PRACTICE OBSERVED

Practice Research

Practice educational meetings: a new influence in general practice

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For many years medical clubs and societies provided forums for professional discussion and education.[1 2] In this century, and particularly since the second world war, medicine has become more specialised. Each specialty gradually developed its own educational activities. General practice was neglected initially, but since the College (later Royal College) of General Practitioners (RCGP) started in 1952 there has been a striking increase in educational activity in general practice. To start with continuing education projects concentrated mainly on established practitioners. Meetings were held in hospitals and later in postgraduate centres. This type of "refresher course" has continued with the support of Section 63 funds and clinical tutors. Then vocational training developed and more medical students experienced some general practice in their undergraduate course.

In our work as regional advisers and in the East Anglian Faculty of the RCGP we have become aware of a further development—the practice educational meeting. This represents a third development, and one which may have an important effect on general practice and postgraduate activities. The aim of our study was to determine the prevalence and characteristics of practice educational meetings in East Anglia; to identify successful features; and to consider their function in the future. We have defined a practice educational meeting as a group of general practitioners who meet on a regular basis for educational purposes.

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Method and results

In 1979 we sent all practices in East Anglia a questionnaire:
(1) Do you hold any purely educational meetings in your practice or jointly with other practices?
(2) How did they start?
(3) How long have they been running?
(4) What factors are useful in keeping them going?

Data were requested about partnership size; whether the practice was urban or rural; the type of practice premises; whether the GPs had a common room; and whether they taught trainees, or medical students, or both. Practices which gave negative replies were asked whether such meetings had been held in the past but had been abandoned.

A second questionnaire was sent in 1980 to all practices, which had said that they held meetings, asking for more detailed information about how the group functioned. We visited several practices and attended their meetings.

FIRST QUESTIONNAIRE

There were 858 unrestricted principals in East Anglia in 1979 in 285 practices—an average of three doctors per practice. From the 285 practices we received 126 replies from all parts of the region to the first questionnaire. Fifty-eight held practice educational meetings and 68 did not.

The positive answers fell into two distinct categories depending on whether intrapractice or interpractice meetings were held. In the former the GPs organised meetings solely for and within their own practices. Thirty-five practices, comprising 149 doctors, came under this heading—an average of 4·3 doctors a practice. In the second category GPs from several practices attended the same meetings. There were eight such groups and 67 doctors attended from 23 practices.

All of the 68 negative replies were from individual practices with 209 doctors—an average of 3·1 per practice. Random sampling of 30 from the remaining 159 practices from whom no reply was received showed that one in five were holding a regular intrapractice educational meeting. We estimated, therefore, that a further 31 practices

or at least 93 individual doctors must be added to those already identified by the first questionnaire.

Thus, about 309 GPs (or 36%) in East Anglia are meeting regularly for educational purposes at 74 separate group meetings. Table I shows some characteristics of the practices that replied to the first questionnaire.

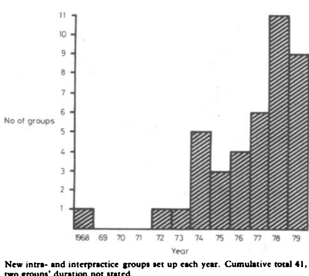
TABLE I—*Characteristics of practices*

	Practices with PEMs No	Practices with PEMs (%)	Practices without PEMs No	Practices without PEMs (%)
Urban or semiurban practices	29	53	32	47
Rural	26	47	31	46
Health centre practice	19	35	9	13
Privately owned premises	36	65	59	86
Trainees attached	37	67	12	18
Students attached	27	49	17	25
Total	55	100	68	100

The most striking feature is the strong association between teaching trainees, or medical students, or both, and the existence of practice educational meetings. Geographical location made little difference except that on further analysis most of the interpractice meetings were 10 miles or more from a postgraduate centre.

The most frequent reasons given in 47 replies for starting meetings were teaching activities, especially the arrival of a trainee (28%), and a mutual need for professional discussion (30%). Our impression of the meetings as a recent development is confirmed by the survey and shown in the figure.

Five practices, which submitted negative replies, indicated that they had previously held meetings, but that these had been discontinued. Only one had ever been a training practice. Several practices not holding meetings expressed an interest in starting them.



New intra- and interpractice groups set up each year. Cumulative total 41, two groups' duration not stated.

SECOND QUESTIONNAIRE

We again divided the answers into intrapractice and interpractice educational meetings.

Intrapractice meetings—In the first category information was received from 23 groups (104 doctors). In virtually all the groups all the partners attended the meetings, and trainees attended 80% of them. Other staff and students attended some of the meetings regularly and most meetings occasionally. Sometimes hospital specialists attended—in one group regularly. Most groups were organised on a mutual basis, but sometimes an individual partner took responsibility. In only two cases was this the senior partner. Just under half had a chairman; this task was undertaken regularly in some cases, or in rotation. Occasionally a partner acted as secretary.

The 23 groups gave the following aims of their meetings: continuing education of partners (21); teaching trainees (19); support for participants (15); teaching students (14); education of employed staff (14); education of attached staff (12); liaison with other doctors and health professionals (12); and education of patients (five).

Meetings were held weekly or more often in 65% of the practices, and most usually in the practice premises (table II). Table III shows the content of the meetings and table IV the variety of methods used.

We found that one practice formally assessed meetings and 12 did so informally.

TABLE II—*Process of practice educational meetings*

Frequency		**Programme**	
Weekly or more often	15	Determined by mutual agreement	15
Weekly to monthly	6	Determined by individual partner	6
More than a month between meetings	2	Determined by individual partner in rotation	2
Site			
Surgery	15	Circulated	14
Health centre	6	Not circulated	9
Homes	2	Record of meetings	7

TABLE III—*Content of practice educational meetings*

	Frequency		
	Regularly	Sometimes	Never
Clinical management of cases	13	10	0
Review of medical knowledge and skills including therapeutics	10	13	0
Advances in clinical medicine	5	17	1
Practice organisation	10	10	3
Exploring doctor-patient relationships	3	16	
Developments in other subjects—for example, social work, physiotherapy	3	14	
Educational technique	1	8	14

TABLE IV—*Methods used in practice educational meetings**

	Frequency		
	Regularly	Sometimes	Never
Clinical case discussion	9	11	2
Random case discussion	10	8	4
Talks or lectures	3	12	7
Audit, screening, research programme	4	9	9
Tapes, slides	0	10	12
Film, video	1	7	14
Journal review	3	4	15
Books	0	6	16

*No information was included in one questionnaire.

We wanted to find out what doctors thought were the important factors in keeping groups going and the features they considered particularly valuable. The replies reflected the enthusiasm and variety of activities associated with the meetings. They reinforced the information already recorded and some mentioned the use of projects and modified essay questions. The following factors were mentioned most frequently: regularity and organisation of meetings combined with informality; social contact; practice review including random case analysis; clinical discussion; and presence of a trainee.

There was one request for circulation of tapes and slides and one for help with speakers' travelling expenses. Some practices stated categorically that no help was needed. There was, however, an interest in an exchange of ideas between groups.

Interpractice meetings—From the eight groups (67 doctors) we obtained knowledge of three kinds of meeting.

(1) Groups similar in style to the "within practice" groups but attended by two or three practices.

(2) Young practitioners: three groups of young practitioners most of whom had recently completed their vocational training. These groups seemed to fill a void for younger doctors who had been accustomed to meet regularly with their peers. These doctors were mostly from practices where regular meetings were not held.

(3) Clinical societies: two small clinical societies had formed mainly because of distance from postgraduate centres. The usual format was

talks by consultants followed by discussion. Though carefully organised these meetings seemed to gain from informality and a free exchange of comment.

Examples of two practice educational meetings

One interpractice educational meeting took the form of a weekly working lunch. Sometimes this was a random case analysis as a starting point for clinical discussion. Every other week two doctors chose a project—for example, audit, quiz, discussion, consultation, or subject review.

The following is an extract from a report by IGT after he had visited a practice to discuss its educational meetings.

"The meetings are held twice a week and were started because of the trainee in the practice, but the main gainers from these meetings were the partners themselves. When the trainee left, the meetings stopped for a while but all the partners realised that this was a real loss for them. They have now been restarted as a permanent feature of the practice week. The organisation is informal, but one of the partners acts as a convener and makes sure that a programme is decided on in advance. A variety of themes and educational methods are used at the meetings.

"An interesting experiment has just been completed in which the group used an outside group leader to help run meetings exploring the psychological aspects of general practice. These meetings started by an exploration of the doctors' relationships in which emotional problems arose. During the discussion a valuable exchange of views and knowledge occurred about the different partners' expectations of their work and of each other. All of them now feel that their future meetings are going to be much more rewarding because of the relationships that were established through this group work."

Discussion

General practice has suffered from isolation in the past unless the doctor has made efforts to meet and discuss his work with colleagues in general and hospital practice. Though there has been a growth in partnerships and group practices, arrangements have mostly been business ones and were little concerned with maintaining and improving the standard of practice. With the need to maintain good relations between partners and diffidence about criticising another's work the educational potential of group practice has not been fully realised.

The effectiveness of continuing education depends on the doctor accepting new information and relating it to his own practice. Any ways in which day-to-day work may be used as the basis for continuing education must help the process of change. The Alment Report stated, "The essence of continuing education is a critical approach to day-to-day work: the value of this is enhanced by the free discussion among colleagues of experience thus gained. . . . In our view it is a necessary part of the doctor's responsibility to assess his work regularly in association with his colleagues."[3] Pickering said, "Much of the continuing learning process is derived from the doctor's own experience of practice. . . . The free exchange of ideas and experience among doctors at formal and informal discussion is a valuable medium for their continuing education."[4]

Our survey shows that there has been a rapid growth of practice educational meetings during the past 10 years, and may seem to fulfil the criteria referred to above. Though the meetings have often been stimulated by the presence of a trainee, they have met a need for an exchange of views at a regular, often weekly, meeting—something more than the casual hurried chat over a cup of coffee. Regular attendance and the contribution of all participants to planning and leading the discussion adds to variety and sense of purpose. The meetings are supportive to their members while allowing critical discussion in a non-threatening environment. The groups could become too cosy, though regular reviews, medical audit, discussion of new material from lectures or journals, outside visitors, and regular or occasional meetings with other practices should help to prevent this danger. Moreover, trainees and students who have been brought up in an environment where criticism and questioning is the accepted norm should spread the idea more widely.

The three young-practitioner groups in the region were formed largely to continue activities begun during vocational training. Anecdotal evidence suggests that when educational meetings are flourishing in a practice the needs of recently trained GPs are adequately met and there is less need for them to attend a young-practitioner group. The practice educational meeting thus provides a valuable link between the various stages of general practice education.

Meetings have started on the initiative of the practices concerned; help from outside would be regarded as interference. An exchange of ideas between educational groups is, however, likely to be acceptable. Ultimately, the effectiveness of any education depends on motivation and thus personal initiative is welcome and should be nurtured assensitively as possible. The relation of the practice educational meeting to meetings held at postgraduate centres is important. Both meetings have a common aim fulfilling different but complementary needs.

What positive steps could be taken to increase practice educational meetings? We hope that our findings will act as a stimulus. Some existing groups would probably be willing to act as "catalysts"; a list of groups could be held by the regional adviser in general practice and be available on request.

We foresee the practice educational meeting as becoming an integral part of the life of every practice—making a contribution to the education of students, staff, and trainees as well as to the continuing education of the partners.

We thank the doctors who completed questionnaires; Mrs Alison Swarbrick, Mrs Claire Downham, and Mrs Diana Taylor of the East Anglian Regional Health Authority who helped prepare and send out the questionnaires; and Miss Karen Kiddy who typed the manuscript.

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(*Accepted 8 July 1981*)

ONE HUNDRED YEARS AGO It has fallen to my lot during the past seven years to treat five cases of placenta praevia, with three maternal deaths and three infantile deaths. The treatment in each case was the same—viz, manual dilatation and delivery by turning as soon as possible. All the cases were in multipara. My first case recovered without a bad symptom. My second case died within an hour, not from haemorrhage, but apparently from shock, the patient never rallying. My third case lived a week, and died from symptoms of pulmonary embolism. My fourth case recovered, but several times after delivery she was pulseless, and had anaemic convulsions; but, thanks to the subcutaneous injection of ether, application of hot water to the head, and injection of hot water *per vaginam*, she recovered. My fifth case died three hours and a half after confinement, apparently from shock, the pulse becoming excessively quick, and the patient dying evidently from failure of heart.

My object in transmitting the above cases is to ventilate the subject of placenta praevia, and, if possible, to obtain an expression of opinion as to treatment from men who make the study and practice of obstetrics a specialty. I remember, when a pupil, that my master had the same ill luck that I have had in the treatment of such cases. Nothing can be more distressing to the friends or the medical attendant than to see a woman dying, and not be able to prevent her demise. Transfusion is not always practicable in the country. J HENRY ASHWORTH, MRCPEd, Bourn. (*British Medical Journal*, 1881.)

Organising a Practice

Practitioners' progress

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Consultations, visits, and rotas

As "progress" has come our way over the years so the style and content of our consultations and visits have altered good general practice. The specific patterns of work that general practitioners do defy simple recording. Howie[1] has noted over the years the fall in home visits and also the decrease in consultations in the consulting room. As he pointed out, there are wide variations between doctors. What is hard work for one would be regarded as easy by another. The family doctor image remains but is somewhat tarnished. We have lost some of our dedication, believing that we matter as well as our patients. The division between on and off duty is now more clear-cut than ever before. (I write this on a wet Sunday morning off duty and "safe" almost from intrusion from the practice.) How different from the patterns of 30 years ago when doctors were mainly single-handed, or practised in small groups, and co-operation tended to be minimal because of the financial rivalry that then existed.

Percentage of general practitioners working alone or in groups (adapted from report of DHSS[2]*)*

Groups of general practitioners	1951	1957	1963	1969	1976
Single-handed	43	34	25	21	17
2 partners	38	35	32	26	20
3 partners	13	19	24	26	24
4 partners	5	8	13	15	19
5 partners	1	3	4	7	11
6+ partners		1	2	5	9
Total	100	100	100	100	100

By the 'sixties and certainly by 1970 most general practitioners who worked in reasonably close proximity with their neighbours had formed rota systems that initially covered some evenings, occasional weekends, and maybe a half-day a week. Depending on their friendship, co-operation, and need such rotas might also cover holidays, illness, and, later still, postgraduate study. Such a system obviously worked best with a group practising in the same building, and it was advantages such as these that tended to bring doctors together as they came to realise what could be gained by close working relationships. Single-handed practice has steadily declined in the large urban areas (table) and will, I imagine, be a rarity indeed by the end of the century. A pity, for the man or woman working alone can truly show an individuality unfettered by the view of more traditional colleagues. In such practices bonds between the patient and the doctor are necessarily stronger than in group practice, where constant atendance by the doctor has diminished. In its stead we find that a multipurpose view of medicine has developed. Many doctors now have outside medical interests, which increase the practice income to a great extent.

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There was a time when a general practitioner took it for granted and was expected by his patients to do morning and evening surgery each day except Sunday and possibly one-half day a week. The hours of surgery attendance were rigidly noted by the official paymaster, the Executive Council, and any request to change hours had to be submitted officially and would be rejected if thought by the appropriate committee to be jeopardising the interests of the community which the practice served. A change of evening surgery time from 5 30 pm-7 30 pm to 5 0 pm-7 0 pm was a matter for earnest discussion, therefore, at many levels. In those days it would have been a foolhardy doctor who tried to adopt a 4 0 pm-6 30 pm system once or twice a week. His family might welcome him home early, but he would lose popularity locally and would be penalised by a series of demands for evening visits. "It can't wait doctor." The chore of a long evening surgery at the end of a long day is still there at times, but at least the inevitability of it has now gone. Some general practitioners were, and still are, proud of their ability to get through large numbers of patients in a short time. The pattern of "instant diagnosis" may not be so frequent but the need to make a rapid decision exemplifies the good general practitioner under pressure.

Appointment systems were virtually unknown in the 'sixties but became increasingly popular so that by the 'seventies the casual "walk-in" surgery had become archaic. A survey[3] in 1951-2 showed that only 2% of the practices visited used an appointment system. In 1976 over 70% of practices were using the Lloyd Hamol Loose Leaf Appointment Diary,[4] and a further unknown percentage will be running appointments using different systems. The change has undoubtedly helped the doctor. He knows roughly what his work load is for any particular session and can extend or shorten it at will. He can decide the way that time is to be allocated per patient and make special arrangements for particular patients if he so wishes. A well-run, sympathetically-operated, flexible appointment system is also a definite gain for the patients. A rigid system that does not allow for late patients, the variability of the doctors' working habits, and the inevitable odd emergency is a disaster and has rightly led to attack by patients.

Doctors working in groups, in either self-owned or health centre premises, and using an appointment system has led to a less personalised service. No longer is "the" doctor always there. He may be playing golf, but more likely he is doing a session at the local hospital, attending an old people's home, visiting a factory, or regularly giving dental anaesthetics. The surgery sessions are covered by his colleagues whose outside interests will

also be similarly covered by other members of the group The result of such "boxing and coxing" is good for the doctors' interests but means that in some practices patients find continuous personal care a problem unless they work out exactly when "their doctor" is going to be there.

The "charter"

In the late 'fifties and early 'sixties general practitioners were becoming more and more interested in the management, organisation, and dynamics of general practice. At the same time however, the general morale of many doctors was suffering a steady decline. They felt overworked, underpaid, lacking in prestige, and at the beck and call of demanding patients. Good practices were penalised financially as there was no incentive to practise well or to employ ancillary staff. The aspirations of the College of General Practitioners seemed inspired but unrealistic. Was it possible that the Collings report of 1950[5] (which severely criticised general practice in this country) was true? The increasing emigration by doctors was worrying. Why be exploited here when there was big money and pastures green and pleasant in the rest of the English-speaking world? Fortunately for general practice Kenneth Robinson was a sympathetic and interested Minister of Health. The result of much dissension by the leaders of the profession with the Ministry of Health was a new "charter of general practice" in the mid-'sixties. A new method of payment evolved. Doctors were encouraged to work in groups, employ ancillary staff, and purchase or rent adequate premises. Health centre planning became the vogue, and general practice became not only respectable but exciting, and at times the envy of hard-pressed hospital colleagues.

The introduction of more payments related to items of service forced doctors to look more critically at their bookkeeping. They found that they were not very efficient. So, over the ensuing years a new species has arisen to organise us—the practice manager, and the text that he or she needs to know by heart is the "red book"—*Statement of Fees and Allowances Payable to General Practitioners in England and Wales*. As important as knowing it is the need to keep it up to date with all the amendments that are constantly issued if the maximum financial advantage is to be obtained from the system. With the advent of adequately paid ancillary staff and the increased co-operation from local authority public health departments, which in many areas attached nurses and health visitors to practices, came the concept of the "practice team." It was obvious at first that the doctor was the team leader by virtue of his knowledge, experience, and prestige. As the years went by such attributes were not necessarily accepted, and consensus leadership is now regarded as being more appropriate, though the doctor still knows where he really stands—or does he?

The casual employment of untrained secretarial and reception staff continues, but over the years standards have risen and training courses exist in many areas. Staff are better organised, and there is now a national association which they may join. They have a right to payments at adequate rates rather than at the derisory levels that used to exist before the introduction of the "charter." The criticism of receptionist "dragons" continues but has at least deflected the attacks that used to be directed at the doctor's wife. Nowadays she should, in the main, be free of the practice on-call system and able to lead her own life unworried by manning the telephone, except for the occasional weekend or evening. It is, has been, and will always be a constant struggle to ensure that the reception team function adequately in their difficult job of serving patients and doctors. They need to be polite, pleasant, sympathetic, and understanding without taking on a nursing, medical, or social-work role. They sometimes need to block patients and also equally have a right to bully or cajole the medical team into doing extra if they perceive the need. Over the years they have been increasingly appreciated by the doctors, though I think that the patients still see them as a barrier to quick and easy access to the service. Patients are right, but none would go back to the "open door" surgery and a queueing system that resulted in stuffy crowded waiting rooms and the people arriving late standing outside in the rain.[6]

Leisure

Most of us feel that we need time off and wish to know exactly when this is to be. Gone are the days when the senior partner always took the weeks off before and after Christmas. There is equality now in most practices, though some are more equal than others. Most general practitioners now expect four to six weeks off a year as against three to four weeks for the senior 30 years ago and the same or less for the juniors, depending on the practice agreement. Assistants (usually overworked and inevitably underpaid) now hardly exist as the "charter" offers a positive financial inducement to offer early or immediate partnership. The assistants were the waiting men, hoping for a partnership where they worked or looking around for a local or distant vacancy. Forced to behave themselves to ease their way in or obtain a good reference, there was an undercurrent of resentment in the 'fifties that vanished after 1958 as the bold young doctors were absorbed as principals in general practice. For them leisure was often a breathing space grabbed when offered and savoured. Now we have the increasing rejection of personal on-call duty at night and weekends.

Rotas have been superseded by, or supplemented with, the deputising services. For a fee general practitioners do opt out in most big cities most of the time, if they can. In 1970 75%-85% of doctors were using deputising services in Nottingham and Sheffield,[7] and though they were used to a greater extent by single-handed doctors those who practised in groups were not at all against using such services at times. Pious words are spoken about personal commitment by lay committees and doctors unable to avail themselves of these services. In practice, most of us, given the opportunity, relish the thought of an undisturbed night's sleep and a weekend pottering about the garden untroubled by the cares of the practice. As the clinical and organisational standards of the deputising services vary so much it is necessary for the service that they offer to be monitored carefully, and there is a similar need to monitor the use made by certain practices to off-load day-time work. In the 'fifties, however, these same doctors would probably have used other dodges to escape the onerous job of visiting patients. One such effective method was of course to shift the work load on to the assistants.

Training

Then a new device developed that gave the seniors help at no cost at all—and they were even paid for the privilege of having a "trainee" in the practice. The early years of exploitation were due to the lack of awareness of teaching methods combined with a simple belief in the apprentice system. Steadily, over the years, it has become recognised that the trainee general practitioner should be helped, guided, and encouraged to pursue his own interests. As a group the trainees are motivated and are well able to stand up for their rights. They should be able to discuss problems as they arise with their trainers or seek the help of a local "course organiser." The Royal College of General Practitioners, from small beginnings in the 'fifties has been concerned with the educational development of general practice. The group of farsighted general practitioners who founded the college had as one of their main aims the belief in continuous education in medicine. The college defined *general practice* and produced a standard text and reference *The Future General Practitioner*,[8] which has been a cornerstone in many of the educational programmes in general practice ever since.

The 'fifties saw the start of officially backed postgraduate programmes for general practitioners. At first many were on

Sunday mornings, and then a plethora of weekend courses became available, which continued to be offered for many years. Now Sundays cease to attract and the one-day course on Saturday, lunch-time meetings, or half-day courses have become popular alternatives. Six lectures and a passive audience was and still is the common pattern. But in addition to this traditional method of teaching a whole range of innovative courses have been launched, and the jargon of the educationalist has become the byword of some of the more dedicated course organisers. At times in fact one has the feeling that some general practitioners see themselves so totally in their educational role that their job of patient care appears to have been almost totally forgotten. Regional hospital boards and universities increasingly became part of the postgraduate game, and now there is a hierarchy of regional and associate advisers helping, organising, supervising, and running programmes throughout the country for vocational trainees and general practitioners.

In 1981, after years of vacillation, mandatory training for general practice was at last implemented in part and a full programme of postregistration training consisting of two years in hospital and one year as a trainee in general practice will probably be fully enforced by 1983. The days of the 'fifties, when training was regarded as unnecessary and possibly useless, have finally passed. The modern general practitioner should be better trained owing to his initiative and the widespread excellent vocational training programmes. It is to be hoped that the knowledge, skill, and attitudes will be more than adequate for the tasks that lie ahead.

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Trainees' Corner: Managing Chronic Disease

Chronic bronchitis

II: Treatment

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This article is based on an audiovisual presentation made for vocational trainees in general practice by the MSD Foundation. Further information about the tape-slide programmes on which this series is based is available from the MSD Foundation, Tavistock House, Tavistock Square, London WC1.

There are two aspects of long-term prophylaxis where effort on the part of the general practitioner often leads to frustration but should still be considered: the patient's environment, both at home and at work; and his smoking habits. We cannot do anything about the climate, and not much individually about pollution, but by example and by persistent persuasion we may be able to help to stop the patient with chronic bronchitis smoking himself to death—especially if he's still a young man. This can be successful if a positive enough attempt is made.

If the working environment—fumes, dust, and exposure to cold, wet, or damp—is having a detrimental effect on the patient's health, a direct approach to the occupational medical officer at the patient's place of work could get the patient moved to a more suitable atmosphere, although this may mean a reduction in his earnings. The disablement resettlement officer of the Department of Employment may be able to assist in training him for another job. Getting a job, however, may be difficult, but it is still worth trying. And the disablement resettlement officer may assist the determined efforts of the GP to find a Government retraining and rehabilitation scheme, as well as help with transfer to more amenable housing where the conditions are better. The local authority may have a "protected" workshop, but one of the major difficulties is that most people with chronic bronchitis are unskilled and usually of an age when they are unsuitable for retraining or a change of job. All in all, it is not an easy part of patient management, but nevertheless for many a necessary one.

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Chemotherapy

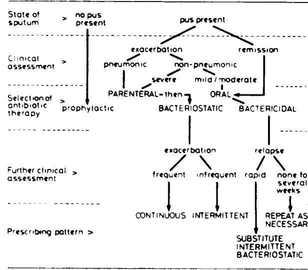
Drug treatment is often seen as the mainstay of long-term management. The importance placed on using antibiotics is often exaggerated, mainly because this is one of the few ways in which the GP feels (rightly or wrongly) he can make some impact on the course of the disease. No study has ever shown that treatment or non-treatment of exacerbations has any influence upon the rate of deterioration of respiratory function. Despite this, no-one would deny the importance of antibiotics when there is clear evidence of bronchial infection.

As we mentioned in the first article two main organisms are responsible for bacterial infections in chronic bronchitis. *Haemophilus influenzae* is isolated most frequently from sputum during exacerbations and less frequently during periods of remission. It is probably the main cause of persistently purulent sputum: bronchoscopic evidence suggests it may persist for long periods in the chronic bronchitic's lower respiratory tract, which is sterile in normal people.

Bacteriological examination of sputum for haemophilus may be difficult because the sputum must get to the laboratory without delay: it is a delicate organism and may die or be overgrown on culture by other organisms.

The other organism most often isolated particularly during an exacerbation, *Streptococcus pneumoniae*, is sensitive to most antibiotics, but it is showing increasing resistance to tetracyclines. Sputum culture is useful only if the condition is not responding or if it is suspected that other organisms are responsible for the purulence—such as staphylococcal infection complicating influenza. Lack of response, however, could suggest that the patient is not taking his drugs properly, or that there is another cause for the condition.

Chemotherapy for ad hoc relief can be managed perfectly well if the choice is made in a logical manner (figure). In general chemotherapy usually offers little to patients whose sputum does not contain pus. Sometimes if the sputum is thick and opaque this may be mistaken for purulence. The prophylactic use of antibiotics might help, however, if the patient has frequent exacerbations or if his respiratory function is such that further deterioration might prove fatal. Some of these patients can be given antibiotics throughout the winter months. Others can be given a supply of antibiotics and instructed to start taking them at the very earliest sign of infection.



Prescribing for chronic bronchitis.

In patients with early bronchitis, intermittent therapy given as required is all that is needed, and bactericidal antibiotics have no advantage over those that are bacteriostatic. Once the multiplication of organisms has been arrested by the antibiotic the host defences, which can be assumed to be still more or less intact, can deal with the infection.

Although the aim is to give a dose providing the most effective tissue concentrations needed, nobody really knows what factors decide these concentrations. So for the most part decisions on dosage are really made by rule of thumb. It has been suggested that there is nothing to be gained by increasing the dose above the conventional levels suggested by the manufacturers, but there is good evidence that very high doses of ampicillin (up to 4000 mg daily) can eradicate *Haemophilus influenzae*—at least for short periods of time—when smaller doses fail to do so.

Arthur again

Now let's look back at Arthur Cook, our typical patient, who was left suspended between a diagnosis and a decision about what to do about him. The winter is proving a particularly bad one for him. What should he do? Firstly, what advice should he be given, particularly about his 20 cigarettes a day? Secondly, should you prescribe an antibiotic for him, and if so, which one and for what reasons?

SMOKING

Mr Cook may not find it possible to give up smoking altogether. If you fail to get him to stop, try to persuade him to reduce the number he smokes, change his brand of tobacco, or not to inhale. You might also find it useful to define targets by considering the number of cigarettes he is allowed to smoke in relation to the state of his chest. And you must think too about the psychological problems of cigarette withdrawal in a patient with advanced bronchitis.

ANTIBIOTICS

The flow chart illustrates a possible policy for antibiotic prescribing in chronic bronchitis, and the table summarises many studies that have been made on the bacteriology of the disease. When choosing an antibiotic you must consider the sensitivity of the bacteria you suspect are present, the relative toxicity and side effects of the antibiotics you are considering, any idiosyncrasies the patient might have, and any treatment he might have had before.

Chemotherapy

These rules of thumb are based on the probability that a certain species will be the pathogen in a given situation—that is, the basic pattern is a stable one.

The results from a large number of studies can be summarised:

(1) In patients in remission, if there is persistent or repeated episodes of pus in the sputum the probable pathogen is *H influenzae*.

(2) In patients with acute exacerbation the causative pathogens are likely to be *H influenzae* or *Str pneumoniae* or both together.

(3) If pneumonia is complicating an acute exacerbation the commonest bacterial cause is *Str pneumoniae*.

(4) If pneumonia due to a staphylococcal infection is suspected culture and sensitivity tests should always be undertaken.

(5) Macroscopic pus in the sputum is at present the only reliable objective index of bacterial infection of the respiratory tract.

(6) Controlling the infection makes little difference to the rate of deterioration of respiratory function.

(7) The presence of pus is not by itself an indication for chemotherapy. Many patients benefit objectively and subjectively from suppression of infection: others may have increased dyspnoea and cough due to increased tenacity of residual mucoid sputum resulting from antibiotic therapy.

(8) Bacteriostatic antibiotics—in adequate concentration to inhibit the infecting organism—given as required are suitable for most patients with *early* bronchitis.

(9) In patients with *advanced* disease bacteriostatic antibiotics usually need to be given continuously.

(10) Bactericidal antibiotics need to be given to provide the highest possible tissue level to attempt to reduce persistent organisms to the level that the local defences can remove and to sterilise respiratory secretions.

(11) When the bactericidal treatment is successful pus disappears very rapidly from the sputum and treatment can be stopped after 4-5 days.

VIRAL INFECTIONS

The particular vulnerability of patients with chronic bronchitis to viral infection is probably due to some defect of the protective mechanisms of the lower respiratory tract. It is a counsel of perfection to tell them to avoid people who may have viral infections. The best you can do is to try and reorganise their lifestyle—for example, by reducing travelling on crowded buses and trains. Children often bring viral infections into the house and if unwell they should be advised to keep away from the bronchitic patient if possible.

Drugs other than antibiotics

Among the other drugs used to treat patients with chronic bronchitis mucolytics are often prescribed with the aim of reducing sputum viscosity, but no studies have produced any really convincing evidence of the benefits.

Even though airflow obstruction in chronic obstructive bronchitis is almost entirely irreversible, a small reversible component is usually present and undoubtedly most bronchitics derive some benefit from bronchodilators. It is generally preferable to give bronchodilators by aerosol (instructing the patient carefully about their use); oral preparations are more liable to cause side effects. Some patients with chronic obstructive bronchitis may also have coexistent late-onset asthma, in which case some of their airflow obstruction will be reversible, but bronchodilators are not always effective in this form of asthma. Patients in whom asthma is suspected merit a trial of corticosteroids, but in other circumstances there is no justification for their use in patients with chronic obstructive bronchitis or emphysema.

SLEEP PROBLEMS

One of the problems for patients with advanced bronchitis is sleep. Sedatives or hypnotics are contraindicated as they depress the respiratory centre and this in turn increases the degree of carbon dioxide retention leading to increased intracranial pressure, coma, and death.

Problems of advanced disease

Most practices have some patients with bronchitis that is so advanced that the main object is to try to make their remaining years as comfortable as possible. In an article of this length it is not possible to consider all aspects of such an advanced stage, but there are two conditions which must be mentioned, if only briefly: emphysema and respiratory failure.

EMPHYSEMA

If chronic obstructive bronchitis is complicated by emphysema the patient may not be noticeably short of breath at rest. This is because his respiratory centre has become insensitive, as a result of which he has a considerable tolerance to hypoxaemia (the cause of his cyanosis) and also to a raised Pco_2. Because a rise in Pco_2 does not stimulate his respiratory centre he is not short of breath. These patients eventually develop right-sided heart failure and fluid retention, and thus the term "blue bloaters" is often used to describe them.

On the other hand, if the disease is predominantly emphysema, the dyspnoea is usually distressing. These patients, however, are not cyanosed because their Po_2 is nearly normal, at least until the terminal stages. To achieve this they have to increase the rate and depth of respiration as much as possible and this causes dyspnoea. These patients, often termed "pink puffers," receive some benefit from oxygen. It reduces the respiratory effort that they have to make and there is no danger of depressing the respiratory centre. Domiciliary oxygen can be prescribed by the GP but difficulties may arise when replacement supplies are needed from a local pharmacist. Pharmacists are not obliged to carry them; the Family Practitioner Committee publishes a list of those who do.

RESPIRATORY FAILURE

Respiratory failure can be said to be present when the patient cannot maintain normal blood gases even at rest. The only reliable signs by which it can be recognised are tremor, mental confusion, and drowsiness. Other signs such as tachycardia and fluid retention may well be due to other causes so it is perhaps wise to assume the presence of respiratory failure from the patient's general clinical situation.

We are grateful to Dr Ian Gregg for his help with this article. The patient discussed is fictitious.

ONE HUNDRED YEARS AGO Sir,—Without entering into the merits of the question raised by Dr Markham on the earlier cases quoted by him (whose parallelism to the later case appears to me to be destroyed by the exceptions he himself makes), I cannot but think the whole argument turns upon the point as to what constitutes a medical consultation.

Homœopathy, in the eyes of all good men and true, is a thing as much outside legitimate medicine as astrology, alchemy, or the Brunonian system. The "gibberish," as Dr Johnson called it, by which such theories were represented, is a term equally applicable to the phraseology used in support of the modern assumption of "similars." How then, it may be asked, can the physician be said to "consult" with men who have neither language or ideas in common with him?

What Dr Quain did, in conformity with the advice of friends best able to help him, was to *prove* that Dr Kidd was not a homœopath. Dr Kidd's letter positively declared the fact, the first consultation verified it, and the bulletins, which were the result of subsequent consultations, confirmed the honesty and truth of Dr Kidd's declaration; but, even if Dr Kidd had turned out to be an inveterate homœopath, it might have been possible to put Dr Quain honourably in possession of the case. Although the issue was not tried, the power existed of eliminating Dr Kidd altogether. In such a case, the patient would have to exercise the power.

Your correspondent who signs himself "A Member" asks: "Is an ordinary practitioner justified in refusing aid in a dangerous case of labour, where a homœopathist professed is in attendance?" In answer, let me put a hypothetical illustration. Suppose Mr Gladstone, in his late serious illness, had been first attacked in a railway-carriage, and that a homœopathic gentleman, travelling in the same carriage, and calling himself a physician, had been invited to take charge of the case until the Prime Minister could obtain the services of his own physician. What would Dr Andrew Clark, on arriving at the patient's bedside, have done with the homœopathic gentleman? Assuredly, one of two things must have happened. If the homœopath were honest, and at once confessed his creed, Dr Clark would simply have ignored him as a medical practitioner. If this revelation were delayed, and the unwelcome truth elicited at a later period, the homœopath would probably have been summarily and ignominiously dismissed. Under either circumstance, professional honour would have been vindicated. —I am, etc, Henry Dayman. (*British Medical Journal*, 1881.)