SOCIAL MEDICINE STUDIES BASED ON CIVILIAN MEDICAL BOARD RECORDS

I. NATIONAL SERVICE REJECTS

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By the regular publication of statistics based on Census data and death certificates the General Register Office has kept the United Kingdom so well informed that even the man in the street is aware when mortality changes of a disquieting or reassuring nature have occurred. But nowadays, when disease more often causes loss of working efficiency than premature death, a more sensitive instrument than mortality statistics is needed to measure the public health. Since there is no immediate possibility of supplementing the national register of deaths with one of disabilities, it is relevant to ask whether the optimum use is being made of the records of routine health examinations, in particular those of Civilian Medical Boards.

During the war over 7,000,000 men and 500,000 women from all walks of life registered under the National Service Acts and were screened by Civilian Medical Boards. According to the official report for the years 1939-45, one in seven of the men (17-45 yrs) and one in five of the women (18-35 yrs) were found to be either physically or mentally unfit to serve in the armed forces (Ministry of Labour and National Service, 1947). The rejection rate for the men increased four-fold between the youngest and oldest age groups (under 21 to over 36 years), and for women it increased from 7 to 17 per cent. (under 21 to over 31 years). To these meagre facts in the Ministry report can be added the work of some independent investigators. Men referred for a second opinion have provided clinical material for papers on glycosuria (Keeping and Lawrence, 1947) and cardiac abnormalities (Bourne, 1946; Parkinson and Hartley, 1946). The original records have also been used to study physique (Martin, 1949), stature and chest circumference (Clements and Pickett, 1952, 1954), general standards of fitness (Stewart and Hughes, 1949), and foot defects (Hewitt, Stewart, and Webb, 1953). There is, however, nothing to correspond to the detailed reports on the U.S.A. Selective Service Examinations (U.S. Govern-

ment, 1948; Goldstein, 1951), and apart from the paper on foot defects no indication that the records of *clinical abnormalities* have ever been consulted except to settle individual pension claims.

Certain features of the records may explain this apparent lack of interest in the massed data. During 1939 and 1940 the findings of the Boards were entered in specially printed ledgers and a single line usually sufficed for each examination. In this form the entries under medical history and clinical findings were so cramped and illegible that Martin (1949) decided they were not worthy of analysis. In 1941 a new format was introduced and the Manual of Instructions to Examiners revised (Ministry of Labour and National Service, 1941). Henceforth each examination was accorded a page, foolscap size, with printed headings arranged under three sections. Each section was completed by a different examiner and the final grading was done in consultation with the Chairman, who was responsible for the general conduct of the examination and for referring men to consultants for specialist opinion.

In practice, under certain headings (*e.g.*, weight, height, chest, circumference, visual acuity, hearing standard, and medical grade) the entries were completed in nearly every case, while under others (*e.g.*, past illnesses, fits, heart, lungs, etc.) the spaces were frequently left blank or merely ticked. Though it is reasonable to suppose that in such cases the examiners thought that there was nothing of interest to record, there is no guarantee that they asked the same questions, kept exactly the same kind of record, or agreed about what constituted an abnormal finding. Therefore, in spite of the strict rules of procedure laid down in the Manual of Instructions, it is not safe to assume that the records of clinical abnormalities (as opposed to the records of weights and heights) are strictly comparable. Members of a single Board must have worked to a common convention, but it is unlikely that the same level of skill and accuracy was maintained in

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all regions. On the contrary, it can be shown that when all the entries under medical history and clinical findings are included in the analysis there are significant differences between Boards which can only be accounted for by different standards of work (see Table I).

It is one thing to discover that some of the examinations were less fully recorded than others and another to say that the mass records are therefore valueless from the point of view of epidemiology. There is no reason to suppose, merely because a Board overlooked or failed to record minor deviations from normal, that it set different standards for, say, town-dwellers and villagers, clerical workers and labourers, tall men and short men, young men and old, to mention some of the environmental and constitutional factors which were recorded on the schedules and which it might be of interest to correlate with the prevalence of disease. Systematic bias of this kind is so improbable that, *provided the annual records of each Board are separately assessed*, there is no reason why the existence of "observer error" should prevent their use in establishing correlations between disease prevalence and other phenomena. From this point of view it is far more important that the men and women examined by Civilian Medical Boards should be typical of their regions, occupations, and age groups, than that the individual case records should be perfect. From another point of view it is of interest to know how the Service and Civilian reports on individuals compare: whether men who appeared before more than one Civilian Medical Board were similarly assessed,* and whether, at a level of disability sufficient to cause

rejection, there was greater similarity between regions than at a level of minimal disability. It is only with this last point that the present paper is concerned, but further publications are contemplated in which the value of the records will be considered from other points of view.

MATERIALS AND METHODS

The whole investigation is based on three sets of Civilian Medical Board records, each of which was compiled during the period 1941-44. Two of the examining panels worked in adjacent counties—Leicestershire and Northamptonshire—and the third served part of Essex. By the terms of the National Service Acts of 1939-44, men who were registered as having certain gross physical or mental defects† did not come before a Civilian Medical Board, but from 1943 onwards men in reserved occupations were examined, even though they were exempt from call-up. For a variety of reasons, no women, no men over 45, and no representatives of certain groups (e.g., conscientious objectors, ministers of religion, and medical practitioners) are included in the investigation.

To facilitate manipulation of the records a code was devised which allowed everything recorded on the original schedules to be represented on two Powers Samas cards. This recording was based on the International Classification of Diseases and Injuries (World Health Organization, 1948) and the recent Census Classification of Occupations (General Register Office, 1951). The code included six age groups (17-19 yrs, and the four following 5-year groups), nine height groups (at intervals of 2 in.), ten weight groups (at intervals of 10 lb.), and four general fitness categories (Medical Grades I to IV).‡

† E.g., inmates of lunatic asylums, persons with only one leg or permanently incapable of moving without assistance, and persons registered as totally blind or mentally defective.

‡ I—Fit for all forms of active service.
II—Fit for duties "not involving heavy strain".
III—Unfit for active service: possible reservist
IV—Unfit for active service: in any circumstances } National Service Rejects.

* From January, 1943, it became the practice for Civilian Medical Boards to re-examine immediately before call-up men who (because they belonged to a reserved occupation) had not been medically examined in the last 6 months. There were also a number of men with temporary disabilities who were referred for second and third examinations.

TABLE
PREVALENCE RATES IN THREE REGIONS

Main Categories of Disease (International Classification)		I Infective	III Endocrine	V Personality	VI C.N.S. and Sense Organs	VII Circulatory	VIII Respiratory
All Entries	Essex	1.5	1.2	1.5	1.3	1.1	1.3
	Leicester	1.0	1.0	1.0	0.9	1.1	0.9
	Northampton ..	0.6	0.9	0.6	0.8	0.9	0.8
	Number of Cases ..	4,674	810	2,224	3,111	6,083	4,265
Principal Defects	Essex	1.1	*	1.3	1.1	0.8	0.8
	Leicester	1.0	*	0.9	1.1	1.0	1.3
	Northampton ..	0.9	*	0.8	0.8	1.2	0.9
	Number of Cases ..	751	174	751	1,349	1,165	370

* Included under Residue

After the first batch of records had been coded and returned to the archives it was discovered that, if a man in Medical Grade III or IV had had more than one illness, the one which had caused him to be rejected could not be identified. The code was immediately revised, but for this reason only 10,310 of the 23,201 records from Leicester are included in the studies of main reasons for rejection.

PRINCIPAL DEFECTS OF NATIONAL SERVICE REJECTS

There are several reasons why there may be a regional bias in the recording of diseases and injuries which have little or no bearing on a man's general standard of fitness for military service. Doctors tend to be more interested in some complaints than others, and to have greater skill in diagnosing diseases which have frequently come their way than diseases with which they are unfamiliar. Even strict rules of procedure and a sectional method of examination are not proof against such foibles, for it only requires the Chairmen of different Boards to set different standards of note-taking to introduce a regional bias into the records. On the other hand, diseases which caused rejection were less likely to have been omitted than those which had left little or nothing in the way of residual disability. Provided, therefore, the rejection standards were the same—and these were defined in detail in the Manual of Instructions—it might be possible to pool the records of the main reasons for rejection (here called *principal defects*) and estimate (for the ages and occupations represented) the prevalence, not of disease as a whole, but of cases in which a disease reached a conventional level of severity.

To discover how the records compared in these respects a comparison was made between morbidity rates based on:

- (i) all entries under clinical findings and medical history,

- (ii) *principal defects* of men in Medical Grades III and IV.

To construct Table I, diseases were grouped according to the seventeen main categories of disease in the International Classification (World Health Organization, 1948) and age-standardized rates were calculated for each panel and for all three regions combined. The rates for the combined regions were then scaled to unity and the corresponding rates for the three panels expressed as a ratio to the combined rates.

In the top half of Table I, where the ratios are based on "all entries", the figures for Northampton are invariably the lowest of the three, and with one exception those for Essex are the highest. In the total count the rates for Essex and Northampton lie 24 per cent. above and 24 per cent. below the rate for Leicester. The obvious inference is *not* that the Essex men were in all respects less healthy than the other men, but that the standard of recording was highest in Essex and lowest in Northampton.

In the lower half of Table I, where the ratios are based on the principal defects of men who had been rejected, the rank order of the three panels is no longer the same for every category of disease. Northampton still appears third in the final count, but the difference between Northampton and Essex is now only 4 per cent. Northampton only twice takes first place, which suggests that, even at the level of rejection, this panel had relatively lax standards. It also seems likely that the Leicester Board (which had the highest rejection rate) took a more serious view of respiratory and gastric disorder than either of the other panels, and that Essex was unusually strict in its assessment of personality disorders. On the other hand, allowance must be made for the fact that the three populations differed considerably in their occupational stratification (Table III), and it is clear that the regional differences are much reduced in the lower half of the

BY ENTRIES AND PRINCIPAL DEFECTS

IX Digestive	X Genito-urinary	XII Skin	XIII Bones and Organs of Movement	XVII Accidents	Residue	All Categories	No. of Men Examined
1.2 1.0 0.8	1.2 0.9 0.9	1.1 1.2 0.7	1.1 1.0 0.9	1.2 1.0 0.8	1.3 0.9 0.8	1.24 1.00 0.76	11,966 23,201 15,759
6,822	889	3,643	11,528	8,033	850	52,932	50,926
0.9 1.3 0.8	* * *	* * *	0.8 1.1 1.1	1.1 1.0 0.9	0.8 1.2 1.0	0.98 1.08 0.94	11,966 10,131 15,759
735	137	104	595	524	797†	7,031	37,856

† Including totals for III, X, and XII

Table. It would, therefore, seem justifiable to combine the three panels and obtain from the records of principal defects

- (i) age-specific prevalence rates;
- (ii) age-standardized prevalence rates for numerically important occupations.

DISTRIBUTION BY AGE OF PRINCIPAL DEFECTS.—Out of a total of 37,855 men examined by the three Boards, 7,031 (18·6 per cent.) were placed in Medical Grades III and IV. According to figures given in the Ministry of Labour report—which are based on *examinations*, not men—the rejection rate for the country as a whole was 16 per cent. The difference between the two rates is in line with the suggestion that the inclusion of re-examinations has led to an over-estimate of the numbers of fit men examined by Civilian Medical Boards (Ministry of Labour and National Service, 1947).

For men over 40 years of age the average rejection rate was over four times as high as for men under 20 years, but for individual causes of rejection there was great variation in the age gradient. In Table II the principal defects have been grouped into 25 categories. For five of these (sub-standard physique, sub-standard mentality, epilepsy, poliomyelitis, and valvular disease of the heart) there was virtually no increase with age, and for five others (varicosities,

hypertension, hernia, peptic ulcer, and other digestive disorders) the rates for men in the oldest age group were anything from fifteen to over one hundred times as high as for the youngest men. Between these two extremes come such conditions as defective sight and hearing, non-pulmonary tuberculosis, and skin diseases (with a two- to three-fold increase over the age range), and mental instability, pulmonary tuberculosis, trauma, and lung diseases (with a four- to ten-fold increase).

Unlike other diseases with a pronounced age gradient, pulmonary tuberculosis and other respiratory diseases have a higher rate at ages 35–40 than at ages 40–44. Clinical work suggests that from the fifth decade of life onwards the number of deaths from pulmonary disease may exceed the number of *serious* new cases, thus reducing the prevalence rate among older men. A tailing-off in the oldest age group of the prevalence rate for peptic ulcer and the absence of any such decrease in the rate for hypertension may be explained in the same way. That is to say, at an age when death begins to take an appreciable toll of sufferers from peptic ulcer, hypertension is not yet a killing disease.

OCCUPATIONAL MORBIDITY RATES.—When the records for the three panels were combined, ten of the 28 Main Orders listed in the 1951 Census

TABLE II
PRINCIPAL DEFECTS OF NATIONAL SERVICE REJECTS
Age-specific rates per 1,000 men examined for 25 disease groups

Age Gradients	Age Groups	17–19	20–24	25–29	30–34	35–39	40–44	All Ages	Total Number of Cases
	Number Examined	11,177	5,227	3,276	7,073	7,864	3,238	37,855	
I. No Definite Trend	Poor Physique	4·3	3·6	3·4	4·4	8·9	4·9	5·2	195
	Illiteracy, etc.	9·0	8·4	6·1	7·1	12·5	16·4	9·7	366
	Epilepsy	3·1	2·9	4·0	4·0	5·3	4·6	3·9	148
	Poliomyelitis	3·0	5·9	4·0	5·8	5·7	4·3	4·7	177
	Valvular Disease of the Heart (congenital and rheumatic)	10·4	12·4	11·3	14·9	15·0	14·5	12·9	488
II. Two- to Three-fold Increase	Other C.N.S.	1·0	1·5	3·4	1·7	4·6	3·7	2·4	90
	Visual	7·2	12·2	11·6	12·4	20·4	19·8	13·1	494
	Auditory	8·6	9·8	14·4	20·1	25·2	25·6	16·3	618
	Endocrine	2·9	4·2	2·8	4·1	6·6	9·3	4·6	174
	Other Tuberculosis	2·4	2·9	5·5	5·6	5·2	5·3	4·1	156
	Genito-urinary	1·5	3·1	4·3	4·4	4·8	4·6	3·5	131
	Skin	1·3	1·2	3·1	3·7	4·6	3·7	2·8	104
III. Four- to Ten-fold Increase	Mental Instability	2·5	6·5	11·9	10·8	17·2	23·7	10·3	389
	Pulmonary Tuberculosis	4·2	7·3	9·2	15·4	17·0	16·1	10·8	410
	Other Respiratory	3·6	8·6	8·9	8·9	17·7	16·7	9·8	370
	Fractures, etc.	3·9	7·1	14·4	17·0	24·2	26·6	13·8	524
	Foot Defects	2·1	3·6	4·6	8·8	8·5	11·7	5·9	224
	Other Skeletal	3·2	7·5	7·3	11·6	16·4	18·8	9·8	371
	Other Cardiovascular	1·2	1·9	4·0	3·3	5·7	9·0	3·5	132
	Miscellaneous*	1·5	1·5	2·4	5·5	9·7	13·0	5·0	190
IV. More than Ten-fold Increase	Varicosities	0·2	1·3	11·9	12·9	16·7	26·9	9·4	357
	Hypertension	0·4	0·6	1·8	2·7	8·9	26·6	5·0	488
	Hernia	0·3	1·2	2·1	5·4	10·9	13·9	4·9	185
	Peptic Ulcer	0·9	2·3	7·6	16·3	24·7	27·5	11·8	445
	Other Intestinal	0·6	0·8	3·4	2·8	4·1	9·6	2·8	105
• Total		79·3	118·3	163·4	209·6	300·5	356·8	186·0	7,031

* Comprising 7 with syphilis, 26 with anaemia, and 155 with multiple minor defects

Classification of Occupations (General Register Office, 1951) were found to be represented by more than a thousand men. By combining professional and administrative workers an eleventh group ("executives") of similar size was obtained. For each of these and for all occupations combined age-standardized rates for the 25 categories of principal defects were calculated (Table III). The all-causes prevalence rates ranged from 17 per cent. below to 32 per cent. above the standard rate. Five of the occupational groups had rates which were more than 10 per cent. below par, and three had rates which were more than 10 per cent. above.

Agricultural Workers.—The excess was due solely to the large number of illiterate and mentally defective men in the group. Mental instability, epilepsy and other diseases of the central nervous system were also unduly common; in spite of a high rate for hernias, this occupation had a rejection rate 8 per cent. below standard, for all other diseases combined. The mental characteristics of the group must be due to selective recruitment, but the

existence of nine cases of hernia where only five were expected may be an indication of a genuine occupational risk.

Unskilled Workers.—This not only attracts men of low mental calibre, but, unlike farming, also provides a refuge for the physically handicapped. It was therefore expected that this group would have a high rejection rate both for trauma and for a wide range of diseases. What was not anticipated was that the rate for lung diseases other than tuberculosis would be one of the lowest in the series. According to mortality statistics (Registrar General, 1938 and 1954), pneumonia, bronchitis, and asthma are all, as causes of death, more common among unskilled labourers than in any other section of the community. But according to Hospital Morbidity Statistics (Mackay, 1951), asthma as a cause of ill health is a disease of affluence rather than of poverty. Since it was known that authentic cases of asthma were never placed higher than Medical Grade III (Ministry of Labour and National Service, 1941) a more detailed analysis of the

TABLE III
OCCUPATIONAL MORBIDITY RATES (PER 1,000 MEN EXAMINED), BY PREVALENCE OF PRINCIPAL DEFECTS

Occupational Groups (Registrar-General's Main Orders) ..	II Agri- culture	VI Metal manu- facture	VII Textile	VIII Leather	XIV Build- ing	XVI, XIX Executive (Adminis- trative and Pro- fessional)	XVII Trans- port	XVIII Com- merce	XXIII Clerical	XXIV Ware- house	XXVI Un- skilled	All Occupa- tions
Poor physique ..	6	2	9	9	—	5	1	5	7	11	4	5.2
Illiteracy, etc. ..	33	1	8	10	14	1	8	7	3	8	24	9.7
Mental Instability ..	18	9	8	6	9	8	7	12	9	14	18	10.3
Epilepsy ..	6	2	3	4	4	2	4	4	2	2	8	3.9
Other C.N.S. ..	5	2	2	2	2	4	2	2	3	2	4	2.4
Vision ..	14	11	7	10	13	16	9	13	17	10	21	13.0
Auditory ..	17	15	17	18	19	9	13	19	8	19	29	16.3
Endocrine ..	4	4	7	4	3	6	4	6	2	4	4	4.6
Pulmonary Tuber- culosis ..	9	7	13	11	6	8	9	13	11	12	13	10.8
Other Tuberculosis ..	2	4	4	5	3	3	3	5	3	7	5	4.1
Poliomyelitis ..	2	4	5	8	1	2	4	6	6	4	6	4.7
Fractures, etc. ..	14	20	12	13	13	9	14	14	8	18	20	13.8
Feet ..	6	5	4	11	6	4	7	6	5	1	6	5.4
Other Skeletal ..	6	10	13	10	8	6	7	13	6	8	13	9.8
Varicosities ..	5	4	11	16	6	4	8	10	7	9	9	9.4
Valvular Disease of the Heart ..	13	7	9	19	8	12	11	18	15	16	12	12.9
Hypertension ..	3	2	7	5	8	7	5	5	3	4	5	5.0
Other Cardiac ..	0	3	13	3	2	5	4	2	5	5	3	3.5
Respiratory ..	13	9	12	8	5	11	8	12	9	17	7	9.8
Hernia ..	9	5	4	6	5	5	4	5	2	4	6	4.9
Peptic Ulcer ..	7	16	16	7	9	15	11	13	10	16	14	11.8
Other Intestinal ..	3	2	5	4	1	7	4	2	5	1	3	2.8
Genito-urinary ..	3	5	11	3	3	5	2	5	4	1	3	3.5
Skin ..	5	3	5	2	5	2	2	4	1	3	5	2.8
Miscellaneous ..	5	4	10	4	4	7	5	6	4	4	6	5.0
Totals (as per cent. of Standard Rate) ..	112	85	116	108	83	87	84	103	83	107	132	100
Number of Men Examined:												
Essex ..	690	1,430	16	197	992	567	1,319	1,022	1,027	280	1,366	11,966
Leicester ..	192	1,008	1,520	1,320	295	544	583	1,013	717	459	652	10,130
Northampton ..	370	1,252	15	4,817	732	478	1,074	1,306	895	516	1,161	15,759

respiratory diseases group was made (Table IV). This showed that rejection was due to asthma in less than 20 per cent. of the cases of respiratory disease among the unskilled workers, compared with over 60 per cent. for executives and clerks.

TABLE IV
OCCUPATIONAL DISTRIBUTION OF AUTHENTIC
CASES OF ASTHMA

Occupations	Rejections due to Respiratory Diseases*	Asthma as Percentage of Respiratory Cases
Agriculture	15	47.1
Metalwork	27	39.3
Textiles	23	40.9
Leather	54	40.8
Building	15	25.0
Executive	18	62.9
Transport	25	37.5
Commerce	45	30.8
Clerical	19	64.7
Warehouse	23	25.0
Unskilled	24	17.4

* Excluding pulmonary tuberculosis.

Textile Workers.—This occupation had the second highest all-causes rejection rate, and was virtually confined to Leicestershire. Unlike the two preceding groups it had below-average rates for illiteracy and epilepsy, but for all other diseases combined it had an even higher rejection rate than that of unskilled work. Many men had sub-standard physique and multiple minor defects, and pulmonary tuberculosis was more common than in any other occupation. It was bracketed top with metal work for peptic ulcer, and for several of the more mixed disease categories (e.g. endocrine, other skeletal, other heart, other intestinal, genito-urinary, skin), it had the highest or second highest rates in the series. Since the occupation is far from homogeneous—including bleachers, dyers, weavers, and knitters—it is difficult to say whether the low standard of health should be ascribed to working conditions or to selective recruitment and bad living conditions. All that can be said for certain is that dermatitis is a known hazard of bleachers and dyers, that certain chemicals cause bladder irritation, and that an excessive amount of pulmonary tuberculosis has been found among women working in textile factories (Smith, 1947). There are also, in the 1931 Decennial Supplement for England and Wales, examples of high death rates for peptic ulcer among certain groups of textile workers (General Register Office, 1938). It is therefore possible that excessive exposure to dyes and bleaching agents may cause gastric and intestinal irritation.

Executive and Clerical Workers.—The two groups of office workers had several things in common besides a low all-causes rejection rate. They were above average in intelligence and mental stability,

had exceptionally low rates for trauma, foot defects, and diseases of the ear (mainly suppurative otitis media), and rather high rates for eye diseases (mainly defective vision). In certain respects—notably hernia, skin diseases, and endocrine disturbances—the executives seemed to be worse off than the clerks, but in others—notably varicose veins, poliomyelitis, and other skeletal diseases—they appeared to advantage.

Manual Workers.—Three groups (metal, building, and transport) had low all-cause rejection rates, but apart from low rates for substandard physique, the occupations had little in common:

The *metal workers* owed their favourable position to low rates for illiteracy, epilepsy, and all forms of cardiovascular disease, but had high rates for peptic ulcer and trauma.

The *builders* had rather low rates for diseases of the alimentary tract, exceptionally low rates for all forms of lung disease, and more than twice the expected number of hypertensives.

The *transport workers* resembled the office workers in having "average" rates for a wide range of diseases, but they also had the lowest rates for eye diseases.

Leather Workers.—Most men in this occupation were boot and shoe factory operatives from Northampton and Leicester. The group had more than its fair share of men with substandard physique and tuberculosis, but was not the worst off in these respects. The men seemed, however, to be exceptionally prone to varicose veins, valvular disease of the heart, foot defects, and poliomyelitis. Two of these (varicose veins and foot defects) might well be due to prolonged standing in the same position, which is a feature of the shoemaking operations normally performed by men, but the other types of disease, which were also characteristic of *warehousemen*, are more likely to be due to selective recruitment. In common with other factory operatives not engaged in heavy work, the *shoemakers*, *warehousemen*, and *textile workers* were probably more exposed to tubercular infection than men engaged in outdoor occupations.

To sum up, even when individual causes of rejection are merged into 25 categories and only eleven (far from homogeneous) occupational groups are distinguished, it is still possible to demonstrate trade differences. It is not possible to say how truly representative the findings are, but most of the occupations for which statistics have been quoted are sufficiently well represented in other parts of the country for confirmatory evidence to be obtained.

By themselves the records cannot do more than suggest that certain disabilities are more likely to be due to working conditions than to selective recruitment, but if systematically explored along the lines suggested they might succeed in raising a number of useful questions and provoking new and profitable lines of inquiry.

SUMMARY

The scheme of pre-Service medical screening operated during and since the war has an important—but largely wasted—by-product in the millions of clinical records now held by the Ministry of Labour. It is proposed to illustrate the value of these records in a series of studies based on the examination of approximately 50,000 men. One of the chief problems in this work is the lack of any guarantee of uniformity in the standards of diagnosis and recording applied at different places and at different times. It is suggested that one way of overcoming this difficulty may be to restrict attention to cases of illness which reach a fairly well-defined level of severity: namely, that sufficient to justify rejection from military service. It is shown that certain causes of rejection, besides differing widely in age-distribution, also differ in the frequency with which they affect various occupational groups.

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