A SURVEY OF THE MEDICAL NEEDS OF A GROUP OF SMALL FACTORIES*

BY

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The present interest in medical services for small factories is matched by the limited objective information which is available on the demand for and needs of such services. As a teaching project, a survey was made of factories with between 30 and 200 employees on an estate in the North West where there was no organized medical service. Unfortunately, time allowed only 22 factories to be visited. The findings, therefore, are regarded as indicative rather than conclusive, but this does not detract from their interest.

Factories were visited by two or three postgraduate students who completed a questionnaire designed to standardize their findings. The questionnaire is included as an appendix to this paper. Regarding the demand for medical services, four of the 22 factories were subsidiaries of larger organizations and had part-time medical advice, 14 expressed no interest even if this would have involved no financial commitment, and the remaining four were interested for differing reasons. The needs of the factories in this context were found to be, first, advice and perhaps better supervision of non-mechanical hazards and, secondly, supervision of the first aid arrangements. From the ambulance journey records of the local authority there appeared to be no great demand for local casualty facilities.

To meet these needs it is suggested that the functions of the appointed factory doctor might be modified to include wider supervision of non-mechanical hazards and supervision of first aid arrangements. It is also suggested that the National Health Service should form the basis for dealing with those cases requiring more than first aid.

For a number of years occupational health services have been established in large industries and there has recently been increasing interest in the possibility of extending such services to smaller workplaces. In this country the two established experiments in this field are the Slough Industrial Health Service and the Harlow Industrial Health Service, both of which are voluntary. At Slough somewhere about one-third of the firms on the trading estate are not members of the Industrial Health Service (A. A. Eagger, 1961, personal communication); at Harlow, in 1959, out of a possible 8,100 employees, the Industrial Medical Service

covered only 5,982, and "most of the non-member firms are comparatively small" (Taylor, 1959). Thus in both of these important experiments, despite the length of time for which they have been established and despite their energetic administration, about one-third of the firms are non-members. A somewhat different scheme, the Central Middlesex Industrial Health Unit, has 250 firms in the immediate area of whom "43 have joined so far" (Bailey, 1961).

There have recently been suggestions that there should be a comprehensive occupational health service (British Medical Association, 1961; Association of Industrial Medical Officers, 1961), but the question arises, what will be the attitude of small firms to industrial medical services? In the factories whose managements have elected to join the Slough and Harlow schemes, there is no doubt that the services provided are appreciated, but in any scientific study it is unwise to draw general con-

*This paper is based on the report of a study group of the under-mentioned postgraduate students.

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clusions from observations on a self-selected group, in this instance the 70% of small factories joining an occupational health service. Is it reasonable, therefore, to argue that a comprehensive occupational health service would be equally successful in small factories where management has shown no interest in such a service? Would such a health service best meet their needs?

There is little information on the demand and need for medical care of an unselected group of small factories. The survey by Jefferys and Wood (1960) of a group of small factories in an urban area disclosed that the working conditions were often unsatisfactory, but no attempt was made to assess the attitude of the managements to occupational health. It was decided, therefore, as a teaching project, to investigate a factory estate which had been established for several years in the North West of England where there was no comprehensive occupational health service. The objects of the investigation were:

- To assess the demand for industrial medical services.
- To assess the need for industrial medical services.
- If such a need was established, to suggest the line of development.

Method

The estate, which occupies the site of a war-time factory, covers an area of about 1,000 acres and lies near a new very large residential area with a population of many thousands. Both immediately after the war and again in 1960 industrial development was directed to the area.

Because there was insufficient time in the teaching programme to survey the whole of the estate, the investigation was confined to factories with more than 30 and not more than 200 persons. There were two reasons for selecting these sizes; first, to exclude the very small "family business" which in any case appears to have low accident rates (Acton Society Trust, 1953; Ministry of Labour and National Service, 1960) and secondly, because a large number of the factories with over 200 persons already had part-time industrial medical officers.

Within the size range specified there were 36 factories on the estate. There were a number of other establishments in this size group but they were generally contractors, and since the buildings on the estate served only as a headquarters and carried but a small staff, these were excluded. There was not sufficient time, as was originally hoped, to visit all the 36 factories, and only 25 were approached. They may be regarded as a representative sample of the

total 36 factories because they were merely the first 25 firms in an alphabetical list.

The support of the estate trades council was obtained, and the local medical officer of health and medical inspector of factories were notified. A letter was written to each firm about one week before the visit, stating that the visit would take place and citing the support of the estate trades council. Visits were made on week-day afternoons in the early summer of 1961. Each visit was made by two or three members of the study group, and, to try and obtain some uniformity in subjective assessment, the observers changed colleagues at every visit. The questionnaire used is shown in the Appendix.

Results

Of the 25 factories approached only one gave a direct refusal, two others declined at the time due to immediate pressure of work, and it was not possible to visit them later. Thus 22 factories were visited.

Size of Factory and Number of Employees.—The 22 factories employed 1,683 persons of whom 181 were juveniles and 334 were women. Table 1 shows the distribution of factories of different sizes and the distribution of the working population in those factories.

TABLE 1
FACTORIES IN SIZE GROUPS

Size Range	No. of Factories	No. of Employees
31- 50	10	415
51-100	7	556
101-150	3	364
151-200	2	348
Total	22	1,683

It will be seen from Table 2 that the size distribution of the factories was comparable with the Halifax Survey (Ministry of Labour and National Service, 1958) and with the national figures quoted in that report.

Labour Turnover.—This is affected by many factors both social and industrial, but when adjacent factories are compared some of these factors are common to all (*e.g.* current employment situations and journey to work). Thus differences in labour turnover will reflect differences between factories whether these be physical, psychological, or social (including wages), and in so far as these may mirror morale in the factory this question would be of interest. The person interviewed was asked to state whether he thought that the labour turnover

TABLE 2
COMPARISON OF SIZE GROUPS WITH OTHER SURVEYS

Size Range	Present Survey	% of Total	Halifax Survey	% of Total	National	% of Total
26- 50*	10	46	73	41	16,970	49
51-100	7	31	60	35	10,305	30
101-250*	5	23	51	24	7,292	21
	22		184		34,567	

*The present survey was limited to 30-200 employees.

was high, medium, or low. Although an objective assessment might have been desirable the practical difficulties of obtaining this were too great. Nevertheless, it was assumed that management as a whole have about the same standards of assessment. Labour turnover was described as "high" by seven, "medium" by four, and "low" by 11. One manager replied that it was low for adults and high for juveniles and as they employed 35 adults and 15 juveniles the factory was included in the low group.

Sickness Absence.—Besides labour turnover, sickness absence rate is sometimes also taken as an indicator of morale.

One factory reported that sickness absence was no problem among men but that "mothers tended to give some trouble". A further four reported, without elaboration, that sickness absence was a problem. The mean proportion of women employees in these four factories was 44.7% compared with 6.1% in the 16 factories where it was said that sickness absence was not a problem. This difference is highly significant ($t = 8.04$; $\nu = 18$; $p < 0.001$).

Welfare Facilities.—As stated earlier, labour turnover will reflect differences between individual factories whether these be physical, psychological, or social. It was thought to be of interest to look at the welfare facilities and see whether these were associated with labour turnover. The aspect of welfare facilities inquired into were: canteen, sports club, and sick pay scheme.

Canteen.—None of the factories had a canteen serving cooked meals, although a number provided a mess room in which tea was available; in others there was not even this facility.

Sports Club.—Only one factory provided sports facilities with cricket and football clubs (it was a subsidiary of a large, well-known company).

Sick Pay Scheme.—All firms were asked whether they had a sick pay scheme. Six had one (these included the four factories with industrial medical services), two had one for the staff only. One firm gave sick pay for absence due to accidents at work

(in answer to an earlier question this firm reported "few" accidents per annum and "none" reportable to the Chief Inspector of Factories, viz. "none" requiring more than three days absence from work). One firm stated that the employees ran their own fund. The remaining 12 factories had no sick pay scheme. There was a strong association between the size of the firm and the presence of a scheme; details are given in Table 3.

None of the firms with such a scheme complained of a high labour turnover; in one it was said to be medium, and in the other six to be low.

TABLE 3
SIZE OF FIRM RELATED TO SICK PAY AND RESETTLEMENT SCHEMES

No. of Employees	No. of Firms	No. of Firms With Sick Pay Schemes For All Employees	No. of Firms Practising Resettlement
33- 43	8	Nil	3
45- 90	7	2	2
93-190	7	5	6

Resettlement.—Eleven firms said that some form of resettlement was attempted after sickness absence. The practice was more common among the larger firms but was not confined to them. None of these 11 firms had a high labour turnover; in four it was medium, and in the other seven it was low.

The association between sick pay and resettlement schemes and low labour turnover cannot necessarily be interpreted as cause and effect. It could be reasoned that the firms with high labour turnover would not find such schemes practicable for the type of labour which it is their policy to employ.

Accidents.—As with labour turnover, so with accidents, it was not practicable to adopt a rigid definition in a survey of this kind. In general terms it was regarded as any unlooked-for happening resulting in the necessity for first aid. A subdivision was made by asking about accidents reported to the Factory Inspector; this gave an approximate measure of those greater than the trivial. Eight factories felt unable to put a figure to the number of accidents

but stated in words that they ranged from "nil" (*sic*) to "many minor"; these factories ranged in size from 33 to 145 employees.

The remaining 14 factories reported 3,116 accidents between them, ranging from 12 to 500 per annum. The number of accidents per employee per annum among these 14 factories ranged from 0.2 to seven.

Accidents Reportable under the Factories Acts.—All factories were asked how many reportable accidents they had had in the preceding 12 months; some answers were vague, and in all 52 reportable accidents were recorded. Figures taken from a relatively small sample such as this can not well be compared with the national average as many factors, including size of factory (Ministry of Labour and National Service, 1960) influence the accident rate.

Disposal of Accident Cases.—Only minor accidents were dealt with on the spot; the others had to be sent to a hospital six or seven miles away. Transport is provided by ambulances based on a station next to the factory estate. This service was described as "good" by the majority of managers although some complained of the length of time it necessitated a person being away. The emphasis in these cases was on treatment at hospital rather than by the local general practitioners, a feature noted also by Jefferys and Wood (1960). Some measure of the incidence of accidents requiring hospital attention could be obtained from the demand for emergency calls for ambulances. This showed (S. C. Gawne, 1961, personal communication) that in a year there were 256 emergency calls for ambulances for the whole factory estate (15,000 to 25,000 persons). That is, in a 50-week year of five-day weeks there was on average one case a day severe enough to require hospital attention, and this includes illness as well as accidents.

Safety Officers.—Only three of the 22 firms employed somebody part-time with a responsibility for safety. These three firms were subsidiaries of very large concerns and two of them were among the five with the highest accident rates. Several explanations are possible from this observation. For example, the higher accident rate industries are aware of their propensity and consequently employ a safety officer. Alternatively, the presence of a safety officer makes persons more aware of accidents and so raises the accident reporting figure. However, the "definition" of an accident used in this survey, *i.e.* all accidents which resulted in attention being required, makes it difficult to see how the presence of a safety officer would raise the accident reporting rate.

It appears very difficult, therefore, to draw any conclusions from surveys of the total numbers of accidents in small factories, as accurate figures are virtually impossible to obtain and even the simplest and most extreme definition of an accident leads to inconclusive results.

First Aid Facilities.—Of the 22 factories, 15 had no first aid room, five had one, and two had one under construction. The five factories with first aid rooms ranged from 45 to 190 employees in size with an average of 104 employees (compared with 77 for the total group of factories). Their number of accidents ranged from "nil" (*sic*) to 1,266 with an average of 344 accidents per annum per factory (compared with 233 for the complete group of 22 factories).

First Aid Attendants.—Only two factories claimed to have full-time first aid attendants. One, with 190 employees, experienced 1,266 accidents per annum and the other, with 93 employees, stated that there were no accidents in the preceding year! Only three factory managers stated that they had no first aid attendant.

Nursing Services.—No factory in the survey employed a nurse. One factory made use of the nursing facilities of an adjoining larger factory (employing more than 200 people).

All factory managers were asked whether they would employ a nurse if finance were no problem. Eight replied "yes" and the remainder "no". The eight who replied "yes" ranged in size from 37 to 158 employees and altogether employed 567 persons or about one-third of the labour force. The accident rate in these factories was not high since only 592 accidents, or one-fifth of the total number, had taken place in them.

It appeared that there was no great appreciation of a need for nursing services in the factories surveyed and where there was a wish for such a service it was not related to accident rate.

Medical Practitioners.—Four factories had a part-time doctor. These four factories were subsidiaries of much larger organizations with a well-developed medical service. The remainder were asked if they would employ a doctor if finance were no problem. Four replied "yes" and the remaining 14 "no". Table 4 shows the mean sizes of the three groups of factories.

The four factories which would employ a doctor tended to be small (38, 42, 54, and 90 employees) and with no marked hazard. Their reasons for wanting a medical service were, as might be expected, some-

TABLE 4
ATTITUDE TO MEDICAL ADVICE AND SIZE OF FACTORY

Attitude to Medical Advice	No. of Factories	Mean No. of Employees per Factory
Already have doctor	4	132
Would employ doctor	4	56
Would not employ doctor	14	66

what mixed. One factory felt it would be a good thing to have for the employees, the manager of another felt bitterly about the amount of sickness absence and felt that the doctor could check this. At a third factory there were only a "few" accidents per annum, there was some slight mechanical hazard, and the manager was quite satisfied with the existing arrangements for first aid and disposal of accidents and was not interested in any medical examinations (see later). In fact it is not clear what the doctor's functions were expected to be.

Medical Examinations.—The persons interviewed were asked about their interest in pre-employment medical examinations, periodic medical examinations, and medical assessment on return from absence following injury or serious illness (Table 5).

Of the eight factories expressing an interest in pre-employment medical examinations, four were the ones already having a medical service. The nine factories expressing an interest in medical assessment following sickness or injury included the four already employing a part-time doctor.

General State of Factory Environment.—This was assessed under essentially the same headings as used in the two earlier studies (Ministry of Labour and National Service, 1958; Jefferys and Wood, 1960), that is, based on Part 1 of the Factories Acts. It was arranged that each of our survey pairs included at least one full-time industrial medical officer. The assessments were made jointly and this part of the questionnaire was completed immediately on leaving the factory. As with the other two surveys cited no objective measurements were made, and the classification was a broad "adequate" or "inadequate".

Cleanliness.—The conditions ranged from good to very bad. In one or two developing factories, conditions were poor in the older dilapidated build-

ings but much better in the newer buildings which had just been occupied. Ten factories qualified for "adequate" cleanliness and the other 12 for "inadequate".

Lighting.—As the surveys were made on summer afternoons, the lighting conditions were probably seen at their best. No attempt was made to estimate the adequacy of artificial lighting arrangements during darkness. The assessment was based not on the very moderate requirements of the Factories (Standard of Lighting) Regulations, 1941, but on a subjective assessment by the observers of the adequacy of the lighting for the task being performed. Even so, in only two factories was the lighting considered "inadequate".

Noise.—Again, no attempt was made to measure this, but the criteria suggested by Hinchcliffe (1958) and by Krasnovskii (1958) were used. If the voice had to be raised to talk to someone close by, the factory was regarded as noisy; only two factories were considered to be a problem, and these were classified as "inadequate".

The presence of adverse physical conditions did not correlate with size, labour turnover, or sickness absence.

Hazards.—The factories visited were grouped according to the main hazard present. Where the mechanical hazard was present with another, that other hazard has been taken arbitrarily as the main hazard, as furnishing more interest from the viewpoint of industrial medicine. Ten factories had only a mechanical hazard, three had a toxic hazard from possible inhalation or ingestion of chemical substances, seven had a skin hazard, and two a hazard from dust and/or fumes.

ADVICE ON HAZARDS.—All factory managers were asked from whom they obtained advice on the hazards. The "mechanical only" hazard was generally dealt with, in theory at least, by the Factory Inspectorate. There was no lack of knowledge of measures to be taken—although their implementation, particularly with regard to the wearing of protective clothing, was sometimes not adequate. This, by no means unsatisfactory state of affairs, reflected the effectiveness of the Factories Acts and the Factory Inspectorate.

TABLE 5
ATTITUDE TO MEDICAL EXAMINATIONS

	Pre-employment Medical Examinations	Periodic Medical Examinations	Medical Assessment Following Sickness or Injury
"Yes" (including if practised)	8	6	9
"No"	14	16	13

The answers to questions about the other hazards proved illuminating. Of the three factories with toxic hazards, two were subsidiaries of the large national concerns noted earlier. Advice was readily available from the parent company and their own part-time doctor. The third firm obtained advice from the Factory Inspectorate. Six of the seven companies who stated that they had a skin hazard sought advice from no one, the seventh was a subsidiary and obtained advice from the parent company and their own doctor. Two factories had a dust hazard, in one of these the dust was regarded by the medical observers as innocuous, but the firm nevertheless had obtained advice from the suppliers. In the other company where the dust was a well-recognized industrial hazard, the firm had sought no advice.

One of the reasons for posing this question was to see if there was any latent demand for advice on hazards from the factories in the survey. It appears that there is little demand for this knowledge, although a need exists.

Discussion

Demand.—The first object of this survey was to determine the demand for medical services in a group of small factories within the size range 30 to 200, in the North West of England. In this context the "demand" means the demand of the employer. It is considered important to determine the demand of the employer because under the present arrangements he is responsible for payment and unless he wants the service he will not pay. Even if these arrangements were to be changed so that "the State should assume responsibility for directing the development of such services" (British Medical Association, 1961), whether or not they are controlled by the State, the co-operation of the employer would be necessary for their success. Out of the 22 factories studied four were subsidiaries, and in them the general patterns of behaviour were imposed from above as noted by Taylor and Wood (1960). Of the remaining 18 factories, 14 expressed no interest in a doctor or nurse, even if finance were no problem. In only four factories was such a service acceptable, and they had no marked hazard.

Need.—The second object of the survey was to determine the need for occupational health services in small factories. The needs of small factories which were found by this survey were: for advice on working conditions, for improvement in primary treatment, and perhaps for improvement in resettlement after sickness absence.

Advice on Working Conditions.—There were a

few things wrong with the physical conditions of work, as observed in the Halifax Report (Ministry of Labour and National Service, 1958) and the survey of Jefferys and Wood (1960). Mechanical hazards from machines appeared to be satisfactorily controlled, but the problem of inhalation of harmful dust and the possibility of skin irritation obviously required attention.

Treatment Services.—Regarding treatment services for accidents, it has been noted that in our group of factories it was difficult to assess whether or not the accident rate was excessive. The problem of accident rates has been considered by the Acton Society Trust (1953), and it appears that the worker in the smaller factory is less liable to accident. The trivial accident would be treated in factories where more than 50 people are employed at any one time by the works first aider and new regulations require that he attains a specified standard of training (there is provision—not yet implemented—for the Minister of Labour to extend this requirement to factories with less than 50). Any more serious accident requires skilled care but these cases did not appear to be common.

Resettlement.—In the larger firms surveyed return to work after a period of absence is coped with by the manager with his intimate knowledge of the man and his work, and there seemed no evidence that more was needed. The smaller firms were usually unable to offer alternative employment and could only accept the man back when he became fit to undertake his normal work again. This confirms the view of Lane (1961) that there are but a few cases where specialist medical help is an advantage, and it is doubtful whether these cases are sufficient in number to warrant routine visits of a doctor. Although large firms have shown the value of industrial rehabilitation it does not necessarily follow that the need of small factories is the same. Revans (1960) has shown that length of sickness absence might be less in smaller units and that the will and urge to return to work is greater. Many observers are agreed that the will to return to work is as important as physical disability in industrial resettlement. It cannot be assumed, therefore, that the need in small factories is the same as that in the larger factories. Whether an industrial resettlement centre covering the whole area would be justified requires careful study.

The needs of this group of factories appear then to be twofold. First, some improvement in the supervision of non-mechanical hazards is necessary. This is supported by the finding of Bourne (1956) who showed that 50% of cases of industrial dermatitis among hospital outpatients come from factories

employing fewer than 50 people. The second need is for consideration of the emergency treatment in this group of factories to see whether improvement is feasible. Associated with this there might be a need for some form of resettlement centre although this is by no means established.

These two needs, the preventive and the therapeutic, differ in their application. The first is essentially individual to each particular factory, for example, the prevention of dermatitis caused by a specific compound in a certain factory population in the particular conditions of work. The second need, for treatment and perhaps rehabilitation, is collective; the types of injury were not peculiar to any particular factory.

Ways of Meeting the Need.—It is important to note here that any suggestion must be capable of application in all factories and not only in those which voluntarily elect to have a medical service.

Advice on Working Conditions.—The survey has shown that whilst the Factories Acts and Factory Inspectorate have largely coped with the mechanical hazards, the control of potentially hazardous processes could well be improved. The fundamental question is whether this improvement should be undertaken by some extension of the statutory inspection services or by the occupational health services.

Legislation and statutory inspection having brought mechanical hazards and some toxic hazards under control, it is worth considering whether this system could be extended. Various suggestions have been made. Jefferys and Wood (1960) proposed a unified system of inspectorate under the local authority. Keatinge (1961) put forward the idea of employing nurses with statutory powers and feminine persuasion as Industrial Health Visitors. Lane (1961) suggested a review of the Appointed Factory Doctor service in order to bring the statutory duties more into line with modern needs.

It is, therefore, worth considering at this juncture, what are the functions of an inspectorate? These have been carefully reviewed by Edmonds (1962), and two are relevant to this discussion. The first and most obvious is an enforcement function ensuring that where rules exist governing the conduct of activities, these shall be obeyed. A second is the collection and suitable correlation of facts upon which subsequent legislation will be based. This implies a concept of the creation of ultimately desirable ends and studying the best methods of achieving those ends. Included in this is the function of dispersing as widely as possible examples of sound practice based on current theory, accepting

that no two contexts are ever exactly the same.

Viewed in this light, would a system of statutory inspection meet the need for advice on hazards? At present, the enforcement function of the Factory Inspectorate with regard to mechanical hazards and working conditions is not unsatisfactory. Such hazards are readily controlled by enforcement. Can the same be said of the advisory and teaching functions? The control of dermatitis involves more than compliance with statutory regulations (although provision of adequate washing facilities is unquestionably essential), or the provision of protective creams, gloves, and other measures. It involves the institution of a satisfactory system of working, and from the present survey it appears that the existing methods of inspection do not measure up to this approach. Perhaps one reason is the number of interested inspectors. "It was abundantly clear that the small firms were often confused by the duties and powers of their different visitors" (Jefferys and Wood, 1960). This is certainly not conducive to Edmonds' concept of dispersing possible examples of sound practice.

The suggestion of a unified system of inspection of small factories would allow more emphasis to be laid on the educative function of the inspectorate. The doctor could well play an important part in disseminating information on sound practice based on current theory. This requires a cadre of doctors with training and experience in this work. It has been noted that an essential prerequisite to this educative function is the collection and suitable correlation of information. The sources of this information include the resources of the medical branches of the Factory Inspectorate and the Ministry of Pensions and National Insurance, and the clinical experience of the doctor himself. The person at local level with this experience is the Examining Medical Practitioner and it is obviously wise that he is frequently also the Appointed Factory Doctor. The nucleus of the scheme is already there; lines of development would be improvement in the dissemination to the local Appointed Factory Doctor of information collected and modification of his duties and perhaps training to enable him to apply this knowledge.

Primary Treatment and Resettlement.—Hospitals were originally sited in industrial areas to deal with accidents and illnesses of persons working and living in those areas. In urban areas the local hospitals still fulfil this function toward the small factories as noted by Jefferys and Wood (1960). Where new industrial estates are set up at a distance from the older centres and their hospitals, the question arises, what may be expected of the National Health Service

in these situations? If a local casualty service were to be set up on the estate—and it obviously would have to cover all the factories, not just the ones in the size group of the present survey—it would provide such service as the National Health Service already gives in urban areas. On the other hand, it would be difficult to see how such facilities could be denied to the local residents, thus emphasizing, with regard to treatment, the interdependence of occupational health services and the National Health Service. In any event, from the figures of ambulance journeys there seems to be no great demand for hospital facilities. The requirement, therefore, is to ensure that the treatment which is carried out in the factories is done properly, that is, for supervision of the first aid arrangements, a duty which could be taken on by the Appointed Factory Doctor in his suggested new role; in fact to give him the responsibility, either directly or with the Factory Inspector, of supervising the first aid provisions of the Factories Act.

It is stressed that the suggestions here are for measures which could be universally applied. They could be supplemented, in those factories where it is desired, by either individual or group medical services on a voluntary basis.

In this survey it was apparent that management in smaller factories is sometimes concerned with the problem of resettlement after sickness absence. This suggests that some form of short-term group rehabilitation centre, perhaps closely associated with the National Health Service, might be considered.

Conclusions

This small survey confirms the experience of established occupational health services covering small factories, *i.e.* that the demand for these services is by no means universal. This implies that if a need were to be demonstrated for some form of comprehensive occupational health service, then the system devised should be capable of universal and effective application.

The occupational health needs of small factories appear to be twofold. The first need is for better control of non-mechanical hazards. The second is for better supervision of primary treatment and perhaps some form of resettlement. When proposals are made for comprehensive occupational health services to meet these needs, it is suggested that they should be related to the existing comprehensive services, covering inspection and treatment.

It is a pleasure to record the thanks of the study group to the estate trades council and to the managements for their willing co-operation.

I am also grateful to Professor R. E. Lane for his help in planning the project and for many stimulating discussions during the preparation of this report, although the author must take responsibility for the opinions expressed.

Dr. O. P. Edmonds has kindly allowed me to read part of the manuscript of a forthcoming publication about Hugh Seymour Tremenheere.

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Appendix - see over

APPENDIX

The Questionnaire Used in the Survey

1.		Serial Number										
<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Nature of Business</td> <td style="width: 50%; text-align: right;">Estimated Labour Turnover</td> </tr> <tr> <td> No. of men</td> <td style="text-align: right;">Medium</td> </tr> <tr> <td> No. of women</td> <td style="text-align: right;">High</td> </tr> <tr> <td> No. of juveniles</td> <td style="text-align: right;">Low</td> </tr> <tr> <td> Total</td> <td></td> </tr> </table>			Nature of Business	Estimated Labour Turnover	No. of men	Medium	No. of women	High	No. of juveniles	Low	Total	
Nature of Business	Estimated Labour Turnover											
No. of men	Medium											
No. of women	High											
No. of juveniles	Low											
Total												
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Any Special Requirements under The Factories Acts:												
Number of persons seen annually by appointed Factory Doctor												
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Number of Accidents in 1960		Reportable under Factories Acts										
		Recorded in Accident Book										
Do you employ a Safety Officer? Yes/No												
If Yes, part time or full time												
<hr/>												
Do you employ a nurse? Yes/No		Part time or full time										
		If part time, hours per week										
		Qualifications										
Do you have:—												
A first aid room? Yes/No												
First aid boxes? Yes/No		Number of boxes										
Couches? Yes/No												
<hr/>												
Do you have first aid attendants? Yes/No												
Number full time		Number part time										
<hr/>												
2.												
Name of Firm		Observers										
Status of person seen												
Details of process												
Details of hazards (mechanical, electrical, toxic, dust, and fume, skin, etc.)												
From whom advice on hazards												
Details of safety equipment and precautions												
Nursing facilities. Details and comment												
First aid facilities. Details and comment												
Disposal of accidents (hospital, general practitioners, etc.)												
Are local hospital facilities adequate?												
Are you satisfied with above arrangements?												
Would you have nurse? if finance no problem												
doctor?												
Would you be interested in:												
(1) pre-employment medical examination?												
(2) periodic medical examination?												
(3) medical assessment on return from absence following injury or serious illness?												
Sickness absence—problem?												
Any rehabilitation												
Details of sick pay scheme												
Welfare facilities												
Assessments on factory												
General cleanliness	Space	Methods of dealing with hazards										
Temperature	Noise	Comments on safety equipment and precautions										
Lighting	Workplaces	Any general comments										