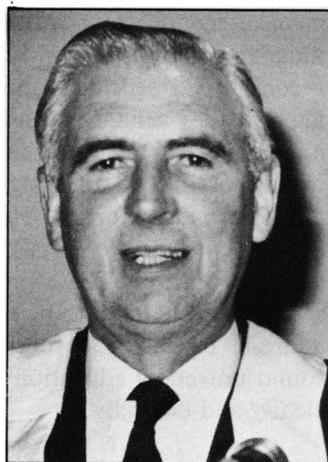

WILLIAM PICKLES LECTURE 1982

Striving to change

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MY picture of the world-famous country doctor, Dr Will Pickles, grew out of a series of discussions in the late 1960s with his biographer, John Pemberton, who was then Professor of Social and Preventive Medicine in the Queen's University, Belfast, an appointment he held from 1958 until 1976. I worked in his department for five years before becoming head of an autonomous department of general practice in the same university in 1971. I heard much of life in Wensleydale and about the deep bonds of friendship between country doctor and patient. The satisfying life of a rural doctor is symbolized for me in John Pemberton's book, *Will Pickles of Wensleydale* (1970).

Will Pickles combined the role of general practitioner with that of District Medical Officer of Health. For him community medicine was all-embracing and encompassed all aspects of medicine. Today the specialty of community medicine aims to improve public health by developing and applying medical skills to whole communities. Will Pickles practised medicine in a rural setting and aimed to provide the best care for all his

patients. However, he was internationally famous because he demonstrated in general practice that the epidemiology of a disease is an integral part of its basic description, and that it is possible to make original observations in everyday general practice.

It is a singular honour to be asked to give the Will Pickles lecture on the occasion of the meeting of the College of Family Physicians of Canada and the Royal College of General Practitioners in Britain and Ireland. It is appropriate that the venue should be Dublin and I hope acceptable that an Ulsterman should give the Lecture. I am indeed proud to have been asked by the Royal College of General Practitioners to honour one of its most venerable Presidents.

My professional life in recent years has been dedicated to the growth and development of the Department of General Practice in the Queen's University, Belfast. We have had to overcome problems of development similar to comparable departments of general practice elsewhere in the United Kingdom: financial disincentives to become university general practitioners, inadequate economic and other resources, the absence of an appropriate academic career structure, and resultant problems in recruiting suitable staff. We have also had to contend with problems peculiar to the environment of Northern Ireland, although these have simply hardened our will to succeed. We are relatively isolated in relation to the rest of Britain and Eire, mainly because of the political instability of the Northern Irish community, less so because of geographical location.

General practice and community medicine

I believe there is an inherent conflict between the educational objectives of a clinical discipline, for instance, general practice, and those of a subject concerned with population medicine. The main thrust of teaching in departments of community medicine at undergraduate level must be to teach general principles of epidemiology. In my experience, general practice has much more in common with the various clinical disciplines (mental health, geriatrics and paediatrics) which have a direct interest in community practice. Yet many

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departments of social medicine in Great Britain have spawned embryo departments of general practice, and we have a few professors who heroically attempt to span both disciplines. Academic general practice in Northern Ireland undoubtedly owes its birth to the foresight of Professor John Pemberton, my former academic colleague in social medicine. Nevertheless, I agree with Professor Ian Richardson (1981), who posed the question in last year's Will Pickles Lecture, "Why should academic general practice not enjoy the same independent status as medicine, paediatrics or psychiatry?" Obviously, autonomy greatly enhances the credibility of any subject.

My thesis is that general practice, with its endless supply of unselected illnesses, its human laboratory of patients, provides an ideal opportunity to achieve properly defined educational objectives in clinical medicine. General practice is still largely a clinical discipline and our teaching should truthfully reflect the reality of clinical practice. Thus, in the Department of General Practice at Queen's, although our overall teaching objectives (Irwin *et al.*, 1976) embrace preventive clinical medicine and health education, we do not teach these aspects of the general practitioner's work in separate courses, but as part of what happens in daily practice. For us, much preventive work is part of the day-to-day consultation and daily routine. We therefore rely enormously on our general practice clinical teachers in the community to demonstrate various aspects of preventive medicine. We try to cultivate preventive attitudes of mind, particularly with regard to preventing complications of disease or long-term disability. We encourage discussion of Stott and Davis's (1979) neat *aide-mémoire* of the consultation, which includes what they call "opportunistic health promotion". However, the main thrust of our teaching in the clinical years is to provide special training in basic clinical skills, in problem perception, in history-taking, in decision-making and in communication techniques. I shall be describing below how we try to teach these skills and how we use the new resources available at the Dunluce Health Centre, which opened two years ago.

The need for change in medical education

Different authors in the past decade (Irwin, 1974; Ryan, 1976; Maddison, 1978; Marinker, 1981) have suggested various ways in which the curriculum and teaching methods in medical schools might be changed and improved. Maddison (1978), in particular, has been very critical of the 'siege mentality' prevalent in medical schools and amongst medical educators. Pedantic learning is, of course, traditional in medical education, especially in the basic biological sciences, and will always be so. A daunting amount of scientific knowledge has to be acquired by students. The lecture still offers the best and often the only way of delineating areas of knowledge, given present staff-student ratios.

There is, however, a constant need for vigilance and to prune content and stop pedantic behaviour. Fortunately the clinical and later years offer much greater scope to promote small group and even autonomous learning, in both hospital and general practice. Despite this, Pickering (1978) thought that the modern medical student has underdeveloped powers of observation and is poor at arranging and interpreting facts. This view seems at variance with the modern emphasis on medical science and pathology in undergraduate teaching, nor would my colleagues in the Queen's Medical Faculty in Belfast necessarily accept that Pickering's statement is true.

I was fortunate to have been given the opportunity to develop the subject of general practice in a progressive medical school which attempts to produce a graduate judged to be wise, clinically competent and with an accomplished bedside manner. General practice teaching provides a balance and a change from high-technology medical science. It introduces students to a much wider spectrum of suffering and uncertainty. Intellectually it has much more to offer to medical education than its mundane image of self-limiting illnesses and the trivia of practice. The cognitive and affective domains are the aspects of learning which I hope to stress in this address, because the fundamental requirements of a sound university education are to make students think clearly and critically.

Attitudes to general practice

Academic general practice remains insecure partly because of the big-brother attitudes of some hospital and university staff. Some see the subject as mundane, merely the sum of many specialties. A professor of general practice has to work hard to acquire authority and influence in a medical school. In the past we had constantly to correct false impressions of general practice which students gleaned consciously or unconsciously from their hospital mentors. Unfortunately there are still some incompetent and ill-informed general practitioners, and a bevy of authors have found grounds for criticizing the service they provide and the growing division in British medicine between specialists and general practitioners (Stephen, 1978; Honigsbaum, 1979; Pereira Gray, 1980).

Some older general practitioners feel out of their depth in scientific medicine and develop deferential attitudes to consultants. We can report now, however, that there are healthier and more positive attitudes towards general practice on the part of medical students in the Queen's Medical School. We hope that this change is related to our own efforts, to the development of vocational training for general practice, and to the activities of members of the Royal College of General Practitioners. There are also signs of increasing co-operation between ours and the other Royal Colleges (Horder, 1977).

The department of general practice at Queen's

The academic general practitioner

There is general agreement that the clinical role of the academic general practitioner is of supreme importance. It holds the key to credibility with clinical colleagues, both in general practice and the hospital. There is further acknowledgement that "professors preach what they practise" (Ross, 1982) and are no longer living in ivory towers far removed from the reality of an ordinary general practitioner's round. Yet, faced with the competing tasks of administration, teaching and research, some senior academics in general practice have deliberately avoided taking a contract of service to patients. Finding time for all this work places the academic doctor in a real dilemma. Small wonder that at times he or she feels like a jack-of-all-trades and master of none.

For the past three years our academic career structure, which is described in the literature (Irwin, 1980), has resulted in a happy and well-balanced department (myself, two senior lecturers, a lecturer and two junior tutor posts). The last two posts are academic training posts, non-tenured, with three-year contracts; applicants must have completed vocational training for general practice. There is now a grave danger that these posts, which have been very successful, will disappear in the immediate future due to a combination of factors—oversupply of medical graduates, relatively too few practice vacancies and the financial squeeze on all British universities. Nothing saddens me more, as it puts the development of academic general practice in jeopardy. In these new circumstances, who can blame young doctors for feeling too insecure to risk applying for an academic post which guarantees no permanency after three years? The same threat hangs over all departments of general practice in British schools.

Senior and junior medical academic staff in our department are happily married into two partnerships in the Dunluce Health Centre. Each academic general practitioner has a service contract to the NHS which specifies an average of 20 hours' clinical service each week. This leads me to describe briefly the excellent support we get from local general practitioners.

Part-time teaching staff

Six of the 12 part-time lecturers in general practice are from practices in the Dunluce Health Centre, the rest from practices outside. They all play an important part in small group teaching in their practices. They have the further support of 115 general practice clinical teachers, who each year take several undergraduate students on mandatory two-week attachments, one in the fourth year and the other in the final year of the curriculum. These teaching practices are spread widely throughout the province. We have managed to achieve this happy position despite being able to offer only nominal financial inducements to teach, and in sharp contrast to some

areas in Great Britain. It is a tribute to the soundness of general practice in Ulster. Forty-seven of the general practice clinical teachers are members of the College and 27 of them act also as trainers in postgraduate education for general practice. The measure of local support is even better judged by the figure of 68 general practice teachers who are not members and have expressed no interest in becoming trainers.

The work of our teachers in the community is regularly monitored by correspondence and regular visits. In this way aims and methods are explained and feedback is obtained. Above all, our system and infrastructure maintains the competence of academic staff to teach at all levels of education.

Philosophy

Since the Report of the Royal Commission on Medical Education in 1968, there has been much confusion over the meaning of a broad basic education. The aim is primarily educational, but the undergraduate course is also vocational. Put differently, it would be nonsense to award a medical degree to a student who had been trained and educated in non-vocational subjects. Medicine is a vocation for which education and training go hand in hand, inextricably mixed. These concepts are important to grasp because the acquisition of knowledge and skills and the development of appropriate caring attitudes should be embedded at the undergraduate level.

The philosophy of education in our department has been discussed elsewhere (Irwin *et al.*, 1976). Each of our objectives has been analysed in terms of Bloom's (1956) taxonomy of levels of cognitive skill as developed by Metfessel and colleagues (1969). Our five objectives in our clinical courses cover both cognitive and affective learning and are to enable the student to study in general practice:

1. a) The earliest manifestations of illness.
b) The spectrum of undifferentiated illness.
c) The significance of physical, psychological and social factors in the aetiology and management of illness.
2. The characteristics of the doctor/patient relationship.
3. The particular skills of primary diagnosis and management.
4. Preventive clinical medicine and health education with particular reference to the communication network within the team, between the team and the hospital, and between the team and other community health and social services.
5. The purpose of maintaining and using concise intelligible records and registers, including the uses of epidemiology in service, teaching and research.

These objectives are similar to those defined by the General Practice Working Party of the 1974 European Conference on the Teaching of General Practice (1977).

Our courses are designed to produce a graduate with a wide knowledge of disease and illness behaviour in the primary care environment, with a sound grasp of preventive and curative clinical skills, and an ability to understand and communicate with patients and other health and social welfare professionals. We try to stress the importance of health education, preventive clinical medicine and anticipatory care in our case-study presentations and topic teaching. We stress the importance of the primary care team and our students learn about the role of each professional worker involved in providing comprehensive care. Controversial issues, for example the role of the general practitioner in screening and anticipatory care, are all raised and discussed. We find that these topics, and health education, are best taught through a clinical medium, where motivation is high. We try to develop in our students a better understanding of some psychological problems and of the therapeutic skills to deal with them.

Re-organizing the curriculum

A few years ago steps were taken to restructure the medical curriculum at Queen's. We wanted to relieve congestion, particularly in the fourth year. As a result we changed from a six- to a five-year course and reduced student numbers from 188 to about 155 a year. The other main changes were as follows:

1. The second year

General practice teaching was introduced in a new format into second-year teaching. The aims of the course are to introduce students to people, their problems and their social and interpersonal relationships in the context of community care. Behavioural sciences are taught through clinical studies, and students are introduced to basic communication skills. This course forms the base for later clinical teaching.

2. The fourth year

The fourth-year general practice clinical clerkship was reduced from five to three weeks, the last two weeks of which the students spend in a community teaching practice.

3. The joint course

Four departments—general practice, geriatric medicine, community medicine and mental health—combined to create a new integrated course. This is the joint course, which lasts for two weeks and consists of small group teaching for each student (Stout and Irwin, 1982). It provides integrated teaching of topics of common inter-

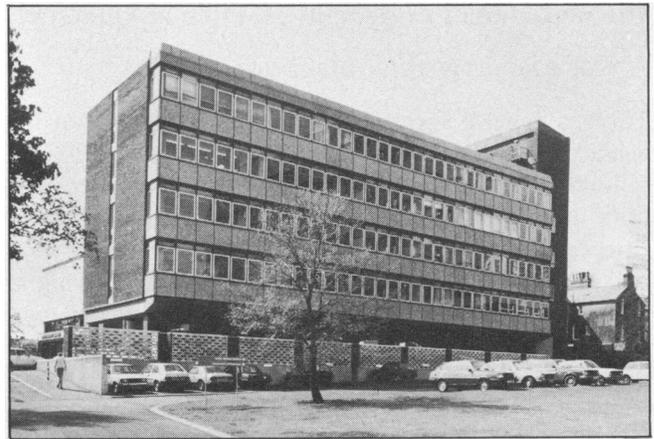


Figure 1. *The Dunluce Health Centre.*

est to two or more departments, for instance family planning, terminal care, coronary care, the confused elderly, disability and alcoholism.

The Dunluce Health Centre

These changes took place just before the new department of general practice in the Dunluce Health Centre opened in December 1979 (Figure 1). The department had been planned as far back as 1972/73. Planning priority was given to this development by the DHSS (NI) at a time when cuts in health spending meant that plans for a number of other city health centres were shelved. It is the university's general practice base and is immediately adjacent to other academic buildings and to one of the main teaching hospitals, the Belfast City Hospital. It is a four-storey building and houses four NHS partnerships closely associated with the department; they provide care for a population of over 20,000 patients. The academic accommodation on the top floor is linked by a closed-circuit television system to 14 consulting suites in the health centre below (Irwin and Perrott, 1981).

Teaching for the consultation

We concentrate a lot of time and resources on teaching our fourth-year students communication skills and problem perception in the consultation.

The interview model

Teaching about the consultation in general practice is very different from information-gathering in hospital. We therefore teach some simple and general principles of interviewing, which we incorporate into our General Practice Interview Model. The eight principles of the model are:

1. Start with an open-ended approach.
2. Establish rapport and confidence.

Table 1. Student scores by case and method of history-taking.

	CASE I	CASE II	CASE III	CASE IV	CASE V	CASE VI
GP model	$\bar{x}^* = 5.272$	$\bar{x} = 7.636$	$\bar{x} = 3.385$	$\bar{x} = 5.636$	$\bar{x} = 4.455$	$\bar{x} = 3.769$
	SD** = 1.191	SD = 1.206	SD = 0.583	SD = 1.502	SD = 1.293	SD = 0.857
Hospital model	$\bar{x} = 3.692$	$\bar{x} = 5.091$	$\bar{x} = 3.00$	$\bar{x} = 4.308$	$\bar{x} = 6.455$	$\bar{x} = 2.591$
	SD = 1.267	SD = 2.023	SD = 1.565	SD = 1.182	SD = 1.293	SD = 0.917
't' test	t = 3.14	t = 3.60	t = 0.762	t = 2.383	t = 3.63	t = 3.236
	df = 22	df = 20	df = 22	df = 22	df = 20	df = 22
	p < 0.01	p < 0.01	ns	p < 0.05	p < 0.01	p < 0.01

*x = mean value. **SD = standard deviation.

3. Listen attentively.
4. Think clearly about:
 - a) identifying the problem.
 - b) involving the patient in decision-making.
 - c) explaining findings, prognosis and management.
5. Encourage communication by body language and use of various techniques, for example facilitation and confrontation.
6. Observe and interpret non-verbal behaviour.
7. Streamline by asking more specific questions as the interview proceeds.
8. Finish with clear explanation and reassurance.

By the end of a consultation the students are expected to be able to have:

1. Taken a selective history.
2. Performed a relevant physical examination and/or investigation.
3. Made initial decisions regarding primary diagnosis and management.
4. Constructed a problem list.
5. Demonstrated communication skills in a consultation.
6. Showed empathy and understanding.

All general practitioners are familiar with the range of problems which present in practice. McCue (1982) talks about 'clingers', 'demanders', 'help rejecters' and 'deniers'—all stereotypes familiar to the experienced family doctor. The general practice student is also likely to encounter common presentations of mixtures of physical and emotional illness.

Our eight principles are applied when the student finds it hard to assess one or more of the problems presented. In preparing students for practice we also condition them to operate against a set time limit, to tolerate uncertainty and to be flexible and selective in gathering data.

We recently carried out a clinical research study in the Dunluce Health Centre to validate our concepts of problem-solving using the General Practice Interview

Model. Alternate patients attending general practice surgeries at the health centre and presenting new problems with a mixture of organic and emotional illness were accepted into the study and asked to co-operate by seeing a trainee immediately after an experienced trainer had made his notes. The trainee undertook a full hospital-style history and examination, along the lines of the instructional booklet issued to each undergraduate student by the department of medicine in Queen's.

The general practice style and the hospital style history and physical findings for six of these patients were recorded and submitted to three groups of fifth-year medical students as a written examination at the end of their final-year general practice clerkships. Each group of students was presented with four different patient histories—two taken by a trainer using the general practice model and two taken by a trainee using the hospital model. There were 11 students in groups one and two, and 13 students in group three. Each student had to prepare problem summary lists, which were then scored according to an agreed schedule constructed in retrospect and based on what the trainers knew about the patients and on what they learned in subsequent follow-up. Table 1 shows student scores by case and method of history-taking. The results indicate that for case histories 1, 2, 4 and 6, mean scores for the general practice model were significantly higher than those for the hospital model. Only in Case 5 was the hospital model mean score significantly better. A further analysis, employing a Friedman two-way analysis of variance, compared case scores within batches of students. The results indicate that there were significant differences between cases within the second and third student groups, but not within the first group. Page's 'L trend test' revealed a significant trend favouring the general practice model in the second and third groups. These preliminary findings suggest that, for the same case, senior medical students are likely to be more successful in diagnosis and problem-solving when using material derived from the general practice mode of history-taking and physical examination than from the hospital model. We are continuing this study, which is yet another example of the interdependence of student and graduate education.

Prescribing Information

Zantac

RANITIDINE

Uses

Indications: Zantac Tablets are indicated for the treatment of duodenal ulcer, benign gastric ulcer, post-operative ulcer, reflux oesophagitis and the Zollinger-Ellison syndrome.

Mode of action: Zantac is a highly effective, rapidly acting histamine H₂-antagonist. It inhibits basal and stimulated secretion of gastric acid, reducing both the volume and the acid and pepsin content of the secretion. Zantac has a relatively long duration of action and so a single dose effectively suppresses gastric acid secretion for twelve hours.



Dosage and administration

Adults: The usual dosage is one 150 mg tablet twice daily taken in the morning and before retiring. It is not necessary to time the dose in relation to meals. In most cases of duodenal ulcer, benign gastric ulcer and post-operative ulcer, healing occurs in four weeks. In the small number of patients whose ulcers have not fully healed, healing usually occurs after a further course of treatment. Maintenance treatment at a reduced dosage of one 150 mg tablet at bedtime is recommended for patients who have responded to short-term therapy, particularly those with a history of recurrent ulcer.

In the management of reflux oesophagitis, the recommended course of treatment is one 150 mg tablet twice daily for up to 8 weeks.

In patients with Zollinger-Ellison syndrome, the starting dose is 150 mg three times daily and this may be increased, as necessary, to 300 mg per day.

Children: Experience with Zantac Tablets in children is limited and such use has not been fully evaluated in clinical studies. It has, however, been used successfully in children aged 8-18 years in doses up to 150 mg twice daily without adverse effect.

Contra-indications

There are no known contra-indications to the use of Zantac Tablets.

Precautions

Treatment with a histamine H₂-antagonist may mask symptoms associated with carcinoma of the stomach and may therefore delay diagnosis of the condition.

Accordingly, where gastric ulcer is suspected the possibility of malignancy should be excluded before therapy with Zantac Tablets is instituted.

Ranitidine is excreted via the kidney and so plasma levels of the drug are increased and prolonged in patients with severe renal failure. Accordingly, it is recommended that the therapeutic regimen for Zantac in such patients be 150 mg at night for 4 to 8 weeks. The same dose should be used for maintenance treatment should this be deemed necessary. If an ulcer has not healed after treatment for 4 to 8 weeks and the condition of the patient requires it, the standard dosage regimen of 150 mg twice daily should be instituted, followed, if need be, by maintenance treatment at 150 mg, at night. Although the incidence of adverse reactions in clinical trials of one year's duration and longer has been very low and no serious side effects have been reported with Zantac treatment, care should be taken to carry out periodic examinations of patients on prolonged maintenance treatment with the drug as a safeguard against the occurrence of unforeseeable consequences of drug treatment.

Like other drugs, Zantac should be used during pregnancy and nursing only if strictly necessary. Zantac is secreted in breast milk in lactating mothers but the clinical significance of this has not been fully evaluated.

Side effects

No serious adverse effects have been reported to date in patients treated with Zantac Tablets. There has been no clinically significant interference with endocrine, gonadal or liver function, nor has the drug adversely affected the central nervous system even in elderly patients.

Further information

Drug interactions: Ranitidine does not inhibit the cytochrome P450-linked mixed function oxygenase enzyme system in the liver and therefore does not interfere with the effects of the many drugs which are metabolised by this enzyme system. For example, there is no interaction with warfarin or diazepam.

Pharmacokinetics: Absorption of ranitidine after oral administration is rapid and peak plasma concentrations are usually achieved within two hours of administration. Absorption is not impaired by food or antacids. The elimination half-life of ranitidine is approximately two hours. Ranitidine is excreted via the kidneys mainly as the free drug and in minor amounts as metabolites. Its major metabolite is an N-oxide and there are smaller quantities of 5-oxide and desmethyl ranitidine. The 24-hour urinary recovery of free ranitidine and its metabolites is about 40% with orally administered drug.

Use in renal transplants: Zantac has been used without adverse effect in patients with renal transplants.

Product licence number 0004/0279

Basic NHS cost (exclusive of VAT) 60 tablets £27.43.

References: 1. Data on file, Glaxo Group Research. 2. Borjes, P. *et al.*, *Lancet* 1980; 2 (8197):755. 3. Peden, N.R. *et al.*, *Acta Endocrinologica* 1981; 96:564-568. 4. Nelis, G.F. and Van de Meene, J.G.C., *Postgrad. Med.J.* 1980; 56:478-480. 5. Henry, D.A. *et al.*, *BrMedJ.* 1980; 2:775-777.

Zantac is a Glaxo trade mark.

Glaxo

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Middlesex UB6 0HE.

Tutor sessions

In the Dunluce Health Centre in each fourth-year general practice clerkship we deploy 11 tutors. The students work in groups of three and each one has several three-hour training sessions, each time with a different tutor. Every consultation by a student with a real patient is observed by the tutor and the two other students in the adjoining viewing room, and the whole process is video-recorded. Later, the different interviews are played back with the tutor, analysed, evaluated and discussed. Patient consent is obtained beforehand for these teaching surgeries.

The video system is very cost-effective. The capital cost was over £23,000 a few years ago, but running costs are very cheap (a few hundred pounds a year) because nearly all tapes are wiped clean after a session and used again. The system has been described in greater detail elsewhere (Irwin and Perrott, 1981).

There are few medical schools, if any, in the UK or the USA, whose students' interactions with patients are directly observed and video-recorded on such a scale (Engel, 1976). The system has enabled us largely to discard role play and simulated clinical teaching in favour of genuine interviews.

We concentrate on teaching for the consultation for a variety of reasons, knowing that the consultation is the heart of clinical general practice. Today's students are tomorrow's young doctors. I believe that there is now an urgent need to improve the quality of clinical care provided by general practitioners in the British NHS. This can best be done by ensuring a longer average consultation time, so that new, well-trained graduates will have enough time to listen to what their patients wish to say, to understand their problems efficiently, and have time to offer advice on occasions rather than just reaching for a prescription pad. In my opinion this should receive priority over the many other changes being talked about. Longer consultations would also increase greatly patient satisfaction with the service, and enhance the quality of general practice care in the eyes of hospital staff.

In my experience there is an even more urgent reason for adopting this teaching strategy, which I have described in some detail. It introduces a new educational and intellectual dimension into teaching in general practice, which is readily appreciated both by students and other medical educators.

Communication study

For the past few years we have been attempting to evaluate the fourth-year students' communication skills. We use rating scales and began by working with simulated patients. More recently we have used real patients who have given their consent.

Seventy-three students and 11 staff have so far been involved in this year's study, and two types of interview

PLEASE TICK: Real patient Student's name _____ Date _____
 Role play Tutor's name _____

Did student see real or role play first?

Interview rating scale 4th year A B C D A=1 B=2 C=3 D=4

1. Beginning poor					Beginning very good
2. Body posture bad					Body posture very good
3. Inappropriate eye contact					Appropriate eye contact
4. Does not listen attentively					Listens attentively
5. Does not use facilitation effectively					Uses facilitation appropriately
6. Does not use confrontation wisely					Uses confrontation effectively
7. Inappropriate use of silence					Appropriate use of silence
8. Inappropriate question style					Good question style
9. Frequent use of jargon					Absence of jargon
10. Interrupts patient unwisely					Interrupts patient appropriately
11. Not able to keep patient to relevant matter					Able to keep to relevant matter
12. Does not pick up verbal cues					Picks up verbal cues
13. Does not pick up non-verbal cues					Picks up non-verbal cues
14. Does not clarify					Clarifies well
15. Inadequate cover psychological aspects					Covers psychological aspects well
16. Inadequate cover personal issues					Covers personal issues well
17. Inadequate cover social aspects					Covers social aspects well
18. No empathy					Shows empathy
19. Exposition not clear					Exposition clear

Total score (as a percentage) =

NB. If any of the above statements are considered inappropriate by the tutor please leave blank spaces (do not score at all).

Figure 2. The blue rating scale.

rating scale have been used. On two occasions, within the space of a few days each student was assessed by a tutor while interviewing patients. Two different formats of the same rating scale were used. The blue rating scale (Figure 2) shows the scoring scheme for the 19 parameters on the scale. The rater does not score any parameter which in his opinion is not relevant to a particular consultation, and allowance is made for this in working out a total score as a percentage.

The yellow-coloured rating scale is shown in Figure 3. The various parameters 1-19 are scored from 1 to 4 on a negative to positive scale.

If during a student's first interview a blue form was used, then a yellow form was used for the second interview, and vice versa. Comparison of the mean scores obtained on the blue and yellow formats produced no statistical difference. Also when we compared the first and second occasions when each form was

used, we found no significant differences. At this stage it is reasonable to conclude that the format of the rating scale is not a significant variable affecting the results.

Given these findings, the scores awarded to each student were averaged, regardless of whether a blue or yellow form was used, and whether a first or second interview was being assessed. The range of percentage possible scores for either form of rating scale is 25 to 100, with a median of 62.5. The scores recorded by the 11 tutors ranged from 55.8 to 76.2 per cent, with a median score of 65.2. Six of the tutors gave average scores deviating significantly from the tutor median score. Twice as many tutors awarded high deviant scores as low deviant scores. These results seem to indicate that the objectivity of a rating scale in assessing communication skills is more apparent than real, and that the scale is open to considerable user bias. This finding implies that the scores obtained from rating

scales should be treated in the same way as other subjective assessments, for example essay-type examination questions, and that statistical adjustments need to be made between scores awarded by different raters.

Teaching hours per student

Table 2 shows how labour intensive integrated teaching really is, and that a total of nearly 1,800 staff hours of small group undergraduate teaching are provided in each academic year, which runs from September to the following May. This excludes staff time in the four weeks spent in the teaching practices in the community. It is not uncommon to have as many as five tutors involved in different activities during any three-hour session in the fourth-year general practice clerkship.

Student assessment

We have subjected our methods of assessing learning to constant scrutiny since 1975. Soon after we defined our educational objectives we chose the Modified Essay Question (MEQ) as one of our main forms of written assessment. Professor Knox of Dundee has outlined in several publications the construction and use of this type of paper (Knox, 1975, 1980). We modified it for our own use in evaluating the general practice fourth- and fifth-year courses in 1975/76 (or, as they were then, the fifth- and sixth-year clerkships), and as one of two main written papers in the Final MB Part II Examination. Its acceptance by the medical faculty was influenced by the published educational research work of the department of general practice in this field. A paper (Irwin and Bamber, 1978) about the MEQ evaluation of the 1975/76 fifth-year general practice clerkship showed that the reasoning skills required in general practice differed from the skills required in more specialized areas. This work contributed to a decision by the Queen's Medical Faculty to develop the Final MB Part II Examination into a holistic appraisal of knowledge and skills applicable to general medical practice. A further paper (Odling-Smee *et al.*, 1982) describes in detail the structure of this examination. It consists of clinical examinations, orals and two main written papers. One is a Multiple Choice Question (MCQ) paper, and the other is the MEQ, set and marked by the department of general practice. We have also carried out more recent research on the cognitive structure of the 1978 and 1980 Final MB MEQ papers (Irwin and Bamber, 1982). This research shows the potential of the MEQ in measuring the whole range of cognitive areas defined by Bloom and Buckwalter (1981).

I am pleased to add that a substantial financial donation has been made to the university to establish an Evelyn Boyd Scott Medal and a prize of £200, which will be awarded to the student who obtains the best mark in the general practice fourth- and fifth-year continuous assessments.

The interface with postgraduate medical education

In Northern Ireland, as in England, Scotland and Wales, for historical and not very good reasons, voca-

Figure 3. The yellow rating scale.

Please tick	Real patient	<input type="checkbox"/>		
	Role play	<input type="checkbox"/>		
Did student see real	<input type="checkbox"/>			
or role play first?	<input type="checkbox"/>			
Student's name	_____			
Tutor's name	_____			
Date	_____			
Target behaviour	Evaluation of target behaviour: Circle where appropriate			
	- ve		+ ve	
1. The beginning	1	2	3	4
2. Body posture	1	2	3	4
3. Eye contact	1	2	3	4
4. Attentive listening	1	2	3	4
5. Use of facilitation	1	2	3	4
6. Use of confrontation	1	2	3	4
7. Use of silence	1	2	3	4
8. Style of questions	1	2	3	4
9. Absence of jargon	1	2	3	4
10. Appropriateness of interrupting patient	1	2	3	4
11. Keeping patient to relevant matters	1	2	3	4
12. Picking up verbal cues	1	2	3	4
13. Picking up non-verbal cues	1	2	3	4
14. Ability to clarify	1	2	3	4
15. Covering of psychological aspects	1	2	3	4
16. Covering of personal issues	1	2	3	4
17. Covering of social aspects	1	2	3	4
18. Presence of empathy	1	2	3	4
19. Quality of exposition	1	2	3	4
Total score (as a percentage) =				
NB. If any of the above target behaviours are considered inappropriate by the tutor please leave blank spaces (do not score at all).				

tional education for general practice is largely divorced from undergraduate medical schools (Morrell, 1978). If independent postgraduate departments were to develop in regions served by university medical schools, academic general practice would ultimately be weakened, because there would be marked academic overlap. There is also a need to tie together what should be a continuous educational process, so that what is learned at undergraduate level affects postgraduate education and vice versa. Various local solutions have emerged in Britain. Some general practice advisers and/or course organizers have honorary or real appointments to lectureships in university departments of general practice; in some centres the opposite pertains. In Belfast we operate as physically separate institutions, but acknowledge our interdependence. We are striving continually to improve formal and informal communication between the two bodies. The contribution of the department of general practice to postgraduate medical education in various courses is illustrated in Table 3. The 142 staff hours shown here exclude weekly small group teaching time for several general practice trainees who are attached to the department.

The department also assesses the communication and clinical skills of general practice vocational trainees in Ulster, both in the department and their practices. In 1981/82 this work occupied 132 direct contact staff hours. The total of 274 staff hours spent in postgraduate teaching and assessment of skills represents about 13 per cent of the total time spent on all teaching.

The overall role of the department of general practice in postgraduate education for general practice is as follows:

1. Defining educational objectives and methods of assessment.
2. Defining areas of knowledge to be taught.
3. Advancing knowledge and making it available.
4. Correcting ignorance of teaching methods.

Marsh (1980) has summarized the taxonomy of affective behaviour or attitudes which we are attempting to portray in the consultation when teaching general practice trainees or their trainers. Specific educational advice is needed for course organizers and trainers because the educational literature of general practice is too often couched in general terms, for example *The Future General Practitioner* (RCGP, 1972), *The General Practitioner in Europe* (European Conference, 1974), Morrell (1978) and Pereira Gray (1979).

Conclusion

In conclusion, in 1971 the medical curriculum in the Queen's University of Belfast was changed with the object of producing a graduate with a wide knowledge of disease, a sound grasp of clinical skills and an ability to relate to and understand patients (Odling-Smee *et al.*,

Table 2. Number of direct contact teaching hours per academic year.

Undergraduate teaching	Hours per student	Hours per curriculum	Staff hours taught
Second year	36	108	290
Fourth year			
Special teaching	9	81	432
Other teaching	18	162	324
Joint teaching	54	162	486
Fifth year	9	108	252
Total			1784

Table 3. Number of direct contact staff hours per course.

Types of course	Staff hours taught
Trainee	26
Trainer	26
Course organizers (England)	60
Continuing education	30
Total	142

1982). At the same time the Chair of General Practice in Queen's was established. In this lecture I have outlined what the department of general practice teaches, and how it is taught and assessed. Staff of the department aim to make a significant contribution to the whole end product and to meet fully the most recent GMC recommendations on teaching general practice. Doubtless there are other ways of achieving the same result. Our way is interesting because it serves as a perfect example of how the educational objectives which we all share can be achieved by a well-resourced department using video technology and one-way mirror-sound systems.

Simulated patients are being widely used in medical education to teach interpersonal skills of communication, but real patients have obvious clinical advantages and greater academic credibility. Our students learn the general principles of how to gather information in general practice against a set time limit dealing with undifferentiated problems. Our interviewing model complements traditional hospital teaching, something which would have been unheard of and unacceptable 20 years ago. Our intensive use of closed-circuit television technology and observation facilities in the Dunluce Health Centre is a great help in spreading the gospel of general practice to undergraduates. This is having beneficial effects on entry to general practice and my final plea is for a closer integration of the two levels of education, undergraduate and postgraduate.

I hope that my odd title now makes more sense, and that I have given some insight into my thinking and striving.

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Low birthweight and mental handicap

The prevalence at school age of cerebral palsy and severe educational subnormality in children of low birthweight ($\leq 4 \text{ lb} = 1814 \text{ g}$) born to residents in the region served by the South East Thames Regional Health Authority in the early 1970s was compared with that in children of the same birthweight born in 1950-53. The prevalence of one or both of these defects was lower in the 1970s' cohort; this was due to both a fall in the incidence of extreme gestational immaturity among children of low birthweight and a reduction in risk of defects to the gestationally immature births that occurred. The decreased risk of these defects in children of low birthweight was approximately counterbalanced by the increased likelihood of their survival; among children of all birthweights the prevalence of these defects attributable to children of very low birthweight changed little.

Source: Alberman, E., Benson, J. & McDonald, A. (1982). Cerebral palsy and severe educational subnormality in low birthweight children: a comparison of births in 1951-53 and 1970-73. *Lancet*, **1**, 606-608.