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Mode of Action of Competent General Doctors: The Toolkit Concept

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Abstract

Clinical decision making strategies of general practitioners (GPs) must be made regard to the whole range of problems encountered in everyday work (biopsychosocial). So, GPs must integrate large amount of complex information to obtain a relatively simple result. Further, the limited time allotted for each consultation requires rapid actions. What do GPs use to focus on the breadth of the clinic? How do they manage to find in the vast, varied and complex clinic, without apparent reference points, such concrete and small data? Clinical problems managing puts high demands on GPs that have to using a variety of clinical decision-making strategies. Quality of decision making in modern health care is defined with reference to evidence-based medicine (MBE). But, there is concerns that this approach is insufficient for GPs. Actually, the GP uses many more techniques more frequently (qualitative strategies) than MBE, and many of them are specific to him: this is the GP 'toolkit: 1) Contextualization; 2) Continuity of Care; 3) Doctor-patient relationship; 4) Strategic planning; 5) Use of patient and doctor resources and strengths; 6) The self-esteem, self-capacity, and self-efficacy of patient and doctor; 7) The emotion; 8) The intuition; 9) Ethics; 10) Participation of patients and communities; 11) Ecological and network relationships; 12) Focus on the process instead of the result; 13) The clinical interview and the narration; and 14) The family. The lack of understanding of the non-clinical variables can cause a suboptimal approach in the care of the patients. A true EBM cannot be carried out without the recognition and incorporation of these qualitative variables (the general doctor' toolkit), that modify clinical decision making in general medicine. As the GP of novel "Anna Karenina", by Leo Tolstoy, "with a subtle smile" says: "you know, there are always moral, spiritual causes at the back in these cases."

Keywords: *General Practice; Clinical practice; Health Care; Diagnosis; Clinical reasoning; Medical Decision-Making; Medical Expertise; Doctor-Patient Communication; Workplace Learning; Evidence-Based Medicine; Continuity of Patient Care; Ethical Decision-Making*

Introduction

Students learn, generally in a self-taught way, that there is a clinical method and that it consists of the scientific method applied to the individual care of patients. That is, making a history of the disease that the patient tells, exploring and performing complementary tests to collecting objective data, build hypotheses about which organs are affected, and what disease causes it. However, it usually happens that, after being dazzled by the brightness of such a method in the hospital, when the general practitioner (GP) arrives to work in primary care, he begins to face the fact that a certain part of the patients cannot fit them into any disease of the classifications learned. Not only were they early symptoms that did not meet the known criteria, or that seemed to give different manifestations than in the hospital but some of them were not sick from the doctor's point of view, but they considered themselves that way. At the time, the young GP usually goes uncovering the truth: the training received so far was incomplete and biased; He do not have the precise tools to make diagnoses and treatments at the level of general medicine because of those tools are different from those used by the hospital doctor (1-3).

Thus, there are certain characteristics of primary care that modify the clinic of patients treated at the level of general medicine (3):

-There are problems instead of diseases

-The first phases of the disease are observed

-Many symptoms and signs are self-limited

-There is a different clinic vision in the hospital in patients selected by the GP

The diseases seen in the hospital and its work environment are different from general medicine because of (3):

-The patient attended is de-contextualized of their living environment

-It puts a greater emphasis on the biological and technology

-It puts a greater emphasis on the quantitative

In this way, clinical decision making strategies of GPs must be made regard to the whole range of problems encountered in everyday work (biopsychosocial). Managing the diversity of problems encountered puts high demands on GPs to use a variety of clinical decision-making strategies. In a study from general practice less than 50% of the cases resulted in certainty of a "known" diagnosis without further testing. Further, the limited time allotted for each consultation requires, if possible, rapid actions (4).

However, the clinical method has not been differentiated, although it is intuited that the clinic in general medicine and in hospital medicine is different and has its own specificities. And in relation to all this, actually, little is known about GPs' decision-making processes in diagnose and prescribe (5).

Deciding on a diagnosis and treatment is essential to the practice of medicine. Developing competence in these clinical reasoning processes, commonly referred to as diagnostic and therapeutic reasoning, respectively, is required for physician success. Clinical reasoning has been a topic of research for several decades, and much has been learned. However, there still exists no clear consensus regarding what clinical reasoning entails, let alone how it might best be taught, how it should be assessed, and the research and practice implications therein (6).

In this scenario, this article, which is a personal view, aims to, based on a selected narrative mini-review and the author's experience, to show, describe, understand, systematize and summarize fundamental concepts on what is the mode of action of the competent GPs and its application in daily practice.

Discussion

Integrate Large Amount of Complex Information to Obtain a Relatively Simple Result

How do Atlantic salmons find their way back to the streams where they were born, after up to three years at sea? How do Arctic terns find their breeding sites in the far north after excursions of more than 70,000 kilometres to the Antarctic? How are the amazing subtlety, complexity and diversity techniques used by ants to find their way home? Sea turtles are able to make very long trips by open sea and reach, with incredible precision, their destination; what do turtles use to orient themselves in the breadth of the oceans? How do they find so small and remote places in the middle of the ocean, without apparent landmarks? How do they do that? What compass do they use?: They use polarized light patterns and colour gradients and light intensity in the sky, along with the position of the Sun, backed by signals from the Earth's magnetic field and wind direction; They know where they are counting the steps they have taken and keeping track of the direction they were following at that time; They can memorize panoramic 'snapshots' of landmarks, such as rocks, around their objectives. Somehow, their brains integrate all this information so that their search trips can be optimally organized. The central message is that there is a sophisticated repertoire of navigation behavior of certain living beings, which actually emerges from a large number of relatively simple elements, which can be called their toolkits of tools. Thus, for example the ant can be oriented simply by cleverly using the components of its toolkit (7).

Just as studies of the mental processes of the great chess masters have revealed clues about how people become experts in other fields as well (8), the orientation processes in the animal world (salmon, turtle, ants, etc.), can serve as metaphors for the process of orientation and decision in the clinic of each day of the GP (9).

How are the GPs Oriented?

GPs are able to understand the full impact of the disease (neurological, cardiological, etc.) and assess the diagnosis, treatment, prognosis, evolutionary course and severity, in a specific individual, without having "guidelines" for each health problem in

each patient. In addition, the GPs are caring for an increasing number of older patients with multiple diseases and they face the uncertainty concerning the benefits and harms associated with guideline-directed interventions.

What do GPs use to focus on the breadth of the clinic? How do they manage to find in the vast, varied and complex clinic, without apparent reference points, such concrete and small data? (10-12).

It is important to determine what the mode of action of the competent GPs consists of. In this sense, it is necessary to show an explanation and systematization of the clinical mastery of the GP, which although it can be achieved personally by reflection-action process throughout the professional life, it would be desirable for it to be formalized and transmitted (that is, taught and learned) without downloading that process completely in the trial-error way during professional life (13).

Decision-Making Process and Ability to Manage the Uncertainty of Consultation in General Medicine

The decision-making process is very complex and depends on the role of each "actor": patient, family member of a patient or doctor (14). Medical uncertainty is a well recognized problem in medical care, however, the way doctors make decisions about uncertainty has not yet been understood.

Making medical decisions is very complicated, so, for example, when you have to choose something that directly affects to yourself you see them from a different perspective. It seems to be a natural tendency to avoid immediate pain over oneself, although when you have deciding on another person, you can choose the option of seeing and waiting although I may have worse consequences. Also there is another human tendency which is to use all the power that one has within reach when making a decision for another person (15).

The sense of "art" or clinical expertise "in general medicine is associated with the ability or capacity to manage the uncertainty of the consultation. It is a mistake the formation that tries to eliminate this ancient concept of "the clinical eye of the wise -and subjective- doctor", to emphasize clinical epidemiology as the only (objective) approach to the tests. The important thing is to try to understand the process of the "clinical eye" -the ability to manage uncertainty- and include it in the clinical method. The judgments cannot be true or lie in the abstract (in the generalization of the protocol), but case by case. And that has to be taught and learned by future doctors.

Quality of decision making in modern health care is defined with reference to evidence-based medicine (EBM). But, there are concerns that this approach is insufficient for, and may thus threaten the future of, generalist primary care. We urgently need to extend our quality of knowledge use and decision making in order to protect and develop the discipline (16, 17). The personal experience of each professional represents a factor of great importance in everyday decision making. Despite the opinion of the promoters of the EBM model, personal judgment seems appropriate in the context of the implementation of this modality of medicine, especially in those areas where scientific data is scarce. The integration between the doctor's scientific information, the patient's personal circumstances and the non-clinical parameters constitute what has been traditionally called "the art of medicine" (18).

What Counts as Clinical Evidence in Scientific Health Care?

The distinction between basic sciences and clinical knowledge which has led to a theoretical debate on how medical expertise is developed has implications for medical school and lifelong medical education (19).

The quality of clinical decisions depends on the range and quality of the evidence used to make those decisions. Health professionals and patients have different perceptions of what they find most useful in making clinical decisions and what patients want rarely coincides with what clinicians think these patients need. But the main determinant of the final success in a consultation is the agreement between doctor and patient on the main problem that arises. However, sometimes professionals make decisions, applying only their narrow range of evidence while ignoring the evidence of patients and their families: decisions must be based on both sources of evidence. If the patient loses confidence in the advisory role of health personnel, and believes that they act in their personal interest, professionals will lose immense gains in public opinion and in their own self-esteem that they have achieved since the middle of the 20th century (20, 21).

More a hundred years ago, Albert Einstein upended physics with his general theory of relativity, revealing that the straightforward world Newton had described was mind-bendingly more complex. There is a comparable conceptual leap about the actual model of human decision making, which is far too simple to explain reality. So, there is a conceptual leap about the actual model of medical decision making, which has profound implications for general medicine. The key problem is medicine's ongoing assumption that clinicians and patients are, in general, rational decision makers. In reality, we are all influenced by seemingly irrational preferences in making choices about reward, risk, time, and trade-offs that are quite different from what would be predicted by precise, quantitative calculations (22).

General Doctor' Toolkit

GPs use a certain number of strategies or toolkit to deal with uncertainty. Many of them are specific to the GP. They are the GP 'toolkit (TABLE 1). The clinician, from the paradigm of positivist science (quantitative, objective), uses fundamentally as strategies to manage clinical uncertainty, the clinical epidemiology and EBM. But, it also uses many more techniques more frequently. These facts have implications to theorize about decision making under conditions of medical uncertainty, to understand how the care model affects the doctor's decision making and to form a policy on the optimal structure of medical work (17, 23-26).

Table1. *General Doctor' Toolkit*

GENERAL DOCTOR' TOOLKIT	
1. Quantitative strategy	-Evidence-based Medicine
2. Qualitative strategies	-Contextualization
	-Continuity of Care
	-Doctor-patient relationship
	-Clinical interview and the narration
	-The family
	-The emotion
	-The intuition
	-Ethics
	-Participation of patients and communities
	-Ecological and network relationships
	-Focus on the process instead of the result
	-The self-esteem, self-capacity, self-efficacy
	-Use of resources and strengths
	-Strategic planning

There is a medical idea that objective (measurable) knowledge is in conflict with the subjective (personal, individual) knowledge that is necessary to meet the healthy or sick individual. The problem is not if one is better or worse information, but what is required to solve the clinical problem. There is no reason for the doctor not to use both objective and subjective thinking. Architects, for example, are able to think in an objective, mathematical, measurable way, in terms of engineering, but at the same time they are able to think aesthetically. Obviously, this sense of "resolutivity" (objective and subjective) of medical problem has conceptual implications in general medicine that should be part of the training program (27, 28).

Although efforts encouraging physicians to avoid cognitive biases and to reason in a more analytic manner (quantitative, MBE) may yield some benefit, this facts suggests that, in general medicine, the experience, doctor-patient relationship, continuity of care, or contextualization are more important determinant of diagnostic (29). To have knowledge of guidelines or not is an unsuitable as an indicator of how guidelines are being put into practice in the clinical routine (30, 31). GPs' subjectivity is an intrinsic instrument in their daily work. To achieve the greatest possible objectivity in these subjective decisions, two methods have been proposed:

1. Balint groups (32).

2. Contextualization (33).

GPs emphasize the relevance of their own knowledge of the personal and medical history of and the continual care for their patients (34). On the other hand, in the process of decision making, GPs describing conflicts between their own and their patients' goals, and there are a number of barriers to making good treatment decisions, including the lack of outcome data, the role of hospital specialists, and the patient and family expectations (35).

Medical professionals need to keep on learning as part of their everyday work to deliver high-quality health care. The GPs experiences contribute to their expertise development (36). The decision-making (immediate or gradual) by the GPs seem to be adjusted on the symptom or on the patient as a person. The GPs seem to recognize immediately both problems and persons, hence the quintessence of the expert skill of the GP as developed through experience. Clinical reasoning encompasses the mental processes and behaviors that are shared (or evolve) between the patient, physician, and the environment (context) (4, 37-39).

Thus, it does not seem possible to carry out a true EBM without the recognition and incorporation of these variables that modify clinical decision making. Although they are not formally considered on many occasions, different non-clinical parameters can be associated with relevant difficulties in decision-making in terms of EBM. The clinical decision process involves numerous variables in daily practice, among which the recognition of the patient's problem, the identification of probable solutions, the discussion of therapeutic alternatives, the possibility of providing information, the knowledge of preferences of the patient, the implementation of therapy and the evaluation of the results. Although these decisions are routinely based on traditional clinical criteria, certain non-clinical parameters can have significant repercussions on these processes (18).

GPs experiences contribute to expertise development; however, much could be gained from managing learning opportunities more explicitly (36). It has been communicated that the essence of clinical practice is an engagement. Engagement accounts for the daily routine of clinical work, as well as the necessity for the GP to sometimes trespass common boundaries or limits. Personally engaged in the clinical situation, the GP is able to create a space / time bubble within which the clinical encounter can unfold. Engagement provides an account of clinical practice as a unitary lived experience (40).

Conclusion

Understanding how GPs approach treatment decision making for their patients is critical to the design of interventions to improve this process. The lack of understanding of the non-clinical variables can cause a suboptimal approach in the care of the patients. So it should be emphasized the need for new strategies that make the EBM compatible with non-clinical parameters without compromising the quality of health care. Rather: a true EBM cannot be carried out without the recognition and incorporation of these qualitative variables (the general doctor' toolkit), that modify clinical decision making in general medicine. Further, much could be gained from managing learning opportunities of these General doctor' toolkit more explicitly. As Leo Tolstoy says in Anna Karenina (41) "But, you know, there are always moral, spiritual causes at the back in these cases'... the family doctor permitted himself to interpolate with a subtle smile…"

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