in medical treatment and were given as much responsibility as possible. Unfortunately, there were no laboratory facilities and diagnosis was purely clinical.

At first adult malnutrition was treated in the same manner as kwashiorkor. A large proportion of these adults, however, did not improve with protein therapy alone. This group presented in a similar manner to the adult protein calorie malnutrition, but had pronounced ascites, were not anaemic, had large hearts, and often had a peripheral neuritis. These patients responded rapidly to vitamin-$B_1$ therapy. The diagnosis of apparent thiamine deficiency in the area was confined to adults and was not seen in children. The diagnosis was on a clinical basis and was confirmed only by the response of the patient to therapeutic doses of thiamine (Bicknell and Prescott, 1946 ; Williams, 1961).

In this area no case of cancrum oris was seen in the population suffering from malnutrition, though this condition is common in most famine areas (Mayer, 1965). Tempest (1966) found that 70% of the cases with cancrum oris he studied in Nigeria followed directly on an attack of measles. The absence of cancrum oris in Udi may well be related to the few cases of measles seen there.

Patients were rehydrated by intraperitoneal infusion. By this method fluid could be given quickly and easily by a nurse. The fluid was absorbed slowly and therefore unlikely to overload the circulation. This form of treatment was carried out on 200 patients with adult protein calorie malnutrition and kwashiorkor ; there was no sepsis, no haemorrhage, and no abdominal organ was punctured, confirming Jelliffe's (1966) report on a larger series. When we first treated adult protein calorie malnutrition and kwashiorkor we gave intravenous Darrow's solution followed by nasogastric fluid to only the very severe cases in grade 3. It was found, however, that by giving Darrow's solution intraperitoneally to all grade 3 and the severer grade 2 patients they were able to take food by mouth in a matter of days, and it was often possible to bypass the nasogastric feeding stage. As a result of this method the mortality rate was reduced. Intraperitoneal infusion was found to be a very simple and effective method, particularly while working in the field (Jelliffe, 1966).

This was an acute medical feeding programme, which is nearly completed. The second stage of rehabilitation, including the planting of crops, sanitation, schools, and employment, is now starting.

I should like to express my thanks to Dr. David Morley, of the Institute of Child Health, for his helpful advice ; to Dr. Andrew Gray, Miss Frances Gairdner, Miss Elizabeth Lamb, Miss Sally Goatcher, Mr. Leslie Maitland, Mr. Garry Sibson (administrator), Mr. Paul Hardcastle (relief worker), the Save the Children Fund Team IV ; and to the Nigerian Staff at Udi, the Save the Children Fund, London.

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# GENERAL PRACTICE OBSERVED

## General Practitioner's View of the Home Nursing Service

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**Summary ; A postal questionary concerned with possible developments in the home nursing service was sent to a random sample of 500 principals in general practice in Scotland in late February 1967 and was completed by 444 (89%). Only 13% of the respondents had a district nursing sister attached to their practice organization, but 70% of the remainder wanted this. The most frequently expected benefit was that she could undertake procedures at present performed by the doctor. Half the respondents thought that at present the district nursing sister did not use her professional training and skills fully. Most general practitioners agreed that a State-enrolled nurse, working under supervision, could do some of the jobs now performed by the district nursing sister.**

### Introduction

The direct attachment of district nursing sisters to general practitioners is increasingly accepted as a means of improving the effectiveness of domiciliary nursing (Leiper, 1965–6 ; Warin, 1968). This report is concerned with the attitudes of a random sample of Scottish general practitioners towards this and other developments in home nursing that are at present being discussed.

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### Method

The study was conducted by means of a postal questionary, which contained three main areas of inquiry ; firstly, about interest in a more formal attachment of district nursing sister to practices than is usual at present ; secondly, about developments that doctors might like in the home nursing service ; and, thirdly, about how far doctors would be willing to have activities that are at present undertaken by the district nurse performed by a less skilled person, such as a State-enrolled nurse.

The sample was randomly drawn from the current list of "doctors providing general medical services" of all the executive councils of Scotland, and represented about one in every five general practice principals throughout Scotland. The questionaries were sent by post to members of the sample in late February 1967. Completed questionaries were received from 444 (89%) of the 500 doctors who were approached.

## Results and Comments

Only a small minority of the respondents reported that they had a district nursing sister attached to their practices: 8% said they had a full-time and 5% that they had a part-time arrangement. Attachment was commoner in rural practices (29%) than in urban/rural (14%) and urban locations[1] (8%), though in rural practices attachment is perhaps more likely to be the fact of the doctor and nurse working together than the more formal administrative arrangements that are necessary in towns.

The reported frequency of referral of patients to the district nurse varied strikingly in relation to the type of area in which the respondent practised. Only about a quarter of doctors from urban or suburban practices said they referred more than five patients a month, in contrast to 55% of those in rural areas. Similarly 40% of the urban general practitioners reported fewer than three referrals a month in comparison with 22% of those in rural practices (Table I). As might have been expected, "the general nursing care of chronically ill patients" was the most important service for 73% of the respondents with "technical procedures such as the dressing of wounds or ulcers" and "giving injections" coming a poor second and third as the choice of 11% and 8%, respectively. The more frequent referrals of the rural doctors perhaps finds some explanation in their response to this question. General nursing care was the most important service for only 56% of this group—"technical procedures" was cited more frequently and the "preventive supervision of elderly or disabled patients" was chosen by 13% ; none of the doctors in urban or suburban practices selected this item of service.

TABLE I.—*Frequency of Referrals to the Home Nursing Service in Relation to the Type of Area in Which the Respondents Practised* (%)

| | More than eight | Between five and eight | Between three and five | Less than three | Occasionally or not at all | N = 100% |
|---|---|---|---|---|---|---|
| Urban | 7·7 | 17·3 | 34·6 | 29·5 | 10·9 | 156 |
| Suburban | 11·5 | 9·6 | 38·4 | 30·7 | 9·6 | 52 |
| Mixed urban rural | 16·2 | 17·3 | 32·4 | 29·6 | 4·5 | 179 |
| Entirely rural | 36·4 | 18·2 | 23·7 | 20·0 | 1·8 | 55 |
| All respondents | 15·0 | 16·9 | 32·7 | 28·4 | 7·0 | 442 |

Type of locality not stated = 2.

Two-fifths of the general practitioners completing the questionary expressed the view that their use of the service was restricted, and that they would like to extend it. This opinion was commoner among those in group practices—49% of respondents in practices of four or more principals considered themselves restricted, in contrast to 32% of those in single-handed practices.

### Opinion about Nursing Attachment

Those general practitioners who had no district nursing sister attachment to their practice were asked whether they would like this—71% said they would, with 35% expressing a preference for a full-time attachment and 36% preferring a part-time arrangement. A total of 17% of the doctors said that they did not want a nursing attachment, and 13% had no definite preference either way.

Preferences were related to practice organization and seemed in line with the amount of employment the doctor might provide for the nurse. Of the single-handed doctors only a fifth wanted a full-time attachment and 46% either did not want a nurse or had no preference. In contrast, of those in practices of four or more principals, 55% wanted a full-time attachment, 9% did not want an attachment, and only 5% had no preference (Table II).

[1] These terms are based on the respondents' own descriptions of the type of locality in which their practices are situated.

TABLE II.—*Respondents' Desire for the Attachment of a District Nurse to Their Practice Organization in Relation to Their Type of Practice Organization (Percentage of Respondents Without an Attachment)*

| | Would like a full-time Attachment | Would like a part-time Attachment | Would not like an Attachment | No Preference either Way | N = 100% |
|---|---|---|---|---|---|
| Single-handed | 20·8 | 33·3 | 28·1 | 17·7 | 96 |
| Two or three principals | 33·3 | 39·1 | 14·5 | 13·0 | 207 |
| Four or more principals | 55·3 | 30·3 | 9·2 | 5·3 | 76 |
| All respondents | 34·6 | 35·9 | 16·9 | 12·7 | 379 |

Practice organization not stated = 6.

The great majority (75%) of the general practitioners who had a district nurse attached to their practice thought it advantageous when compared to the "district" system, and only 7% thought there was no particular advantage in the arrangement. The remaining 18% were unsure, saying that there were both advantages and disadvantages.

Both groups of doctors were asked to choose two items from a list of nursing activities which they thought might benefit them if a nurse were to be attached to their practice or (in the case of those doctors with attachment) to select two items which they felt had been important advantages of attachment (Table III). Among those without a nursing attachment two benefits were clearly the most popular: the supervision or follow-up of patients that was at present done by the doctor (66%), and the performance of technical procedures in the surgery that were at present done by him (58%). About a quarter of the respondents felt that the doctor might delegate some of his preventive activities.

TABLE III.—*Comparison of the Benefits of the Attachment of a Nurse Anticipated by Respondents Without a Nursing Attachment With the Advantages of Attachment Considered Most Important by Those With an Attachment. (Respondents Were Asked to Select Two Items From the List But There Were Some Doctors Who Chose Only One: For This Reason Percentages Do Not Add to 200%)*

| | Benefits anticipated by doctors without a nurse | Advantages thought important by doctors with a nurse |
|---|---|---|
| * The nurse could undertake some supervision, or follow-up of patients at home that is at present done by you | 66·3% | 44·8% |
| The nurse would be able to undertake technical procedures in the surgery that are at present done by you | 58·2% | 25·9% |
| The nurse might undertake preventive measures which are at present done by you | 23·1% | 12·1% |
| Improved liaison with the nurse would mean that she had a better understanding of the needs of her patients | 14·6% | 32·8% |
| You would obtain better information about the progress of patients you refer to the nurse | 13·3% | 46·6% |
| Other advantages | 2·9% | 5·2% |
| N = | 385 | 58 |

* The tense of these sentences was changed for respondents who had a nursing attachment but otherwise the two sets of items were identical.

These expectations contrast markedly with the advantages reported by doctors to whom a nurse was attached. The supervision and follow-up of patients remained a popular choice and was selected by 45%, but the advantage most frequently chosen (by 47%) was that the doctor was better informed by the nurse about the progress of patients referred to her. Similarly, a related item, that improved liaison with the nurse meant she had a better understanding of the needs of her patients, was chosen as important by 33% of those with attachment compared with 15% of those without attachment.

### Possible Developments

Only a third of the doctors who completed the questionary felt that the present work of the district nursing sister made best use of her professional skills and training ; slightly more

than half (52%) felt that this did not and 12% said that they did not know. This response was related to existing attachments; half of those with attachment thought the nurse was appropriately employed in contrast to a third of those without attachment.

An interesting range of answers was given to a question which asked doctors to choose two items from a list of ten activities which might possibly be developed in home nursing. Only 5% of the doctors did not wish developments in any of the areas suggested to them, and the response to the question, with the items listed in order of "popularity," is shown in the list below:

| Activity | % |
|---|---|
| Preventive geriatric care—for example, the regular visiting of elderly patients who live alone | 50·7% |
| Guidance and encouragement of patients—for example, in the mobilization of patients recovering from cerebrovascular accidents | 30·0% |
| Supervision of long-term therapy—for example, the day-to-day supervision of diabetic therapy | 20·3% |
| Use of social agencies—collaboration with other health personnel in the management ofsociomedical problems | 18·9% |
| Preventive obstetric and paediatric care—for example, antenatal and "well-baby" clinics | 18·5% |
| Supervision of convalescent patients—for example, those recently discharged from hospital | 18·0% |
| Technical procedures—for example, the syringing of ears for the removal of wax | 13·7% |
| Screening patients—for example, in the early detection of carcinoma of the breast | 8·8% |
| Helping patients understand and carry out your prescriptions—for example, in following an obesity diet | 2·3% |
| Other activities | 3·6% |
| None of the above: satisfied with present arrangements | 5·4% |
| No response .. 1·1% / Incomplete response 3·4% | 4·5% |

(N = 444; percentages do not add to 100%)

Obviously some of these activities are very similar and the range of choices is to some extent misleading—a total of 52% allocated both their choices to the "supervisory" group of items. On the other hand, no single pair of items was the choice of more than 12% and only five of the possible 36 pairs were selected by more than 5% of the doctors.

Most of the respondents (82%) did not consider that the general training of the district nursing sister would need more than slight revision to develop the activities suggested to them, and almost half (47%) thought that their present training would be sufficient. Only 9% thought it would require "considerable revision" and only 2% took the view that a complete change in the training programme would be necessary. This view of the adequacy of general training did not include training in the specific techniques which may be associated with particular activities.

## The State-enrolled Nurse

The questionary also asked about activities which might be delegated to the State-enrolled nurse or a "nurse's aide." Doctors were asked to select items from a list of nine procedures which they thought might one day be performed by such a person under the supervision of the home nurse, as follows:

| Procedure | % |
|---|---|
| Bathing and dressing patients | 93·5% |
| Prevention of bed-sores | 70·9% |
| Urinary tests for glucose and albumin | 65·1% |
| Giving suppositories | 64·4% |
| Helping patients in the use of orthopaedic aids | 57·0% |
| Applying surgical dressings | 40·8% |
| Treatment of bedsores | 35·6% |
| Giving enemata | 31·8% |
| Giving routine injections | 29·1% |
| None of these | 2·3% |

(N = 444)

The average number of procedures chosen was 4·9, with three-quarters of the doctors saying that four or more items were suitable. Only ten respondents (2%) thought that none of the suggested procedures were appropriate. One might have expected that items such as bathing and dressing patients would be thought suitable for the State-enrolled nurse, but it is interesting that such procedures as the treatment of bedsores and giving routine injections were thought appropriate for her under supervision by as many as one-third of the respondents.

## Discussion

The results of this type of inquiry are expressions of opinion, and as such must be evaluated together with other data and in terms of other needs. The home nursing service differs from other local authority services, however, in that it is available "on prescription" to general practitioners—and it is this group of doctors who are responsible for the way it is used and the nature of its case-load. Objective data relating to the prevalence of "need" for home nursing in the community at large are not available; without them the opinions of those who are most directly concerned with the identification of need are of value.

Obviously, the professional status and role of the district nursing sister and the general practitioner are closely related, while developments in domiciliary nursing are dependent on changes in the organization of general practice. At present in most instances the relationship of doctor and nurse is essentially what it was 30 years ago, and referrals to the nurse follow a similar administrative process. The comments of two respondents express the general practitioner's side of the problem: ". . . if you don't know the nurse you don't know whether you can entrust her with various jobs and it is therefore easier to do it yourself." "The present service is good as far as it goes . . . attachment to practices and some rather greater responsibility with the nurse making medical decisions of a minor nature would be a great help."

The second comment is amplified by the kinds of nursing activity the general practitioners were most interested in seeing develop and in the benefits they anticipated a nursing attachment might bring. The response to both questions was concerned more with the possibility of delegating work now considered to be the general practitioner's responsibility than with the extension of more traditional nursing activities. Hodgkin (1968) has recently provided a detailed account of delegation in an experimental study in four practices in North-east England; the "time-saving" activities he describes are generally those which interested the doctors in this study.

Hodgkin's study also confirms earlier estimates of the potential saving of general practitioners' time resulting from delegation to a nurse. Several studies have shown this to be between 10 and 20% of working time (College of General Practitioners, 1965) and, as Fry has pointed out, this implies a considerable contribution to the more efficient utilization of limited medical manpower (Fry, 1968). The willingness to delegate medical work expressed by the large majority of doctors responding to the questionary (and its high response-rate) emphasizes the view that organizational change in general practice is a feasible way of approaching this problem.

The comment of one respondent that "the relationship of home nurse and general practitioner should be that of ward sister and consultant" makes an ironic comparison with the situation described by both Carstairs (1966) and Hockey (1966). These reports raise serious doubts about the suitability of employing skilled personnel for much of the case-load they describe; the fact that in this study half the providers of that case-load expressed dissatisfaction with the way the nurse uses her skills adds strength to these doubts. The general acceptance of the place of the State-enrolled nurse in domiciliary nursing improves the "ward sister" analogy, however, and one can envisage a situation in which a district nursing sister, working closely with a group of general practitioners might exercise supervisory responsibility over State-enrolled nurses who were undertaking less-skilled nursing procedures. Perhaps a further summary of the general practitioners' desires for the future is in the idea of a "general practice nurse," who would combine these supervisory activities with more complex nursing procedures and with some of the services now provided by both the health visitor and the doctor.

The recent Green Paper (Ministry of Health, 1968) has focused attention on the administrative integration of the

different parts of the National Health Service. However welcome this may be, integration will become effective only when it occurs widely at the "grass-roots" level of improved patient care. Many experiments have demonstrated the increased value of the district nursing sister's services which has resulted from her closer liaison with the general practitioner, and the present study demonstrates a widespread interest in implementing these findings. The future problem is the translation of experimental results into operational reality.

Copies of the questionary and a more detailed analysis of these data are available on request.

I am grateful to Professor E. Maurice Backett for his support and encouragement of this study; to Miss Joan Roberton, Miss I. E. M. Ritchie, and Miss Jane Shepherd for their secretarial help, and the general practitioners concerned for their co-operation in completing the questionary.

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# CONFERENCES AND MEETINGS

## 89th Congress of the Ophthalmological Society

[FROM A SPECIAL CORRESPONDENT]

The 89th Annual Congress of the Ophthalmological Society of the United Kingdom was held at the Royal College of Physicians, London, on 16 to 18 April 1969, under the Presidency of Mr. T. KEITH LYLE.

The first symposium, on visual disturbances in systemic disorders, was largely concerned with the problems of swelling of the optic disc. Describing a patient with papilloedema which did not require neurosurgery, Dr. R. HIERONS (London) pointed out that 5% of cases of bilateral papilloedema showed no abnormality on extensive investigation, except for a raised intracranial pressure. While the term benign intracranial hypertension was a reasonable euphemism for most of these, some 3 to 4% did not recover spontaneously. The mechanism of this disc oedema was little understood, not least because of our ignorance of the secretion and flow of cerebrospinal fluid. Thrombosis of the dural venous sinuses was common before the antibiotic era, but though it was less common now—and no longer presented in the classical way following middle ear infection—it still occurred in patients who had a tendency to thrombosis and in a variety of other conditions—including some iatrogenic disorders.

Continuing, Dr. Hierons said that many drugs had been said to cause intracranial hypertension, among which were the contraceptive pills, which had been shown to produce papilloedema as well as retinal-vascular and cerebrovascular complications. The raised intracranial pressure seemed to be related both to cortical thrombophlebitis with sinus thrombosis and to complex biochemical disturbances probably affecting the production of renin and aldosterone.

### Steroids

In the discussion it was pointed out that steroids also produce disc oedema, which was due to raised intracranial pressure. This type usually occurred in children—less often in adolescents—after reducing or stopping long-continued steroids. The mechanism of action was little understood, but in animals it had been shown that adrenalectomy altered the blood-brain barrier, leading to cerebral oedema. Similarly, excessive dosage with vitamin A—which was used by dermatologists in the treatment of acne—could result in raised intracranial pressure and had produced both palsy of the sixth nerve and bilateral papilloedema. Tetracyclines and nalidixic acid had produced similar changes. Furthermore, it was pointed out that there was still the classical condition of benign intracranial hypertension, which included by far the greatest proportion of all the patients and occurred typically in fat women of over 40 who had recently gained weight and might suffer from menstrual abnormalities. These patients might also present complex signs and symptoms, and it was noteworthy that abnormalities of steroid metabolism had been shown to occur in obesity, and that steroids caused animals to fatten even without an increase in diet. The problem was further confused by the fact that some 30% of obese patients show a disturbance of aldosterone and antidiuretic hormone metabolism.

### Stages in Papilloedema

Mr. M. D. SANDERS (London) reviewed 100 cases of papilloedema which had been studied by fluorescein angiography, and proposed a classification of early, acute, chronic, vintage, and atrophic stages. Each had distinctive features, he went on, and the new term "vintage" papilloedema was useful, since its features were distinct from those found in chronic cases and because the condition could be confused with drusen. Of the first three classified groups, 50% had had benign intracranial hypertension and 15% meningioma, while of the total of 100 cases studied 14 had shown early papilloedema, 12 acute papilloedema, 32 chronic, three vintage, and four atrophic.

In *early* papilloedema oedema fluid and some hyperaemia of the disc were present. A fine vascular network, in which the vessels were permeable to dye, could be demonstrated on the surface of the optic disc by fluorescein angiography. In the fully developed acute disc swelling, however, the veins were raised by the swelling, which obscured the arteries, and the angiogram showed considerable early leakage with seepage of dye into the surrounding retina. Resolution of the swelling left the patient with a slight halo around the disc, owing to a disturbance of pigment epithelium, and some sheathing of vessels.

In *chronic* papilloedema a swollen disc, without haemorrhage or exudates and with a vascular plexus on the disc—20 to 30 $\mu$ in diameter—was easily seen with the ophthalmoscope, whereas the fine vascular network of early papilloedema could not be seen on normal examination of the fundus. These large vessels—together with the absence of haemorrhage—indicated compensation within the disc. Fluorescein angiography showed that at the earliest stage the superficial vessels on the disc filled with blood at the same time as the choroidal vessels and before any other retinal artery. This confirmed that most of the supply of blood to the disc came from the choroidal circulation. Microaneurysms and dilations, which retained dye and finally gave rise to later leakage, could be seen on the capillaries of the disc.

### Vintage Papilloedema

There were two main distinctive features of *vintage* papilloedema. Firstly, small refractile bodies, which were possibly the result of nerve fibre degeneration, were present on the disc and around it. Secondly, large opticociliary or choroido-retinal shunt vessels, which were greatly increased in size, were seen. Fluorescein angiography showed filling of these shunt vessels early in the arterial phase (when there was no other filling) and was followed by a vast leakage of dye involving the whole posterior pole and associated with pigment epithelium degeneration. The refractile bodies disappeared when the raised intracranial pressure was resolved.

*Atrophic* papilloedema occurred in four patients who had visual acuities varying from