Group Occupational Health Service in a Developing Country

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Summary: In 1967 an experimental group occupational health service was set up in Dar es Salaam to provide direct service to industrial firms. Larger companies were visited by a doctor, smaller firms in rotation by auxiliaries. After three years 65 companies had joined with over 15,000 employees, and workers were attending the group dispensaries at a rate of over 250,000 visits a year. Such an approach through direct service to the working community appears to be more appropriate to a developing country than a purely advisory central occupational health unit.

Introduction

In 1967 two industrial firms in Dar es Salaam had already expressed their willingness to support a group occupational health service for the city's expanding industries. The political climate was also right at that time for a venture of this kind, and work was started without delay to establish a group service in several factories, an initial income for the project so being provided. A non-profit-making company was formed and incorporated in June 1967. Management was in the hands of a council of about 12 members; half of these were elected and half were nominees of specified potentially interested bodies, such as the Ministries of Health and of Labour, the Employers' Federation, the Chamber of Commerce, the National Union of Tanganyika Workers, and the local medical association. The council meets three or four times a year, delegating its main powers to an elected executive committee of four business and two medical members. The medical director is responsible for the day-to-day running of the project and reports to the executive committee, which normally meets every month.

Background

The mainland of Tanzania has a population of 13 million, of which 95% live in rural areas while 300,000 live in expanding Dar es Salaam. Excluding domestic servants, the country's total employed population is about 330,000, most of the remainder of able-bodied persons being self-employed farmers in the rural areas. School-leavers who feel that education has fitted them for something better than farming drift to the towns, and in Dar es Salaam have caused a local pocket of high unemployment and thus a low labour turnover among those with permanent jobs.

The ratio of registered doctors to population is probably about 1:25,000 overall, this being higher in the towns but lower in the rural areas. In addition a number of Chinese medical workers with unspecified qualifications are working in up-country hospitals. General medical services are free to the public. Four outpatient filter clinics in Dar es Salaam, staffed by medical assistants under a supervising assistant medical officer, refer selected cases to the main hospital of 900 beds. These clinics, run rather like the casualty departments of old-fashioned teaching hospitals, carry out the bulk of the daily outpatient treatment in the city. Civil servants on salaries above £52† per month and their dependants attend a senior outpatient clinic run by a doctor; those below this salary level have to attend the crowded town filter clinics. Members of the public may, by paying a fee, also use the higher-grade facilities and have direct access to a doctor, while in emergencies—genuine or otherwise—patients may also attend the hospital casualty department direct.

For an annual charge based on employees' salary levels commercial or industrial firms may contract in to the Government Capitation Scheme, under which the employees may use Government facilities on the same basis as civil servants on equivalent salary levels.

All of these public services are heavily overloaded, and the "grade I" services in particular became much more so when nationalization added hundreds of new State employees and their dependants to the load. At the town clinics it is common to have to wait half a day before obtaining 45 seconds of a medical assistant's time, such is the daily load. A worker who disputes his fitness to work has a good chance of winning the argument, and, even if he does not, will not return to his workplace much before the day is done.

The main hospital is seriously short of senior and middle-grade staff. This position has worsened in the past three years, so that only a few non-paying patients referred to a specialist there actually see one; many see only an intern. Thus many employers were only too ready to consider any alternative solution to losing several employees daily for most of the day for complaints which either they suspected were not genuine or, if they were, often seemed to get inadequate attention.

Growth of the Service

Basically we have two types of member firms: firstly, those well-to-do companies which already had, or wanted, their own full-time factory dispensaries and staff and which are prepared to pay for the luxury of a doctor's daily visit to supervise them; secondly, others—mostly smaller—which (*a*) used to send their employees to the public clinics or (*b*) to a private practitioner to avoid the waste of time in public clinics, or which (*c*) had a doctor briefly at the factory each day. For these smaller firms we have built up a mobile service with male auxiliaries on bicycles serving groups of adjacent factories as a shared factory nurse. Each nurse makes his headquarters in one of his factories and visits his branch dispensaries in the others on a fixed rota, being available to any of them by telephone throughout the day.

While the majority of member companies are industrial some purely commercial organizations also asked to join, notably the nationalized banks and insurance company, which were finding the delays in the overloaded capitation scheme

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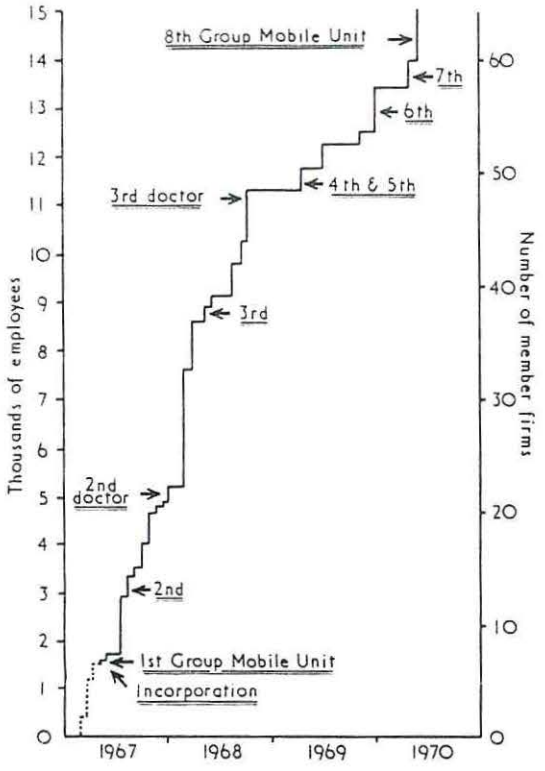
† 20s. E.A. = 23s. sterling.

highly inconvenient. We therefore also undertook the out-patient care of 1,100 clerical employees and an estimated 1,700 dependants.

The growth of membership in numbers of employees served (dependants excluded) up to the end of June 1970, together with the number of companies, is shown in the Chart. This also shows the stages at which successive mobile units were



Number of employees (excluding their dependants) and member firms served up to the end of June 1970

formed and also the points at which new doctors were taken on. At that time there were eight mobile units, which included 85% of the member companies. So far no company has left the association, except on going out of business.

Service Charges

For the factories which request a daily doctor's visit we have mostly continued with an already established fee of £85 per month while trying to give a fuller service, including free laboratory work. A central store system has greatly reduced supply costs through bulk purchasing.

For the visiting mobile service we make a monthly charge of 4s. per employee up to 100 in one location, 2s. 50c. from 101 to 500, and 1s. thereafter, though the association includes only one or two companies of this size. This fee covers a daily visit—sometimes two—by an auxiliary, all simple basic drugs and dressings, supervision by a doctor, who usually calls at each unit twice or three times weekly to see any referred cases, any simple laboratory work (blood counts, stool and urine examinations), factory inspections, and any advice required on matters of occupational health, safety, or hygiene. The monthly charge of 4s. is broken down roughly into 1s. 50c. for the auxiliary's salary, 1s. for supplies, 1s. for the doctor's time and transport, and 50 cents for overheads.

From having one man and a boy in the office and one nurse in the field, by June 1970 we had three doctors, 13 auxiliaries (rural medical aides, nurses—nearly all male—and nursing assistants), a microscopist, a secretary/book-keeper, a storekeeper and a messenger, and a part-time pharmacist. In addition there were five medical assistants and seven other auxiliaries under our supervision but paid by the companies they worked for.

In 1968 we opened a small central consulting clinic in town for management staff and their dependants, supervised by a nurse-receptionist. Care is provided on a fee-for-service basis at rates which at first sight are not particularly low (20s. an initial consultation), but by discouraging unnecessary attendances and prescribing economically the overall costs to companies using our services instead of those of private practitioners for their senior as well as labour staff have dropped considerably.

Supply Organization

Member firms with their own dispensaries had previously been buying direct from town pharmacies. At once it was obvious that advantage was being taken of this (one pharmacy was found charging 25s. per pint bottle of gentian violet lotion) and we soon began centralized buying and supply. Our monthly turnover has risen over the past three years to £700-800, and increasingly favourable prices have been obtained.

Work Load

At the end of 1968 patients were attending our dispensaries at a rate of 200,000 a year; this figure climbed more slowly to 215,000 at the end of 1969, and in the first half of 1970 130,000 attended. These figures, to be published elsewhere, show extraordinarily high attendance rates—15 to 20 dispensary visits per man per year averaged over the whole factory population. Since some men hardly attend at all, attendances per dispensary-user are even higher; yet these are arising in a relatively young and healthy, predominantly male, population among whom the incidence of true incapacitating sickness is around 1% (compared with 5% or more in Europe).

While firmly discouraging detectable malingering we feel that in the present state of health education of the workers, and almost complete absence of simple home medication, the best thing is simply to ensure that the men are handled with despatch, so avoiding large queues, and that they are returned to work as promptly as possible with two aspirins or a dose of cough mixture. It is in this context that our firm principle of bringing, whenever possible, the care to the man by visiting the factory has resulted in such savings in lost time. But these high rates do mean that a disproportionate amount of our auxiliaries' time—and that of our doctors—is taken up with treating minor or non-existent ailments, thus limiting the time they have for the general duties of an occupational health worker.

The industrial accident rate is low, and so is the incidence of industrial disease, since there are not many serious hazards in the relatively unsophisticated types of industry so far established here. Industrial dermatitis, for instance, so large a factor in European industry, is hardly seen in the African.

Future Development

So far the service has been operating from offices and store space spared with difficulty in the medical school, and in 1969 successful application was made to Holland for aid to build a headquarters in the industrial area. Under a joint-financing agreement nearly £25,000 has been granted out of an

estimated total of £35,000 needed to build and equip a headquarters and reference clinic, junior staff quarters, and two doctors' houses, which are expected to be complete in early 1971.

Membership and income are increasing at a rate which should enable the extra running costs of these premises to be borne, and they are expected to increase further once there is a visible presence in the industrial area.

The major recurrent problem is obtaining doctors. Were local staff available to take over, the project could already be easily self-supporting for recurrent expenditure. At present it pays and houses one expatriate doctor on overseas terms but could not support another. Some form of aid may still be required until the entire medical staff can be locally recruited; such aid may also permit one or more of the staff to have spare time for teaching and research. One thing is certain, the successful future of the project is inseparably bound up with the quality of the medical staff it can attract.

Discussion

Clearly the development of an experimental community service project of this nature is a proper activity for a department of social and preventive medicine. So far it has been very successful and is already providing a service to about 18,000 people. This population provides scope for research, and community medicine field projects for students; the project staff are thus concerned in teaching medical students and others and will, we hope, continue to be so even when the umbilical connexion with the department is severed.

Whether a developing country so desperately short of doctors for its general, and particularly rural, services can afford the luxury of three or four concentrating their efforts on a small, if important, sector of the community is a vitally important question. The need for some kind of occupational health service has, however, already been accepted by the Government, and possibly an approach of this kind, through service, is more appropriate to the needs of a developing country than the detachment of a doctor to run a purely advisory unit.

This project has not robbed the general services of any doctors; so far it is staffed entirely by those who would not otherwise be engaged in Government medical services. Though there are advantages in continuing on this basis until the staffing position improves, perhaps by 1975, there is also a very understandable pressure to Africanize such a prominent organization, impractical though it is to do so except by stealing from Government services. Auxiliaries have been taken from the general services, but only those who have served at least five years in return for their training; some of this debt is being repaid by assisting in the training of further staff of several cadres.

The project's main achievement lies not in having brought marginally improved and better organized services to large companies which would have had a medical service anyway, but in serving small companies which would not otherwise have done anything for their workers. By satisfying their need primarily for a service for minor ailments and injuries we have obtained a foothold within their premises and a chance to improve safety, hygiene, and working conditions.

The group has grown rapidly for several reasons. Firstly, it has filled a need created by the deficiencies of the public services and by the shortage of good private practitioners with any genuine interest in occupational health; secondly, the months following the country's declaration of socialist policies could hardly have been more opportune for launching such a project; and, thirdly, it has had widespread support from the Government, the workers and their union (which has lately taken to pressing employers to join as part of their union agreements), and the employers. The local medical association has so far declined its place on the management council lest by so doing it appeared to condone a venture of which most of its private practitioner members disapprove. By support from employers I do not refer simply to their joining the association; the whole idea clearly aroused the enthusiasm of many of them, and several top managers have given generously of their time to managing our business affairs and to negotiating for overseas aid.

Apart from finance and staffing, perhaps the most important aspect of such a project is that a need must be felt for additional medical services in industry. Were public services ever adequate, or were there ever enough good doctors in private practice interested in occupational health apart from its material reward, the alternative approach of a purely advisory central unit might be considered—but in practice this is never likely to occur. The functions of an occupational health service in a developing country should be: service, training, advice on problems and on new legislation, and research, in that order of importance. Clearly, ultimate responsibility for occupational health must lie with the Government—either the Ministry of Health or the Ministry of Labour. Local circumstances will determine whether it is appropriate for a group service of this kind to be a private, public, or joint venture. The essential point is the approach through direct service, which is certain to have a deeper and more rapid influence on occupational health standards than an advisory unit; as always, the words of the man who is doing something practical are more heeded than those of the peripatetic expert.

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