work lost through sickness

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IN Great Britain during 1963, over 9¼m. new claims for sickness benefits were registered with the Ministry of Pensions and National Insurance. A total of nearly 300m. working days were lost during the year from June, 1962 in certified spells of sickness absence. This represents an average of 14 working days lost for each person covered by the insurance scheme. The amount paid in sickness benefits during 1962/63 exceeded £160m., a sum equivalent to approximately one-sixth of the total expenditure on the National Health Service.

This paper examines the trends in sickness absence. It deals only with spells off work through sickness for which a claim, accompanied by a doctor's certificate, is made. These certified sickness spells cover the bulk of total sickness in the insured working population.

The amount of certified sickness absence, or the rates of sickness absence per 1,000 insured, are affected by many factors which can act upon each other and which are subject to change over time. The important factors include the age and sex structure of the insured population, their social responsibilities such as their marital and employment status, the advent of epidemics and changes in the general pattern of morbidity and mortality.

Other factors which are also important in setting the pattern of sickness absence include the weather, the relative size of firms, the payment of sickness benefit, the general state of the economy and even the day of the week on which sickness starts.

Measurement of Absence due to sickness

Absence due to sickness is measured in three main ways: *new claims, spells commencing* and *days lost.*

New claims to sickness benefit are registered at the beginning of a period of incapacity on receipt of a "First Medical Certificate". The certificate may not be followed by evidence of continued incapacity as, for example, with an unexpectedly short illness; in the absence of information on the duration of incapacity, these new claims are not recorded as spells of sickness.

Spells commencing is a technical term indicating the number of spells of sickness recorded as starting during a year. A spell of sickness is a period of incapacity for work and is a measure of the incidence of incapacity episodes rather than of persons ill. One person may have a number of spells in a year caused either by one illness or by two or more different illnesses. Seven out of ten of the insured population have no spells of sickness in any one year; one in four have one spell; one in twenty, two spells; and one in fifty, three or more spells (*Table* A).

Days lost indicate the number of working days recorded as being lost due to sickness during a year, calculated on a six day week.

New claims are tabulated according to calendar years, while, since 1953, spells commencing and days lost refer to the year starting the first Monday in June so as to include one winter in each year's set of figures. New claims represent a total count of all claims submitted to the Ministry's local offices. The number of spells and durations of incapacity are obtained by sample. This sample, on which the discussion of trends is based, represents approximately five per cent of the total claims submitted.

Figures for sickness absence do not measure the morbidity of the population at large or even among all persons of working age. Certain groups of the population are excluded, particularly non-employed persons, those married women and widows who have opted out of the scheme,* children up to 15 and students above the age of 15, persons over pensionable age who have retired, all men over 70 years of age and women over 65 years

* Gainfully occupied married women and certain widows can decide whether or not to pay contributions. Two-thirds of the employed married women and one half the employed widows had opted out by 1960.

of age, members of the armed forces, and most non-industrial civil servants who have been incapacitated for less than six months. In addition, the first three days of sickness are not usually paid; therefore most illnesses lasting less than four days are not reported although they are included in the statistics if they are. Long-term sickness is also under-represented because of the minimum of three years' contributions which have to have been paid in order to claim for an illness which lasts more than one year. Thus few persons becoming chronically sick before school leaving age are included. The figures also exclude industrial illnesses for which industrial injury benefit will be claimed. Finally, even amongst those entitled to claim sickness benefit a small proportion do not do so.

Figures for new claims are available since 1949. The general trend has been upwards, and the number has risen from 7·1m. in 1950 to 9·3m. in 1963. Information on spells commencing and days lost is available from 1953/54. The trend is similar: in 1953/54 some 6·6m. spells commenced and a total of 280·6m. working days were lost; in 1962/63 spells commencing totalled 8·4m. and the working days lost amounted to 288·9m. (*Fig.* 1).

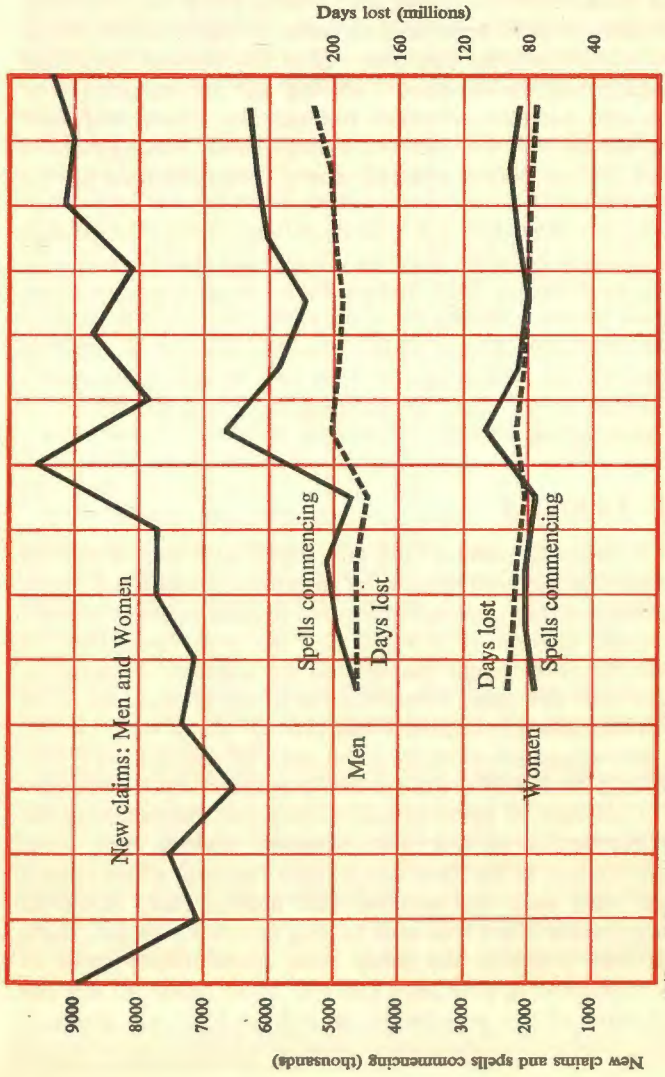
THE TRENDS

The rise in spells commencing and days lost is due in part to an increase in the total number of persons covered the scheme. The male working population insured against sickness showed an average increase of 0·8 per cent per year from 1953/54 to 1962/63, the female population an average decrease of 1·2 per cent per year. However, due to the preponderance of men in the insured population (in 1956/57 there were 14·6m. men, insured against sickness, 1·7m. married women and 3·6m. single and widowed women; the proportionate breakdown was 73 per cent, 9 per cent and 18 per cent respectively) the total population at risk has increased slightly each year. During the late 1950s there was a small "ageing" effect among women who were not married and among men. A rather larger opposite effect was seen among married women. These trends may continue for some time. Standardised rates of spells commencing and days lost per 1,000 based on the age distribution of the population at risk in 1951 are given in *Fig.* 2.

FIG. 1

New claims, spells commencing and working days lost among insured population. Great Britain, 1949 to 1963.

Source: Ministry of Pensions and National Insurance. Reports and Digests, various years.



Notes: 1. New claims recorded for calendar year, spells and days from first Monday in June.
2. New claims for 1950, 1955 and 1960 have been adjusted from original 53 week period.

FIG. 2

Spells commencing and working days lost per 1,000 insured population (of equivalent age structure of 1951 population). Great Britain, 1953/54 to 1962/63.

Source: Ministry of Pensions and National Insurance. Report for the Year 1962.

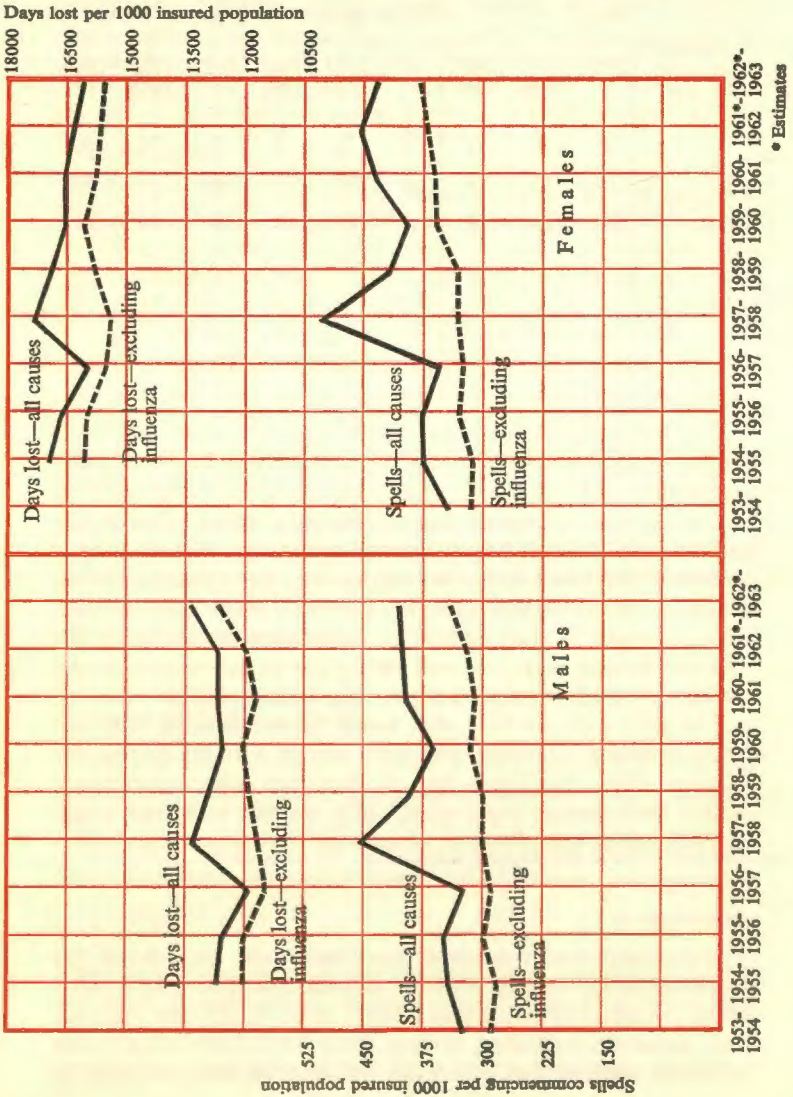


TABLE A

The proportion of insured persons with 0, 1, 2, 3 or more spells of sickness.

Source: Fifth Interim Report and Reports on the Second and Third Quinquennial Review of the National Insurance Acts by the Government Actuary.

Number of spells in year	*Men*			*Single Women*			*Married Women*		
	1952	1955 1956	1960 1961	1952	1955 1956	1960 1961	1952	1955 1956	1960 1961
	%	%	%	%	%	%	%	%	%
0	74	72	69	70	68	64	64	64	64
1	20	21	22	23	24	26	27	26	25
2	4	5	6	5	6	7	7	7	8
3 or more	2	2	3	2	2	3	2	3	3
	100	100	100	100	100	100	100	100	100

One of the dominant factors affecting these rates is the incidence of influenza epidemics. If this cause of incapacity is excluded, the trend of spells commencing per 1,000 (inception rates) has been slightly upwards for both males and females. This increase is due partly to more persons claiming for sickness benefit each year and partly due to an increase in the average number of spells per year per claimant (*Table* A).

The days lost, on the other hand, have remained substantially constant for males and have shown a slight decline for females (*Fig.* 2). These trends, however, obscure changes within each group, particularly with respect to employment, marital status, age, duration of spell and patterns of morbidity.

Employment

The self-employed contribute less than seven per cent of the total insured working population and, therefore, have little effect on the overall trends. Their rate of sickness absence has, however, increased steeply since 1949 from an average of about one-third of one week per insured man per year to

one and a half weeks per year by 1962/63 (*Fig.* 3). Only since the introduction in 1948 of the National Insurance scheme have the self-employed generally been covered and therefore their rise is due mainly to the increase in long-term claims amongst the older self-employed as the scheme matures. Employed men receive on average about two weeks benefit each year. This figure has changed little throughout the period.*

Marital Status

Whilst the rates for married women and single women have fallen (the former substantially more than the latter, *Fig.* 3), a different pattern of changes within each has occurred and thus, wherever possible, the two groups will be examined separately.

Age

Table B shows the number of weeks of sickness benefit per year for three selected age groups, the young aged 20–24, the middle-aged 40–44 and the old 55–59 or 60–64, for each year from 1949 to 1962/63.

Among the young the days lost per year have fallen and among the older employed men and employed married women they have risen. In the case of older single women the rate has remained almost constant.

Duration of Sickness Spells

There has been an important shift in the duration of sickness spells over the years. A marked increase is seen among illnesses lasting for less than one month (*Table* C).

Illnesses which last for between one month and five years have decreased among women. For illnesses lasting more

* Where figures relate to the average number of weeks lost per year it should be borne in mind that these figures are dominated by a small proportion claiming for comparatively long periods. The majority (seven out of ten) of insured persons do not claim at all in any one year and of those who do claim some 30 per cent claim more than once. This pattern of claims within the year may well be repeated over different years. It is possible that the minority of people who are responsible for the majority of sickness in any one year may be the same people who are responsible for much of the sickness absence in all years.

TABLE B

Average number of weeks of sickness benefit per person.

Source: Fifth Interim Report and Reports on the Second and Third Quinquennial Review of the National Insurance Acts by the Government Actuary.

	Employed Men			*Employed Single Women*			*Employed Married Women*		
Age group	20–24	40–44	60–64	20–24	40–44	55–59	20–24	40–44	55–59
1949	1·07	1·65	6·26	1·71	2·23	6·37	—	—	—
1950	1·06	1·64	5·85	1·69	3·03	5·86	2·27	3·76	6·16
1951†	1·04	1·68	6·33	1·70	3·09	5·98	2·08	3·63	6·17
1952	1·00	1·58	5·99	1·49	3·00	5·76	2·02	3·58	5·83
1953–54	1·01	1·58	6·12	1·40	2·92	6·08	1·99	3·79	6·90
1954–55	1·01	1·55	6·38	1·40	3·06	6·00	1·80	3·58	7·09
1955–56	0·97	1·55	6·53	1·30	2·81	5·99	1·93	3·84	7·15
1956–57	0·90	1·46	6·39	1·21	2·75	5·68	1·80	4·01	6·90
1957–58†	1·09	1·61	6·83	1·43	2·99	5·87	1·94	4·02	7·18
1958–59†	0·96	1·53	6·90	1·21	2·96	6·08	1·76	3·90	7·02
1959–60*	0·92	1·52	6·94	1·08	2·85	6·04	1·61	4·10	7·16
1960–61*†	0·91	1·57	7·00	1·12	3·09	6·03	1·58	4·44	7·11
1961–62*	0·92	1·59	7·10	1·22	3·06	5·76	1·55	4·43	7·47
1962–63*	0·88	1·77	7·07	1·18	3·16	5·81	1·53	4·30	7·03

† Influenza Epidemic years.

* Excludes short-term sickness amongst non-industrial civil servants.

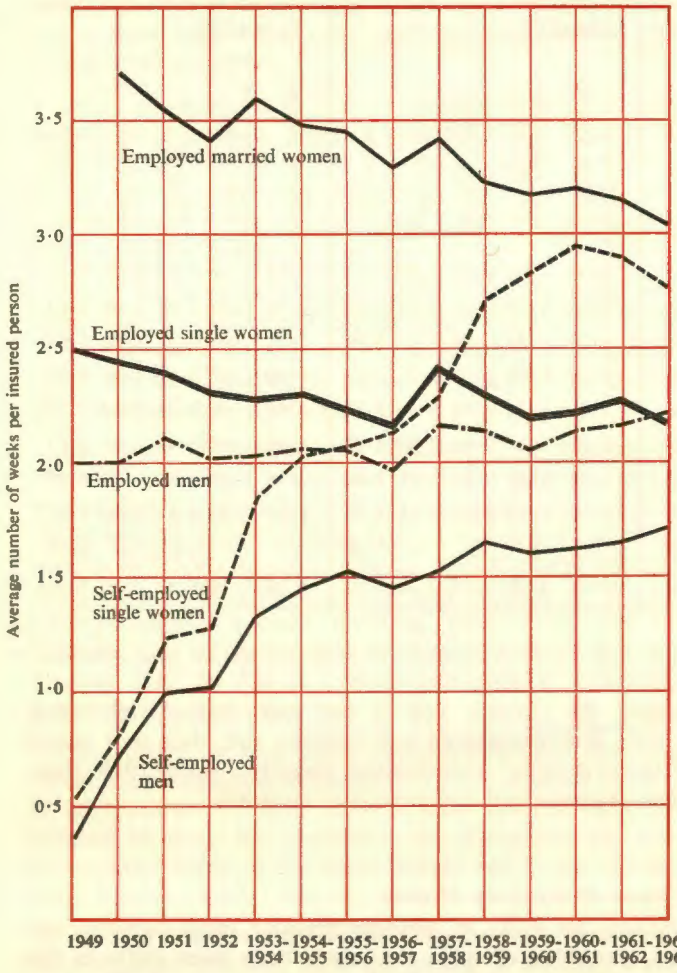
than five years the fall in the female rate is due mainly to the fall among married women. Over the period an increasing proportion of older employed married women have opted out of the scheme although at the younger ages the proportion opting in has increased slightly. The availability of maternity benefits provides an incentive for younger married women to contribute to the scheme.

For employed men and single women the slight rise in very long-term sickness does not mean an increase in chronic sickness. Only since 1948 has insurance covered the whole of the working population and only since then have sick persons been able to claim for illnesses lasting more than one year (providing they have paid sufficient contributions).

FIG. 3

Average number of weeks of Sickness Benefit per insured person per year. Great Britain, 1949 to 1962-63.

Source: Fifth Interim Report and Reports on the Second and Third Quinquennial Review of the National Insurance Acts by the Government Actuary.



Notes:

1. Single women include spinsters, widows and divorced women.
2. Since 1958–59 short-term illnesses amongst non-industrial civil servants have not been included.
3. Figures relate to men aged 15–64 and women aged 15–59.
4. The period covering the first half of 1953 has not been shown.

TABLE C

Number of persons sick on set day (mid-year) per 100 insured, by duration of spell.

Source: Derived from the Ministry of Pensions and National Insurance Digests. Various years.

Year	*MALES*					*FEMALES*				
	Not over 1 month	Over 1 month and not over 1 year	Over 1 year and not over 5 years	Over 5 years	All durations	Not over 1 month	Over 1 month and not over 1 year	Over 1 year and not over 5 years	Over 5 years	All durations
1954	1·14	1·29	0·86	0·48	3·77	1·32	1·44	1·06	1·09	4·91
1955	1·22	1·32	0·83	0·51	3·88	1·38	1·44	1·01	1·08	4·92
1956	1·22	1·28	0·80	0·51	3·81	1·51	1·42	0·94	1·09	4·97
1957	1·27	1·22	0·78	0·51	3·78	1·60	1·37	0·90	1·05	4·92
1958	1·20	1·36	0·74	0·52	3·82	1·39	1·46	0·86	1·04	4·77
1959	1·24	1·31	0·81	0·51	3·87	1·48	1·43	0·92	1·04	4·87
1960	1·34	1·23	0·83	0·51	3·92	1·58	1·34	0·88	1·00	4·81
1961	1·36	1·24	0·81	0·51	3·91	1·66	1·40	0·87	1·00	4·92
1962	—	—	—	—	3·90	—	—	—	—	4·69
1963	1·43	1·39	0·84	0·53	4·19	1·61	1·34	0·83	0·96	4·76

Therefore, the chronic sick in the years immediately after 1948 were not represented and between that date and about 1958 their number accumulated steadily. Since 1958 their number has remained comparatively constant.

The Causes of Sickness Absence

In addition to shifts in sickness absence rates between age groups, durations of spell, etc., there have been shifts in the pattern of illnesses for which benefit was claimed. The outstanding change in sickness figures between the years 1953/54, and 1962/63 has been the fall in absence due to tuberculosis, presumably as a result of effective control and treatment.

In 1953/54 25·8m. days were lost (nine per cent of total); by 1962/63, the figure was 7·31m. (three per cent of total). Not only has there been a reduction in days due to shorter spells of tuberculosis but also the number of spells commencing has fallen from 36,900 to 13,600. If the 1953/54 figures had prevailed over the next nine years an additional 100m. days would have been lost in total, costing approximately £50m. in sickness benefit alone.

Days of incapacity due to peptic ulcers, rheumatism, appendicitis, asthma, pleurisy, anaemias and diseases of the skin have all also shown a downward trend over the years (*Table* D). In some cases the fall is due to shorter spells as, for example, in pleurisy, in some cases due to fewer spells and in some to both.

There has been an increase, both in days lost and in spells commencing, for mental illness and for accidents. Diabetes and arteriosclerosis have shown an increase among men. For spells and days relating to maternity, the 1954/55 figures had almost doubled by 1960/61.

The cause of incapacity is obtained from medical practitioners' certificates which the patients generally see. This means that the more serious illnesses are under-represented; the doctor purposely refrains from entering the real diagnosis on the certificate in order not to unduly alarm the patient. Also, because of a more enlightened attitude on the part of society towards certain illnesses, particularly the mental illnesses, part of the increase in sickness absence due to these illnesses may be due to greater frankness in recording the illness on the certificate.

Nevertheless it can safely be assumed that some figures reflect a real change in incidence and prevalence, as for example in tuberculosis. In other cases it may be that although the number of spells has increased, the prevalence has not, for presumably many of the same people are ill for shorter but more frequent spells; this may be the case for psychoses.

There has thus been a shift in absence rates from long-term to short-term illnesses, from the young to the old, and from one type of illness to another. Before examining the interrelationship of these variables and the possible reasons for the changes found during the 1950s, what is the present day picture of sickness absence?

TABLE D

Approximate comparison between 1954/55 and 1960/61 in terms of spells commencing and total days of incapacity standardised with equivalent 1951 population. Selected causes* where a trend was present over the seven years.

Source: Derived from the Report of the Ministry of Pensions and National Insurance for the year 1962.

Cause	*MALES*		*FEMALES*	
	Days	Spells	Days	Spells
Falls: 1954/55 *to* 1960/61	%	%	%	%
Tuberculosis (respiratory)	58	50	63	47
Diseases of skin	24	22	23	22
Rheumatism	21	11	32	17
Appendicitis	20	19	31	20
Ulcers of duodenum	33	22		
Ulcers of stomach	27	16		
Asthma	27	17		
Pleurisy	30		37	
Anaemias	19		26	
Rises: 1954/55 *to* 1960/61				
Sprains and strains	64	66	43	49
Displacement of invertebral disc	58	76	63	78
Nervousness, debility, headache	34	28	16	19
Vascular lesions	24	33	70	—
All injuries and accidents	18	37	15	28
Psychoneuroses and psychoses	8	19	24	18
Diabetes mellitus	23	40		
Bronchitis	17	9		
Arteriosclerotic and degenerative heart diseases	12	21		
Complication of pregnancy	—	—	94	98
Abortion	—	—	97	83
All causes	—	16		16

**Notes:*

1. Where no figures are shown, no discernable trend was present.
2. For a fuller definition of these causes and those shown in Tables E, F, G and Figures 6 and 7 see Appendix.

CURRENT PATTERNS OF SICKNESS ABSENCE

Over the last few years females had approximately ten per cent more spells commencing and approximately 30 per cent more working days lost per 1,000 employed than males. These large differences exist even though insured women contain a higher proportion in the younger age groups where sickness rates are lower.

Sickness absence is higher among married women than among single women; on average single employed women receive 2¼ weeks benefit a year while married women receive an average of a little over three weeks (*Fig.* 3). This may be due to specific illnesses, such as those arising out of pregnancy, although since it persists in all age groups it cannot be due to child-bearing alone. It may perhaps also reflect the greater strain placed on married women who both run a home and go out to work. Self-selection into the scheme by the less healthy married women may also affect their different rates of absence.

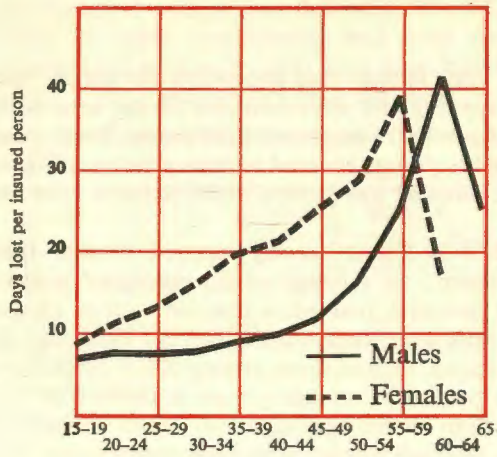
Self-employed men received about 1½ weeks of benefit in 1962/63 compared with about two weeks for employed men. Since the accumulation effect of the 1948 scheme has abated, the self-employed now have similar long-term illness rates* but have much lower short-term rates. Persons working for themselves are probably less inclined to absent themselves for comparatively minor illnesses although their lower short-term rates may reflect a lower rate of claiming. Also if a self-employed person does any work at all whilst ill, such as signing cheques, in theory he thereby loses his entitlement to claim.

The number of days lost per 1,000 insured rises consistently with age. The same, however, is not true for the number of spells of sickness absence (*Fig.* 4).

There is no one simple explanation for the comparatively constant inception rate for men up to the age of 54. Those who tend to be ill when young may become permanently ill in old

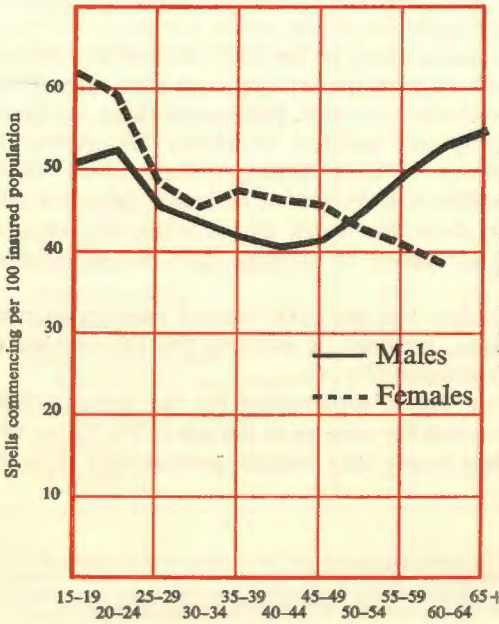
* The 1962/63 figures for spells terminating per 100 insured showed employed men to have a rate eleven times greater than that for the self-employed for spells lasting not longer than one week. For spells lasting between one and two weeks it was four times greater but for spells lasting for more than three months the rates were similar.

FIG. 4



Working days lost per insured person by age. Great Britain, 1957/58.

Source: Ministry of Pensions and National Insurance. Digest of Statistics 1957–58.



Spells commencing per 100 insured population by age. Great Britain, 1957/58.

Source: Ministry of Pensions and National Insurance. Digest of Statistics 1957–58.

age, so that they are no longer available for new spells when they become older. The attitude towards ill-health has changed from generation to generation and those who have grown up in post-war Britain may be more inclined to seek medical advice than those whose attitudes were fixed 30 years ago. Also, as one grows older, there may be a greater fear to attend the doctor for a minor illness in case a serious disease is discovered. Conversely, middle-aged people may have come to recognise symptoms which on previous occasions indicated only minor and self-limiting conditions; they may no longer regard these as justifying absence from work or medical advice.

While inception rates do not rise very steeply with age, the number of working days lost through sickness does. This indicates a far greater proportion of long-term incapacity among the older age groups. For men aged 60–64 in 1957/8, 13 per cent of the working year was lost through certified sickness, this is one in eight working days (apart from days lost for which claims were not made). These men contributed 42m. days lost or 21 per cent of the total days lost, although they represented only seven per cent of the male working population. Days lost per person among those still in employment who have passed retirement age is substantially lower than among the pre-retirement age groups. This obviously is due to a process of selection, the fitter choosing and being permitted to stay in employment beyond retirement age.

In June, 1963, 33 per cent of the incapacitated men and 38 per cent of the women had been off work for more than one year. It should be remembered that most of the equivalent group were not able to claim before 1948, and thus these persons are a large addition to the sickness figures since 1949. Those who had been off work for more than eight years in June, 1963, accounted for seven per cent of the men and 14 per cent of the women.

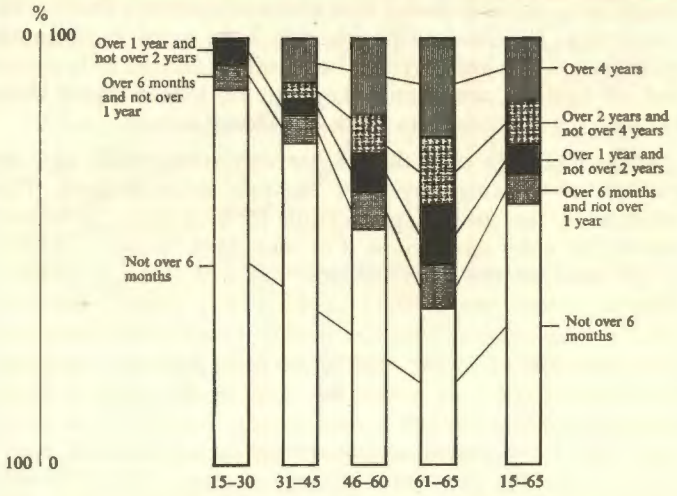
In the year 1962–63, 31 per cent of the days lost among men were caused by those who had been incapacitated for over one year on the 1st June, 1963. This group represented only one per cent of the insured male population. For women, 36 per cent of the days lost were caused by only two per cent of the insured female population.

The effect of age is important in relation to the duration of spells. Of those incapacitated on the 1st June 1963, 88 per cent of men aged 15–30 had been sick for under six months

FIG. 5

Proportion of each age group sick for specific durations. Great Britain, Employed men sick at 1st June, 1963.

Source: Derived from the Report by the Government Actuary on the Third Quinquennial Review of the National Insurance Acts.



and only six per cent for more than one year. For those aged 61–65, 37 per cent had been sick for six months or less and 53 per cent for more than one year (*Fig.* 5). At all ages over 45, there is a risk that a serious illness may develop into a state of chronic invalidity. 80 per cent of illnesses that had lasted for over five years (men receiving sickness benefit 1st June, 1957) were attributed to those aged 45–64 who make up only 40 per cent of the insured population. Thus, generally, the young tend to go off sick for short periods (under one month), the old for the longer periods. What of the illnesses themselves?

Each year, by far the greatest number of days of incapacity are lost through respiratory diseases. In 1962/63 over 76m. days (26 per cent) were lost in this way, a little over half of them through bronchitis. Although influenza is responsible for only five per cent of days lost, it accounts for 14 per cent of spells commencing. *Table* E sets out the number of spells commenc-

ing, the total days of incapacity and the approximate outlay in sickness benefit for the year 1962/63 by broad diagnostic groups. It also shows the proportionate contribution of each group to the total.

The total days lost per man in 1960/61 (standardised to equivalent age distribution of the 1951 population) was 12·8; for women it was 16·7 (30 per cent higher than men). *Figure* 6 shows the main causes in terms of days lost. Bronchitis and influenza were the leading causes among men; psychoneurotic disorders (other than anxiety reaction) and bronchitis were the leading causes among women.

Sex and age obviously have an important bearing on incapacity by cause and for certain illnesses one finds a wide variation between the sexes, sometimes reflecting a real variation and sometimes masked by the different age structures of the male/female population at risk. *Table* F shows the incidence at different ages of certain important causes. The figures are for persons incapacitated on June 2nd, 1956.

Overall, incapacity increases with age but there is an interesting pattern with tuberculosis. Among males there was a steady increase with age but among females the rate was 6·6 per 1,000 25–34 year olds falling to 2·1 per 1,000 55–59 year olds. Bronchitis affected young women more than young men but older men more than older women. For all ages women generally show the same incidence as men who are between 10 and 20 years older.

Which are the illnesses causing long-term incapacity? Psychoses are the most important single group of causes. For persons incapacitated with this illness on the 2nd June, 1956, 85 per cent had been claiming for over one year and 60 per cent for over five years. Among men, 22 per cent of all spells lasting for more than five years were due to psychoses although only five per cent of spells of all durations were diagnosed thus. Other important contributory causes to total long-term illness are diseases of the circulatory system, particularly arteriosclerotic and degenerative heart disease and hypertensive disease, tuberculosis, diseases of the nervous system (including multiple sclerosis, cerebral paralysis, epilepsy, paralysis agitans and vascular lesions affecting the central nervous system), arthritis (particularly among women), and psychoneurotic disorders. *Table* G sets out the major contributory causes to total long-term sickness and *Figure* 7 shows for each of a number of important causes the proportion of

TABLE E

Spells commencing, total days of incapacity and approximate sickness benefit expenditure in 1962/63 by diagnostic group.

Source: Derived from the Report of the Ministry of Pensions and National Insurance for the year 1963.

Diagnostic Group	*Spell commencing*		*Days in the period*		*Cost in sickness benefits‡*
	Thousands	%	Millions	%	(£m.)
00 Tuberculosis	13·6	*	7·31	3	4
01 Other infectious diseases	202·5	2	3·61	1	2
02 Malignant neoplasms†	6·0	*	0·84	*	*
03 Benign and unspecified neoplasms	22·9	*	1·24	1	1
04 Allergic, endocrine, metabolic and nutritional disorders	104·1	1	6·97	3	4
05 Diseases of blood and blood-forming organs	41·9	1	2·04	1	1
06 Mental, psychoneurotic and personality disorders	215·8	3	27·56	10	15
07 Vascular lesions of central nervous system	8·2	*	3·02	1	2
08 Inflammatory and other diseases of nervous system	124·0	1	13·87	5	8
09 Diseases of eyes	58·1	1	3·43	1	2
10 Diseases of ears and mastoid process	60·4	1	1·45	1	1
11 Diseases of circulatory system	267·8	3	32·51	11	18
12 Diseases of respiratory system:					
Acute nasopharyngitis (common cold)	*480·4*	*6*	*4·64*	*2*	*3*
Acute pharyngitis and tonsillitis	*524·0*	*6*	*5·07*	*2*	*3*
Influenza	*1192·7*	*14*	*13·88*	*5*	*8*
Bronchitis	*916·2*	*11*	*39·25*	*13*	*22*
Other respiratory diseases	*501·8*	*6*	*13·41*	*4*	*7*
Total of respiratory system	3615·1	43	76·25	26	43

TABLE E continued

Diagnostic Group	*Spell commencing*		*Days in the period*		*Cost in sickness benefits‡*
	Thousands	%	Millions	%	(£m.)
130 Diseases of the teeth and supporting structures	57·9	1	0·62	*	*
13 Diseases of the digestive system (remainder)	983·2	12	24·04	8	13
14 Diseases of urinary system	112·7	1	3·19	1	2
15 & 16 Diseases of genital organs	84·3	1	3·44	1	2
17 & 18 Deliveries and disorders of pregnancy	60·9	1	2·50	1	1
19 Diseases of skin and cellular tissues	280·1	3	5·67	2	3
20 Diseases of bones and movement organs	671·1	8	27·00	9	15
21 & 22 Congenital malformations and certain diseases of early infancy	2·8	*	0·34	*	*
23 Symptoms, senility and ill-defined conditions	692·6	8	21·05	7	12
24/26 Injuries, accidents, poisoning, etc.	758·0	9	20·91	7	12
27 (part) Contacts with infectious diseases	0·5	*	—	—	*
TOTAL	8444·5	100	288·86	100	162

† See paragraph 4, page 13.

* Denotes less than £0·5m. or less than 0·5%.

‡ Cost estimates have been calculated by O.H.E. on the assumption that sickness absence payments fall proportionately on diseases in the same ratio as total numbers of days recorded sickness absence. They therefore ignore, for example, the different rates of payment to the sexes.

TABLE F

Number of claimants incapacitated on June 2nd, 1956, analysed by sex and age and selected causes of incapacity, expressed as rates per 1,000 of population at risk for each age group.

Source: Incapacity for work among the insured population of Great Britain—Mary Jones (1959).

	MALE					*FEMALE*				
Age at Dec. 31st 1955	Up to 24	25–34	35–44	45–54	55–64	Up to 24	25–34	35–44	45–54	55–59
Cause: Tuberculosis (respiratory)	1·7	2·2	2·6	2·8	3·9	2·9	6·6	5·2	2·2	2·1
Psycho-neurosis and psychoses	1·2	2·7	3·4	3·8	5·7	1·5	5·9	10·1	11·4	12·1
Arterio-sclerosis and degenerative heart disease	—	0·1	0·3	1·8	9·2	0·1	0·3	1·3	2·7	6·5
Hypertensive disease	—	—	0·1	0·7	3·8	0·1	0·2	1·0	4·3	11·9
Bronchitis	0·4	0·7	1·4	3·9	14·9	0·8	1·3	3·2	4·9	7·0
Arthritis	0·1	0·2	0·5	1·4	4·8	0·1	0·6	2·5	7·3	14·3
Rheumatism	0·5	0·8	1·3	1·6	3·1	0·8	2·0	2·1	3·4	5·3
All causes	18·1	20·2	26·6	40·2	95·8	26·2	39·7	60·2	82·8	118·6

spells lasting for over five years, for one to five years and for under one year.

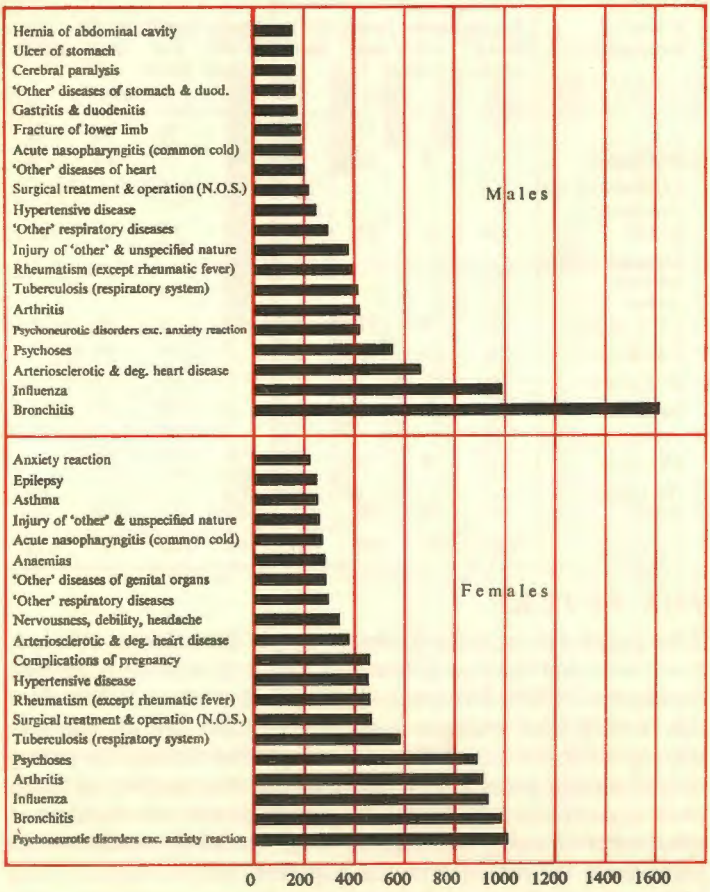
Multiple sclerosis and diabetes mellitus are long-term illnesses but they have a low incidence in the sickness figures and therefore do not contribute greatly to total long-term sickness. Bronchitis, on the other hand, is important in the total figures but in itself is an illness which often causes relatively short spells.* Since 1956 tuberculosis has had a decreasing effect on total long-term illness.

* The figures on bronchitis are difficult to interpret. Acute bronchitis is the normal consequence of many of the acute specific fevers of childhood and of influenza at all ages. With treatment recovery is very rapid, and even without treatment it is relatively quick. Chronic bronchitis on the other hand, is often associated with marked bronchial spasm. (This can lead to a diagnosis of asthma and variation in certification). With chronic bronchitis patients may have frequent spells of illness every winter or may become permanently incapacitated. However, due to certification habits, both chronic and acute bronchitis are often included in a single group and they are not differentiated in the sickness absence figures.

FIG. 6

Working days lost per 1,000 insured population (of equivalent 1951 age distribution) by selected causes. Great Britain, 1960/61.

Source: Ministry of Pensions and National Insurance. Report for the year 1962.



Days of incapacity per 1000 at risk (if age distribution of population at risk had remained as in 1951).

TABLE G

Proportion of spells of specified duration attributed to certain selected causes: persons incapacitated on 2nd June, 1956.

Source: Derived from the Ministry of Pensions and National Insurance: Digest of Statistics 1955–56.

Cause of incapacity	*MEN*				*WOMEN*			
	Spells under 1 year	Spells 1–5 years	Spells over 5 years	All spells	Spells under 1 year	Spells 1–5 years	Spells over 5 years	All spells
	%	%	%	%	%	%	%	%
Psychoses	1	5	22	5	1	7	12	5
Diseases of the circulatory system	10	20	12	12	7	18	16	11
Diseases of the nervous system and sense organs	4	9	11	6	3	8	10	5
Tuberculosis	4	14	10	7	3	15	14	8
Bronchitis	10	13	7	10	6	4	3	5
Arthritis	2	5	6	3	3	8	12	6
Psychoneurotic disorders	3	4	6	4	7	9	7	7
All other causes	66	30	26	53	70	31	26	53
All causes	100	100	100	100	100	100	100	100

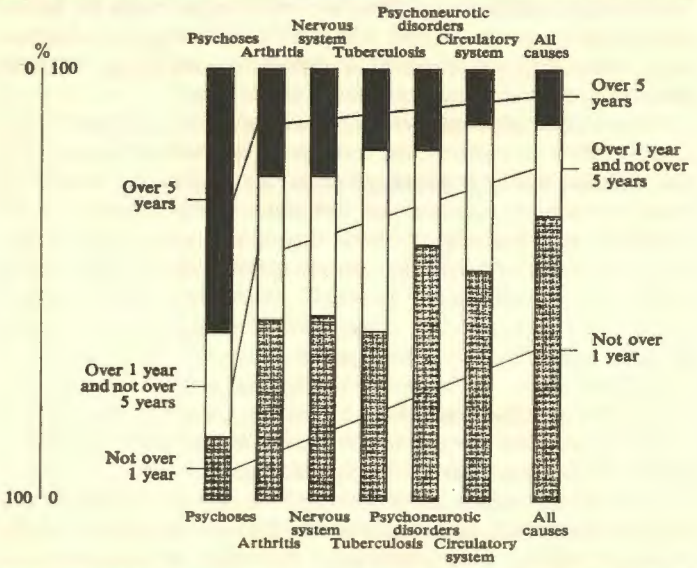
THE FUTURE

This paper has examined recent trends in sickness absence. Total recorded sickness in terms of days lost remained constant during the 1950's. However, this total conceals a fall in days lost among the younger age groups offset by an increase among older workers. The fall in days lost among the young results mainly from a small decrease in the number of long-term absences outweighing a larger increase in the number of short-term illnesses. Among the older working population an increase in short-term absence together with a constant rate of long-term absence led to an overall increase in days lost. Thus spells commencing increased at all ages. This was a real increase and it can be assumed that a higher proportion of the insured population are now claiming for sickness benefit (and those who are claiming are doing so more frequently) than a decade ago.

FIG. 7

Proportion of persons incapacitated from selected causes for specific durations. Great Britain, Men sick at 2nd June, 1956.

Source: Ministry of Pensions and National Insurance. Digest of Statistics 1955–56.



Three major factors appear to have affected sickness absence figures over the past ten years. First, mortality has been reduced by continued improvements in therapeutic medicine. In England and Wales for example, for men aged 25–34 the rate per 1,000 fell from 1·75 in 1949 to 1·07 in 1962. The decrease was greater in absolute terms for older men. For ages 45–54 the rate fell from 8·39 per 1,000 in 1949 to 7·25 by 1962. Many of those who would formerly have died after a short illness may now be saved, but require a long convalescence before returning to work. Also, some of those so saved may be more vulnerable than the population as a whole, and may be more prone to recurrent illnesses. In both these ways, sickness absence may tend to be increased and because of the latter effect the numbers going sick each year may also rise.

Secondly, and with an opposite effect, the advances in

therapy which keep some people alive, will also shorten the treatment for those who fall ill but would have recovered anyway. Thus, in the case of pneumonia, while some who would have died rapidly now survive and may take many weeks of convalescence to recover, for most the period off work has been greatly reduced by the antibiotics and other therapeutic advances. In the case of diseases such as polio, which can be more or less completely prevented by vaccination, the effect of medical progress in reducing sickness absence is even more clear cut.

In some diseases, improvement in treatment may have had a specific effect in shifting the burden of sickness absence on to the elderly. With younger persons the ability to terminate illnesses such as tuberculosis has reduced considerably both mortality and periods off work through sickness. Less spells of tuberculosis are recorded due to prevention and the spells themselves are decreasing in length due to improved therapy. With older persons the same advances in treatment have reduced mortality but have been less effective in leading to a return to work. Such may also be the case for bronchitis among the elderly. However, on balance, these first two factors alone cannot explain the tendency for the actual numbers of spells of sickness recorded to rise each year.

This pattern seems more likely to be due in the main to a third factor, which has been described as the emergence of the "clinical iceberg" of previously tolerated or unrecognised ill-health. Whilst, in a sense, the keeping alive of those with inherent physical weaknesses or biochemical disorders could be said to be creating a "less healthy" population, the explanation for the persistence of sickness absence seems more likely to lie in the fact that people are becoming, in another sense, "more healthy".

Many factors may be involved in producing the emergence of the "clinical iceberg". Certainly the advancement of medical knowledge both within the profession and among the population generally has contributed to it. Also changing social conditions play their part. With the advent of a more affluent society people not only expect better health standards but are also able to afford them; many who previously could not afford a few days off work may now be able to do so. This may be inter-related with the probable increase in private sick pay schemes. There is little evidence of the extent of growth of individual company schemes to pay employees during sickness

over the past decade, but certainly by 1962 more than half the employees in Britain were covered by such schemes. Better labour relations and full employment have led to greater security of employment and this also may be a factor in allowing employees the opportunity to go off sick for minor ailments where previously they would have continued at work.

The increase in numbers of people recorded as off work through sickness each year seems likely to be a reflection of the fact that minor ill-health is now no longer ignored or accepted in the way that it often appears to have been in the past. This theory is supported by the fact that much of the increase in numbers of spells of sickness relate to those of less than one month's duration. Undoubtedly, some of these extra absences from work will in retrospect prove to have been medically unnecessary. However, it is impossible in the present state of knowledge to distinguish in advance between trivial illnesses which will prove self-limiting, and those which urgently require treatment.

The new attitude to sickness and its contribution to the constancy of total sickness absence were not unforeseen. The Government Actuary writing in 1946 predicted that "While it is true that, as a result of the comprehensive health and rehabilitation service which is to be provided in place of the more limited existing medical benefit, a substantial improvement in the health of the community should be secured in due course, this may well be accompanied by a change of attitude towards absence from work on account of sickness, and it does not necessarily follow that the cost of sickness benefit will be correspondingly abated." In fact, the Government Actuary over-estimated the amount of sickness absence which would occur in the years after the introduction of the scheme in 1948.

It is equally difficult at this stage to predict the future trends in sickness absence. In the short term, however, it would still seem wrong to expect further advances in medicine to benefit the community in the form of a reduction in sickness absence. Nevertheless this prediction should not be seen out of perspective. One third of those now receiving sickness benefit would have been denied it had the provisions of the national insurance scheme not been amended in 1948. Even if reduced mortality since the 1930s has kept alive some people who have remained off sick either permanently or intermittently for many years, it has also retained in the

population a number of people of working age which far exceed the number off sick in this way. At the same time, many who previously worked on during ill-health now probably benefit from a short period of necessary treatment.

Against this background, sickness absence, and its cost to the insurance funds, should be seen as only one part of the total cost of sickness. As in other sectors of the health and welfare services, the very real savings achieved by medical progress have been masked by a continued shift in the economic burden of ill-health from the individual and his family on to the community as a whole.

References

1. Government Actuary. *Report on the Financial Provisions of the National Insurance Bill, 1946.*

2. Government Actuary. *Fifth Interim Report on the National Insurance Acts for the year ended 31st March, 1955,* including a *Report on the sickness experience of insured persons in the years 1949–1952.*

3. Government Actuary. *Report on the Second Quinquennial Review of the National Insurance Acts, 1960.*

4. Government Actuary. *Report on the Third Quinquennial Review of the National Insurance Acts, 1964.*

5. Jones, M. (1959). *Incapacity for work among the insured population of Great Britain.*

6. Ministry of Pensions and National Insurance. *Digest of Statistics Analysing Certificates of Incapacity.* Various years.

7. Ministry of Pensions and National Insurance. *Report for the Year 1962.*

8. Ministry of Pensions and National Insurance. *Report for the year 1963.*

9. Ministry of Pensions and National Insurance. Personal communication.

Appendix

The detailed list numbers according to the International Statistical Classification of Diseases, Injuries and Causes of Death issued by the World Health Organisation 1955 (Seventh Revision) are given below for those causes shown in *Tables* D, E, F, G and *Figures* 6 and 7. It should be noted that prior to 1958 the Sixth Revision was in operation but the differences in classification between the Sixth and Seventh Revisions are unlikely to affect any comparison that have been made.

TABLE D; page 14.

Cause	*I.C.D. No.*	*Cause*	*I.C.D. No.*
Tuberculosis (respiratory)	001–008	Displacement of invertebral disc	735
Diseases of skin	690–716	Nervousness, debility, headache	790, 791
Rheumatism	726–727	Vascular lesions	330–334
Appendicitis	550–553	All injuries and accidents	E800–E999
Ulcers of duodenum	541	Psychoneuroses and psychoses	300–318
Ulcers of stomach	540	Diabetes mellitus	260
Asthma	241	Bronchitis	500–502
Pleurisy	519	Arteriosclerotic and degenerative heart disease	420–422
Anaemias	290–293	Complications of pregnancy	640–649
Sprains and strains	E840–E848	Abortion	650–652

TABLE E: page 20.

Diagnostic Group	*I.C.D. No.*	*Diagnostic Group*	*I.C.D. No.*
Tuberculosis	001–019	Influenza	480–483
Other infectious diseases	020–138	Bronchitis	500–502
Malignant neoplasms	140–205	Other respiratory diseases	471, 474–475, 490–493, 510–527
Benign and unspecified neoplasms	210–239	Total of respiratory system	470–527
Allergic, endocrine, metabolic and nutritional disorders	240–289	Diseases of the teeth and supporting structures	530–535
Diseases of blood and blood-forming organs	290–299	Diseases of the digestive system (remainder)	536–587
		Diseases of urinary system	590–607
Mental, psychoneurotic and personality disorders	300–326	Diseases of genital organs	610–637
		Deliveries and disorders of pregnancy	640–689
Vascular lesions of central nervous system	330–334	Diseases of skin and cellular tissues	690–716
Inflammatory and other diseases of nervous system	340–369	Diseases of bones and movement organs	720–749
Diseases of eyes	370–389	Congenital malformations and certain diseases of early infancy	750–776
Diseases of ears and mastoid process	390–398	Symptoms, senility and ill-defined conditions	780–795
Diseases of circulatory system	400–468		
Acute nasopharyngitis	470	Injuries, accidents, poisoning, etc.	E800–E999
Acute pharyngitis and tonsillitis	472–473	Contact with infectious diseases	Y09

On Table E, p. 20/21, the figures to the left of the diagnostic group refer to the short I.P. List.

TABLE F: page 22.

Cause	*I.C.D. No.*	*Cause*	*I.C.D. No.*
Tuberculosis (respiratory)	001–008	Hypertensive disease	440–447
Psychoneuroses and psychoses	300–318	Bronchitis	500–502
Arteriosclerotic and degenerative heart disease	420–422	Arthritis	720–725
		Rheumatism	726–727

TABLE G: page 24.

Cause	*I.C.D. No.*	*Cause*	*I.C.D. No.*
Psychoses	300–309	Tuberculosis	001–019
Diseases of the circulatory system	400–468	Bronchitis	500–502
Diseases of the nervous system and sense organs	330–369	Arthritis	720–725
		Psychoneurotic disorders	310–318

FIGURE 6: page 23.

Cause	*I.C.D. No.*	*Cause*	*I.C.D. No.*
Bronchitis	500–502	Fracture of lower limb	E820–E829
Influenza	480–483	Gastritis and duodenitis	543
Arteriosclerotic and degenerative heart disease	420–422	Other diseases of stomach, etc.	542, 544, 545
Psychoses	300–309	Cerebral paralysis	351, 352
Psychoneurotic disorders excluding anxiety reaction	311–318	Ulcer of stomach	540
Arthritis	720–725	Hernia of abdominal cavity	560, 561
Tuberculosis (respiratory)	001–008	Complications of pregnancy	640–649
Rheumatism	726–727	Nervousness, debility headache	790–791
Injury of other unspecified nature	E860–E869 E910–E918 E931–E936 E950–E999	Other diseases of genital organs	622–626, 630–633, 635–637
Other respiratory	471, 474, 475, 512, 514–518 520–522 525–527	Anaemias	290–293
Hypertensive disease	440–447	Asthma	241
Surgical treatment and operation (N.O.S.)	795 (part 1)	Epilepsy	353
Other diseases of heart	430–434	Anxiety reaction without mention of somatic symptoms	310
Acute nasopharyngitis (common cold)	470		

FIGURE 7: page 25.

Cause	*I.C.D. No.*	*Cause*	*I.C.D. No.*
Psychoses	300–309	Tuberculosis	001–019
Arthritis	720–725	Psychoneurotic disorders	310–318
Nervous system	330–369	Circulatory system	400–468

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