THE WORK OF A NURSE EMPLOYED IN A GENERAL PRACTICE

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While everyone agrees about the importance of co-operation between doctor and nurse in the provision of an effective domiciliary medical service, the general administrative organization does little to ensure or encourage integration. Problems of co-ordination are accentuated by the tripartite division of the National Health Service, so that the extent to which integration is achieved depends largely on the individuals concerned.

Various local authorities and individuals have approached this problem in different ways. References are often made in nursing journals and reports of medical officers of health to schemes which are designed to bring the general practitioner and the public-health nurse into a working partnership, but we have remarkably little factual information about the nature of the work done by the doctor and the nurse under these different schemes.

One form of collaboration which is still comparatively rare in this country is for a nurse to work directly with a general practitioner. This paper describes the system adopted in two general practices in each of which a nurse was employed with two doctors and a medical social worker in a "family-doctor team." The organization of the nurse's work in this situation is described, and an analysis is given of the nature of the work which she performed and the type of illness with which she was most frequently concerned. Attention is focused on the nursing component of the routine work of the family doctor, and some practical problems of defining the roles of the doctor and nurse in this situation are revealed. The relationship of the nurses in these practices to health visitors and district nurses employed by the local health authority is discussed. Finally, the advantages and disadvantages of the wide-scale application of such an arrangement are considered.

Practices, Staff, and Patients

The two practices involved in this study together constitute the Edinburgh University General Practice Teaching Unit. Each practice is staffed by two doctors, a medical social worker, and a nurse. All the staff hold university appointments. Both nurses have additional qualifications and experience in midwifery, and one of them has been trained as a health visitor.

The size of the lists is relatively small, each practice having approximately 2,500 registered National Health Service patients, but all the staff have considerable teaching commitments. Every year approximately 150 medical students are attached to the unit for a period of three months for practical instruction.

The two practices are situated within half a mile of each other near the centre of the city. In this area there is a lot of old property, and housing conditions of the patients are much lower than the average for Scotland or Edinburgh. A considerable proportion of them live in overcrowded conditions, and the absence of such amenities as a bath and the exclusive use of a lavatory is not infrequent. A high proportion of the adult male patients are labourers and unskilled workers, and there are relatively few non-manual workers. In addition, the age distribution of the practice differs from that in Scotland or Edinburgh, there being an excess of children under 5 and a dearth of middle-aged people of 45-64 (Scott, Anderson, and Cartwright, 1960).

Material

During the twelve months October, 1956, to September, 1957, the doctors, almoners, and nurses in the unit recorded details of all their consultations on standard record sheets. The nurse's records provided information about the circumstances of the consultation, the diagnosis made by the doctor, and the examination and treatment carried out by her. All of this, apart from the diagnosis, was pre-classified so that she knew precisely the amount of detail required and the alternative classifications available. The classifications had been made after various pilot studies and discussions with the individuals involved. Social data about the patients and their families were recorded in a separate file.

Organization of Practices

Each practice has a waiting-room, two consulting-rooms for the doctors, a small consulting-room for the almoner, and a larger consulting-room, measuring approximately 20 by 15 ft. (6 by 4.5 m.), for the nurse. This is an all-purpose room which is equipped as a combined treatment and examination room, adjoining the doctors' consulting-rooms. In one practice an electric hot-air oven is used to dry-sterilize syringes: these are packed in aluminium screw-capped tubes for use in both practices.

Three "surgeries" (consulting hours) are held at each practice on week-days: 9-10 a.m., 3-3.30 p.m., and 6-7 p.m. The nurse is available for all morning and afternoon surgeries and for one evening surgery each week. In addition, both practices hold an ante-natal clinic once a week, where registered expectant mothers are seen by appointment, and in one practice a child-welfare clinic for the patients is held on one afternoon a week.

In the unit's earlier days the nurses undertook a considerable amount of home visiting, and at the time of the study (four years ago) they were still accepting some responsibility for the care of patients in their homes, although the doctors normally used the domiciliary services provided by the local health authority. In both practices effective collaboration with the local authority health visiting and district nursing service has been established, with the result that it is now quite exceptional for the practice nurse to do home visiting.

Other duties of the nurse include the supervision of surgery equipment and the contents of the doctors' bags. She attends a daily case conference at which she, the doctors, and the almoner report on their contacts

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with patients during the preceding 24 hours, discuss their problems, and exchange information.

Finally, the nurse is largely responsible for maintaining and developing contacts with the local health authority services, and she arranges conferences between health visitors, district nurses, and the staff of the practice.

Number and Nature of Consultations with Nurse

At one practice the nurse was concerned in just over 3,000 consultations† in the course of the study year, and at the other practice the number was just under 4,000—a rate of between 12 and 16 consultations per working day for each nurse, and an average of about one and a half consultations per year for each registered patient.

The numbers and proportions of consultations at the normal surgeries, in patients' homes, and at the antenatal and child-welfare sessions are as follows:

At the normal surgeries ..	5,026	70.6%
In patients' homes ..	411	5.8%
Antenatal sessions ..	814	11.4%
Child-welfare ..	867	12.2%
	7,118	100%

A quarter of the nurse's consultations were concerned with antenatal or child-welfare sessions and 6% took place in the patient's home.

Doctor and Nurse

How did the doctor and the nurse work together in practice? In what proportion of her consultations was the nurse seeing the patient on her own, and in what proportion was she working directly with the doctor? Who was mainly responsible for initiating consultations with the nurse, and when both the doctor and the nurse were involved in a consultation how did this arise?

At antenatal and child-welfare sessions both the doctor and the nurse were present as a matter of routine, and all patients attending would almost invariably see both of them. At normal surgery times the position was quite different, both doctor and nurse being available for consultation in their different rooms.

Patients consulting at the practice for the first time always saw the doctor. He might ask for the nurse's assistance during the consultation, he might send the patient in to see the nurse without also seeing her himself, or he might tell the patient to return for treatment to the nurse in a few days' time. Once the nurse had seen the patient she might make fresh appointments for the patient to see her or the doctor, and she would sometimes call the doctor in during the course of consultation. Sometimes, too, once a patient had consulted the nurse for one ailment he might go direct to her for another condition, but in such a case she would almost always consult the doctor. How often did these various contingencies arise in practice?

The doctors saw four times as many patients as the nurses at normal surgery hours, the ratio of doctor to nurse consultations being slightly under three to one at the morning and afternoon consulting hours when the nurse was nearly always available, and thirty to one in the evenings, when she was there only occasionally.

At two-fifths of the nurse's consultations the doctor was also present. On these occasions they conferred

or worked together. This collaboration was more often initiated by the doctor than by the nurse:

	Percentage of Nurse's Surgery Consultations
Doctor involved { At his initiative ..	22
" At nurse's ..	17
" By chance ..	1
Doctor not involved ..	60
Total No. of consultations (=100%) ..	5,026

Looking at this from the doctor's standpoint, we find that the nurse was involved in approximately one in ten of his surgery consultations, and this proportion varied between 13% at morning and afternoon surgeries and 2% in the evenings.

Sometimes the nurse accompanied the doctor on visits to the patient's home. During the study year this occurred on 51 occasions, which represent 12% of all the nurse's visits to patients' homes but only less than 1% of the doctor's visits.

How did the patients come to see the nurse during normal surgery hours? This information is given in Table I.

TABLE I.—Methods by Which Patients Reached Nurse for Normal Surgery Consultations

Method	Percentage of Consultations	Percentage of Consultations at which Doctor was Involved	No. of Consultations
From consultation with doctor	24	94	1,214
By appointment:			
Made by doctor ..	10	19	475
" nurse ..	55	22	2,763
Direct—patient's initiative ..	11	32	574
All consultations ..	100	40	5,026

The commonest type of attendance was the follow-up consultation when an appointment had been made at a previous consultation with the nurse. (The term "appointment" is used here loosely to indicate that it had been arranged previously that the patient should come to see the nurse, although a particular time and date may not have been arranged.) The patient went direct to see the nurse without any previous arrangement or referral by the doctor in about one in ten of her consultations.

The proportion of these different types of consultation in which the doctor was directly involved is shown in Table I. The proportion was greatest for those arising direct from a consultation with the doctor. In these cases it was, of course, the doctor who initiated the collaboration, but at the other types of consultation it was the nurse who had to decide whether or not the doctor should also take part in the consultation. She asked the doctor to see the patient at a fifth of the consultations which had resulted from an appointment, and this proportion was practically the same whether the appointment had been made initially by the doctor or the nurse. When the patient came to see the nurse on his own initiative she referred him to the doctor in a third of the cases.

Action Taken by Nurse

It is convenient to consider the nature of the work undertaken by the nurse in three broad groups. In the first section the nurse's role in diagnosis is considered by analysing the contribution she made to the examination of the patient; secondly, the nature of the treatment carried out by the nurse is recorded; and, finally, the part played by the nurse in supplying advice, explanation, or discussion is examined.

†A consultation with the nurse was recorded every time she saw a patient in a professional capacity, whether or not a doctor also took part in the consultation.

Examination

The nurse helped in the clinical examination of the patient at 41% of her consultations (Table II). This was much more common at child-welfare and antenatal sessions, for which it was practically routine, than at normal surgery attendances, and it rarely occurred at her visits to the patients' homes.

The nurse weighed the baby at more than nine-tenths of the consultations at the child-welfare sessions and she weighed the patient, tested the urine, and assisted the doctor in his examination of the expectant mother at the great majority of consultations during the antenatal sessions. During the normal surgery attendances the nurse's main contribution consisted in helping the doctor in the physical examination of the patient.

TABLE II.—*Type of Examination Carried Out by Nurse*

	Normal Surgeries	Patients' Homes	Child Welfare	Antenatal	All Consultations
	%	%	%	%	%
Assisting at examination by doctor	15	5	7	95	23
Weighing	10	—	93	94	29
Testing (mainly urine)	2	1	—	93	12
Taking specimens (mainly for bacteriology)	2	1	—	2	2
Temperature, pulse, respiration	1	—	—	—	1
Other examination	—	—	—	—	—
No examination	74	94	5	3	59
No. of consultations (=100%)	5,026	411	867	814	7,118

Treatment

At three-fifths of all their consultations the nurses performed some type of action that had a direct therapeutic purpose: this occurred at 75% of nurse consultations during routine surgery hours, and was even more evident (82% of all consultations) when she visited the patients' homes. The figures were very much lower for child-welfare and antenatal sessions, being only 18% and 3% respectively of these consultations. The type of action performed is shown in Table III.

TABLE III.—*Type of Direct Therapeutic Action Performed by Nurse*

	Normal Surgeries	Patients' Homes	Child Welfare	All Consultations
	%	%	%	%
Dressings	42	50	17	35
Supervision of personal hygiene	7	20	1	7
Eye-drops, ointment	8	—	—	6
Therapeutic injections	13	16	—	10
Supporting bandages	4	1	—	3
Topical treatment of ear conditions	8	—	—	5
Fitting birth-control appliances	1	—	—	—
Administering medicines	1	—	—	—
Other therapeutic action	8	15	—	6
No direct therapeutic action	25	18	82	39
No. of consultations (=100%)	5,026	411	867	7,118*

* Consultations at antenatal sessions are included in the proportions for all consultations, but no separate figures are given, since only at 3% of these consultations was any direct therapeutic action taken.

By far the most frequent type of therapeutic action undertaken by the nurse was the application of dressings—for example, in the treatment of skin diseases, such as infantile eczema, or in the topical treatment of boils, infected wounds, and abrasions. Some form of dressing was applied at 35% of her consultations, at 42% of normal surgery consultations, and at 50% of those taking place in patients' homes.

The supervision of personal hygiene, which included any washing or bathing (apart from that done before applying a dressing), was also relatively frequently performed at home visits, and injections were also given quite often under those circumstances. The nurse gave an injection at 10% of her consultations, and a substantial amount of work was concerned with the supervision of topical treatment for eye and ear infections. Included under the heading "other therapeutic action" were such things as enemas, douches, throat paintings, and nose drops.

Advice, Discussion, Explanation, and Listening

Apart from her other direct therapeutic activities, the nurse gave advice and information to patients, and explained various aspects of their illnesses or various normal physiological functions. She also listened to their accounts of their doubts and dilemmas, fears and frustrations. This aspect of her work is analysed in Table IV.

TABLE IV.—*Advice, Discussion, Explanation, and "Therapeutic Listening" Provided by Nurse*

	Normal Surgeries	Patients' Homes	Child Welfare	Antenatal	All Consultations
	%	%	%	%	%
Advice, discussion on:					
Diet, nutrition	18	40	86	38	30
Health, normal physiology	15	16	74	69	28
Disease	24	34	9	6	21
Exercises	6	6	9	45	11
Personal relationship problems	4	1	2	6	4
Vaccination, immunization	1	—	12	—	2
Birth control	2	—	—	2	2
Sex—other than birth control	1	—	—	1	1
Self-prescribed medicines	—	1	—	—	—
Other topics	2	—	1	2	2
Therapeutic listening	21	50	13	23	22
No discussion, advice, or listening	32	—	1	1	23
No. of consultations (=100%)	5,026	411	867	814	7,118

Advice on diet included dietetics, nutrition, home economics, budgeting, and often detailed examination of the medical and social aspects of the nutritional problem presented not only by the patient but by the family concerned. One aspect or another of this topic was the subject of advice or discussion at three out of every ten of all the nurse's consultations. The proportion was highest at child-welfare sessions, but it was also a relatively frequent topic for discussion at antenatal sessions and at the nurse's home visits. The nurse described some particular physiological process at over a quarter of her consultations, and again this was most frequent at antenatal or child-welfare consultations, whereas an explanation about the nature of a disease often took place at a normal surgery consultation or at home visits. This latter type of explanation was not recorded if the nurse merely told the patient the diagnosis; it was reserved for occasions on which the nurse explained the cause of the illness, how it was likely to develop, how the signs and symptoms were connected, when she reassured the patient that he did not have some particular sinister condition, or when she cleared up a misconception about the course or consequences of his illness.

Exercises were most often discussed at antenatal sessions, and vaccination and immunization at the child-welfare consultations. Birth control was discussed at only 2% of her consultations, and sex, other than birth control, at 1%. Other types of personal relation-

ship were the subject of conversation at 4% of all the consultations.

The nurse, in addition, often helped the patient to express latent fears and fantasies. She received many confidences and listened to many stories of strife and tales of tribulation. "Therapeutic listening" was recorded when she felt that the patient had benefited—not because of anything she had done or said but because she had just let him talk. This form of therapy was recorded at one in five of all consultations and at as many as half the home visits. Not surprisingly, it was lowest at the child-welfare sessions, but even here the mother bringing her child to the nurse was afforded this form of treatment at 13% of attendances.

Further analysis* showed that the nurse's activities at normal surgery consultations varied in relation to the person initiating the consultation. The nurse was most likely to be involved in examination or other diagnostic procedures when the doctor initiated the consultation, whether directly or by appointment. The nurse carried out some form of treatment most frequently when she herself initiated the consultation, and the patient came to see her by appointment at her suggestion. The extent to which she provided advice, explanation, and information, or lent a sympathetic ear, did not vary much with the person initiating the consultation, but it was highest when appointments were made by the doctor. Clearly, the doctor used the nurse as an adviser, and consciously or otherwise passed on to her some patients who had a greater than average need for therapeutic listening.

Effect of the Nurse on the Doctor's Work

In this study it is not possible to examine the effect of the nurse on the nature and extent of the doctor's work. To do this would necessitate an analysis of his work before and after the introduction of the nurse into the family-doctor team. It is, however, possible to examine certain aspects of his work under different circumstances during the study year, and this will provide some indication of the way in which the availability of the nurse influenced the type of action undertaken by the doctor at different consultations.

Although the nurse was generally present at morning and afternoon surgeries there were occasions when, because of illness, holidays, or various commitments associated with her work, she was not available during

TABLE V.—*Variation in Doctor's Action with Availability of Nurse*

	All Surgeries	
	Nurse Available	Nurse Not Available
Type of action:		
Dressings	8.0	14.3
Ear syringe	0.2	0.3
Therapeutic injections	1.2	2.5
Type of examination:		
Patient undressed	40.7	36.1
Couch used	11.0	7.3
No. of consultations (=100%)	11,326	8,604

these periods, and the variation in certain of the doctor's actions under those circumstances is examined in Table V. (The figures given are for all surgery attendances, but detailed analysis reveals the same trend if the nurse is not available, no matter whether this is a morning, afternoon, or evening surgery.)

*Detailed statistical tables and analyses are available, on request, from the authors.

In general, the doctor tended to do fewer dressings, give fewer injections, and perform more extensive physical examinations when the nurse was available. This demonstrates again that the nurse undertakes certain therapeutic functions on her own, but in regard to examinations and diagnostic procedures her most frequent role is that of assisting the doctor.

Nurse and Almoner

A discussion of the work carried out by the nurses in these two practices would be incomplete without some reference to the relationship between the nurses and the medical social workers who, with the doctors, make up the family-doctor team.

Total consultations given during the study year (including those for temporary patients) by doctors, nurses, and almoners were 32,418, 7,118, and 2,715 respectively. This gives a ratio of 11.9:2.6:1. The doctor's consultations outnumbered those of the nurse by just over 4½ to 1; but the nurse, whose hours of duty were identical with those of the medical social worker, had 2.6 consultations for every one given by her almoner colleague. The almoner saw fewer patients and on average gave more time to the patient than did the nurse. In contradistinction to her method of working with the doctor, the nurse rarely saw the patient along with the almoner—liaison and integration being normally effected at the daily case conference. Apart from routine daily reports, the almoner referred the problem back to this case conference at 9% of her consultations, and at 1% of her consultations she sent the patient back to the nurse in the unit for specific advice or information. The almoners recorded that 4% of their consultations were initiated by the nurses, and a relatively high proportion of these referrals were maternity cases.

Different Types of Disease with which Nurse was Concerned

Compared with the doctor, the nurse was relatively more concerned with skin conditions, pregnancy, accidents and injuries, child welfare, diseases of eyes and ears, diseases of the female genital organs, varicose veins, and obesity.* All these represent a greater proportion of the nurse's than of the doctor's consultations, although for these conditions the number of consultations was greater for the doctor than for the nurse. Fairly common conditions which represent a higher proportion of doctor's than of nurse's consultations are cardiovascular degeneration, bronchitis, vague symptoms, coryza, sore throats, psychoneurosis, exanthemata, and dyspepsia.

The nurse was seen at some time or other for just under one in five of all episodes of illness. Conditions for which she was most likely to be consulted were pregnancy, child welfare, boils, diseases of the female genital organs, wax in ears, impetigo and acne, and cuts and grazes; and she was concerned in a third or more of such episodes. These conditions all demand either examination, at which the nurse can assist the doctor, or dressings, the most frequent type of direct therapeutic actions performed by the nurse.*

Conditions which led to high consultation rates *per patient consulting* were of a different nature, being mainly chronic or long-term conditions—malignant

*Detailed statistical tables and analyses are available, on request, from the authors.

disease, eczema, cardiovascular degeneration, varicose veins, pregnancy, pulmonary tuberculosis, psoriasis, asthma and other allergies, and rheumatic diseases. If a nurse was consulted at all for these conditions the patient was seen by her, on average, more than four times.*

Analysis of nurse/patient consultations by age and sex* suggests that the nurse would be consulted most often in practices with a high proportion of young children and women of child-bearing age.

Discussion

That there is a substantial nursing component in the daily work of the family doctor is well recognized, and a number of general practitioners, mainly those working in partnership, provide out of the practice income a person to assist them in this respect. Such auxiliaries are by no means always fully qualified nurses, and, though some of the tasks they perform may not require a high degree of skill or training, these auxiliaries presumably are employed because of existing gaps in the nursing service available to the general practitioner. Apart from any nursing assistance which is provided by hospital out-patient departments, the nursing services available to the general practitioner can be reinforced by a wide range of services provided in the community. District nurses, midwives, health visitors, and school nurses are employed by the local authority. Many factories provide an industrial nursing service, and there is still room for voluntary societies, religious orders, and private enterprise to make a contribution in this field. With few exceptions, however, none of these services is available at the consulting-room, where the general practitioner does most of his daily work. Most of these services have this in common, that the nurses are employed by an organization or an authority which determines the type and range of service which will be provided, the general practitioner having little influence on determining policy and no direct executive authority to control or modify in detail the day-to-day work of the nurse or nurses concerned.

When a general practitioner, therefore, is confronted with a situation where he has complete access to the services of a fully trained nurse to assist him in the work of his practice, there is no substantial recorded experience to guide him to the most effective way in which they can work together as colleagues. His approach to this problem is therefore likely to be largely empirical and to be continued by preconceived ideas, partly derived from his image of the work done by the nurse in the hospital in which he was trained, and partly by the nature of the personal experience he has had of professional contacts with nurses employed in the community services. This empirical approach is clearly illustrated by an analysis of the work done by the nurses in these two practices, and a study of the results has already led to modifications of the way in which the nurse's services are used.

As a doctor and nurse develop a better understanding of their respective roles, the nurse is likely to be given more responsibility, particularly in the supervision of health and welfare of children and expectant mothers, in prophylaxis, in health education, and in dealing with a wide range of social, economic, and personal relationship problems which form the background of the illness for which the patient has consulted the doctor.

When a nurse is working directly with general practitioners as part of a family-doctor team she can be said to have three different roles. First, she relieves the doctor of a number of functions which she is often more experienced than he in performing. Secondly, she enables the doctor to undertake both diagnostic and therapeutic responsibilities which he would otherwise discharge by referring the patient to other parts of the Health Service, particularly the hospital and the community nursing services. Thirdly, by assisting the doctor, she extends, both qualitatively and quantitatively, the personal medical care given to the patients.

We have not attempted here to categorize the various tasks performed by the nurse in this way. This would have involved innumerable subjective decisions which we were not prepared to make. We have simply described the nature of her work in quantitative terms.

The particular practices in which this study was carried out are quite atypical. The salient features of their organization are the existence of a family-doctor team comprising two doctors, a nurse, and a medical social worker; the heavy teaching commitments of all members of the staff; and the small number of patients on the list of each doctor. As they differ from the majority of general practices in so many ways it is quite impossible to ascribe variations in the number and nature of the services provided to any one particular feature. Thus the high consultation rate (6.6 per patient per year) and the low prescribing rate observed may be influenced by each of these three factors.

The relatively high consultation rate certainly suggests that, while the nurse can relieve the doctor of a number of time-consuming duties, her presence in a general practice does not necessarily reduce the overall amount of work performed by the doctor. When he is freed of such tasks as the application of dressings and providing detailed advice and instruction about diet, he is able to assist his patients in other ways. Our description of the treatment provided by the doctors in these practices has shown the considerable extent to which they are concerned with the social and emotional problems of their patients (Scott *et al.*, 1960). In this respect the nurse may well act as a stimulant to the general practitioner. The appreciable amount of discussion between the nurse and the patients often revealed complications and additional problems of which the doctor was made aware at the daily case conference. Fox (1960) has suggested that the particular object of the personal doctor's independent existence may be defeated if he leaves all dressings to the nurse, sympathy to the receptionist, messages to the secretary, and the solution of home problems to the social worker. Our experience does not support this thesis, but suggests that a family doctor working with a nurse may have rather more personal contacts with his patients than one who works on his own and refers more of his patients to the hospital or to any other agency.

Clearly, if a nurse was to work with a general practitioner in a very different situation—for example, where the doctor had a large list and none of the other additional facilities available to the doctors in our practices—the effect might be rather different. It is probable that the nurse would be mainly employed by the single-handed doctor with a large list to relieve him of his more arduous tasks and thus enable him to augment his scanty leisure; but even in such a situation it is likely that he would be stimulated to extend his range of diagnostic and/or therapeutic activities.

*Detailed statistical tables and analyses are available, on request, from the authors.

Besides enabling the doctor to have more free time and/or time to extend the care given to patients, it is possible that the nurse could enable the doctor to look after a greater number. Our feeling, however, is that this effect is not likely to be large, because the pressure to provide more care or care of a different nature is pretty considerable, and only doctors already overburdened with their commitments are likely to be able to resist it.

We would conclude that the main effects of a nurse working in general practice are, first, to extend the care given to patients; secondly, by relieving the doctor of arduous and time-consuming tasks, to ease his sense of frustration (it might be that "therapeutic listening" to the general practitioner is the most important and most frequent duty of the nurse in this situation); and, thirdly, to reduce the amount of use made of other parts of the Health Service, and in particular the hospitals, district nurse, health visitor, and possibly the pharmaceutical services. Although we feel that this arrangement of a nurse working directly with a general practitioner is in many ways ideal from the viewpoint of the patient, we do not claim that it could or should enable doctors to increase their size of list with impunity.

In various ways the nurse helps to co-ordinate many different services. She does not replace the health visitor or district nurse, but helps to ensure efficient collaboration between them and the general practitioner. To some extent, however, she does relieve them of some of their duties in the same way that the general practitioner, by holding a child-welfare clinic in his practice, relieves the medical officer of health of part of his responsibility. Here, again, closer collaboration between the family doctor and the local health authority services seems likely to increase the extent and improve the nature of care provided rather than to reveal much overlapping of services.

Costs

It may be thought that the system described here, in which one nurse works directly with two general practitioners, is an idealistic one, but that the cost of such a service would be so prohibitive as to make its general application quite unrealistic.

It is not possible to compute exactly the net cost of such a service, since we are unable to estimate the possible saving which would occur in other services. The following facts and figures, however, provide a background against which the proposal can be considered. They relate to England and Wales in 1958.

During that year the hospital and specialist service accounted for 57% of the expenditure on the National Health Service, general medical services for 10%, pharmaceutical services for 10½%, and the local authority services for 9%. At this time there were 19,685 principals in general practice, 10,189 home nursing staff (51% of them part-time), and 6,393 health visitors, again many of them part-time.

Thus there was a ratio of one health visitor or district nurse to every 1.2 general practitioners, although in "full-time equivalents" it would be more nearly two to every three G.P.s.

The cost of providing one additional nurse for every two doctors, if such nurses were available, would be, at an average salary of £800,* £7,874,000. If this scheme were adopted it would almost certainly be

reasonable to reduce the present force of district nurses and health visitors. If they were reduced to one-half of their present level, this would mean that the cost of the scheme would be about £3,937,000. This sum could be realized by a reduction of 1.04% in the cost of the hospital services, and it seems possible that a scheme like this could effect such a saving. It is also possible that this scheme might reduce the cost of the pharmaceutical service. In the practices in which this study took place the average cost per prescription was just slightly below the general average, but the prescribing rate was two-thirds of that in the area. If this rate was general it would effect a saving of £21,800,000—that is, nearly three times that of the total cost of providing these additional nurses.

However, the major obstacle to the employment of nurses in general practice may not be expense but shortage of suitably qualified nurses. This type of work is in many ways particularly suitable for nurses who are married and have some family responsibilities, since if a nurse is available during only one consulting period each day it is possible for the general practitioner to organize his work in such a way that he makes the best use of her services. Alternatively, in a large practice it might be possible to employ more than one part-time nurse so that one would be available at each of the consulting times.

Summary

Two general practices, each staffed by two doctors, a nurse, and a medical social worker, were studied for a period of one year. The work undertaken by the nurses in this situation is described and analysed.

In one practice a third of the nurse's work, as measured by the number of consultations, was taken up with antenatal and child-welfare work. In each practice patients consulted the nurse on average approximately once for every four times they consulted the doctor. At just over half the normal surgery consultations with the nurse, patients saw the nurse without the doctor being present.

At the ordinary surgery consultations the nurses performed some sort of therapeutic action at three-quarters of these occasions, some action with a diagnostic purpose at one-quarter, and provided advice, explanation, information, or "therapeutic listening" on just over two-thirds. The application of dressings and therapeutic injections constituted the major part of their treatment, and assisting the doctor at examination and weighing were the most common forms of diagnostic procedure. The nature of the patient's illness, diet, nutrition, and normal physiology were the most frequent topics of discussion between nurses and patients; and at as many as one-fifth of the consultations the nurses recorded that they felt the patient had benefited because they had listened sympathetically while he related his troubles.

The types of condition most often seen by the nurse were skin conditions, pregnancy, child welfare, accidents and injuries, diseases of the eyes and ears and female genital organs, rheumatic diseases, varicose veins, cardiovascular disease, and obesity. Babies, elderly people, and women of child-bearing age were the groups of patients most likely to consult the nurse.

The advantages of this arrangement, the nurse working directly with the general practitioner, were felt

*The present Whitley Council salary scales are £655 to £830 for health visitors and £600 to £775 for district nurse midwives.

by the individuals concerned to be considerable. It is suggested that the main effects are to extend the range of care given to patients, to ease the sense of isolation and general feeling of frustration commonly experienced by general practitioners, and to reduce the amount of use made by these doctors of the hospital, local authority, and pharmaceutical services. Certain calculations suggest it is possible that the wide-scale application of such a system might result in a saving to these last three services which would offset its cost.

This account of a collaborative study would be incomplete if we did not record our indebtedness to the large number of individuals who made it possible. Our thanks are especially due to our two nursing colleagues, Miss Margo Ferrier and Miss Janette Robertson, who, as former members of the staff of the unit, assisted in the planning

and collected the appropriate data during the year in which this study was carried out. Mrs. E. Harnden was responsible for the tabulating and computing. A good deal of extra clerical work was undertaken by our secretaries, and in particular by Miss H. P. Pace. Mrs. N. Cheshire and Mrs. J. Gibson did most of the coding and transferred the data to punched cards. Past and present members of the staff of the unit who collaborated in this study included the following:—almoners: J. McNicol, J. E. Paterson, and J. Throne; doctors: J. A. D. Anderson, D. W. Maclean, I. S. McRobbie, D. H. McVie, M. W. Moss, and H. R. Neve. The cost of the study was met by a grant made by the Secretary of State for Scotland on the recommendation of the Advisory Committee for Medical Research.

REFERENCES

- Fox, T. F. (1960). *Lancet*, **1**, 743.
Scott, R., Anderson, J. A. D., and Cartwright, Ann (1960). *Brit. med. J.*, **2**, 293.

British Medical Association

ANNUAL MEETING AND BIENNIAL CONFERENCE OF THE NEW ZEALAND BRANCH, AUCKLAND, 1961

SUMMARY OF PROCEEDINGS

SECTIONS OF OBSTETRICS AND GYNAECOLOGY AND DERMATOLOGY

Thursday, February 9

Leucoplakia and Vulval Atrophy

With Dr. I. B. SNEDDON (Sheffield) in the chair, Dr. H. J. WALLACE (London) read a paper on leucoplakia and vulval atrophy. He said that leucoplakia was a disorder which varied considerably in appearance and he thought that the simplest diagnostic procedure was to observe the histological changes in the mucous membrane during the hypertrophic phase which alternated with the atrophic phase of the condition. Malignant change was likely to occur at any stage and it was important to differentiate hypertrophic leucoplakia from chronic dermatitis and atrophic leucoplakia from lichen sclerosis.

Leucoplakia of the vulva was often associated with intense itching and was confined to the labia minora, clitoris, and inner aspects of the labia majora. There appeared to be no correlation with syphilis or vitamin-A deficiency, but chronic irritation and dermal dystrophy were predisposing factors. It occurred most commonly as a complication of lichen sclerosis or primary atrophy but could arise from a chronic dermatitis or without any obvious cause.

The treatment of the condition was difficult, and the only certain method of removing the risk of carcinoma was to cut out the cancer-bearing areas. These were sometimes difficult to define, and inadequate surgery might be followed by the recurrence of leucoplakia. In general, vulvectomy was indicated after the age of 40. Before this age, or after if vulvectomy was contraindicated or refused, observation should be carried out at two-monthly intervals in order to detect early cancerous changes. It was sometimes possible to secure symptomatic relief by section of the pudendal nerve, but local anaesthetic applications and radiotherapy were not desirable. Topical hydrocortisone and oral anti-histamines were the least ineffective symptomatic treatments.

Dr. Wallace then discussed the differential diagnosis of leucoplakia from lichen sclerosis, chronic dermatitis, lichen planus, psoriasis, and moniliasis. He concluded by describing the changes associated with vulval atrophy and suggested that the term kraurosis be discontinued, since it was not clear whether it was used to describe a primary atrophy of

the labia minora and clitoris or a benign, involutionary atrophy predominantly of the vestibule and introitus. Atrophy of the labia minora and clitoris was usually potentially sinister. The benign types of vulval atrophy were involutionary, and often inflammatory, changes confined to the vestibule and introitus and senile genital atrophy.

In the discussion Mr. BRUCE W. GRIEVE (Auckland) emphasized the value of multiple biopsy studies as an aid to accurate diagnosis and suggested that the treatment of leucoplakia, lichen sclerosis, or vulval atrophy which was associated with intractable pruritus was simple vulvectomy. In reply to Dr. I. O. STAHL (Melbourne), who favoured conservative treatment for lichen sclerosis of the vulva at any age, even if accompanied by persistent irritation, Dr. WALLACE said that this might be justifiable if the patient could be seen at two-monthly intervals.

SECTIONS OF OBSTETRICS AND GYNAECOLOGY AND ANAESTHESIA

Friday, February 10

Anaesthesia in Obstetric Practice

With Dr. C. R. CLIMIE (Auckland) in the chair, Dr. W. D. WYLIE (London) read a paper on some aspects of anaesthesia in obstetric practice. He limited the subject to the problems associated with anaesthesia for emergency obstetrics in the labour ward, noting that much of the present interest in it stemmed from the challenging picture presented by the figures for maternal mortality due to anaesthesia in the United Kingdom, and the widespread feeling that anaesthesia for obstetrics had not generally kept pace with that for other branches of surgery. It could be estimated that about 9% of avoidable maternal deaths were related to anaesthesia, and that 60% of these were due to pulmonary aspiration of stomach contents. National figures gave little evidence of morbidity, yet hospital experience suggested that about 4% of mothers in labour vomited during purely inhalational anaesthesia, and that about 1% developed non-fatal pulmonary complications as a result. A survey of anaesthetic practice in the labour ward in the obstetric unit of 40 teaching hospitals and large non-teaching hospitals