as a result of the meetings which took place. Basic differences in the attitude and function of the three groups emerged and were ventilated and though no changes took place a better understanding of their respective roles was reached.

After I gave up my position at the Tavistock Clinic my place at the house was taken by a junior colleague with an interest in the problems of rootless young people. She continued regular weekly visits for a further nine months along the lines that I had established. Ultimately the group practice resumed total responsibility for the house by allocating one of the doctors to visit the house weekly. I understand that these visits are continuing but that they are now considerably shortened. Probably a lengthy visit is no longer necessary.

Discussion

The experience of the residents in the house amply bears out all the points made in Davies's study.⁵ They are, of course, a special and rather atypical group, representing only one section of the many homeless and rootless.⁷ A scheme of the kind outlined in this paper provides no solution for the medical care of those who are sleeping rough, and there is an urgent need for a walk-in centre of the kind outlined in a discussion paper (unpublished) by Co-ordinated Help and Other Services (CHAOS) dated March 1974, which has resulted from Miss Davies's work.

Meanwhile, our experience seems to show that the most important ingredients in the medical care of young homeless people are time and compassion. It is not difficult to meet their

immediate medical needs, provided they are not expected to conform to standards which are really impossible for them to attain, but the provision of such care is likely to be time consuming, especially at first. This is not easy for a busy general practitioner whose time has to be strictly rationed. My therapeutic goals were limited, and for what I attempted no great medical or psychiatric expertise is required (though a knowledge of simple carpentry can be a help.) The fact that I was a consultant psychiatrist is largely irrelevant. An experienced general practitioner would have been much better equipped than I was at that stage.

Any doctor wishing to involve himself in these problems would do well to limit his goals and curb any moralistic fervour he may feel either to "cure" drug addicts or to "change" people of whose way of life he may disapprove.

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Contemporary Themes

Surgical instruments and dressings: an information service

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Summary

A regional information service on surgical equipment, instruments, and dressings is proposed that would be staffed by information scientists. It would appreciably reduce the time spent on administration and make the buying of equipment more efficient. Such a service could be extended to all health service staff.

Introduction

The provision of information for workers in the health services has improved¹⁻³ but there are still many fields in which no

satisfactory information services exist. Even when they do exist they are often inadequate—for example, they may give only references to published articles. Coverage must be extended to include other information, particularly data generated in hospitals and those produced by manufacturers of equipment. Information services can have an important role in hospitals and help to improve the service to patients. But despite major developments, such as in patients' records, biochemical analysis, classification of diseases, and drug information services, doctors and nurses still solve many problems without expert help.⁴⁻⁷ We maintain that information on surgical instruments and dressings merits special and urgent attention on a national or regional scale.

Existing service

Surgical equipment, instruments, and dressings account for 20% of the average general hospital's budget for supplies and services⁸ yet there is no organised information service to help medical and nursing staff to choose items or to keep up to date with new products and materials. In the financial year 1973-4 a teaching hospital group (about 2100 beds) spent £516 000 on surgical instruments, dressings, and sundries.⁹ With inflation we may assume that in two or three years one teaching hospital and its associated hospitals will spend £1m each year on these items, and this without access to any reliably organised information on them. We have been unable to discover any service in the UK that systematically collects and exploits trade and

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professional publications on this subject. Hospitals usually have only a few trade publications on surgical instruments and sundries. These are unlikely to be kept up to date, and supply department staff are not responsible for meeting the information needs of highly specialised hospital teams.

The selection of surgical equipment, instruments, and dressings used in any hospital depends largely on the personal choice and experience of the medical staff, but from discussions with surgeons, anaesthetists, and nursing staff an information service on the availability and performance of these items would be welcomed.

Service proposed

We envisage an information service designed principally for medical and nursing members of surgical teams, run by qualified staff who would evaluate their needs and regularly supply them with current information on dressings, instruments, and equipment. They would also answer individual inquiries about instruments and equipment. Ideally, the personnel providing the service should be information scientists with a good initial qualification in medical or biological sciences or both. The service would be regional and based on a large general hospital and could be extended to people working in any branch of the health service.

Information would be gleaned from trade publications, published articles, and informal, unpublished information exchanged among colleagues. Manufacturers publish information to describe, illustrate, and sell their products. It would be necessary to list all relevant manufacturers and their products. This collection would be updated to ensure that only current publications were held in the system, that new descriptions were promptly included, and that discontinued items were promptly withdrawn.¹⁰

Articles that review products and comment on their performance provide *Which?*-type reports and indicate where a particular item is being used. This is especially useful for capital equipment, as it enables prospective purchasers to see the equipment in use and discuss it with its users. Such articles appear in a wide range of journals, and to keep costs down one would identify the few core journals which on any subject contain some 80% of the relevant material and base the service on these.^{11 12} Articles in journals outside this category could still be reached through abstracting services.

Finally, much information is exchanged verbally and informally, and it is desirable to monitor and organise this. The monitoring process could be carried out with the help of scientific gatekeepers in each hospital, who acquire and communicate relatively more professional information than most people.¹³

Data storage and supply

Proper indexing is essential. The data base formed by the accumulating information from each source would be indexed under the name of the manufacturer and the type of instrument. Though most library classifications treat surgery in considerable detail, they do so from the point of view of anatomy and pathology and do not classify instruments themselves. In our information service the function of the instrument—for example, holding and cutting—and the shape of the active part—for example, angled (scissors) or toothed (forceps)—would be most important. We have therefore developed a prototype classification system using this approach.¹⁴ When possible we have used terms from *Medical Subject Headings* (the indexing language on which *Index Medicus* is based) to try to make this service compatible with existing medical information services.

Examples of our classification scheme are as follows.

- Main classes (function performed by instruments):
 - Examination and diagnostic
 - Holding and supporting—for example, clamps, clips, forceps, retractors, sutures, pessaries, pins, plates
 - Prostheses
 - Cutting
 - Infusion, irrigation, drainage
 - Probing, dilating
 - Wound-protecting dressings
- Subclasses (shape and action):
 - Forceps:
 - Shape—straight, curved, curved on flat, angled on flat
 - Action—points/sharp, rounds/blunt, point/round, toothed, serrated, fenestrated, tenaculum

This classification allows for any variation of groupings and cross-referencing.¹⁴

All data would be classified and kept in a classified sequence. There would also be alphabetical indexes for the manufacturer's name and the name in common usage—for example, Allis forceps, Ryle's tube, Nelaton catheter. Whenever possible descriptions of products should be backed by high-quality illustrations either provided by the manufacturer or taken from other sources. Scales would accompany illustrations to allow comparison between similar products. Later, descriptions of rival products could be standardised, thus furthering opportunities for comparison and impartial buying. An index of locations could record those hospitals where large and expensive equipment was already in use, thus enabling inquirers to see the equipment and seek first-hand comment on its performance.

With a data base organised and indexed in this way a current-awareness service and a retrospective searching service could be provided. Increasingly an information service is expected to be responsible not only for finding information and keeping it up to date but also for keeping its users informed of advances in their individual specialties.

Systems for selective dissemination of information (SDI) are being developed, whereby the information scientist regularly provides new information on agreed subjects to specialists. For each user of an SDI service an interest profile¹⁵ is drawn up describing his regular information needs. For example, a surgeon might wish to receive information on the following topics: (1) specific problems encountered within his specialist area of surgery; (2) particular problems, ailments, or disabilities of the patients for whom he is responsible; (3) new instruments developed for use in specific circumstances; and (4) compatibility of new equipment with items already in use. Users are given relevant information as it is received and their needs are frequently updated.

The following sample profile for a surgeon indicates the way his needs might be indexed.

Profile:

Clamps: developments
 Retractors: self-retaining; developments
 Dilators: rectum
 Special dressings: natural tissue
 Sutures: materials, developments

The following is an example of the output that might be produced in response to the above profile.

Output:

A new intestinal clamp. Menendez, J C,
Journal of Abdominal Surgery, 1973, 15, 76.
 Self-retaining retractors for hand surgery. Tegtmeir, R E,
Plastic and Reconstructive Surgery, 1974, 53, 495.
 Amniotic membrane as a living surgical dressing. Trelford, J D,
Oncology, 1973, 28, 358.
 Dilator for treatment of strictures in upper part of rectum and sigmoid. Drucker, H, *et al*,
Diseases of the Colon and Rectum, 1973, 16, 550.
 Abdominal wound closure using a new polypropylene monofilament suture. Hermann, R E,
Surgery, Gynecology and Obstetrics, 1974, 138, 84.

The output would also contain references to descriptions of new products issued by manufacturers.

The data base would also be used to answer individual queries, and we would aim to extend the service to all professional people working in the health services. This dual approach would make the best use of the resources required for the service.

Advantages

The service should reduce the time spent by medical staff on non-productive administrative tasks, result in an improved service to the patient, and save money. Increasingly, medical staff complain about the growing proportion of their time devoted to administration (including time spent searching for information), which could more usefully be spent looking after their patients. The patient would benefit from the increased attention of hospital staff and would also benefit from more rapid application of new developments resulting from the increased information available.

The major problem facing information services in the early stages of their development has always been the cost of data base, staff, and

accommodation. It is always difficult to convince the accountant of the cost-effectiveness of an activity that does not in itself produce a tangible end-product but claims to help other people to do their job more effectively. Traditionally, managers have not been convinced by cost data for supplying information, but it will soon be possible to produce standard costings for many information activities and reliable techniques for calculating the cost-benefit from information services.^{16 17}

We do not claim that this information service would automatically reduce financial outlay on equipment and instruments. In an inflationary economy, and with a growing population, *actual* savings are perhaps too much to expect, but experience suggests that savings in real costs, and a reduction in the rate at which costs rise, may be predicted with some confidence. Given access to full information on products available, those responsible for selecting and purchasing equipment and instruments will be able to make more reliable and more consistent decisions.

Increasingly, private consumers consult *Which?* before buying, so it seems strange to deny a similar opportunity to highly educated specialists responsible for the proper expenditure of large sums of money and for the health care of large numbers of people.

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Today's Treatment

Diseases of the central nervous system

Treatment of stroke

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Introduction

Stroke is the major neurological disease of our times, causing more death and severe disability than any other. The pathological basis may be either vascular occlusion, causing cerebral ischaemic infarction, or intracerebral haemorrhage with destruction of brain tissue. With generally available methods it is not always possible to distinguish these two types during life. This is unfortunate, because, although the general aims of treatment are the same in both cases, they are likely to be achieved by different methods. The failure to differentiate reliably between infarction and haemorrhage is just one factor which has hindered the development of effective treatments.

Three aspects of treatment will be considered: treatment in the acute phase of completed stroke; the prevention of further strokes; and rehabilitation. They are described separately merely for convenience. In practice, all three must be considered together as soon as the patient presents. The purpose of treatment in the acute phase is to limit the brain damage as far as possible. Clearly this includes trying to prevent the early occurrence of another stroke. Similarly, early mobilisation and the prevention of secondary complications must be carried on to allow the patient to derive maximum benefit from formal rehabilitation procedures introduced as soon as he can tolerate them.

Treatment in the acute phase

The age of the patient, the nature and extent of any extra-cerebral disease, his functional ability before the stroke, and the likely prognosis are just some factors to be considered when deciding how far to pursue active treatment in the acute phase. If vigorous treatment is contemplated hospital admission is necessary. Whether that is possible depends on what facilities are available in a given area. Since 1971 the Oxford neurology department has provided an emergency service for admitting patients with acute stroke. The service has been given in the hope that active treatment in a specialist unit may improve the prognosis. Even so, the limited facilities mean that only a relatively small proportion of the total stroke admissions to Oxford hospitals can be taken, and, inevitably, preference has been given to younger patients, especially those having their first stroke symptoms, however severe or mild.

GENERAL TREATMENT

General treatments are indicated regardless of whether the stroke is due to haemorrhage or vascular occlusion.

Airways obstruction must be prevented, particularly in patients who are obtunded or have dysphagia due to bulbar paralysis. They should be fed through a nasogastric tube, nursed in the bulbar palsy position, and given frequent physiotherapy to the chest during the initial stages. The cough reflex is usually well preserved despite bulbar paralysis. So endotracheal intubation or tracheostomy is rarely necessary if simpler nursing measures are applied properly. Similarly, endotracheal intubation and assisted respiration is rarely justified in patients with central respiratory depression due to the stroke because the prognosis from the brain damage is so bad.

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