" – is associated with many challenges and problems for GPs for several reasons. First, GPs have for many decades been exposed to an overwhelming amount of information regarding treatment effects on an increasing amount of "surrogate endpoints" – such as blood pressure, blood glucose, blood lipids, and bone density – all evidence-based in often methodologically excellent randomized controlled trials (RCTs). Next, even when effects on "hard end points", i.e. diseases and death, are available, the EBM approach recommends that each risk factor should be treated separately according to the latest evidence (17,18). As a consequence of this fragmentation, GPs may be fooled into believing that handling the total amount of fragments in healthy persons is the most essential, and not the whole person they belong to. EBM contributes in this manner to the increasing complexity, which also reduces the possibility of turning efficacy into effectiveness (19,20). Finally, even if evidence-based therapy for low risk is available, it should probably not be implemented, as clinical trials with arbitrarily chosen thresholds for intervention are an inappropriate scientific basis to estimate the risk level demanding individual intervention in general practice (19). Defining risk is basically a moral choice, involving fundamental questions of value for the individual (21). In addition, the society has to define the level of health risk it expects can be handled in a balanced healthcare system (1,19), which primarily has to take care of the people who experience diseases and suffering.

And it should not be forgotten that when large RCTs and meta-analyses are needed to demonstrate an effect of a treatment, it is an indication of a minor potential individual gain. It is therefore highly thought provoking that information from exactly this type of study is given such a disproportional attention in medicine (see Table I).

This attention even exaggerates the ever present, though covered, value-ladenness of facts, and it may turn the GP into a biomedical technician. Although each fragment may have its own irrefutable value, as based on epidemiological and evidence-based clinical studies, it may have very limited relevance for the individual patient's experience (19).

MEDICINE TODAY

The origin of medicine was basically theoretical–philosophical, i.e. based on humanistic sciences (H) (Fig. 4a) (22). Today, the biomedical leg (B) seems to be too long, in spite of all the available resources (Fig. 4b) (19,20). There seems to be a trend towards too much medicine in Western societies (20,23). In addition it is fragmentary (24) and imperative (22), and as such a hindrance to optimal, holistic medical care (20).

I would prefer a better equilibrium between the biomedical, technical leg and the humanistic, non-technical leg in medicine, and also a serious assess-

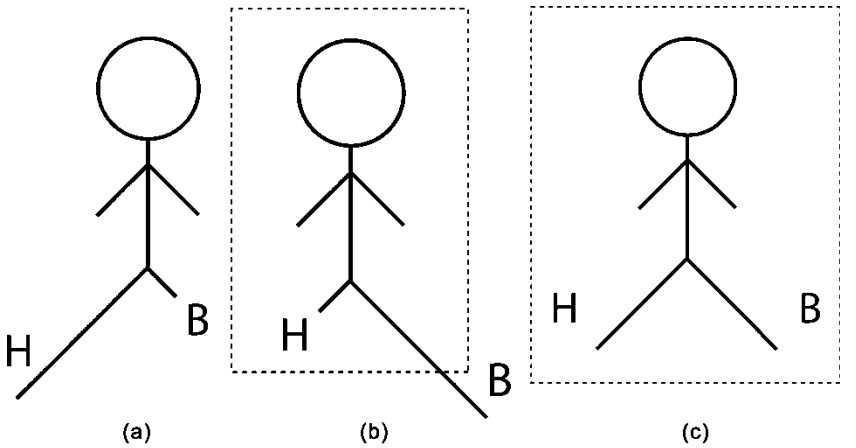

Fig. 4. Medicine used to be based on humanistic (H) sciences (a). In contemporary medicine the biomedical based (B) content seems to be greater than the practical possibilities (b). A better balance between H and B is needed (c).

ment of "how much medicine can the healthcare system manage to integrate?" (Fig. 4c) (19,23). A critical appraisal of the definitions of medical risk, diseases, and what is regarded to be good therapies is needed. This in fact means a critical appraisal of contemporary medical research, including the concept of EBM.

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