Family Practice

Vol. 14, No. 4
Printed in Great Britain

P-R-A-C-T-I-C-A-L: a step-by-step model for conducting the consultation in general practice

Jan-Helge Larsen, Ole Risør and Sam Putnam

Larsen J-H, Risør O and Putnam S. P-R-A-C-T-I-C-A-L: a step-by-step model for conducting the consultation in general practice. *Family Practice* 1997; **14**: 295–301.

Background. It has been shown that when patients are unable to express all their major concerns, they are less likely to follow the physician's prescribed treatment plan and they are less satisfied. On the other hand, the GP has a limited amount of time to elicit all the appropriate information and must ask certain questions about the biological aspects of the illness in order to carry out her professional responsibilities. By acting in a patient-centred way, first enabling the patient to express himself, the GP can make maximum use of patients' ability for problem formulation and solution.

Methods. We describe a model, for which the mnemonic, P-R-A-C-T-I-C-A-L, will help the practitioner to remember its nine steps. The model uses a chronological succession of strategies during the consultation that balances the voices of medicine and the lifeworld. In overview, the GP takes the patient, step by step, first through an exploration and clarification of his views of the illness, then expands the problem by further examination (e.g. the physical examination), a negotiation about the final model of the illness that includes both diagnosis and management, a discussion of the treatment plan, and finally a moment of reflection to prepare for the next visit.

Keywords. Concern, consultations, frame of reference, general practice, patient-centred.

Introduction

> "In typical interviews the 'voice of medicine' comes to control and dominate the discourse. Patients' efforts to tell their stories and to provide a sense of their lived experience (the 'voice of the lifeworld') are disrupted by physicians who ignore what they are saying and transform all content into the terms and the logic of the biomedical framework."[1]

During a consultation the most vital and often the most difficult task is for the GP to determine the real content of the patient's visit—the biological as well as the psychological and social content. The cognitive aspects of the medical problem are most readily obtained, since this is what physicians have been traditionally trained to collect and what patients expect to divulge. The psychological and social meaning leading to the patient's visit frequently remains obscure. Since there is significant psychosocial content in approximately 50% of primary care visits, physicians will often obtain an incomplete history if they do not ask about these issues—a fact that becomes blatantly clear when (with a hand already on the door handle) the patient says "Actually I came to . . .".[2,3] Furthermore, it has been shown that when patients are unable to express all their major concerns, they are less likely to follow the physician's prescribed treatment plan and they are less satisfied.[4] On the other hand, the GP has a limited amount of time to elicit all the appropriate information and must ask certain questions about the biological aspects of the illness in order to carry out her professional responsibilities.

McWhinney delivered some persuasive evidence that talks in the consultation room should be patient-centred.[5] By acting in a patient-centred way, enabling the patient to express himself, the GP can make maximum use of patients' ability for problem formulation and solution.

In this paper, we describe a model that has been tested in a series of studies and courses and outlined in two instructional papers.[6,7] The model uses a chronological succession of strategies during the consultation that balances the voices of medicine and the lifeworld. In Table 1 we present the elements of this model, showing where some of them have been drawn from

Received 23 July 1996; Revised 14 March 1997; Accepted 3 April 1997.
Department of General Practice, 3 Blegdamsvej, DK-2200 Copenhagen, Denmark.

TABLE 1

PRACTICAL (9 steps)	Byrne and Long[2] (6 steps)	Pendleton *et al.*[8] (7 tasks)	Neighbour[9] (5 Checkpoints)	Lassen[10] (6 Dimensions)
1. Prior to consultation The patient's story				
2. Relationship 'Permission'	(i) Relationship	(vii) Relationship	(i) Connect	
3. Anxieties Ideas, concerns and expectations Cognitive/affective	(ii) Reason for attendance	(i) Reason for attendance, including ideas, concerns and expectations	(i) Connect	(i) Expectations (ii) Ideas
4. Common language Summarize Check of health belief		(ii) Other problems (iii) With the patient to choose action	(ii) Summarize	
5. Translating From lifeworld to world of medicine Verbal or physical examination	(iii) Verbal or physical examination			
6. Interaction Common understanding Change of frame of reference Doctor's or patient's choice	(iv) Doctor and patient consider the condition and (v) Detail treatment or further investigation	(vi) Shared understanding (v) Responsibility	(iii) Handover	(iii) Information about the contents of the advice (iv) The effect and relevance and (v) The patient's assessment of the advice given
7. Converting insight into action Impede/promote				(vi) Obstacles to compliance with the advice
8. Agreement check Safety-netting Prolonging		(vi) To use time and resources appropriately	(iv) Safety-net	
9. Leave from consultation OK? Ready for my next patient?	(vi) The consultation is terminated		(v) Housekeeping	

previous studies.[8-10] The mnemonic, P-R-A-C-T-I-C-A-L, will help the practitioner to remember its steps.

In overview, the GP takes the patient, step by step, through an exploration and clarification of his views of the illness, an expansion of the problem as the clinician conducts further examinations (e.g. a review of systems, the physical examination, laboratory tests), a negotiation about the final model of the illness that includes both diagnosis and management, a discussion of the treatment plan, and finally a moment of reflection to prepare for the next visit. In the process of carrying out these strategies, the GP focuses all of her energy and attention on the patient in front of her in order to build a trusting relationship and help him release the tensions caused by his anxieties (Table 1).

Prior to the consultation: how has the patient prepared for the visit?

Before visiting the GP's office, the patient will have prepared for the visit by asking himself the following questions:[11] what happened?; why did it happen?; why to me?; why now?; what would happen if nothing were done about it?; what should I do about it, or who should I consult for further help?

It is important for the GP to remember that as a result of this 'head start', the patient already has his own ideas of what is wrong and may have many anxieties as he fantasizes about what is wrong. Therefore, the GP must prepare herself by suppressing the urge to ask questions and by adopting the attitude that she is ready to listen to the patient's story with a facilitating and

and inquiring mind. The fact that this does not happen is well illustrated in Beckman and Frankel's classic study of primary care encounters in which few patients could complete their opening because they were interrupted, on average, 18 seconds after the beginning of the interview.[12] They also found that no completed opening statement took more than 150 seconds.

Relationship: let the patient talk

The GP initiates the consultation with a greeting, eye contact and perhaps a handshake or other appropriate way of touching. This initial contact builds the relationship by signalling interest and acceptance and gives 'permission' for the patient to bring forward whatever is on his mind.[13]

The GP's first statement should be brief without extraneous comments: 'Good morning'/'Hello'/'Hi'; 'What brought you here today?' 'Tell me'. The GP then keeps quiet and gives the 'floor' to the patient. This first exchange is crucial in establishing at the beginning of the encounter that the GP truly wants the patient to take the lead in telling his own story. If the GP says anything, it should be to confirm that she is listening.

Most GPs, when they first practice this step, are afraid that they will open Pandora's box and unleash a torrent of complaints that will consume the entire appointment. In fact, patients rarely take more than 2 minutes to complete their list of concerns.[12,14] Because the 'Voice(s) of medicine' have indoctrinated patients, the GP may have to make an extra effort to convince the patient that she (the GP) is really interested in hearing all the patient's concerns and may have to invite the patient several times to begin his story. Such questions as "what else . . . what is on your mind . . . what do you feel right now . . .?" are examples of effective techniques. If the patient phoned beforehand, the GP can say: "We already talked on the phone . . . could you tell me some more about it . . .?"

If the GP interrupts the patient in the beginning, the patient may be inclined to forget some of the reasons for coming, get the impression that 'doc knows best', understand that the GP is setting the pace, assume the GP will take charge of the remaining process, think the GP is busy today or feel that whatever he relates is just too petty. In the situation where the patient wanders off into details that seem irrelevant to the main concerns, the physician can always bring him back to the main story by saying "now you have said . . . can we come back to . . .?" and gently lead the patient back to the narrative.[15] The GP should also check if the patient has other, perhaps more important, questions today. If patients offer more complaints than the physician can reasonably manage in one visit, the GP can negotiate with the patient about which complaints are most troublesome to the patient and most worrisome to the physician and which other problems can be postponed to a next visit.

Anxieties: what does the patient want?

The title for this step is meant to cover a broad range of feelings that patients experience in the course of their illnesses—guilt, shame, a sense of inferiority, impotence, etc. All of these are likely to prevent patients from openly stating, or even acknowledging, the emotional content of their illnesses. However, as every good clinician knows and numerous studies have pointed out, a large proportion of visits to primary care physicians is prompted by patient feelings and psychosocial concerns.[16] Even in the absence of these issues, patients' heads are filled with fantasies about what is causing their symptoms.

The GP can elucidate these feelings and psychosocial concerns by asking a series of key questions, adapted to situation and person.[17,18]

(i) What caused you to come here today (and not yesterday)?
(ii) What do you think is your problem?
(iii) What do you think caused your problem?
(iv) Are you worried about anything in particular?
(v) What have you tried to do about the problem so far?
(vi) What would you like me to do about your problem?

By asking such key questions, the GP is also inquiring into the patient's health beliefs, eg. "I guess my stomach ache came from eating canned tuna last week—it was a bit stale . . ." or "We've had a lot of strain at my job for the past month, due to taking stock, so that's why, I guess . . .". If the GP fails to take into account that the patient's health belief may differ from her own, there is a major risk that the patient will not take the offered advice or make use of a prescription.[19]

Just by divulging the details of their concerns in an undisturbed narrative, patients will greatly reduce their anxieties. When combined with the doctor's meticulous clarification of their ideas and expectation, patients will feel that their concerns have been understood, i.e. that they have been able to speak in 'the voice of the lifeworld' and tell what their symptoms meant to them.

Common language: GP's summary

It is natural and professionally appropriate for the GP to formulate hypotheses about the patient's problems as she listens. Studies have shown that experts can manipulate more data in their short-term memory when they categorize the data ('chunk' in the jargon of psychologists studying this phenomenon).[20] For example, when the GP hears the patient talk about 'pain

in my chest', she will start to arrange the data in her head around the differential diagnosis of chest pain. However, no matter how compelling these differential diagnoses may seem to the physician, she must remember that they are foreign to the patient. Before contaminating the patient's model with her own ideas, the physician must be sure she has all the details necessary to understand the patient's model. She can do this best by summarizing what she has heard the patient say. ''So what you came to see me about today is . . .'' (short version); ''As I gather from what you have told me . . ., I understand the facts are . . ., that your major problem is . . ., and this is what you most want my help to solve . . . Am I correct?'' (complete version).

It may also be important for the GP to 'read between the lines' and say what she thinks the patient wanted to express, including feelings the patient might have had. When patients know that the GP has heard both the expressed and unexpressed thoughts and feelings about their problems, they are likely to feel a profound sense of relief. ''You had this heart attack last week, and the staff got so scared they called an ambulance, and you were rushed to the hospital and admitted for a few days. So today you came to see me to have your blood pressure checked. You also said that your wife got awfully scared. You know, lots of people getting an attack like that would be afraid they were about to die. Is that how you felt? And would you want to tell me about it?'' By using this phrasing, especially the last sentence, the GP encourages the patient to share his feeling and demonstrates that she knows how to meta-communicate (i.e. communicate on communication). Meta-communicating helps to ensure that GP and patients are speaking the same language and can be used every time the GP gets the feeling of misunderstanding.

An encouraging remark included in the GP's summary will work as an 'ear opener' while criticism will work as an 'ear closer'.

Translating: from lifeworld to world of medicine

Once the GP is reasonably certain that she understands the patient's model and has communicated this understanding to the patient, she can 'take the floor' and ask questions that will help her complete the history and develop a differential diagnosis. In addition, the physician will add details to her model by conducting the clinical examination. In this step, the GP is translating what she has found out from the patient into a model that also includes her medical perspective of the illness. This also includes practising biopsychosocial medicine.[21]

Interaction: negotiation on what to do

In the next two steps, interaction and converting insight into action, the GP enters a negotiation process in order to reconcile the two models, those of the patient and of the GP, and develop a treatment plan. First, the GP has to communicate her own model in terms that the patient can understand. Then, through a series of questions and promptings, the physician must make sure that the differences are understood. If the problem is simple and the patient is familiar with the 'voice of medicine', little time needs to be spent in reconciling the models. For example, if the patient happens to be well informed, he knows that the common cold is caused by a virus and cannot be treated with an antibiotic. Once both patient and physician have been reassured that there is no bacterial component to the illness, the patient can accept a conservative treatment plan (fluids, acetomenaphen, etc.). The GP can limit the interaction to a report that there is no evidence of the bacterial infection and a question about the patient's understanding of what causes most colds. If the physician does not check the patient's understanding, no harm is done since similar models are implicitly understood. However, in one elegant study of primary care interactions, 85% of the time the patient did not automatically accept the physician's model.[22] Despite the patients' efforts to ask questions, express doubts, or offer their own explanations, physicians ignored or actively suppressed the patients' attempts to question the physicians' models. Thus, in the very instances where dialogue needed to take place in order to determine differences between the patients' models and the physicians', such a dialogue did not occur.

To avoid this unfortunate situation, the GP can ask the patient to give his opinion about the model the physician has just presented or, perhaps more subtly, by asking: ''So, what are you going to tell your husband/wife about what happened here today?'' One of the authors has found in a study of his own consultations that patient and physician models differ according to different frames of reference which are shown in Table 2.[23] The frames of reference—superstition, biomedicine, environment, psychosocial—include the commonly held beliefs about illness and can be described by a causal sphere (pre-scientific or scientific), different explanations for the illnesses, different forms of treatment, and different roles for the patient to play. Each frame of reference is associated with a specific idiom or characteristic style of interaction. For example, in the psychosocial frame of reference, the symptoms convey emotions, often unrecognized by the patient. Once the physician recognizes this, her job is to help the patient discuss the emotions. If both patient and physician agree on a biomedicine frame of reference, e.g. a streptococcal throat infection, it is usually a simple matter for both to agree that a penicillin prescription is required.

TABLE 2 *Frames of reference in the consultation—doctor's and patient's*

Dimension	Frames of reference in the consultation			
	Superstition	Biomedicine	Environment	Psychosocial
Causal sphere	Pre-scientific	Scientific	Scientific	Scientific
Explanation for illness	'invisible forces' 'punishment for sin'	Changes in biological processes within the organism	Adaptation capacity exceeded by external influence	Inadequate action in relation to fulfilment of needs
Treatment	Invocations Prayers Cures Purification	Medical, surgical, physical influence on biological processes	Removal of harmful external influence Knowledge Legislation	Insight via attention Dialogue on possible actions and impediments
Role of the patient	Passive	Passive	Passive/active	Active

However, when there is a lack of agreement on the frame of reference, then there is a need for patient and physician to negotiate. For example, if the patient believes he has a gastritis, but the physician thinks that the stomach pains are purely psychosocial in origin, the physician will have to negotiate an agreement about which frame of reference is to be used since the expected treatments and patient roles are very different. It is important to recall that "negotiation is a two-way communication aimed to attain agreement with a counterpart, with whom one has both shared and conflicting interests".[24] Consequently, when solving a health problem, an approach using more than one frame of reference may often prove rewarding, e.g. antacid medication combined with conversation therapy.

The actual process of negotiating which frame of reference will be chosen is beyond the scope of this paper. However, the following key points need to be made. As illustrated in Table 2, the patient's role is often the key sticking point. If the illness can be viewed entirely in the biomedicine frame of reference, the patient's role is almost entirely a passive one. All he has to do is swallow a pill, undergo surgery, or allow some other form of intervention. If the frame of reference is a psychosocial one, the patient must take an active role and do almost all the work himself. The physician may instill insight and offer support, but then the patient must carry out the actual work of convincing himself that the problem is not due to a biological process in the flesh and undertake steps to lessen the psychosocial distress that is causing the symptom.

There is seldom total agreement about which frame of reference to choose. Most of the time, negotiation can be continued at future visits without jeopardizing the patient's health. To jump too quickly to an agreement when there are serious doubts on one side or the other would hurt the relationship. For example, if the physician gave in too quickly to the patient's view that he had gastritis, referred for endoscopy, and found no evidence of gastritis, the physician would feel badly for allowing an expensive and potentially dangerous procedure to be undertaken, and the patient would feel lack of trust in the physician's medical judgement.

Sometimes the physician will need to over-rule the patient if there are compelling medical reasons for acting quickly on the basis of the physician's frame of reference, e.g. the decision to operate and remove a ruptured appendix or ectopic pregnancy. At other times, the physician can leave the choice to the patient even though she might disagree. For example, if the patient believes that he has a bacterial bronchitis and will not feel he has been appropriately treated unless he gets an antibiotic, it may be worth writing the prescription in order to preserve the relationship.

Converting insight into action: from consultation to everyday life

When given the opportunity to respond to the plan that has been agreed upon, patients tend to be overly optimistic and positive. However, the GP should function as the devil's advocate and, together with the patient, should examine what could impede the positive plans from coming true: perhaps the patient cannot afford to buy the medicine at this time of the month, perhaps the wife/husband will never agree to a change of diet, or perhaps he does not like the idea of going to the swimming baths.

On the other hand, the physician might discover factors in the patient's life that could promote the treatment plan, e.g. salutogenetic aspects.[25]

In either case, it is important for the physician to help the patient to develop a realistic treatment plan that is not doomed to failure because the patient is overly ambitious or insufficiently motivated.

Agreement check: safety netting

As the visit comes to an end, the physician can help to build the relationship and enhance compliance by checking again to see that there is agreement on the diagnosis and treatment and that the patient remembers the most important information. Several studies have clearly demonstrated that the patient's chances of following the prescribed plan are much higher if there is agreement on what the problem is and how it should be managed.[26,27] It has also been shown that patients promptly forget much of what they have learned.[10,28,29] They forget not only the plan, but also the diagnosis and prognosis. The more information given and the more complicated the plan, the more is forgotten. To avoid embarrassing the patient, the physician can say something like, "I know that we have already gone over this, but it would help me to be sure that you have learned everything you need to know if you tell me again what we think the diagnosis is, how serious it is, and how we plan to treat it." Once the physician is satisfied that the patient can recall the essential points, she should make sure that there is agreement on making another appointment. The date of such a check-up visit should be negotiated with the patient.

By following these simple steps to check agreement, the physician is signalling caring, interest, and support for the patient. These messages give the patient a sense of security and make it easier for him to come back. By sharing responsibility, the physician is building trust and a sense of autonomy in the patient. This contributes to compliance with the medical regimen and raises the patient's awareness on the advice. It also make it easier for patients to return to see their physicians. Physicians who do not develop this sense of trust and autonomy in their patients are much more likely to lose their patients than those that do, a fact that will be of considerable importance to managers of health care organizations.[30]

This process of checking agreement with the patient also serves as a safety net for the physician. Both patients and physicians can detect mistakes as they review the plan (how often have patients reminded physicians that they are allergic to a particular medicine?) The physician would be wise to also ask herself a few 'what if?' questions:[9] what do I expect will happen?; have I taken into account the possible ways in which the problem could turn out differently?; how will I know that I was mistaken?; and then: what will I do? As the final part of this safety check, the physician may instruct the patient on what to do if the plan does not work out as expected; for example, call back if the penicillin does not take effect within 24 hours.

Leave from consultation: time for reflection

It is time to say goodbye to our patient. The GP may ask herself one final time, "Did I remember everything?" and ask the patient a similar question. However, the most important process for the physician in this step is to ask herself some questions: how am I feeling right now?; is there anything I need?; am I ready for my next patient?

Thinking about these questions allow the physician to do some sound housekeeping with her own personal resources before seeing the next patient.[9] If something went wrong during the consultation, it is important to take time to quickly think through the problem and shake off the feelings of frustration, anger, or sadness so that they will not interfere with the next consultation and start a vicious circle that can last all day. Later, however, the physician should spend more time reflecting on the distressing encounters. This is an important topic that is receiving increasing attention. Michael Balint, author of the classic book dealing with this issue, *The Doctor, his Patient and the Illness*, started a process of gathering physicians into support groups where they could share their experiences of doctoring with each other under the guidance of a skilled group leader.[31] This is still the most practical and effective way of dealing with the issue.[32] Since the introduction of small video-recorders, group supervision has become more common as supervision tool. However, it is still an underutilized process. As physicians grow more skilled in medical interviewing and more perceptive in how their encounters with patients affect their behaviour, this housekeeping and reflection function will become more important.

Conclusion

We have presented a chronological model for conducting the consultation that allows the GP to balance the patient's views of the illness ('voice of the lifeworld') with the physician's views ('voice of medicine'). By remembering the mnemonic, 'PRACTICAL', the physician can go step by step through the consultation with the patient in a way that will make the consultation a more productive and enjoyable process for both.

Acknowledgements

We wish to thank Torsten Risør, medical student, for translating our Danish model[6,7] into the word 'PRACTICAL' and Jørgen Nystrup, Kirstine Münster and Ian R McWhinney for inspiration and invaluable comments during the work process. We also wish to thank course participants, trainees and medical students for their willingness to implement the model, thus contributing to its unfolding.

References

[1] Mishler EG. *The Discourse of Medicine: Dialectics of Medical Interviews*. Norwood, NJ: Ablex, 1984.

[2] Byrne PS, Long BL. *Doctors Talking to Patients.* London: HMSO, 1976.

[3] Katon W, Ries RK, Kleinman A. The prevalence of somatization in primary care. *Compr Psychiatr* 1984; **25:** 208–215.

[4] Freemon B, Negrete VF, Davis M, Korsch BM. Gaps in doctor–patient communication: Doctor–patient interaction analysis. *Pediatric Res* 1971; **5:** 298–311.

[5] McWhinney IR. *A Textbook of Family Medicine.* New York, NY: Oxford University Press, 1989.

[6] Larsen J-H, Risør O. Konsultationsprocessen i almen praksis. *Månedsskr prakt lægegern* 1994; **72:** 319–330 (in Danish).

[7] Larsen J-H, Risør O. Konsultationsprocessen i almen praksis. In Vejlsgaard R (eds). *Medicinsk Årbog.* København: Munksgaard, 1995: pp. 101–107 (in Danish).

[8] Pendleton D, Schofield T, Tate P, Havelock P. *The Consultation.* Oxford: Oxford University Press, 1984.

[9] Neighbour R. *The Inner Consultation.* London: MTP Press Ltd, 1987.

[10] Lassen LC. Connections between the quality of consultations and patient compliance in general practice. *Family Practice* 1991; **8:** 154–160.

[11] Helman CG. Disease versus illness in general practice. *J R Coll Gen Pract* 1981; **31:** 548–552.

[12] Beckman HB, Frankel RM. The effect of physician behavior on the collection of data. *Ann Intern Med* 1994; **101:** 692–696.

[13] Annon JS. *The Behavioral Treatment of Sexual Problems. Vol. I: Brief Therapy.* Honolulu, Hawai: Kapiolani Health Services, 1974.

[14] Blau JN. *Br Med J* 1989; **289:** 39.

[15] Lipkin M. The medical interview and related skills. In WT Branch (ed.). *The Office Practice of Medicine.* Philadelphia, PA: Saunders, 1987: pp. 1287–1306.

[16] Putnam SM, Lipkin M. Research supporting the patient-centered interview. In Lipkin M, Putnam SM, Lazare A (eds). *The Medical Interview.* New York, NY: Springer-Verlag, 1995.

[17] Malterud K. Key questions—A strategy for modifying clinical communication. *Scand J Prim Health Care* 1994; **12:** 121–127.

[18] Johnson TM, Hardt EJ, Kleinman A. Cultural factors in the medical interview. In Lipkin M, Putnam SM, Lazare A (eds). *The Medical Interview.* New York, NY: Springer-Verlag, 1995.

[19] Kirscht JP, Becker MH, Eveland JP. Psychological and social factors as predictors of medical behavior. *Med Care* 1976; **14:** 422-431.

[20] Elstein A. Psychological research on diagnostic reasoning. In Lipkin M, Putnam SM, Lazare A (eds). *The Medical Interview.* New York, NY: Springer-Verlag, 1995.

[21] Lieberman JA, Stuart, MR. Practising biopsychosocial medicine. In Rakel RE (ed.). *Textbook of Family Medicine*, New York, NY: Saunders, 1995.

[22] Tucket D, Boulton M, Olson C, Williams A. *Meetings Between Experts: an Approach to Sharing Ideas in Medical Consultation.* New York, NY: Tavistock Publications, 1986: pp. 1–290.

[23] Larsen J-H. The consultation as a mutual process of recognition. *European General Practice Research Workshop (EGPRW)*, Budapest, 24–27 May 1990.

[24] Fisher R, Ury W. *Getting to Yes.* New York, NY: Lennart Sane Agency, 1981.

[25] Hollnagel H, Malterud K. Shifting attention from objective risk factors to patients' self-assessed health resources: a clinical model for general practice. *Fam Pract* 1995; **12:** 423–429.

[26] Freidin RB, Goldman L, Cecil RR. Patient–physician concordance in problem identification in the primary care setting. *Ann Intern Med* 1980: **93:** 490–493.

[27] Starfield B, Wray C, Hess K, Gross R, Birk P, D'Lugoff BC. The influence of patient–practitioner agreement on outcomes of care. *Am J Publ Health* 1981; **71:** 127–132.

[28] Ley P, Spelman MS. Communications in an out-patient setting. *Br J Soc Clin Psychol* 1965; **4:** 114–116.

[29] Ley P. Patients' understanding and recall in clinical communication failure. In Pendleton D, Hasler J (eds). *Doctor–Patient Communication.* London: Academic Press, 1983: pp. 89–108.

[30] Kaplan SH, Greenfield S, Gandek B, Rogers WH, Ware JE. Characteristics of physicians with participatory decision-making styles. *Ann Intern Med* 1996; **124:** 497–504.

[31] Balint M. *The Doctor, his Patient and the Illness.* London: Pitman, 1957.

[32] Hahn SR, Croen LG, Kupfer R, Levin G. A method for teaching human values in clinical clerkships through group discussion. *Teach Learning Med* 1991; **3:** 143–150.