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Assisting the observation skills of medical students visiting general practices and patients in their homes

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Summary

The article describes *a frame of reference* for assisting the observation skills of medical students. It is intended for use early in the student's study—for example in the third year curriculum. Its function is to help students give meaning to what they see and hear (1) when present during consultations between a general practitioner and his patients, (2) when discussing the reasons for particular decisions and activities in a general practitioner's handling of a case, and (3) when visiting a patient of a general practitioner at home. The programme of discussions, exercises, case presentations and video film which is used to teach the frame of reference is outlined. Criteria, which such a frame of reference evidently needs to satisfy if it is to function as intended, are proposed. These are derived from the opinions of third year medical students who have used the frame of reference on visits to a practice and who were later invited to critique its usefulness.

Key words: FAMILY PRACTICEj•CdUCI •EDUCATION, MEDICAL, UNDERGRADUATE; TEACHING/ ¬methods; PROBLEM SOLVING; MEDICAL HISTORY TAKING; NETHERLANDS

Introduction

In faculties such as law, social science, engineering and medicine, students are sometimes required to spend short periods 'in the field' observing the profession for which they are studying at work. If students on such occasions are to observe critically and analyse effectively what they see, it is important that they are given some concrete frame of reference *into which* they can fit what they observe and *out of which* they can ask critical questions of the professionals with whom they come in contact.

In this paper we would like to describe such a frame of reference, to indicate when and how it is taught and to comment on its use by the students. The frame of reference in question is a *concept of general medical practice in operation.* It is used by students during a required visit to a general practice and to a patient at home. This is a requirement in the curriculum of the Department of General Practice in the Faculty of Medicine at the University of Utrecht. All medical students, irrespective of whether or not it is their intention to become general practitioners, must satisfy this requirement during their third year of study. The visit, including the extended visit to a patient, lasts officially for 5 half-days. Some students make their own arrangements to stay longer. Its purpose is to enable the student to give a meaningful answer to the following questions: *Who is the 'general practitioner' ? What does he do? What sort of decisions is he typically involved with and how does he make them?* K*7th whom does he need to cooperate? Are all his activities strictly 'medical' or not? What factors influence his decision making and activities?* and *To what essential purpose is the work of a G.P. directed?*

The concept

The concept, which is intended to help the student observe more critically and have more fruitful dis-

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cussions with the general practitioner (GP) and the patient he visits, consists of five elements. These five elements are: (1) the need or needs of the patient, (2) the medical and paramedical assistance available to the GP, (3) the problem-solving process used in general practice, (4) the 'activities' of general practice —diagnosing somatic and psychosomatic illnesses, counselling, practising preventive medicine, administering the practice and so on, and (5) the factors that typically play a role in what a GP does and in what decisions he makes. As drawn in Fig. 1 *and strictly for didactic purposes,* the five elements interacting with each other conceptualize general practice in operation. It is in this sense that the frame of reference is referred to as a 'concept' of general practice.

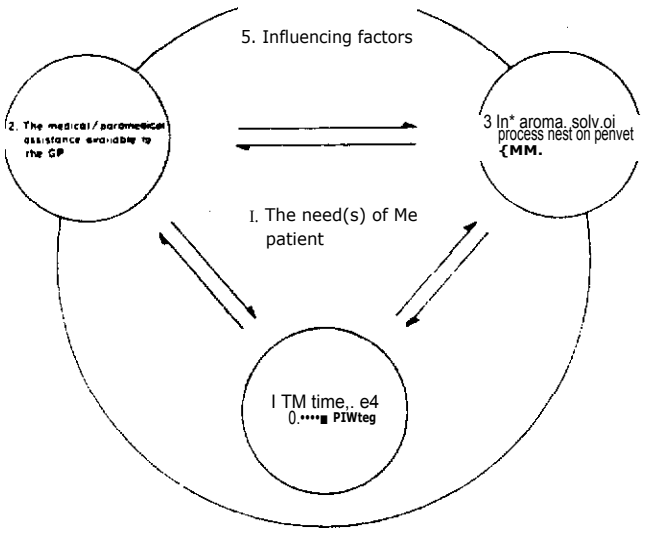
The students' programme

The concept of general practice represented by the elements in Fig. 1, is taught *prior* to the student's excursion into the field. This is done in a series of group meetings with the help of cases and events taken from practice, discussions led by a group leader, hand-out materials and a video film of a consultation. The group leader is him- or herself a practising GP and part-time staff member of the Department of General Practice. The group size is restricted, so far as this is possible, to a maximum of twelve students per group. The group meetings in which the concept is taught are spread over 4 half-days.

An overview of the students' programme, indicating the sequence in which the elements in the concept are taught and the learning time involved, is given in Table I.

TABLE I. The programme showing teaching sequence and times involved

Session No.	Topic/exercise	Time in min (approx.)
1	Introduction by group leader	30
2	'The needs of patients'	60
3	'Medical/paramedical assistance'	60
4	`The problem-solving process' (I)	60
5	'The problem-solving process' (2)	60
6	The problem-solving process' (3)	60
7	'The problem-solving process' (4)	60
8	'The activities of general practice*	60
9	'Influencing factors'	60
10	Final exercises in the use of the concept	240
Field visits	Students' visits to individual practices Students' visits to individual patients	(24) days)
II	Exchange of experiences and impressions	210
12	Discussion of a case met in practice	150
13	Exchange of experiences of visits to the patients	180
14	Discussion of reports	180
15	Group answering of test questions	150
16	Student critique of the Programme	90



Etc. I. The elements in the concept of general practice.

As indicated in Table 1, individual excursions into the field are followed by a further series of group meetings. During these meetings the students exchange accounts of their experiences and discuss the content of each other's written reports on the visit to a patient. These reports cover the medical, psychological and social aspects of the patient's illness. The exchange of experiences and reports of patient visits are assisted (where necessary) by referral to the concept represented in Fig. I.

The teaching of the concept

A challenge which the group leader faces is to teach the concept in a way that is not *too directive* but at the same time *directive enough* to give the student confidence that he or she can use the concept as a frame of reference for observation and discussion. The strategy used to *teach the concept,* is indicated below with the help of descriptions of some of the programme sessions: sessions 2, 3, 5, 7, 9 and 10.

The needs of the patient (session 2) time c. 60 min

In an introductory meeting (session 1). the group leader has explained the goal of the programme and explained that the elements in the concept will be handled first of all one by one and later together. Exercises and discussions in session 2 focus on element No. I: the needs of the patient.

Without identifying what sort of needs, the group leader explains that a GP has to respond to a whole variety of needs. Some, he explains, are clear to the GP early in the consultation with the patient and others are obscure. He invites the students to list the sort of needs that *they* think a GP has to respond to in his day to day work in the practice. These are discussed. The exercise ends with the students being asked to match each of the needs that have been identified, with the appropriate activity(ies) from the following categories: (1) exploration, (2) diagnosis and therapy, (3) counselling, (4) early diagnosis and prevention, (5) practice oriented activities. and (6) other.

The goal of this session is to have the student recognize the wide spectrum of needs/problems that a GP can meet and the wide variety of activities that such needs can demand.

Medical/paramedical assistance available to the GP (session 3): time c. 60 min

In session 3 the student learns that, in many instances, a GP cannot alone respond effectively to the needs of a patient. He works in cooperation with others. After discussing the use of medical and paramedical assistance in several examples the students are given two problems to study. These are chosen from cases that a GP could have to handle (multiple scelerosis, *dementia senilis,* kidney dialysis and drug addiction) in his practice. The students study the two problems individually. Each is then asked to choose the one problem which interests him most. He then joins two other students who are also interested in the same problem. The student *triad* is then asked (a) to speculate on how the problem is likely to develop and (b) identify the sort of people—specialist, colleagues, etc.—whom the GP could profitably involve in his continuing response to the patient's need(s). Finally, the ideas of the different subgroups concerning the assistance that could be used are discussed.

Analysing the problem-solving process of a GP (session 5): time c. 60 min

The problem-solving process used in general practice, element 3 in the concept, is a key element. Session *5* is the second in a set of four sessions in the programme which are devoted to this subject.

In session 4 the student has learned that a GP is a 'problem-solver'. It has also been made clear with the help of discussions and exercises that the GP must, in view of the variety and sometimes the complexity of problems that he meets, be a systematic problem-solver. He makes use, the student has recognized, of the well known steps in problem-solving viz. data collection', 'hypothesizing', 'selecting a solution or solutions on the basis of a hypothesis or hypotheses', 'testing hypotheses' and 'validating solutions'.

The student, during his visit to the practice, will be present during a number of consultations of his host GP with a patient. He will be required to analyse and discuss with his host GP the decision-making process in the different cases. In session 5, he is given an opportunity of exercising his analytical skill in this direction. In one exercise, for example, each student is given a one-page hand-out. This contains a description of the facts and events in a consultation of a GP with a mother and her four-year-old son.

The mother is concerned that the child is 'pale, not eating well and seems constantly tired'. This is a typical case that a GP can meet. In the description of the consultation the GP involved gives the facts he was confronted with, the factors which steered his thinking and the decisions he made. The GP's statement is divided into short paragraphs for quick reading. The paragraphs are numbered for ease of reference in the exercise and later in a general discussion. What the student must do is to study the material and identify at what point in the consultation the GP is collecting data, at what point is he hypothesizing, at what point testing his hypothesis, and so on. On completion of this individual 'paper-and-pencil' exercise, the students compare and discuss their conclusions. It becomes apparent that although the steps in the problem-solving process are not always clearly defined and differentiated, the steps are present and are recognizable.

The problem-solving process in handling non diagnostic-therapeutic problems (session 7): time c. 45 min

In the previous sessions, the student has been confronted with the fact that a significant number of the problems that a GP meets in practice call for 'history taking', 'physical examination', 'the initiation and monitoring of therapies', 'referral to other points and persons in the health system' and 'consultation with colleagues'. These activities, the student has learned, are frequently grouped under the heading *of diagnostic-therapeutic activities.* These are the means which the GP frequently needs when he implements the various steps in the problem-solving process. The student has also learned (see Fig. 2) that none of these means is specific. This is to say that any one of the means may be of use at any one of the steps in the problem-solving process.

In session 7 the group leader switches the group's attention to the fact that a GP must frequently respond to needs/problems which involve him in *non diagnostic-therapeutic* activities. The screening of the patients, the giving of medical advice, counselling, the giving of injections and so on are examples of such activities. The group leader suggests that such activities also involve, directly or indirectly, *the steps in the problem-solving process.* The students are then asked to listen to a case that the group leader presents. The case concerns a 22-year-old married woman patient with no children. She comes to the GP for a routine 'pill control' consultation. During the consultation she explains to the doctor that 'next year my husband and I would like to start a family'.

She asks for an injection against german measles. During the presentation of the case the group leader

Step n the problem salving Process / Diagncsitic- therapeutic activities						
I. Taking patient's history	x		x			
2. Examining the patient	x	x	x		x	
3. Selecting implementing therapies	x	x	x	x		
4. Consuiting with others	x	x		x	x	
5. Re⁴errci of the patient						

Etc. 2.

raises such questions as: Is an injection necessary? If so, when can she best be given it? Is there a more subtle need of the patient that the GP in the case needs to respond to? If so, what is this need and how can he best respond to it? Information given has suggested that the woman may have some unwarranted fears playing in her mind. The students on completion of the presentation are asked to identify in what way the use of the steps in the problem-solving process could directly or indirectly help optimize the GP's response to the patient's need.

TABLE 2. List of influencing factors

	The circumstances of the case.
2	The personality of the GP.
3	The existing knowledge and skill of the GP.
4	The GP's perception of what his role is.
5	Morbidity and mortality patterns in the practice.
6	The state of contact between the GP and patient.
7	The diagnostic/therapeutic philosophy and approach of the GP.
8	Point in time of the contact between GP and patient.
9	The presence or absence of needed assistance.
10	The past history of the patient and risk (if any).
II	The size and location of the practice.
12	Others. -

Influencing factors (session 9): time c. 60 min

Session 9 concentrates on element 5 in the concept: the factors which influence, or can influence, what a particular GP does and what decisions he makes. The exercises in this session are related closely to what has been covered in the preceding session (session 8). In session 8 the students have been introduced to and have discussed the various 'activities' which characterize general practice. They have seen how certain aspects of these activities distinguish general practice from hospital practice or specialism.

Session 9, as a learning experience, revolves around the analysis of the decision that a GP has made in three separate incidents. The incidents are described in a hand-out that each student receives. The student's task is to identify independently, what, in his opinion, are the factors that influenced the decisions that were taken. The first incident concerns a GP's non-referral of a 70-year-old woman to an orthopaedic surgeon for correction of 'hammer toes'.

The second incident concerns a GP's decision not to visit a patient in the early hours of the morning despite the angry message that the caller would get another GP to come. The third event involves a GP's response to a patient with symptoms of rheumatoid arthritis and a depression which is disturbing her relationship with her husband, and disturbing her three young children. Accompanying the description in this last item are two quite *independently given opinions* by two GPs on what the GP in the case cited might best do next. The opinions differ. The students must identify what factors might account for such a difference of opinion.

To end session 9, the group leader hands out the list of factors given here in Table 2. Fie emphasizes that such a list is never complete but can be helpful to have when he (the student) visits the practice and patient at home. It can help him identify what factors are playing, or have played, a role in the GP's decision making.

The final exercises (session 10): time 4 x c. 60 mm

The final exercises are designed to integrate the five elements in the frame of reference. They are designed to exercise the total concept as the student might use it on his visit to practice and patient. This is done with the help of short cases presented to the group. They are selected from practice. Each has medical and/or psychological and/or social components in it.

The last exercise in this series of cases invites the students to analyse two consultations which have been video-taped. The consultations concern the same patient and same problem—a young woman complaining of pains in her lower back. The patient, a simulation patient, is seen in discussion with two different GPs. The GE's are two of the teaching staff from the Department of General Practice. They carried out their consultations independently of each other and with no prior knowledge of the 'patient's' complaint. As it happens, the first GP focuses on the possible *somatic* elements and origins of the problem. The second chooses to explore possible *psychosomatic* causes of the patient's symptoms. After each consultation (part I and part II of the film) the GP who has been seen at work with the patient gives a short explanation of his ideas and thinking in relation to what he sees is the patient's need. During each part the student makes notes relating to the following questions:

What is the need of the patient?
What activities does the GP's response to this need (as he sees it) involve him in?

What steps in the problem solving process (gathering information, hypothesizing and so forth) were involved?

What assistance (if any) is, or will be, called in by the GP?

What factors played a role in the decision making of the GP?

On conclusion of the film the students exchange their ideas. They discuss between themselves the similarities and dissimilarities in approach/thinking of the two GPs.

The use of the concept

To what degree the 'five element concept' described in this article assisted the students in their individual visits to a practice and **to a** patient at home, is indicated in the points below. These are distilled from discussions with students and group leaders who were involved in the programme during the period from September 1977 to June 1978. During this period twenty groups of students—twelve per group—passed through the programme, Ten group leaden were involved and some 100 practitioners cooperated as host GPs. In principle, the learning experience in the programme (pre-field meetings, visit to the practice and patient, and post-field trip meetings) were valued and liked by the students. Points emerging from discussions with students about their use, or non-use, of the concept as a frame of reference for analysis and discussion of the things they met, included the points listed below.

(I) A minority of the students (say 5%) seemed to prefer a totally unstructured and unguided period of observation in the practice and visit to a patient. Although in principle not against the concept and the elements in **it,** they preferred to work without any sort of organizer.

(2) Some 15-20% of the students welcomed the structure and direction it gave to their learning experience. Despite some reservations about whether conditions were always present for its proper use, these students found the concept a useful organizer of their thinking and for their discussions with their host GPs. In short their reaction to the concept was highly positive.

(3) The majority *(ca.* 70%) of the students indicated that they liked the concept but found their use of it was to a certain degree inhibited. Several reasons were given for this including the following:

(a) The initial meetings with the host GP in the consultations with patients were for many students an 'overwhelming experience*. This made use of and attention to the concept, initially at least, difficult.

(b) For some, it was not possible to observe and *at the same time* use the concept. This difficulty was compounded by the speed at which everything was sometimes happening.

(c) Circumstances and/or personality and/or lack of experience made it difficult for some host GPs to fulfil the role of 'tutor' to their students. Some found it difficult to discuss cases with their student in terms **of the** conce; t—'hypothesizing', `problem solving', **etc.**

(d) Some students found it difficult to remain strictly in the role of `observer' during the consultations with their host GP and patients, Their own ideas about what **the problem was and how it should perhaps be handled, dominated their thinking** ***too*** *early* **in their observations. This interfered with ther use of the concept.**

(e) In some practices the consultations with patients were frequently—and of necessity—very short. They often followed each other in quick succession. This fragmented the student's observation and thinking and made use of the concepts as an analytical tool difficult. This was in sharp contrast to the time available in the exercises to make use of the concept.

Additional comments and ideas from the students suggested that the concept was most useful *after* (rather than during) the consultation with patients and *after* **the visit to the patient at home. For the latter, many students felt that a second concept** for viewing 'illness through the eyes of the patient' would have been helpful. The concept which they were using was mostly helpful in seeing the 'illness through the eyes of the GP' involved with the case.

It was not possible to formally collect data over the host GP's ideas about the usefulness of the concept. However, our impression **is that a significant number found the concept** *as a frame of reference in which to discuss general practice* indeed **helpful. The** group leaders from the Department of General Practice, despite some difficulties in having to work in a rather 'programmed' set of sessions, found the concept gave some important structure and direction to the group meetings. They were assisted in their work of preparing their students for the visits to practice and patient by the existence of **a 'teacher's**

guide'. This contained all the materials needed for the group sessions and also suggestions how each session might be conducted. Some leaders followed the suggestions in the teacher's guide closely. Others preferred to adapt the suggestions to their own style and to some degree their own instructional content. This had both advantages and disadvantages for the teaching of the concept.

Some conclusions

The reaction of the students suggests that *'some concrete and relevant frame of reference or concept into which they can fit what they see and ow of which they can ask critical questions of the professionals with whom they come in contact'* can be useful in the type of curriculum activity that this article has described. For such to work effectively in a curriculum (medical or non-medical) certain criteria, however—our experience suggests—will need to be satisfied. These criteria are: (1) the conditions must be present in the observing situation for the concept to function, (2) the individual student must, in principle, value the concept's content and want to use it, (3) the result of the concept's use—and particularly its initial use—must be such that its *continued use* is reinforced, and (4) the concept's content must be appropriate for, and not distracting to the goal it is intended to serve. The students' remarks about the need for a 'second concept for use when visiting the patient' suggests, for example, that the concept described in this article did not satisfy this criterion (criterion 4) to a satisfactory degree.

What might be done in general to improve the functioning of the concept that we have described? The answer to this question lies, it seems to us, in solutions relating to the first criterion mentioned above. How host GPs can be assisted in creating 'better conditions' for the student's use of the concept, is now receiving attention in the Department of General Practice at this University. The idea of a second concept to assist the student's contact with the patient is also currently under discussion.

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