Survey of medical personnel engaged in occupational health service in West Malaysia

by *Harold S. Jorgensen*
D.P.H., D.I.H.
WHO Adviser.

and *Amar Singh*
M.B.B.S., D.P.H., M.Sc.
Assistant Director,

Occupational Health Unit, Ministry of Health.

Introduction

ONE of the recommendations at the ILO sponsored seminar on Occupational Health, for small industries held in Kuala Lumpur in 1974, was that the present resources in occupational health services should be studied. The present survey has had this objective.

Method

The survey has been planned as a mail survey and questionnaires were sent out in June 1976 to all general practitioners, registered with the Ministry of Health. Reminders were sent out once. Several doctors were also in addition contacted by telephone or personal letters for further clarification of the answers. The Social Security Organization's (SOCSO)'s list of panel doctors was used as a reference. There are at present a total of 721 doctors on the SOCSO panel in Malaysia. The figures published by SOCSO in its statistical summary for Sept. 1976 and showing the total number of factories and employees in peninsular Malaysia were used for comparison.

Material

A total of 1002 questionnaires were initially sent out to the corresponding number of doctors representing all practising general practitioners in Peninsular Malaysia. 540 answers (54%) came back initially. Following the reminders an additional 45 (4.5%) were returned, making the total returns 585 (58%). The highest response was in Selangor State where 259 out of 400 answered (65%). The lowest response was in Negeri Sembilan where only 20 out of 48 answered (42%).

304 doctors were not working with industry on a permanent basis. 125 of these were on the SOCSO panel but did not receive any patients from industry. 65 answers did not clearly indicate whether the doctor was working as a SOCSO panel doctor or working with industry or not. However, it was assumed that this was not the case and they were therefore not included in the analysis. The final analysis of the survey was limited to those doctors working with industry on a permanent basis. 281 doctors were classified as such, out of which 160 (62%) were residing in Selangor State. These 281 doctors constituted 33% of the doctors on the SOCSO panel.

Results

The participants in the survey were initially asked the following questions:

A. Do you visit the factory to see the patients?
B. Are the patients referred to your clinic outside the factory?
C. Are you paid by the number of patients seen by you?
D. Are you paid by the number of employees in the factory?
E. Are you paid by the number of hours you spend at the factory?
F. Do you ever visit the workshops?
G. Do you approve of the idea of starting an occupational health association under the MMA?

The answers to questions A – G were as follows:

A. 81 (30%) indicated that they visit clinics at the industries.

B. 264 (95%) indicated that they have patients from industries referred to clinics, outside the industries.

C. 246 doctors (88%) answered that they were paid by each patient visit.

D. 64 (23%) answered that they were paid by the number of employees in the respective industry.

E. 31 (11%) answered that they were paid by the time they spent in the clibic at the industry.

F. 65 (23%) doctors indicated that they visited the workshops and gave advice to the management. Only 19 doctors (7%) visited the workshops on a regular basis.

G. 251 (89%) doctors answered favourably to the suggestion of establishing an association of doctors working with Occupational Health. 10 disapproved of the idea. 20 did not answer this question.

Size of activity per doctor

The most common number of factories served by individual doctors was 1–4 (87%). Some doctors served considerably more factories and a few even more than 20. (In these figures estates are not included but only factories)

Some of the doctors did not initially answer how many employees they were taking care of. They indicated that they did not know the size of the industrial population or they simply did not want to give the information. In some of these cases it was possible, through a personal contact with the doctor, to obtain approximate figures whereby a frequency distribution could be made. (Table 1).

The number of doctors in this table is therefore less than the total and the number of employees served by each doctor may represent an underestimate. Most doctors served 500 – 999 employees (25%); many served 200 – 499 employees. 35 doctors (16%) served less than 100 employees.

The number of industries which according to the doctors employ auxilliary medical personnel: (Nurse/Hosp. assistant/Sister) were 101. 59 were in Selangor State. The majority of these were employing nurses (63), in general on full time duty during daytime, from Monday to Saturday. 22 industries had nurses on duty round the clock. 21 industries employed hospital assistants and 16 sisters.

Table 2 shows the distribution of the total number of factories included in the survey according to the approximate number of employees. 430 (63%) of the factories are in Selangor State. 622 (91%) are in the four states Selangor, Penang, Perak and Johore. 571 (83%) are factories with less than 300 employees. 53% of the factories have less than 100 employees. The most frequent size of factory served by doctors is the one with 25 – 49 employees (22% of all the factories). Factories with less than 25 employees only contribute towards 13% of the total.

To be able to estimate the proportion of all industries in West Malaysia which are served by doctors on a regular basis the above mentioned figures have been compared with the number of factories and employees covered under the SOCSO scheme; September 1976 (Table 3)*.

This comparison shows that 24% of the employees covered by SOSCO are included in the survey, but only 4% of the industries.

Discussions

The return rate for the whole of Peninsular Malaysia was 58%. For Selangor it was 65%.

Selangor is by far the most industrialized state in Malaysia with the largest number of doctors. A satisfactory representation in this State therefore is more important than the lower response in some of the much less industrialized States.

A decisive factor in influencing the response rate has been the participants motivation to answer the questionnaire. It may therefore be assumed that the great majority of the doctors who did not respond at all were those who did not have any contacts with industry and in particular no interest in occupational health. For these reasons it is assumed that the answers, from the 281 doctors in the survey, that were studied, are representative of those doctors, who are delivering medical care to employees in industries in Peninsular Malaysia.

Table 1

Frequency distribution of the average number of employees served by each doctor.

No. of employees	<100	100–199	200–499	500–999	1000–1999	2000–2999	3000+
No. of doctors	35	19	57	70	29	8	1

Table 2

Frequency distribution according to size of factories served by the doctors in the survey

	<25	25–49	50–99	100–199	200–299	300–399	400–499	500–999	1000–1499	1500–1999	2000+	Total
Selangor	67	90	90	75	39	19	16	17	10	2	6	430
Penang	7	38	4	6	11	2	4					72
Johore	2	7	15	16	4	2		1	1	1		48
Perak	7	11	12	7	17	7	4	6			1	72
Melaka	1	1	1	6	8	1	1	4				23
N. Sembilan			2	6	5	1	1					15
Kelantan			1					4				5
Pahang	1	1							1			3
Trengganu			1									1
Perlis	1		1				1	1				4
Kedah	2	3	1	3	1		1	1		1	1	14
Total	88	151	128	119	85	32	28	34	12	3	8	688

Table 3

No. of employers and employees under SOCSO (September 1976) and in Survey (Peninsular Malaysia)

	No. of factories under SOCSO	No. of factories in Survey	No. of workers under SOCSO	No. of workers in Survey
Selangor	8,078	472 (5.8%)	326,442	95,202 (29%)
Remainder Peninsular Malaysia	11,636	326 (2.9%)	384,935	77,337 (20%)
Total	19,714	798 (4.1%)	711,377	172,539 (24%)

One of the objectives of the survey was to determine to what extent the industries in Peninsular Malaysia are covered by doctors offering medical care to the employees, on a regular or a permanent basis. In general, patients from one individual industry are referred to one specific panel doctor who has agreed to take care of the employees from that industry. In some instances, the same industry may have made arrangements with several doctors. This may offer the employees a choice of doctors. However, when making a total compilation of factories and employees served by all doctors, this situation may in some cases create a risk of "overlapping", i.e. by doctors reporting separately but serving the same industries. This complication has been anticipated and to a large extent avoided by comparing the names of the factories on the individual doctor's list of factories. However, it may not have been possible to totally avoid duplication. Especially among the small industries (less than 50 employees) where in some cases the names of the factories have not been listed. Therefore, the number of factories, and the number of employees, especially among the small factories, may represent a slight overestimate.

Only 4% of the industries in Peninsular Malaysia and 24% of the workers, covered by the SOCSO scheme, have permanent arrangements for medical care by G.P's.

This discrepancy between the proportions of industries and employees is probably due, to the smaller industries being under-represented in the survey i.e. they are not covered by doctors on a permanent basis. On the other hand it is worth noticing that 24% of the employees *are* covered by arrangements between industries and doctors. This has been accomplished on a voluntary basis and without any invitations to the industries to do so.

The majority of Industrial workers in urban areas are now covered by SOCSO. The scheme applies only to industries with more than 4 employees and workers earning less than $500/-. Self employed are not covered.

It is estimated that SOCSO at present covers 15% of the total working population in Malaysia. On this basis the coverage of occupational health services by doctors on a permanent and regular basis is of course very limited. However, the great majority of workers in Malaysia are rural workers in the estates. These are to some extent covered through the Rump Labour Code by MOH's and also in many instances by general practitioners. These contributions are not included in the present survey. Workers in the rural areas which are not covered under the SOCSO scheme also include mine workers, agriculture workers and fishermen.

The primary aim of the survey has been to describe the size and extent of medical service delivered to industry. The survey has not dealt in detail with the content of the type of service delivered by the individual doctors; mainly because it was already evident from many visits to individual industries, that no occupational health service in it's real meaning, was delivered, but only essentially medical care.

Summary and Conclusions

A mail survey has been carried out to describe the present resources for medical care in industry in Peninsular Malaysia.

All registered general practitioners, 1002 doctors, received a questionnaire and 58% answered. The response rate in Selangor State, where the majority of the industries and the doctors are located, was 65%. The final analysis was made on 281 GP's working with industry on a regular and permanent basis. This constituted 28% of all general practitioners and 33% of the doctors on the SOCSO panel.

The results showed that 4% of the industries and 24% of the employees, included in the SOCSO scheme (1976), are covered by doctors on a more or less permanent basis. The larger industries are covered by doctors much more frequently than the smaller industries. However, approximately one

fourth of the employees covered by SOCSO (1976) receive regular medical care based on agreements between the employers and the doctors.

In most cases the patients are referred to the doctors clinics outside the industries but 30% of the doctors also visited clinics at the industries. The majority of doctors are paid by each patient visit; 23% said they visited the workshops but only 7% did this on a regular basis 101 factories (15%) had auxilliary medical personnel employed, mostly nurses on daytime duty.

The survey showed the need for occupational health services, especially in the small industries. It also showed a need for a closer liaison between the industries and the doctors. The doctors should be able to visit the workshops on a regular and frequent basis and they should be able to advice the management on occupational health matters. At present this is probably not expected by most employers. Many doctors may also feel uncertain as to their qualifications in occupational health and possibilities of influencing the working environment. The industries should be enlightened about the advantages of occupational health services and the doctors and nurses should receive training and support.

Instead of having a large number of factories divided up among many doctors it would probably be advantageous if groups of industries would join and share occupational health services. Agreements could then be made with a limited number of doctors, with special interest in occupational health who could receive training in occupational health.

Preventive efforts should be incorporated in the occupational health services together with medical care. This would include preemployment and and preplacement examinations, regular health examinations of workers in hazardous trades (e.g. exposure to lead fumes, silica dust, radiation) and monitoring of the working environment.

Ergonomic and rehabilitation aspects should also be considered as an important part of occupational health services.

Occupational health services should, in principle, be catered for by the industries themselves. Advice and guidance as to the content and implementation should be available through the Occupational Health Unit, Ministry of Health and the Factory and Machinery Department jointly.

Occupational health services for the many small industries may have to be incorporated with the public health services. Health Clinics in industrialized areas should be orientated towards this problem. Medical officers of health and public health nurses should receive in-service training in occupational health, especially when they are employed in industrialized areas.

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