a notable proportion of cases to the hospital population of mentally subnormal patients.

I thank Dr. Lilian Jones for help, particularly in the records of serial measurements.

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Letter from . . . Denmark

Too Much, Not Too Little ?

FLEMMING FRØLUND

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Judging from English medical journals it is a noteworthy problem that quite a number of your young doctors leave these isles to seek their fortune elsewhere. Working conditions, it appears are not sufficiently attractive within the National Health Service. In Denmark we are faced with the reverse problem, so to say—that is, young doctors do not leave the country in sufficient numbers. This odd statement needs some explanation.

By tradition admission to the three Danish universities with medical schools is free for everybody who has passed his or her finals from high school, and medicine has always attracted a fair share of undergraduates. During the 1960s the annual output of new doctors rose, but the decade also saw a corresponding expansion of hospital services, so ample numbers of suitable posts were available. Such were the absorbing powers of hospitals that there was even a certain overall shortage of staff. Peripheral hospitals in what were considered less attractive parts of the country were severely understaffed, and as might be expected, general practice also suffered.

From 1960 to 1970 the number of G.P.s remained unchanged, while both the population and its demand for medical care were growing. Those were the days when serious people all over the world did not give general practice much chance to survive, as it was expected that hospitals would continue to drain the pool of doctors.

Social Medicine More Popular

Nevertheless, the number of medical students has increased even more than expected, but parts of the whole picture have changed. Students and young doctors have developed a growing interest in the social aspects of medicine and consequently an interest to enter general practice. Furthermore, because of unsatisfactory state finances—to put it mildly—the Government has now applied the brakes to slow down the expansion of the hospital services.

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Primary health care is now receiving due attention from the authorities. Qualitative and quantitative furtherance of its activities is considered desirable and is encouraged. With more graduates than ever before and fewer jobs in hospitals than was calculated some years ago, we now have what looks like a surplus of young doctors, but this is partly spurious. Many might be absorbed by general practice, but there are reasons why the problems are not solved as easily as would seem possible.

Admittedly, Danish medical students have some clinical training, but no one would venture to call it sufficient. So when the student qualifies as a doctor, by international standards, his qualification is real enough, but in Denmark it does not entitle him to professional work without supervision. Thus he is entitled only to further training in clinical departments, irrespective of which branch of medicine he is aiming at.

If he wants to enter general practice he must have at least two years' training in the major specialties such as internal medicine, surgery, gynaecology and obstetrics, and psychiatry, spending a laid down number of months in each department. He might choose an assistantship in general practice to begin with, but then only as a temporary measure. Back to hospital he must go for further training; so for various reasons it is no happy solution (for the young doctor or the principal) if he does his clinical training the "wrong way round." But training posts are scarce, and it is feared that this state of affairs will continue for some considerable time, owing to shortage of central funds.

So we are in the most cumbersome situation of backward failure in the system resulting in the unemployment of young colleagues. General practice might offer a solution, but so far mainly in theory. This channel is blocked owing to the requirements of hospital training before registration as a G.P. Why not dispense with regulations and let general practice take doctors straight from university and train them appropriately then and there? Though it looks like a simple and sensible solution, it is perhaps too simple, creating new problems for the future that will be even more difficult to solve.

Improving the Image

In the 'sixties the image of general practice was not too flattering, and so from its own ranks rose the demand that something ought to be done. Working conditions and quality should be improved greatly, it was argued, and general practice ought to

establish itself as a specialty in its own right. General practice ought no longer to accept doctors with less than appropriate clinical hospital training: it should no longer be prepared to be some sort of dump for people who had given up hope of achieving specialist status. As a consequence of the claim a compulsory training scheme was set up and is now in action—though each vacant training post attracts enormous numbers of applicants, over 100 being by no means an exception.

If regulations are now dispensed with it is feared that the desired end of improving standards of general practice will be jeopardized. If principles are thrown overboard it might prove difficult to recover them. A mere defeatist attitude is, of course, not tenable, and those responsible for taking the decisions are engaged in thoughtful negotiations which I hope will lead to a reasonable solution.

In the meantime some of our young doctors emigrate, temporarily or maybe for good, but evidently too few to solve the problems of the surplus. And this is understandable. Seven or eight years ago students were welcomed at Danish universities, so they now expect that their skills may be applied in their own country, and not somewhere on the opposite side of Mother Earth.

Medicine in the Tropics

Reorganization of a Nutrition Unit in Papua New Guinea

ANNE BARNES

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Summary

Adequate nutrition is a medical priority. It has been estimated that more than half the children in the Chimbu District of Papua New Guinea are malnourished. A practical scheme to combat poor nutrition there was based on emphasizing the value of breast-feeding and of locally grown foods. The daily menu given was the same, with three meals each day. The scheme's underlying principles can be adapted for any developing country or for migrant and other minority groups in a developed country.

Introduction

The Chimbu District in the Central Highlands of Papua New Guinea is a mountainous region of 2300 square miles (6000 km²) supporting a population of 163 000 people, of whom 27% at the 1971 census were children under the age of 6 years. Venkatchalan[1] reported an incidence of 1·7% kwashiokor and 5·8% marasmus in the district. Though records of weight against age kept by the maternity and child health (M.C.H.) sisters have shown an improvement in recent years (at least among the 30% of children who attend the village clinics), the toddler (1 to 4 years of age) mortality rate for the district was 1·5% in 1972.[2] (A rate greater than 1% is regarded as an index of a significant nutritional problem. The rate in "developed" countries is 0·1%.)

However, various degrees of malnutrition obviously occur before the manifest signs of kwashiokor and marasmus, and growth studies suggest that more than half the children between 1 and 2 years of age are malnourished. As malnutrition has been linked with growth retardation, increased infection, and possibly mental retardation,[3] it would appear to be a medical priority.

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Hospital Nutrition Unit

At the beginning of 1973 the nutrition unit in the district hospital at Kundiawa consisted of a ward, with an average of 15 patients and their various relations, and a small room off the main kitchen where meals were prepared. Children were referred to the ward by M.C.H. sisters from village clinics, or brought by missionaries and patrol officers or transferred from the general paediatric ward. Weekly weighing sessions showed that, while most of the children maintained their weight, few gained and some even lost ground.

The ward was run by six nurse-aides, few of whom could read. Observation showed that they spent considerable time in giving and charting carefully measured quantities of vitamin drops, cod-liver oil, and iron elixir. This took priority over food. Each child was given milk with meals, but in spite of repeated demonstration the dilution varied considerably. This was reflected in the irregular weight gains.

A sister supervised the unit, but it proved impossible to keep one for longer than two months before transfer. Moreover, several were men and showed complete apathy towards nutrition. Owing to the amount of work the doctors could give only minimal supervision. So it was essential to devise a programme with a simple monotonous routine which could be maintained by nurse-aides. The aim was to improve the nutritional state of the child while in the ward and to teach the mothers so that the improvement could be continued after discharge.

Communication was important. The sisters were from the coast and did not speak the local language, Kuman. When off duty they tended to remain aloof in the sisters' home. In contrast, the nurse-aides were from the local villages, so spoke Kuman, and were able to give us invaluable background information. Owing to their hospital work they were highly respected and were able to communicate our ideas to the villagers by putting ward methods into practice with their own families.

Nutrition in the General Population

The main meal is taken in the cool of the evening and generally consists of sweet potato (kau-kau), occasionally pumpkin, and green leafy vegetables. These are either boiled or baked in an earth-oven. Pig is reserved for infrequent festive occasions. In the morning a cold lump of kau-kau, left over from the evening