THE CONTRIBUTION OF THE NURSE IN GENERAL PRACTICE

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In general it seems to be taken for granted that general practitioner services will continue to be based on individual doctor-patient relationships with no intervening third party. This pattern is not followed in some other medical services, for example at Child Welfare clinics, and in Industrial and School Health Services, where the presence of a nurse as an intermediary between doctor and patient is accepted without question. Nor is it invariably followed in other countries; in New Zealand, for example, the nurse assists the practitioner (Collings, 1950). Pinsent (1950) has described the contribution of the health visitor to the care of older patients and has suggested ways in which a nurse might assist the general practitioner in Great Britain.

There are obviously two ways in which a nurse might help. She might provide certain services without referring patients to a medical practitioner; or she might contribute to the care of patients under his direction. There has, however, been no detailed investigation of the work which can be undertaken by a nurse in general practice, and we here report the results of such an inquiry conducted during a 12-month period (1953-4) in the practice of one of us (D. L. C.). The practice includes two residential institutions, each with a resident nurse.

METHODS

The features of the practice in which this study was carried out and the method used in collecting the data have been described in a previous communication (Crombie and Cross, 1956). Briefly, a punch-card was completed for each doctor-patient contact; the information included the patient's age, sex, marital state, diagnosis, time spent in contact with the patient, and degree of severity of the illness. At the end of each episode of illness the

possible contribution of the nurse was assessed. Illnesses were classified as follows:

Group I: Conditions for which it was judged a nurse could take full clinical responsibility.

Group II: Conditions considered to require the attention of a doctor, but to which the nurse could make a contribution.

Group III: All other conditions.

Experience of cases cared for during one week by the nurse without reference to a doctor at a residential school was used to identify conditions appropriate to Group I. They were as follows:

- (a) Mild infections of the upper respiratory tract: common colds, coughs, sore throats, or huskiness with little or no constitutional upset or pyrexia.
- (b) Mild gastro-intestinal disturbances: simple nausea, vomiting, and diarrhoea with little or no constitutional upset and no abdominal pain or pyrexia.
- (c) Minor traumatic lesions: bruises, simple sprains, cuts, and abrasions. Cuts and abrasions which needed more than cleaning and dressing were excluded.
- (d) Minor inflammatory lesions of the skin: furuncles, styes, boils, insect bites, and early paronychia infections.

Services which it was considered could be delegated to a nurse after patients had been seen by a doctor (Group II) were as follows:

- (a) General advice on matters such as diet, particularly for obesity or peptic ulceration; baby feeding and care; use of hypodermic syringes for self-administration of insulin adrenaline, or ergotamine tartrate.

- (b) Copying of repeat prescriptions.
- (c) Dressings of minor cuts, abrasions, and ulcers, and removal of stitches; sub-cutaneous and intra-muscular injections. Intra-venous injections were excluded.
- (d) Other simple procedures, such as weighing; analysis of urine (tests of pH and specific gravity of urine and for presence of albumin, glucose, and ketones); estimations of blood pressure; application of occlusive and elastic dressings to sprains, varicose ulcers, or superficial phlebitis; catheterization of female patients; syringing, cleaning, and packing ears.

It is not suggested that delegation of all these services would be acceptable in general practice. But all of them are delegated in some sphere of medicine, and there is no obvious reason why the possibility of their delegation in general practice should not be investigated.

RESULTS

The potential contribution of the nurse in general practice is assessed in two ways:

- (a) By estimation of the amount of the general practitioner's time which would have been saved during the period of one year had the services referred to above been performed by a nurse;
- (b) By comparison of the time spent by the general practitioner in the care of patients at a residential school and an old people's home where he was assisted by a nurse, with the time spent in the care of individuals of the same ages in the practice where no assistance was available.

Table I gives the proportion of episodes of illness during one year to which it was considered that the nurse could make a contribution. It was thought that she could take full clinical responsibility (Group I) for about one-sixth (15.6 per cent.) of all episodes and that she could assist with a further quarter (23.7 per cent.).

The proportion of episodes in Group I is relatively high in four types of illness (respiratory, 35.5 per cent.; ear, nose, and throat, 25.2 per cent.; gastro-intestinal, 17.5 per cent.; and skin and connective tissue, 17.4 per cent.), but is quite small in all other types.

The proportion of episodes in Group II is more evenly distributed between the various classes of illness, although it is high in the cases of the genito-urinary system (42.1 per cent.) and in a miscellaneous group classified under "other" (42.0 per

TABLE I
ESTIMATION OF THE PROPORTION OF EPISODES OF ILLNESS DURING ONE YEAR TO WHICH THE NURSE COULD MAKE A CONTRIBUTION

Type of Illness	Number of Episodes	Episodes in Group I*		Episodes in Group II*	
		Number	Per cent.	Number	Per cent.
Respiratory ..	813	289	35.5	122	15.0
E.N.T.	901	227	25.2	160	17.8
Skeletal ..	553	15	2.7	115	20.8
Cardiovascular	167	—	—	42	25.1
Nervous ..	614	9	1.5	146	23.8
Genito-urinary	266	1	0.4	112	42.1
Gastro-intestinal	582	102	17.5	143	24.6
Skin and Connective Tissue	989	172	17.4	223	22.5
Other ..	521	28	5.4	219	42.0
All Illnesses ..	5,406	843	15.6	1,282	23.7

* Group I episodes are those for which it was considered a nurse could take full clinical responsibility.

Group II episodes are those (after exclusion of Group I) to which it was considered a nurse could make a contribution.

cent.). The latter includes pernicious anaemia, obesity, and various prophylactic procedures such as immunization against whooping cough and diphtheria.

Table II (opposite) gives an estimate of the proportion of the doctor's time which could be saved by the work of a nurse. The Table shows the total time spent by the doctor on the various types of illness, and the time which would have been saved had the nurse attended to the patients classified in Groups I and II. The difference between the total time spent by the doctor on Group I episodes and the estimate of the time which could be saved on these episodes is accounted for by the preparation of certificates which must be undertaken by the doctor.

It is estimated that 73 per cent. of the time spent on Group I episodes could be saved; the corresponding proportion for Group II episodes is 35 per cent. The possible saving on episodes of both types is approximately one-fifth (19.2 per cent.) of the doctor's time. The saving on Group I episodes alone is only 4 per cent., much the greater contribution being the work of the nurse on patients first seen by a doctor (Group II). The proportion of the doctor's time which could be saved varies somewhat from one group to another; it is greatest in the miscellaneous group (32.3 per cent.), and in illnesses involving the skin and connective tissue (27.7 per cent.) and the ear, nose, and throat (23.9 per cent.).

The services which it was considered that a nurse could perform have already been listed; the number of times each type of service was given during the year of the survey is shown in Table III (opposite). The number of services per hundred episodes was roughly twice as great for patients in Group II as

TABLE II

ESTIMATION OF THE PROPORTION OF THE DOCTOR'S TIME WHICH COULD BE SAVED BY THE WORK OF A NURSE

Type of Illness	Doctor's Time (min.)			Estimate of Time Saved (min.)			
	On Group I Episodes	On Group II Episodes	On all Episodes	On Group I Episodes	On Group II Episodes	Total	Percentage of Doctor's Time
Respiratory	1,220	3,662	10,365	922	1,244	2,166	20·9
E.N.T.	868	1,979	7,189	607	1,111	1,718	23·9
Skeletal	51	1,780	5,193	47	654	701	13·5
Cardiovascular	—	1,815	4,461	—	593	593	13·3
Nervous	35	2,324	7,330	16	757	773	10·5
Genito-urinary	2	4,471	6,494	—	948	948	14·6
Gastro-intestinal	445	3,402	8,096	311	717	1,028	12·7
Skin and Connective Tissue	919	3,728	8,385	726	1,597	2,323	27·7
Other	123	3,649	5,936	46	1,870	1,916	32·3
All Illnesses	3,663	26,810	63,449	2,675	9,491	12,166	19·2

TABLE III

NATURE OF SERVICE WHICH COULD BE GIVEN BY A NURSE

Nature of Service	Group I Episodes		Group II Episodes		Total Number of Services (per cent.)
	Number of Services	Frequency of Service (per 100 episodes)	Number of Services	Frequency of Service (per 100 episodes)	
Advice	205	24	127	10	8·8
Copying Prescriptions	617	73	1,257	98	49·7
Dressings and Injections	56	7	1,161	91	32·3
Routine Tests	—	—	349	27	9·2
Total	878	104	2,894	226	100·0

for patients in Group I. The work suggested for the nurse consists mainly of three types of service: copying prescriptions, dressings, and injections.

The second assessment of the contribution of the nurse is based upon a comparison of the time actually spent in a residential school and old people's home where the services of a nurse were available, with the time spent in care of patients in the same age groups in the practice. The results are given in Table IV. The mean number of episodes per patient at the school (1·6) slightly exceeds the mean for children of the same ages in the practice (1·5), but the mean time (min.) per patient (10·5) and the mean time per episode (6·5) are less for the school than for the practice (12·6 and 8·5 respectively).

At the old people's home, the mean number of episodes (0·8) per patient was lower than for individuals aged 65 and over (1·1) in the practice (Table IV). The difference is almost entirely accounted for by episodes of minor illness. The mean time (min.) per patient was approximately 50 per cent. higher in the practice (19·1) than in the home (12·5). The mean time per episode was also considerably higher in the practice.

When the estimated time saved by the nurse in the care of practice patients in each series is deducted from the doctor's time, the resulting mean values

TABLE IV

A COMPARISON OF TIME SPENT BY THE DOCTOR DURING ONE YEAR IN THE CARE OF PATIENTS IN A SCHOOL AND OLD PEOPLE'S HOME, WITH THE TIME SPENT IN THE CARE OF INDIVIDUALS OF THE SAME AGES IN THE PRACTICE

Patients in	Residential School	Old People's Home	Practice	
			Aged 5-14 yrs	Aged 65 yrs and over
Number of Patients ..	97	141	595	550
Number of Episodes ..	157	111	887	584
Mean Number of Episodes per Patient ..	1·6	0·8	1·5	1·1
Doctor's Total Time (min.) ..	1,016	1,756	7,511	10,493
Mean Time per Patient ..	10·5	12·5	12·6	19·1
Mean Time per Episode ..	6·5	15·8	8·5	18·0

closely resemble those for the institutions. The actual saving of time by the nurse in the institutions therefore confirms the estimated saving in the practice on the basis of the first assessment.

DISCUSSION

It has been estimated that 19 per cent. of the practitioner's time could have been saved by the assistance of a nurse, 15 per cent. on patients referred to her by the doctor, and 4 per cent. on

patients seen originally by the nurse. It seems unlikely that a saving of this order would be regarded as sufficient to warrant the break in the continuity of care which would result. Moreover the actual time saved would probably be a little lower than the estimate, since some of the doctor's time would inevitably be required in delegating the work.

If a nurse has any part to play as an assistant in general practice it would seem desirable that she should combine this role with other functions. In practices of three or more doctors, she might undertake the duties of health visitor and district nurse, but in single-handed practices it would probably also be necessary for her to carry out the duties of receptionist.

This study was confined to the work which a practitioner now undertakes. It has not taken account of the possibility that the nurse and practitioner as a team might provide a higher standard of care than is possible by a practitioner working on his own. In future there may be an extension of preventive work in general practice and this might well be promoted by the presence of a nurse assistant. Her duties under these circumstances might be more extensive than those considered here. It is also probable that a nurse would attract patients with minor complaints who at present either treat themselves or go without treatment.

SUMMARY

(1) The potential contribution of the nurse has been assessed by estimation of the amount of the general practitioner's time which would have been saved during one year had certain defined services been performed by a nurse. It was considered that a nurse could take full clinical responsibility for 16 per cent. of episodes of illness seen by the doctor during a year, thereby saving 4 per cent. of the doctor's time. She could assist with a further 24 per cent. of episodes which would result in an additional saving of 15 per cent. of the doctor's time.

(2) A second assessment has been made by comparison of the time actually spent by the doctor in the care of patients at a residential school and an old people's home where he was assisted by a nurse, with the time spent in the care of individuals of the same ages in the practice where no assistance was available. The doctor spent approximately 20 per cent. more time on each child in the practice than on each of those in the school, and about 50 per cent. more time on each patient aged 65 years and over in the practice than on each individual in the old people's home.

REFERENCES

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