A framework for clinical general practice and for research and teaching in the discipline

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This paper uses three typical case stories from general practice to demonstrate that a GP simultaneously considers four dimensions when making a diagnosis and planning subsequent treatment of a patient in the consultation: (i) a biomedical dimension; (ii) a culture and context dimension; (iii) a medico-psychological dimension; and (iv) a network and social dimension. By taking this diagnostic and therapeutic approach, the GP adds value to the total performance of the health care system. It is demonstrated that a GP needs theoretical, research-based knowledge and skills within all four dimensions, and that it is necessary for a GP to work together with both medical and non-medical disciplines when defining the research and teaching agenda. It is stressed that consultation and communication skills are important tools for any doctor, and the value of continuity of care is discussed. Finally, the implications of the diagnostic approach with respect to planning research and teaching programmes are discussed, and the need for a better balance is stressed.

**Keywords.** Clinical general practice, definition, framework, research, teaching.

Introduction

GPs are specialists like other medical specialists and assume positions alongside other specialists within a comprehensive health care system. They share theoretical and practical knowledge with other physicians and, by their special knowledge, training and skills, they add value to the health care systems.

Different studies have tried to define and describe the discipline and have been instrumental in identifying the core contents of the clinical work performed by GPs. The ground thus has been prepared for teaching students the principles of general practice and for training young doctors in the skills required to master this discipline. However, for such teaching and training to be genuinely successful, we must explicitly describe the theoretical contents of that part of the discipline where we add value to the performance of other physicians, and next we must be able to transform this theory about the discipline into competences, skills and clinical performance of GPs in practical work.

The first aim of this paper is to describe a framework for teaching and researching the clinical contents of GP work and to demonstrate that the GP makes a multidimensional diagnosis and plans a multidimensional treatment. The second aim is to give examples of important theories, competences, tools and skills needed for the GP to perform good clinical work.

A multidimensional diagnosis

A doctor seeing a patient in the consultation seeks to understand both the patient and the patient’s disease. In this process, (s)he draws on the special skills acquired during teaching and training to make a comprehensive diagnosis that may legitimize further activities. All physicians have a strong tradition of diagnosing disease, and current classifications are comprehensive and well established, e.g. the ICD-10 disease classification. However, the absence of classifications or of established definitions and taxonomies for those elements in an encounter which are more patient-centred than disease-centred does not prevent the GP from diagnosing these elements. The subsequent section will argue that in making a diagnosis and prescribing treatment, the GP adopts a comprehensive focus embracing both the patient and the disease, and that this process ideally is a simultaneous rather than sequential (as in linear thinking) process that unfolds in different interrelated dimensions (Table 1).

Three typical clinical situations in general practice will be used to demonstrate the multidimensional nature of the GP’s work.
The purpose of the present paper is to explore if the GP’s approach to these patients differs from that of other health care professionals, e.g. a specialist in infectious disease (A), rheumatology (B) and oncology (C), and to establish where the GP’s participation adds value to the overall performance of the health care system.

The biomedical diagnosis
First of all, the GP makes a biomedical diagnosis, as all doctors do. Already in this process (s)he adds value to the clinical work by using specific epidemiological skills as a physician able to handle the diagnostic process in an area with low incidence of new serious diseases among many less serious problems and diseases. The predictive value of the diagnostic manoeuvres accordingly is rather low, and the GP’s clinical work therefore also involves the management of probability. The GP handles the probability aspect by adopting a diagnostic strategy that takes into account the probability of frequent and rare diseases and relies on different tools, e.g. the dialogue with the patient and watchful waiting, and intuitively (s)he uses the concept of likelihood ratios when adding new tests to the diagnostic strategy. All these characteristics have their own theory which can be made explicit and taught and trained as part of the education to become a specialist in general practice/family medicine.

In case A, the doctor may take a swab from the throat (negative for bacteria) and do nothing more, as the child looks healthy. As part of the consultation, the GP may consider the probability of serious disease, e.g. leukaemia, and immunological deficiencies, but the GP’s skills in probability management and watchful waiting makes the GP abstain from further investigation.

In case B, the GP relies on the diagnosis performed by a specialist, and the value added by the intervention of the GP applies to the next stage in the multidimensional diagnosis and treatment (to be described later).

In case C, the GP also relies on the specialist’s assessment but may consider several biomedical complications, e.g. pain and nausea control, and he may consider ruling out the diagnosis of, for example, hypercalcaemia or exudate in the lungs.
Being able to establish a correct biomedical diagnosis is, however, not the only target that must be met by a GP seeking to do good clinical work. A GP seeing a patient in the consultation adds value to the overall performance of the health care system along three important extra-diagnostic dimensions to be reviewed below (Table 1).

**Culture and context diagnosis**

The GP sees the patient’s condition in the light of the person’s cultural background and his/her general and episode-specific context. Thus, pain is perceived and presented in different ways in different cultures and subcultures in a society, and in different families. Sick leave patterns may also be different, e.g. among blue and white collar workers (general context) or in a well-run company compared with a company going through a crisis (situational or episode-specific context).

In each of the three cases, the doctor intuitively reflects on traditions in the patient’s family and (s)he considers how this family usually reacts to symptoms and signs of disease. The GP may, for instance, consider their health care-seeking traditions (case A), or reactions to disability (case B) or pain (case C). The diagnosis established in this cultural context dimension impacts on the final diagnostic assessment made and the treatment planned.

The context of culture is highly complex, and the above example sheds only partial light on some of the aspects of culture that need to be considered when establishing a context diagnosis. The importance of a patient’s cultural background and present values to diagnosis and treatment makes this subject area an obvious candidate for research, explicit description and teaching; an area that may gain valuable insights from medical anthropology.

**Medico-psychological diagnosis**

The next step in the GP’s process of establishing a multidimensional diagnosis consists of assessing the patient’s personality. At this stage, the GP assesses how the patient copes with health problems and disease, i.e. whether the patient denies the problems or fights them. Other issues explored include the patient’s interaction with others (e.g. family or colleagues), and the patient’s health perception and tendency to somatization when exposed to stress from work or interpersonal conflicts.

In case A, the GP may consider if the mother somatizes by proxy or if the family has a strong external locus of control which pushes them to seek professional help for minor complaints. In cases B and C, the GP will consider the patient’s normal and present coping skills and take them into account when planning further action.

The discipline of family medicine must identify the theories behind, for example, coping, somatization and people’s way of interacting. In this process, help may be sought from the discipline of medical psychology, but the insights gained must be adapted to the particular context of clinical work in general practice, which is also a strongly needed area for general practice research.

**Network and social diagnosis**

The final stage in the process of establishing a multidimensional diagnosis consists of assessing the patient’s social situation, e.g. working conditions and social network. This stage includes considering whether the patient can draw on resources within the family or among friends or colleagues to strengthen his/her coping strategies. It is also important to consider whether some people in the patient’s network could be counterproductive, e.g. to the patient’s compliance with respect to following a diabetes diet or to motivating a patient to stop smoking. Theories about social relations and network can be devised, taught and made an area for further research in a GP setting. Medical sociologists often will be of great help in this process, but concrete insights into the area described should also be sought in clinical work in general practice.

In case A, the GP may consider if there are problems at school or with friends that push the patient into the ‘safe’ sick role. In case B, the GP reflects on the patient’s occupation and may, for example, consider sick leave or sick disability pension. In case C, the GP reflects on the level of support that can be expected from spouse, children and neighbours (i.e. the informal network) and from home nurses or other professional partners in the primary health care team (the professional network), and (s)he may try to find strong and weak links in the network around the patient.

**Diagnostic tools**

The GP has at his/her disposal a number of diagnostic tools.

**The consultation process**

A good consultation process is, in itself, one of the tools required to obtain a balanced diagnosis and also one of the tools used to perform a multidimensional therapy or intervention. A theory-based approach and explicitness with respect to the contents of the consultation process therefore would seem to be a must.

**Theoretical knowledge**

The next important tool relates to ‘the Sherlock Holmes approach’. Sherlock Holmes found traces of the criminals simply because he looked for them. He had a feeling that something important was here or there. Similarly, a GP cannot find that which (s)he does not know may theoretically exist, which makes it of paramount importance that the GP acquires theoretical knowledge about all elements in the four-dimensional diagnostic process. Most physicians have thorough knowledge of the theories and tools used in the biomedical diagnostic process, e.g. X-rays, laboratory tests, etc. In addition, most senior GPs have knowledge about the three extra-diagnostic dimensions, but this knowledge often is not explicit, precise and well-described, and therefore is difficult to
teach young doctors. The future should therefore see increased emphasis on explicit theory, teaching and training in this field (see Table 1, second column for characteristic examples of elements belonging to these extra-diagnostic dimensions).

The therapeutic relationship—communication and continuity

The GP’s most important tool may be to build up a professional therapeutic relationship with the patient in the consultation.22,23 The GP achieves this by conducting a professional consultation process and by using different additional tools, of which only the two most important should be mentioned.

The most important tool is communication skill. The importance of the patient-centred, the dialogue-centred or the relationship-centred style has been described in detail elsewhere.4,23 Good communication skill is not an importancy of the patient-centred, the dialogue-centred or the relationship-centred style has been described in detail elsewhere.4,23 Good communication skill is not an especially good or characteristic of the work in general practice setting and are therefore best researched and taught on the basis of good empirical research. Some elements in communication may be unique to the general practice setting and are therefore best researched and taught within this setting. Hence, efforts must be made to identify and describe such elements thoroughly with a view to communicating to other disciplines how they add value to the overall health care system. Continuity is not a privilege that belongs to general practice alone: (i) a value in itself in all human relations; (ii) other physicians may experience continuity as an important aspect in treating chronic patients even if they will never be regarded as GPs; and (iii) in modern health care systems, GPs perform excellent work in settings where continuity is impossible, e.g. in walk-in clinics or in out-of-hours services.

We must ask ourselves which part of continuity we find especially good or characteristic of the work in general practice, e.g. compared with the work of a diabetologist who sees the same patients again and again over time for a specific diagnosis.

Each of the described diagnostic tools has unique characteristics that can be subject to research with a view to being taught at universities and refined in practical clinical skills training. Furthermore, there is a strong need for classical biomedical tools to be refined for use in primary care settings. This process requires much further development and the pursuit of empirical research in primary health care to extend, complement and make relevant ongoing research into these tools that is undertaken in hospitals.

Intervention

It is the combination of the GP’s simultaneous assessment in all dimensions that determines the final judgement or diagnosis which forms the basis for an intervention strategy, and intervention or treatment should always await the making of this multidimensional diagnosis. Treatment can be targeted at all elements of the described multidimensional diagnosis. Intervention during the consultation can be technical, medical with prescription, and verbal, ranging from simple dialogue with counselling to specific verbal therapy, e.g. psychotherapy or talks with the patient and with network members to reinforce their support of the patient (network intervention). Finally, intervention may consist of a referral to other parts of the health care system. It is the sum of the individual, precise multidimensional intervention strategies that amounts to good clinical practice, and there is a pertinent need for research into these strategies and for nurturing and refining the practical skills required to perform effective intervention in response to the multidimensional diagnosis. Further discussion of the GP’s intervention strategies is outside the scope of this paper.

The intervention in relation to case A is, of course, to rule out serious infectious diseases and other biomedical diseases, but it may also be to have a dialogue with the patient and the parents in relation to the three other described diagnostic elements. The success of the consultation depends on the quality of the dialogue in the consultation (the therapeutic relationship), and the GP will seek to obtain a shared understanding with the patient and may actively use the tool of watchful waiting. In cases B and C, the GP will intervene in relation to all four elements of his diagnosis, e.g. taking care of biomedical problems, talking with the patient about reactions to the disease, and about sick leave, and the GP may also promote adjustments in the way the family reacts to the disease as well as seek to influence the network’s way of supporting the patient.

Management skills

The GP is part of a comprehensive health care system and holds part of the responsibility for its smooth running, in relation to single cases, possible referrals and the overall course. Therefore, a GP finishing a consultation and trying to help the patient through an episode of care relies on management theory and skills as well as administrative insight and skills. The GP must also draw
on this theory and these skills when planning the administration of the clinic (micro level of management skills) or when defining his/her role in a comprehensive health care system (macro level of management skills). These elements may also be explicitly researched, described and taught. Further description of these administrative and management theories and tools is also outside the scope of this paper.

Implications for research

Concepts related to the multidimensional diagnosis (Table 1, second column) are mainly rooted in non-medical disciplines. This, however, does not create a situation essentially different from that arising, for instance, when a GP assesses rheumatoid arthritis using theory obtained from the discipline of rheumatology. Working with other medical and non-medical disciplines, the GP must identify diagnostic elements required for the clinical work to be performed effectively, and (s)he must select precisely only those theoretical and cognitive elements that best meet the needs of the GP working as the first line professional of the national health system. Reaching this goal requires development of qualitative and quantitative research methods and adaptation and transformation of knowledge from neighbouring disciplines into something relevant, feasible and outcome oriented for the work of a GP.29

As a consequence of this, the discipline of general practice/family medicine must clearly identify at least five main research areas.

• The first research area to be covered is the ground shared with other biomedical disciplines where we need to describe the work with classical biomedical diseases in a primary health care and general practice context.
• The second research area consists of developing a common ground with the humanistic disciplines to refine the three last elements in the multidimensional diagnosis and therapy.
• The third area involves research into the ground that general practice has in common with different auxiliary disciplines, be they classical biomedical auxiliary disciplines such as image diagnostics, laboratory tests and microbiology, or diagnostic tools such as communication skills, watchful waiting and active use of the concept of continuity. We must also investigate the development of new diagnostic instruments or techniques, e.g. rating scales, bedside laboratory tests, etc.
• The fourth research area centres on intervention, i.e. the outcome effect of different GP-oriented multidimensional diagnoses.
• Finally, research is required into how GPs can be active partners in health services research with a view to gaining further insight into management skills needed for running a good clinic and for being good partners in a total health care system.

This research should use appropriate scientific paradigms and methods, and it must address both the positive and negative effects of the GP’s activities, including, for example, whether there are negative effects of continuity of care.

Implications of the model with respect to teaching the speciality of general practice

The model will have several implications for GP teaching and GP teachers.

First, the teaching of general practice/family medicine as a separate discipline must focus on theories, knowledge, skills and practical performance in conducting the multidimensional diagnosis. Teachers must be able to give a comprehensive description of each of the four elements, and there should be no further talk of the art of medicine when describing the non-biomedical sphere.29,30 The student and the young doctor must be able to use the four diagnostic and therapeutic elements actively in any clinical situation and must be able to weigh their mutual significance in a given clinical situation.

The second implication for teaching lies in the need to refine all our diagnostic tools and to be explicit about their strong and weak sides. While having for many years devoted all our efforts to continuous refinement of, for instance, X-ray imaging and laboratory tests, the time has now come to refine the tools used for building a therapeutic relationship. The GP teacher must be explicit with respect to the description of which components of communication and continuity (s)he uses in a given situation. Explicitness evidently is also required when it comes to demonstrating different intervention strategies, and the choice of intervention strategies must be closely tailored to the dimensions involved in making the diagnosis.

Finally, introduction of the multidimensional diagnosis raises the question of which means should be brought into play to demonstrate to students and young doctors that general practice professionalism is based on research and that it makes a notable difference as compared with an approach rooted solely in the classical biomedical diagnostic framework, not least when it comes to outcome measures, including the measure of patient satisfaction.31

Only if we reach these goals in theoretical and practical teaching can we claim to be good academic teachers. Success in this endeavour will position GPs as part of a comprehensive health care system and will allow us to teach and to demonstrate how general practice adds value to the health care system and benefits our patients. The explicit teaching of young doctors in theories, competences and skills pertaining to their role as GPs and
demonstration of concrete outcomes of our functions as GPs will be highly effective in removing any doubt about the added scientific value of a GP’s activities in the health care system.

References