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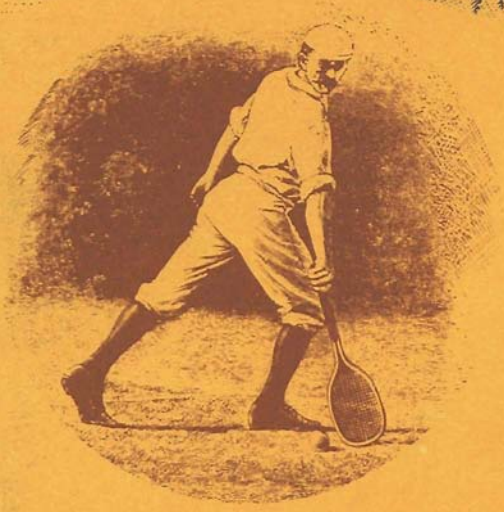
OFF SICK



OFF SICK

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Office of Health Economics

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To undertake research on the economic aspects of medical care.
To investigate other health and social problems.
To collect data from other countries.
To publish results, data and conclusions relevant to the above.

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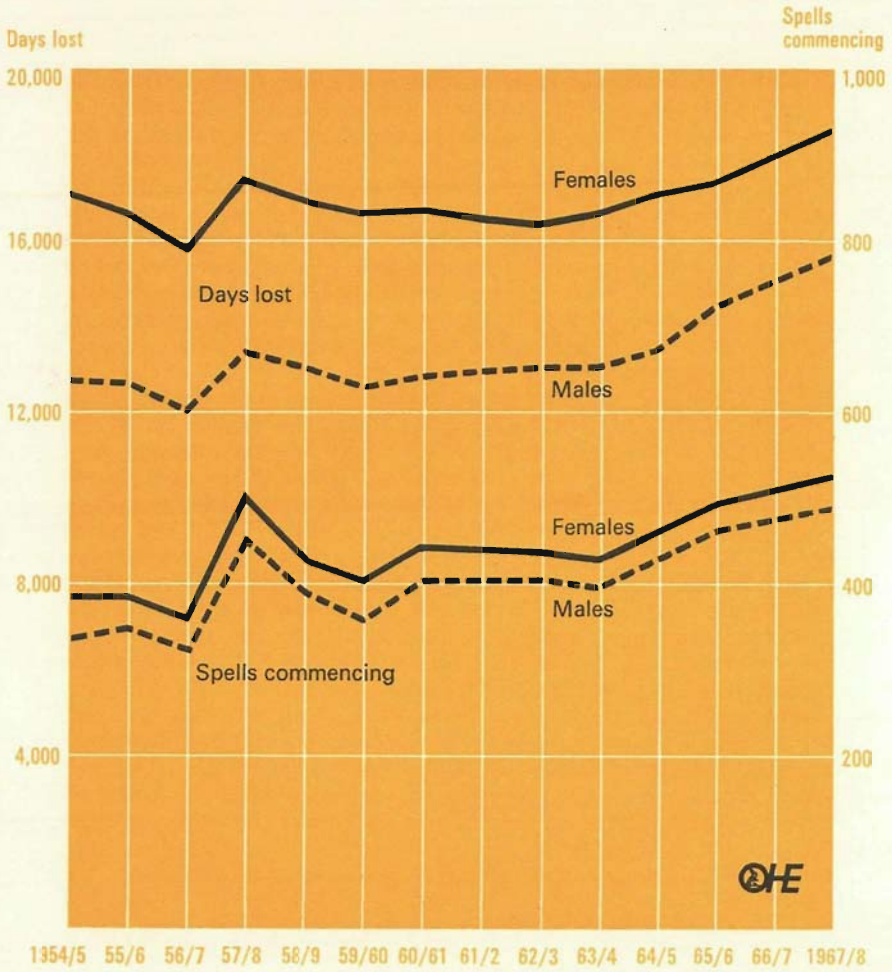
Introduction

In the first six months of 1970, 5 million working days were lost because of industrial disputes. This has been exceeded in only 2 years since the general strike in 1926. In comparison, over 300 million working days are lost every year through certified sickness absence. On the national level absence attributed to sickness has been seen as one of the factors contributing to the relatively poor performance of Britain's economy in relation to other industrialised countries. In view of the very much greater number of working days lost it has sometimes been seen as a more potent threat to productivity than industrial disputes. At the local plant level the effects of absence have been sufficiently disruptive to lead some large firms to devote a good deal of time and effort to the understanding and control of the phenomenon.

Viewed primarily as an economic or industrial problem absence from work represents a costly underuse or dislocation of resources. But it can also be seen in its wider context as a social phenomenon associated particularly with increased living standards and higher expectations. From this viewpoint it comes further into the scope of sociology and psychology and is susceptible to analysis within these disciplines. Finally, and somewhat paradoxically, sickness absence is only sometimes seen primarily as a medical phenomenon susceptible to alleviation and control by specifically medical means. The intention of this paper is to describe the nature and impact of sickness absence in the light of these three broad approaches to the phenomenon. It considers the roles to be played by management, by doctors and by the government in reducing the level of sickness absence. It also considers how changes in the structure of the health services and the organisation of social security benefits could not only help to reduce sickness absence but could also lead to more effective use of limited health care resources. In particular the paper discusses the potential benefits of relocating some medical care facilities at the work places of the normally well population, and of devolving some of the responsibilities of the Department of Health and Social Security onto industry.

Figure 1 *Certified sickness absence. Days lost and spells commencing 1954–5 to 1967–8, rates per 1000 insured population expressed as if the age distribution of the population had remained as in 1951. Great Britain.*



Trends in sickness absence

Certified sickness absence

Figure 1 shows two measures of certified sickness absence in Great Britain, spells recorded and days lost, for both males and females. The figures have been age-standardised to facilitate comparison over time. In the year ending June 1968, the latest year for which statistics are available, men insured under the national insurance scheme experienced 479 spells of certified sickness absence for every 1000 men at risk. For women the rate was rather higher at 520 per 1000. The number of days lost in the same year was 15.6 per man at risk and 18.5 per woman at risk[1]. In numbers, this represented a total of 10 million spells and 328 million days of certified sickness absence for all insured persons. For a number of reasons, however, these figures understate the amount of lost working time attributed to sickness. First, spells of absence lasting for three days or under are not normally recorded in the statistics since benefits are not payable for these short term absences. Second, over three quarters of married women excercise their right to opt out of national insurance. Their absences are not recorded and neither are those of other groups partly or wholly outside the national insurance scheme, for instance, members of the armed forces and non-industrial civil servants. Third, there is an unknown but possibly significant number of absences which are unrecorded because the right to claim benefits is not exercised, for example among academic staff at universities and among senior managerial staff. Perhaps most important of all, the incapacity of housewives goes wholly unrecorded.

On the other hand the statistics on certified absence overstate lost working time to the extent that some of the spells recorded relate to persons no longer in employment. Sickness benefits are payable for any number of years up to the age of retirement, regardless of whether the claimant actually remains on a payroll. A major study undertaken in 1961–2 (HMSO 1964) showed that when insured persons in employment only are considered, the number of days lost is only about 70 per cent of the total number of days recorded in certified sickness absence statistics.

Though the absolute level of sickness absence cannot be accurately estimated, the trends over time apparent from the official statistics are indicative of changes in the pattern of sickness absence. Figure 2 shows age-standardised certified sickness absence rates, as in Figure 1, except that absence certified as being due to influenza has been excluded in order to eradicate the disturbing influence of epidemics on the trends. It is more clear from Figure 2 that the number of spells, i.e. the number of episodes of absence, has been increasing at a fairly steady rate between the mid fifties and the late sixties. Female rates are consistently higher but follow the same trend as male rates. On the other hand, the number of days lost, despite fluctuations, remained at approximately the same level between the mid fifties and early sixties. This pattern is consistent with

1 The number of days lost is calculated on the basis of a six-day week. They will therefore include Saturdays whether or not a claimant normally works on Saturday.

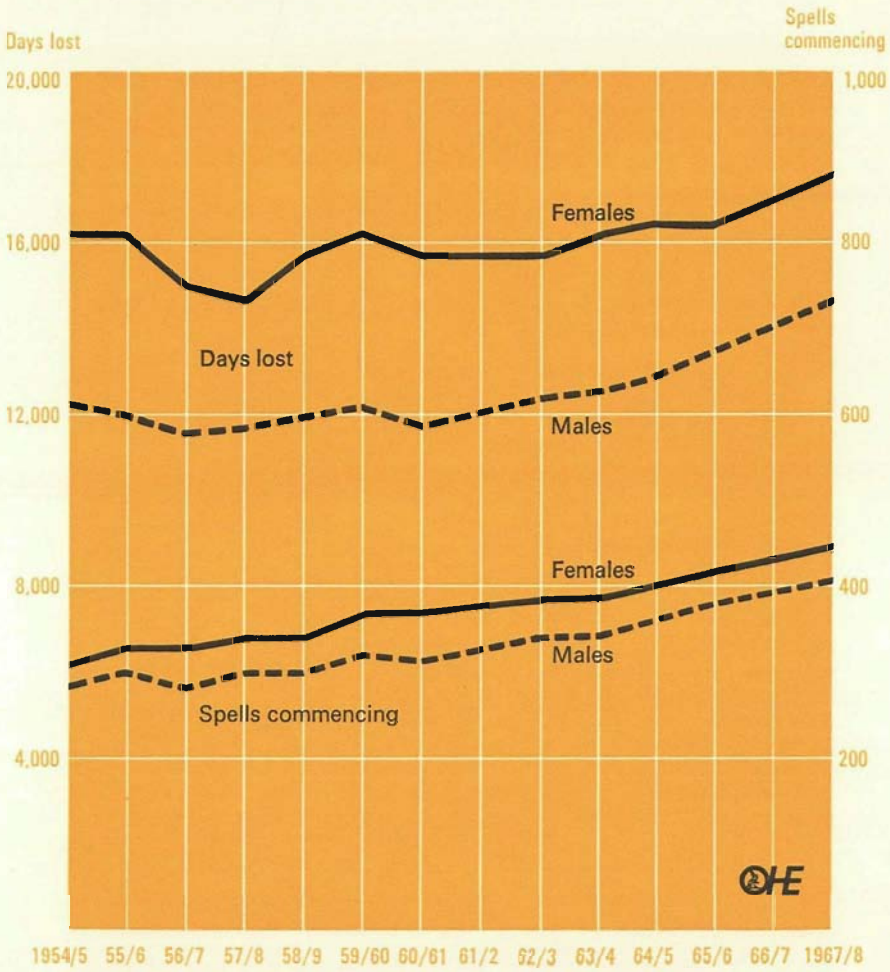
a trend towards more frequent but shorter spells of absence. Since the early sixties, however, the number of days lost has been increasing rapidly, more rapidly in fact than the number of spells. Thus the average duration per spell is no longer falling. Analysis of the figures shows that not only is a greater proportion of persons claiming sickness benefit, but also those that do claim more often.

No simple explanation of these trends can be offered. It is recognised that there are many contributing factors, often interrelated, in the causation of sickness absence, and that any given level of morbidity can be associated with widely differing absence rates according to the characteristics of the sick population. Part of the increase may even be due to more complete recording of absences. However, it is of interest to compare changes in absence rates for various diagnoses between 1954–5 and 1967–8 to see whether any particular diseases may have been responsible for the overall trends noted.

Improved diagnosis and treatment, preventive measures and natural changes in the incidence of diseases can all play their part in reducing the amount of incapacity attributed to a particular disease. Some of the changes over a thirteen year period shown in Table 1 clearly reflect consequent changes in morbidity. For instance, respiratory tuberculosis was responsible in 1967–8 for only 17 per cent of the lost man days attributed to the same disease in 1954–5. This reflects a real reduction in the incidence and prevalence of tuberculosis. However, a number of other factors could also be responsible in part or in whole for changes in the amount of incapacity attributed to the various diseases. Changes in diagnostic practices, especially in the acceptability of diagnoses may have a marked effect. For instance increases in incapacity attributed to 'psychoneuroses and psychoses' may reflect a more knowledgeable attitude to mental illness not only on the part of doctors but also on the part of patients and employers for whom much of the stigma of mental illness has receded. Also, the increased certification of mental illness may be associated with the reduced incapacity from ulcers and other psychosomatic illness whose development may be prevented by the early recognition, acceptance and treatment of anxiety states.

Many of those conditions for which absence rates have increased are non specific or relatively minor and can often only be diagnosed on the basis of statements by the patient. Thus days lost for 'nervousness, debility, and headache' rose by 189 per cent for males and 122 per cent for females between 1954–5 and 1967–8. Days lost from 'sprains and strains' increased by 267 per cent for males and 131 per cent for females. This pattern suggests that at least part of the increase in absence rates is due to less serious illnesses being increasingly regarded as justification for absence from work. This view is supported by changes which have taken place in the duration of spells of certified sickness absence between 1954–5 and 1967–8. Spells of all durations have increased but generally the shorter the spell the greater has been the increase. It is widely accepted that the

Figure 2 *Certified sickness absence. Days lost and spells commencing 1954–5 to 1967–8 per 1000 insured population expressed as if the age distribution of the population had remained as in 1951, all diseases except influenza. Great Britain.*



shorter the duration of the spell the smaller is the medical component (Society of Occupational Medicine 1968).

Other Absence

Certified sickness absence is the major cause of lost working time, but it is only one part of the spectrum of lost time which also includes certified industrial injury absence, uncertified sickness absence, absence without sickness and lateness. All of these separate categories are probably arbitrary and interchangeable to some extent, in that the same condition

Table 1 *Comparison between 1954–5 and 1967–8 in terms of spells of sickness commencing and total days of incapacity, standardised with equivalent 1951 population. Selected causes where a trend was present.*

Rises 1954–5 to 1967–8	*Days %*		*Spells %*	
	Males	*Females*	*Males*	*Females*
Sprains and strains	+267	+131	+228	+139
Nervousness, debility and headache	+189	+122	+139	+62
Psychoneuroses and psychoses	+152	+302	+68	+47
Displacement of intervertebral disc	+147	+113	+171	+132
All injuries and accidents	+72	+46	+109	+75
Degenerative and arteriosclerotic heart disease	+48	−3	+56	+23
Vascular lesions	+39	+45	+23	+10
Bronchitis	+38	+22	+19	+13
Complications of pregnancy				
Abortions	Footnote			
Falls 1954–5 to 1967–8				
Anaemias	−12	−33	+2	−21
Asthma	−24	−18	−6	+6
Skin diseases	−24	−31	−30	−33
Ulcers of duodenum	−28	−32	−6	−19
Ulcers of stomach	−29	−25	−20	−23
Appendicitis	−32	−47	−41	−38
Rheumatism	−39	−55	−44	+1
Pleurisy	−44	−56	−36	−31
Respiratory tuberculosis	−83	−83	−74	−79

Source Derived from statistical information from the Department of Health and Social Security.

Footnote For 'Complications of pregnancy' and 'Abortions' the percentage changes for female days lost were +205 and +71 respectively. Special factors, however, influence the reporting of these two categories. Thus, the substantial increase in absence for 'complications of pregnancy' may be due to the increasing tendency for women past the childbearing age to exercise their right to opt out of the national insurance scheme. The population of women remaining has become younger and thus more prone to absences associated with childbirth.

may give rise to persons taking time off work ostensibly for different reasons. In particular, short term 'sickness absence' and 'absenteeism' without sickness are terms which may often in reality be two alternative descriptions of the same phenomenon. Thus Hill and Trist (1962) found that 'absenteeism' in a Midlands steel foundry was tolerated as a mode of behaviour by both employers and employees. On the other hand Castle (1956) found that in a photographic factory near London 'absenteeism'

Table 2 *Absenteeism and sickness in male manual workers 1968–9. Lost time percentage.*

Certified sick and injured	*Uncertified sickness*	*Other absence*	*Total absence*	*Employees (approx)*	*Type*
%	%	%	%		
9.2	0.8	0.7	10.7	300	Engineering
7.1	0.4	2.8	10.3	1,400	Metal
7.4	0.4	2.1	9.9	4,600	Engineering
7.5	not accepted	1.4	8.9	3,600	Food
6.4	1.8	0.4	8.6	1,100	Chemical
7.5	0.2	0.4	8.1	1,900	Electrical
6.0	0.3	1.5	7.8	400	Engineering
5.1	0.4	2.3	7.8	700	Engineering
5.1	0.2	1.0	6.3	1,100	Electrical
5.2	0.3	0.4	5.9	600	Food
3.4	0.5	1.2	5.1	1,500	Chemical
3.2	0.2	1.0	4.4	1,800	Chemical

Source Taylor P J, (1970). 'The English Sickness?' Industrial Society. Vol 52, July 1970.

The figures relate to the years 1968 and 1969 and indicate that about 70 per cent of the time lost is due to certified sickness and injury absence. About 5 to 10 per cent is set down to uncertified sickness and the remainder is not categorised.

was not tolerated by either employees' peer groups or by management. Attitudes to the acceptability of absence without sickness vary from group to group, and much depends on local history and tradition. Where a stigma attaches to 'absenteeism', little will be recorded. Among groups, such as coalminers, where there may be no stigma associated with absenteeism (and a stigma may instead attach to admitting ill health) proportionately more will be recorded.

There are no national statistics covering absences other than those certified by doctors in accordance with the rules for claiming sickness and injury benefit. Effectively, this means there are no national statistics for absences of under four days. However, some individual firms have kept records which permit comparison between certified and uncertified absence levels. Table 2 sets out the statistics recorded by 12 manufacturing firms. These firms are not representative of industry as a whole but they indicate the relative orders of magnitude of the different categories of absence, and the wide variations among firms.

It is likely, however, that uncertified absence makes up a larger proportion of total absence among the whole working population than Table 2 suggests. For instance, Table 2 relates to men only and there is evidence that women, as well as having more certified absence, also take

Table 3 *Lost time percentages for certified sickness and injury among a sample of manufacturing firms. 1968–9.*

Status group	*No of firms*	*Range*	*Mean%*
Male staff	14	1.2 – 3.7	2.1
Male non-staff	36	3.3 – 13.8	6.2
Female staff	10	1.9 – 5.6	3.4
Female non-staff	22	4.1 – 15.2	7.2

Source Taylor P J. Proceedings of the PERA Conference 1970.

many more short uncertified absences from work than men do. (Employment and Productivity Gazette 1969). Figures from the 12 firms show that a much greater proportion of women's total absence is uncertified. Also, there is evidence that short term or uncertified absence makes up a lower proportion of the absence of manual workers than of staff employees, who are not represented in Table 2. (London Transport Executive 1956) (Taylor 1969). Taylor's findings indicate that the lower proportion of short term absence can be due to the more restrictive regulations commonly applied by firms to their manual workers, including loss of pay.

The total amount of lost time indicated in Table 2 does not reflect the experience of the whole working population either. If the national statistics on certified sickness and injury are adjusted to exclude those absences of persons who are claiming benefit but are not actually in employment, then days lost as a percentage of total working days, i.e. the lost time percentage, was 3.7 per cent in 1967–8. Most of the firms in Table 2, however, have lost time percentages for certified sickness and injury absence well in excess of this. One reason for the excess is that Table 2 relates to manual workers who are known to lose more time through certified sickness absence than staff employees. There is a social class gradient for rates of days lost, with social class V losing about three times as many days through sickness absence than social classes I and II (HMSO 1965). Taylor (1970) has collected further information from a number of manufacturing firms which gives an indication of the range of lost time percentages among male and female staff and non-staff employees. This relates to certified sickness and injury absence only, shown in Table 3. The differences between staff and non-staff employees are very marked, non-staff taking two to three times as many days off sick as staff employees.

The cost of sickness absence

The monetary cost of absence from work can be considered at a number of levels. At one level, from the point of view of exchequer, £328 million was paid out in sickness benefits in 1967–8, or almost exactly £1 for every recorded day's absence. Another £35 million was paid out in injury benefits. At another level, part of the cost is borne by individuals themselves in the form of loss of earnings which are not made up by benefits, or by employers through private sick pay schemes which may make up their earnings for them[1]. Thus the monetary loss from absence from work can have a number of components, but overall the loss to the community through absence is equal to the loss of goods and services which would have otherwise have been produced. In addition to this there are the personal costs of disability to the individual.

The value of lost production has been taken by some economists (e.g. Rice and Cooper 1967) as being equal to the gross remuneration which would have been received by persons off work, had they remained at work. Conceptually this has been considered the total loss regardless of where the burden of payment falls. Multiplying the total number of days lost through certified sickness and injury by the average gross remuneration per day of the working population, increased by ten per cent to account for uncertified sickness absence, produces a total figure of £1,750 million for 1967–8. This is of the same order of magnitude as the cost of the National Health Service, some 5 per cent of National Income.

However, such a calculation does not truly reflect the real economic costs of sickness absence. It is true that other things being equal the eradication of sickness absence would theoretically provide an opportunity for the working population to increase their income by about 5 per cent. However, the fallacy implicit in this is that the total number of hours in the working week from which the lost time percentage is calculated is a fixed and immutable quantity. In reality the standard working week is an arbitrary variable and time lost through sickness absence can be, and is made up for through overtime or possibly a longer standard working week[2]. This will have effects on prices and production through higher wage rates (including sick pay) and difficulties in organising labour, but the cost cannot be measured simply by the value of time covered by sickness absence. It may be the case that in times of low demand the full work force is not needed.

Instead, attention should be concentrated on the disruptive effects of sickness absence and the complex personal costs to the sick individual. No monetary value can be calculated for either of these, but the possible effects can be described. Short term absence, day for day, is likely to be

1 For example, a person who earns £20 a week may receive £4 10s a week from the National Insurance Fund. Another £5 10s from an employer's sick pay scheme may bring him up to half pay. The remaining £10 represents the person's own loss. This is merely an illustrative example and ignores, for example, the effect of taxation on the flow of money.

2 Similarly, an extension of two and a half years to a man's average working life – extending the arbitrary retirement age to 67½ – would theoretically offset all productive capacity at present lost through sickness.

associated with more costly disruptive effects than long term absence. The necessity to switch manpower round to fill temporary gaps will normally be more expensive than making long term adjustments in the labour force. The implication is that as far as industry is concerned greater priority should be given to efforts to minimise short term absence. This is particularly relevant in the case of capital intensive industries where the absence of key men can jeopardise the operation of expensive processes and the effects may extend well beyond the work unit in which the absence occurs. Wide variations in levels of absence are also likely to be costly. A steady predictable level of absence may be compensated for by overmanning, by overtime, by promoting flexibility by training utility men for instance, or even through maintaining high stock levels (The Dunlop Company Limited 1969). But peak levels of absence may reach up to 60 per cent, as among coalminers, and there are few policies available to management which would compensate for this. Priority may therefore be justified for measures designed to minimise epidemics such as influenza which can cause exceptionally high absence rates for short periods, though many of the peak absence rates experienced can be more easily explained as social phenomena, associated for instance with holiday periods. In these circumstances peak levels of absence will only be reduced by changes in employees' attitude to work.

From the point of view of the individual on the other hand, different priorities are indicated. It is long term rather than short term illness which is likely to be associated with the severest disability. Also, day for day, long term absence is likely to impose the severest economic hardship on the individual. The long term sick must often adjust to permanently lower incomes and as a group they are among the most underprivileged in the country.

Whatever its precise economic and personal costs, the level of sickness absence and its tendency to increase is often viewed with some alarm, especially within industry (CBI 1970). Increasing sickness absence is sometimes seen as a reflection of a general malaise in industry which is felt to endanger Britain's competitive position *vis-à-vis* other industrialised countries. However, existing evidence does not support this contention. Taylor (1969b) has collected figures from a number of European countries which indicate that the phenomenon of increasing absence is almost universal. A comparison of trends over time, between the early 1950's and the mid 1960's, showed that Sweden, Italy, West Germany and the Netherlands have all experienced a faster growth in days lost through sickness absence than Britain, though the data did not allow comparison of absolute levels. A limited attempt has recently been made to compare sickness absence statistics for Britain, Holland and Sweden (Department of Health and Social Security). After adjustments had been made to make the coverage of the series as close as possible, it was found that Holland's absence rates were considerably higher than Britain's and Sweden's were higher still.

Social and economic factors

A considerable amount of research has been carried out on the causes of sickness absence and a number of valuable findings have been reported which, if translated into policy, could reduce the level and impact of absence. It is known that both certified and uncertified absences are non-random phenomena (Taylor 1967, Froggatt 1968). Some persons consistently take more time off than others and thus absence rates are to some extent predictable. For instance, the factor of age has been found to have a significant bearing on absence rates. A number of studies suggest that short term absences become less frequent with age, particularly among non-staff personnel, though Froggatt (1970) in a very comprehensive statistical study found that one-day absences in two light engineering factories and two government departments tended to decline slightly with increasing age but not two-day absences. The association was more marked among staff than among non-staff. His data were standardised for length of service, sex, supervisory grade and marital status.

Recent research by Taylor (1968) in an oil refinery has provided insights into other factors which are correlated with absence rates. He divided his experimental population into four groups, the frequently sick, the long sick, the never sick and a control group. He found that although the frequently sick had three times as many spells of sickness absence as the controls, the tests indicated that objectively the morbidity among the two groups was very similar. A study of medical records found little difference in the incidence of trivial or serious previous illness among all four groups, while the only significant difference to arise from physical examinations was that the long sick group was found to have the highest proportion of men with significant reduction in lung function. Furthermore no one disease or group of diseases accounted for the difference in absence rates between the frequently sick and the controls. About the same proportion of absences were attributed to most specific conditions. Only neurotic conditions differed significantly between them. 5.5 per cent of spells among the frequently sick were attributed to neuroses as compared with only 1.1 per cent among the controls. (In the national statistics on certified absence, 2.3 per cent of men's spells are attributed to neuroses).

Among the non-medical factors found to be related to sickness absence were social background and home circumstances. More of the frequently sick claimed to have had an unhappy childhood than the controls, while very few of the never sick placed themselves in this category. The loss of a parent was also more common among the frequently sick. Most of the men with second jobs also came from the frequently sick group. On the personality side, the frequently sick tended towards extroversion and neuroticism. The long sick tended towards introversion and neuroticism, while the never sick tended towards introversion and stability.

Perhaps the most significant factor associated with sickness absence, and the one which is likely to be most susceptible to control, is the factor

of job satisfaction. Of the never sick 96 per cent said they definitely enjoyed their jobs while only 46 per cent of the frequently sick did so. Of the frequently sick 18 per cent said they disliked their jobs, while only 2 per cent of the never sick did so. When the employees' feelings were measured more indirectly by asking whether they wanted more responsibility, the frequently sick again turned out to be most dissatisfied, while the never sick were the most satisfied.

The significance of this finding, which added confirmation to views already widely held, is that one of the keys to the minimisation of sickness absence, particularly short term absence, is in the hands of management. The work of Herzberg has established the concept of 'job enrichment' as the major factor in motivating personnel to align their goals with the goals of the management, in a situation where the more basic needs of security and financial reward are relatively well satisfied. Management by objectives is a familiar application of this approach to organising work, but this is relevant to only a small section of the working population, and similar ideas are seldom applied on the shop floor. Despite the expansion of educational opportunities and attainments, dull and repetitive jobs remain. It is necessary for management, through good communication and through imaginative organisation of labour, to create and maintain the motivation and satisfaction necessary to keep employees at work. One of the points stressed at a recent symposium held on sickness absence (Society of Occupational Medicine 1968) was that management effort was probably the most vital factor in the control of absence problems.

Another finding of Taylor's was that the never sick were mainly permanent shift workers while the frequently sick predominantly did day work only. This finding may be unexpected in view of the disturbance of bodily rhythms associated with shift work, although lower rates of sickness absence among shift workers had been described before, (Aanonsen 1964). This does not indicate, however, that persons put on shift work are going to take less time off. Taylor's shift workers worked on shifts permanently and like Aanonsen's they were probably a highly self-selected group unrepresentative of the whole working population. The imposition of shift work which is likely to expand as industry becomes more capital intensive would probably not be associated with a reduction in sickness absence among that proportion of the working population which did not choose shift work of its own volition.

Among those who did shift work in the oil refinery, a possible explanatory factor in their low absence rates was the size of the working group. Shift workers tended to be organised in small groups with a certain *esprit de corps* and the absence of one worker would inconvenience the others in his group. On the other hand, day workers' jobs could be more easily absorbed when they were absent. The effects of group size on behaviour are well known and Hewitt and Parfit (1953) demonstrated an association between this factor and sickness absence frequency. Again,

the implication appears to be that it is management which is in the best position to modify sickness absence trends by organising work in such a way as to minimise underlying dissatisfaction. The minimisation of sickness absence, particularly short term absence, is also likely to mean the minimisation of other absenteeism and lateness. Taylor (1968) showed that absence frequency and lateness were correlated and Froggatt (1970) showed that in his experimental population there was a consistent independent association between lateness and one-day absences, indicating causes common to both.

Among the economic factors affecting sickness absence rates, the level of sickness benefits has attracted most attention. At a recent symposium on sickness absence (Society of Occupational Medicine 1968) the consensus of opinion was that, in general, improvement in benefits for short term sickness absence is followed by an increase in short term absences. An increase in the weekly amount of benefit leads to an increase in the amount of absence, particularly in the form of longer spells. Ager, speaking at the symposium about the experience of London Transport Board, suggested that although insufficient information was available, earnings-related benefits had probably led to increased absence, particularly among younger staff who benefited most from the new scheme.

Points like these led the Confederation of British Industry to conclude in its analysis of absenteeism (CBI 1970) that 'national insurance sickness benefits are now as high in relation to earnings as can safely be allowed although it may only be a minority of cases in which they are high enough to provide a further stimulus to absenteeism'. However, this view rather oversimplifies the issue and places responsibility for action in this sphere on the government. National insurance benefits including the earnings-related supplement will normally only amount to about half of the usual earnings. Even though this amount will effectively be higher because of tax rebates and the fact that sickness benefit is not taxable, it would be misleading to suggest that national insurance benefit levels exerted a controlling influence on the economic position of the employee off sick *vis-à-vis* the working employee. Over one half of employees benefit from employers' sick pay schemes and most of these receive full pay less national insurance benefit. It is therefore employers themselves who often control the differential between sick persons' and well persons' pay, though the government, by allowing benefits to be tax free, is responsible for an important imperfection in the way the scheme works. Tax free national insurance benefits made up to full pay by the employer can create a situation in which employees are better off when absent than they are when working. In this context it is not the amount of sickness absence which is surprising. It is the lack of it. The CBI report suggested that taxation of all benefits would be desirable in principle. In practice, however, it concluded that practical difficulties in administration would outweigh the likely advantages.

Medical factors – certification and the role of the doctor

Paradoxically, probably the least promising approach to the minimisation of sickness absence rates is the prevention and control of the conditions which appear on medical certificates of incapacity for work. This is because every absence has both medical and non-medical components and it is probably the non-medical component of absence which has in recent years exerted a controlling influence on the level of absence. Thus while it may be presumed that if the prevalence of illness in the community could be measured objectively it would be found to be declining, recorded absence levels are rising. Figures from Table 1 showed that reductions in absence rates for certain diseases between the fifties and the sixties, some of which could be attributed to advances in medical science, were more than matched by increases in absence rates for other diseases, particularly those that could be described as relatively 'trivial' conditions. It must be assumed that at least part of the explanation for increased incapacity attributed to these conditions is a change in threshold levels at which an illness is translated into a spell of sickness absence. The possible impact of changes in threshold levels on the level of absence is well illustrated by Taylor's (1968) evidence that personal and social factors can give rise to threefold differences in absence rates between different groups with the same morbidity experience. Furthermore, there remains a huge reservoir of trivial illness which is not yet manifested as sickness absence but which could be if threshold levels continue to decline. Studies on individuals' own subjective assessment of their state of health generally show that a large majority believe their health to be defective in some way. For instance, a study in Bermondsey and Southwark during 1966 (Wadsworth *et al*, in print) found that 95 per cent of persons interviewed reported some health complaint over the last 14 days. All of these complaints could, in theory, have manifested themselves as spells of sickness absence.

This suggests that there is at present greater potential for reducing absence through policies aimed at altering threshold levels, e.g. the provision of a satisfying work environment by management, than through a specifically medical assault on the conditions to which absence is attributed. On the other hand, at any given threshold level, there are clearly instances of advances in medical science which could significantly affect absence by offering the prospect of dramatically altering morbidity levels. An example is the recent introduction of influenza vaccines. The impact that influenza can have on absence levels can be seen by comparing Figure 1 and Figure 2, the first of which includes, and the second of which excludes, absences attributed to influenza. Though there is no general immunisation programme the influenza vaccines are believed to be about 70 per cent effective in protecting individuals. Also the prevention of influenza among a large enough proportion of the population creates breakwaters which can prevent rapid spread through the unprotected population. In cases like this there is clearly scope for the reduction of

Table 4 *Distribution of first certificates by first day of incapacity and final certificates by final day of incapacity, 1968.*

	First day %	*Final day* %
Monday	29	15
Tuesday	17	12
Wednesday	15	7
Thursday	13	4
Friday	13	4
Saturday	13	58

Source Employment and Productivity Gazette, September, 1969.

absence levels by medical means, especially the peak short term absence levels which are the most disruptive to industry and services.

Often, it is the organisational aspects of medicine rather than medicine itself which can be a potent factor in determining levels of sickness absence. In order to claim sickness benefit from the Department of Health and Social Security, it is usually necessary to have been certified as being unfit to work by a doctor, normally a general practitioner. Often employers also require a medical certificate from their employees for a short term absence. A great deal of controversy has surrounded the question of medical certification, its value and its effects. The British Medical Association has seriously criticised the system on two grounds. First, that it does not effectively fulfil the purpose for which it was intended and second, that it consumes a large proportion of doctors' time, at the same time adversely affecting the doctor/patient relationship.

Certainly, the general practitioner's training does not equip him especially well to measure an employee's capacity to work, often in ignorance of what the job entails. There is normally little a doctor can do but accept the patient's word that he is unfit to work, while the mechanics of certification are such that employees are normally absent till the end of a working week whether their condition justifies that or not. Table 4 shows the final day of incapacity noted on final certificates is Saturday in 58 per cent of the cases.

The new certification rules introduced in 1966 allowed a greater amount of flexibility by providing first/final certificates covering up to 7 days. This removed the necessity for a patient to waste his own and the doctor's time with a visit for the sole purpose of 'signing off'. An analysis of trends since 1966 (Employment and Productivity Gazette, September 1969) produced some evidence that the new certification rules were associated with a reduction in the average length of short-term absences of 12 days and under, though this reduction was offset by an increase in the average duration of absences of 2 weeks to 3 months.

A number of doctors have reported that a considerable proportion of their consultations are attributable solely to the need to produce medical

certificates. One of the most interesting recent studies is by Lunn (1970). He measured the workload imposed upon a general practice in a Welsh mining area by elderly persons just before and just after retirement. He found that there were eight times as many consultations by miners in their pre-retirement year as against their post-retirement year. Non-miners' consultations varied less dramatically between the two years though they too were higher in the earlier year. The difference could not be explained by differences in morbidity and it was found that 83 per cent of miners' visits to the surgery and 75 per cent of the non-miners' visits before retirement resulted in the provision of a certificate of incapacity for work. It was concluded that most of the surgery workload among both groups was due to the need to justify absence from work and bore little relation to medical need. The area, however, a Welsh mining district, was atypical of the country as a whole[1] and the subjects of the study, men at the point of retirement, are also known to have atypical absence patterns. But the study does show how a large proportion of doctor's time can be taken up with what may be considered administrative work outside the scope of their primary functions. More typically, perhaps, Swan (1964) reported that attendances for the sole purpose of obtaining a certificate accounted for at least 18 per cent of consultations in his practice in Ealing.

On the other hand, the payment of sickness benefits without medical certification may, in the absence of any alternative method of control, result in higher rates of sickness absence particularly of the type with a large non-medical component. This view is supported by evidence from Sweden. The Swedish social security system allows self-certification for up to one week and the increase in their sickness absence rates in recent years is among the highest in Europe. It must be concluded that under present circumstances, and in the present state of knowledge, there is some, but not a strong, case for self-certification of long spells of sickness absence.

1 One of the reasons for conducting the study in the particular district was that the pattern of consultations by age was atypical. Normally, consultation rates in general practice increase with each successive age band in the adult population. In the district studied, consultation rates among persons aged 45–64 were higher than rates for over 65s.

Discussion

The factors which can significantly affect the level of sickness absence are largely susceptible to control by management. It may be that for the future an expanding partnership between management and the medical profession could prove valuable in this and many other respects. Also, although the Department of Health and Social Security combines under the same ministerial roof the provision of health services and the provision of sickness benefits, the potential for integration at the operational level remains unrealised. At present the cost of sickness and injury benefits is running at about £400 million a year. Changes in the administrative structure of the health services and the methods of paying sickness benefit could enable co-operation between management and the medical profession to reduce this sum. The changes suggested are first, that it should be made possible for individual firms to take over the responsibility for paying the sickness benefits at present paid through social security offices, with or without medical certificates. Second, that it should be made administratively easy and professionally rewarding for doctors to move from practice in the National Health Service to practice, either full time or part time, within industry under occupational health schemes.

To take the latter suggestion first, there are some plausible reasons for suspecting that the development of a larger and better occupational health service may lead to reductions in absence levels. A qualified health team on the spot with knowledge of working conditions may be expected to be better able than a general practitioner to relate the individual's state of health to the job he has to perform. The industrial doctor is in an excellent position to co-ordinate schemes for the supervision of sickness absence while medical advice to management may be expected to encourage good conditions of employment. The experience of Czechoslovakia lends some support to this view. Czechoslovakia has a relatively well developed occupational health service. Certificates of incapacity are normally issued by the factory doctor and this is the only European country to have recorded declining sickness absence statistics over the last twenty years. Experimental evidence, however, on the effect of occupational health schemes on levels of absence is lacking and this is one reason why a large scale programme to develop occupational health immediately throughout the country would be unjustified. One study from America (Bond *et al*, 1968) involving 27,000 employees in the Mountain States Telephone Company of Denver showed that sickness and other absence declined during four years after the introduction of a comprehensive company health scheme. But conditions in America differ radically from those in Britain and inferences from one country to another may not be valid. Similar research is badly needed in this country to establish the value of such schemes both to the firm, in reducing absence and improving the quality of manpower, and to individuals themselves in improving their standard of health. One practical difficulty in conducting such studies is that few firms record detailed sickness absence data before

they develop sufficient interest to set up some sort of occupational health scheme. Thus it is rarely possible to compare absence levels after the introduction of a scheme with those which prevail beforehand.

However, the justification for the development of occupational health services cannot be seen solely in terms of reductions in sickness absence levels, important as these may be. There are a number of advantages to both doctors and patients which could flow from an enlarged and upgraded occupational health sector. A recent OHE publication (Building for Health 1970) put forward arguments for disaggregating the functions of the health services (which have been increasingly concentrated in hospitals) and relocating each of the services according to the individual needs of the areas served. It was suggested that many services could be economically provided within easy reach of the population served. The argument can easily be extended to the sphere of occupational health. In industry a large number of persons are concentrated in a small area during working hours. Depending on the size of the establishment a large number of medical procedures, not necessarily directly associated with work, would be both convenient and economically viable. One example is dentistry. A number of large firms have resident dentists, with varying terms of service, who treat employees on the spot. The employees gain in terms of convenience through not having to visit a dentist many miles away, while management gains through the minimisation of lost working time. At present, services more usually performed at the place of work include the collection of blood from donors and mass miniature radiography. The development of occupational health schemes could also involve a change in the emphasis of medical care away from curative medicine towards preventive medicine. Doctors working in occupational health would concern themselves not only with the sick population but also with the normally well population in their normal environment. The scope for preventive measures, including the detection of presymptomatic conditions through screening procedures, is enormous.

Also, an enlarged and upgraded occupational health service may be expected to deal more effectively with new industrial diseases which will develop in the wake of technological change. Another area where there would be tremendous potential for development is the rehabilitation of the disabled and the chronic sick. This is an aspect of medicine which is sadly neglected on the national scale. Only a small number of firms such as Vauxhall have active rehabilitation programmes for disabled employees and the returns on investment in this field could be very great, especially to the individuals concerned. Equally, occupational health schemes could radically simplify the process of consulting the doctor. At present most patients must visit a general practitioner, may have to ask for a sick note, obtain a prescription and then visit their pharmacy. Even if they are not certified as unfit for work they are likely to have lost either working time or leisure time. With the provision of a wide range of services at the place of work, including dispensing for instance, there would be an

opportunity to carry out many procedures on the spot in a fraction of the time and with the minimum of disruption to the individual and the employer.

On the other hand, the development of occupational health would create a number of new problems. It might involve a degree of duplication between general practice and industry which is undesirable in principle in the context of strictly limited medical resources. But duplication need not take place and occupational health and general practice should complement each other rather than overlap. There should ideally be close contact between the occupational service and the health centre or group practice which must cater for all of the primary medical needs of the non employed population. Another problem would centre around concurrent care. The general practitioner may find himself sharing responsibility for his patients with an industrial doctor, and this could raise serious ethical problems. For both of these reasons it would probably be desirable for the majority of doctors working in an expanded occupational health service to combine this work with primary medical care under the National Health Service in the same geographical area.

Finally, medical services increasingly geared to an industrial setting may well raise the fear in the minds of both doctors and patients that the freedom of the doctor to consider the welfare of the patient alone would be compromised. This is an area in which co-operation between management, unions and doctors would be vital. Perhaps there is also a role for an independent party to play. Non-profit-distributing organisations like the British United Provident Association and the Private Patients Plan at present act as intermediaries between industry and medicine in arranging for the treatment of groups of employees covered by their medical insurance. Group schemes for employees represent the growth sector in private medical insurance and this is indicative of increasing recognition of the value of occupational health.

An independent third party would have a particularly valuable role to play in the development of co-operative occupational health schemes for a number of firms, each of which is unable to support a scheme alone. A number of co-operative schemes are already in operation. Taylor (1969c) has reported seven of them in this country, all of which were financed originally by the Nuffield Foundation, covering 7,500 to 33,000 employees.

The development of occupational health schemes, either by individual firms, or by co-operative groups, may not proceed very rapidly, not only because of uncertainty as to the precise value of occupational health but also because of constraints imposed by existing resources. Out of a total of about 55,000 doctors in the country there are only about 450 working full time in industry with another 4,000, mostly without special training in occupational health, working part time. Before a large number of occupational health schemes can function to their full potential it is necessary not only to expand the number of doctors involved, but also to

upgrade the quality of resources available. Practice in the occupational health field requires techniques and aptitudes which are not necessarily found in general practice and, ideally, training in the special requirements of occupational health should find a place in the education of general practitioners. Doctors who are interested in this aspect of medicine should also be given every opportunity to improve their knowledge and techniques for instance through the expansion of refresher courses. If developments take place along these lines then a higher status may attach to occupational health, with consequent improvement in the quality of recruitment.

Administratively, there are two lines along which occupational health services could develop. They could either develop under the auspices and financial control of the National Health Service or the responsibility could be placed on individual firms to take their own initiatives. Because of the shortage of resources and because of the inflexibility that may be associated with a centrally directed service, the latter alternative is probably the more feasible and the more desirable. Furthermore, an occupational health wing of the National Health Service would, at least initially, involve increased public expenditure, while schemes financed and run by individual firms may bring savings both to the firms themselves and to the Department of Health and Social Security.

Any economic returns to firms are not easily demonstrable, but industry appears to be finding it increasingly worthwhile to invest in occupational health. This is manifested by the recent growth of private medical insurance coverage for employees, and by the formation of co-operative schemes such as the seven noted above. Benefits to firms may include improvements in the quality of the work force and reductions in the disruptive effects of sickness absence. Costs of occupational health schemes will vary according to the level and sophistication of services provided. An idea of the order of magnitude of costs can be gained from the seven co-operative schemes at present in operation. Their charges are calculated on a capitation basis, and for the full range of services including pre-employment medicals, periodic medicals during employment, first aid and emergency services, follow up of absentees and advice to management, they are currently running at £2.5 to £3.0 per head per year. This cost is equal to about half a day's wages per employee per year. Thus a relatively small reduction in the total level of sickness absence would justify expenditure of this order by individual firms. From the point of view of the Department of Health and Social Security, a reduction in sickness claims brought about by the initiative of firms would save the national insurance fund about £1 for every day of certified incapacity. The health sector of the department would also gain indirectly from any new health resources created through occupational health schemes financed by industry.

The other change suggested also involves a devolution of governmental tasks onto industry. Given the existence of firms with well developed

occupational health schemes which also run sickness benefit schemes of their own, there is no reason why an administrative change should not allow such firms to take over entire responsibility for paying sickness benefits now paid by the Department of Health and Social Security. Such arrangements already exist for certain groups of employees, including civil servants. Financially, the administrative change may involve a reduction in affected employers' contributions to the National Insurance stamp, or block claims on the National Insurance Fund. It would have the advantage of minimising the amount of paperwork involved in making a claim for sickness benefit and receiving it from the National Insurance Fund.

Such a change would provide the opportunity for greatly increased flexibility in the control of absence levels. Management on the spot is often in the best position to understand and manipulate the complex factors relating to sickness absence. Individual firms could use their knowledge of local conditions to determine for themselves in what circumstances medical certification for absence was necessary. The imperfections built into the present universal system of certification could be ameliorated in different ways by firms whose financial interest in minimising the cost of sickness absence would be identical to the interest of the Department of Health and Social Security. The administrative cost of paying benefits could be reduced and in many cases unnecessary visits to general practitioners could be avoided by the existence of the firm's own absence control scheme in conjunction with its occupational health service.

It is important that such changes should not be introduced universally. Universality is generally associated with an inflexible administrative framework, and the key to the advantages noted is flexibility. There is a wide variation among firms in the stages of development their personnel relations have reached. Clearly it is only a minority of firms which in the first instance could be given responsibility for the administration of sickness benefits. Finally, piecemeal development provides an excellent environment for experimentation. Well evaluated experimentation is badly needed to measure the value of occupational health schemes, both in themselves, and as means of minimising sickness absence.

References

Aanonsen A (1964). Shift Work and Health, Norwegian Monographs on Medical Science, Oslo.

Bond M B, Buckwalter J E and Perkin D K. An occupational health program. Costs vs Benefits. Archives of Environmental Health 1968, 17, 408–415.

Castle P F C, (1956) Accidents, absence and withdrawal from the work situation. Hum. Relat., 9, 223–233.

CBI (1970). Absenteeism, Confederation of British Industry, January.

The Dunlop Company (1969). The Effects of Absence on Efficiency. Personnel Research Division October.

Employment and Productivity Gazette, September 1969, Vol LXXVII, No 9, page 824.

Froggatt, P (1970). *British Journal of Industrial Medicine*, 27, No 3, 199–224.

Hewitt D and Parfit J (1953). Occupational Psychology, 27, 38.

Hill J M and Trist E L (1962). Industrial Accidents, Sickness and other Absences. Tavistock Pamphlet No 4. Tavistock Publications.

HMSO (1964). Report on an enquiry into the incidence of incapacity for work, Part I, Scope and characteristics of employers' sick pay schemes.

HMSO (1965). Report on an enquiry into the incidence of incapacity for work, Part II, Incidence of incapacity for work in different areas and occupations. London Transport Executive, Health in Industry, Butterworth, 1956.

Lunn J E (1970). A Study of workload before and after retirement at the age of 65, *British Journal of Preventive and Social Medicine*, February.

OHE (1965). Work Lost Through Sickness.

Rice D P and Cooper B S (1967). *American Journal of Public Health*, 57, 1964–66.

Society of Occupational Medicine, London 1968. Proceedings of the Symposium on Absence from Work attributed to Sickness. Ed A Ward Gardner.

Swan J H, (1964). *British Medical Journal*, 1, 703.

Taylor P J (1967). Individual variations in sickness absence, *British Journal of Industrial Medicine*, 24, 93–101.

Taylor P J (1968). Personal Factors Associated with Sickness Absence, *British Journal of Industrial Medicine*, 25, 106.

Taylor P J (1969). Self-Certification for brief spells of sickness absence, *British Medical Journal*, 1969, 1, 144–147.

Taylor P J (1969b). Some international trends in sickness absence, 1950–1968. *British Medical Journal*, 4, 705–707.

Taylor P J (1969c). Return to Work, Industry's Responsibility, *Journal of Occupational Medicine*, 11, No 12.

Taylor P J (1970). The English Sickness?, Industrial Society, 52, 8.

Wadsworth M E J, Butterfield W J H and Blaney R (1968). In press.

Wyatt S and Merriott R (1953). *British Journal of Industrial Medicine*, 10, 164.

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