

## SYSTEM FOR ANALYSING SICKNESS ABSENTEEISM IN POLAND\*

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**Key words:** Absenteeism, Sickness absence, Sick leave rate, Sickness certification

**Abstract.** The National System of Sickness Absenteeism Statistics has been functioning in Poland since 1977, as the part of the national health statistics. The system is based on a 15-percent random sample of copies of certificates of temporary incapacity for work issued by all health care units and authorised private medical practitioners. A certificate of temporary incapacity for work is received by every insured employee who is compelled to stop working due to sickness, accident, or due to the necessity to care for a sick member of his/her family. The certificate is required on the first day of sickness.

Analyses of disease- and accident-related sickness absenteeism carried out each year in Poland within the statistical system lead to the main conclusions: 1. Diseases of the musculoskeletal and peripheral nervous systems accounting, when combined, for 1/3 of the total sickness absenteeism, are a major health problem of the working population in Poland. During the past five years, incapacity for work caused by these diseases in males increased 2.5 times. 2. Circulatory diseases, and arterial hypertension and ischaemic heart disease in particular (41% and 27% of sickness days, respectively), create an essential health problem among males at productive age, especially, in the 40 and older age group. Absenteeism due to these diseases has increased in males more than two times.

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## INTRODUCTION

The disease-related temporary incapacity for work, its duration and causes are essential factors in the assessment of the health status of the occupationally active population (8,9). Permanent disability for work, a major social and economic problem, is always preceded by prolonged temporary incapacity for work (1). The tendency observed in the working population to shorten the period of occupational activity as a result of sickness has recently become one of the essential problems of the Polish economy.

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The system of data collection and processing which operates currently in Poland provides data on the temporary incapacity for work. They serve the following purposes:

- to indicate health problems in the study populations (by age and sex, by job category according to the European Activity Classification (EAC) and by provinces (voivodships);
- to take preventive measures and decide on health policies, including the certification policy;
- to carry out annual analyses at the regional level.

The National System of Sickness Absenteeism Statistics has been functioning since 1977, as the part of the national health statistics. The system is based on a 15-percent random sample of copies of certificates of temporary incapacity for work issued by all health care units and authorised private medical practitioners. A certificate of temporary incapacity for work is received by every insured employee who is compelled to stop working due to sickness, accident, or due to the necessity to care for a sick member of his/her family. The certificate is required in order that the employee can receive sickness (or sick care) benefit; it is also used as a justification of his/her absence from work. The certificate is required on the first day of sickness. It contains the following data:

- employee personal data (the copy of the certificate used for statistical purposes is anonymous),
- EAC workplace symbol,
- ICD statistical number of the disease,
- number of sickness days, and the dates of the first and last sickness day.

The random sample of temporary work incapacity certificates is representative for voivodships and EAC divisions. Samples are regularly selected at the voivodship level in proportion to its number of the insured workers. The annual sample comprises about 4 million certificates.

The Nofer Institute of Occupational Medicine, Łódź, Poland, is responsible for the sampling coordination and it runs a data base within the sickness absenteeism statistical system. The system permits the analysis of the annual number of days of disability for work because of sickness and accidents, classified by disease entities, sex, and age. Data are available on all employees of the national economy, as well as on the employees of the individual EAC divisions, or Poland's voivodships. The obtained number of sick-leave days is used to calculate sickness absenteeism rates according to the formula:

$$\text{lost time rate} = \frac{\text{number of days of incapacity for work}}{\text{average number of employees} \cdot 365} \cdot 100\% .$$

Permanent data collection under this system allow the analysis of sickness absenteeism trends over periods of several years in disease categories with substantially higher rates. By including the effect of age structure on the value of the lost time rate, the system provides indices for age adjusted individual disease categories. It is also feasible to observe sickness absenteeism for selected disease categories in the same age groups over long periods of time and to predict health situation in this respect.



The system is modified and updated in response to the changes occurring both in the practice of medical certification and in the national statistics.

By 1995, according to the Polish social insurance system, the level of sickness benefit had depended on the duration of employment. This principle has been changed, and now the level of sickness benefit depends on the disease category and sickness duration (4, 6). Thus, for periods of work disability not longer than 90 days, the sickness benefit is equal to 80% of the wage, and for above 90 days 100%. A worker incapable for work because of an accident at work, occupational disease or contagious disease, and a sick pregnant female worker receive sickness benefit equal to 100% of his/her wage.

### SICKNESS AND ACCIDENT ABSENTEEISM IN POLAND IN 1990–1995

The sickness and accident absenteeism reached its highest rate in 1994. The number of certified sickness days in 1994 was 238.2 million corresponding to about 29 days per year for one worker. In 1995, the number of sickness days was reduced to 25 days a year for one employee (5).

**Table 1.** Sickness and accident-related absenteeism in Poland, 1990–95

Sex	Number of days per 1 employer in:					
	1990	1991	1992	1993	1994	1995
Male	12.4	21.0	22.2	26.4	29.8	26.4
Female	22.9	27.4	25.6	26.9	27.5	23.9
Total	17.3	24.1	23.8	26.6	28.7	25.2

During the period from 1990 to 1994 the highest, (40%) increase in the sickness and accident absenteeism rates could be observed; for males, the increase was as high as 90%, and for females it was only 5% (Table 1). The increase was most evident in males aged 40–59 years and females aged 40–49 years. The increase was attributable mainly to the augmented incidence of musculoskeletal diseases (by 81%), and particularly to such ailments or disorders as intervertebral disc disorders, spondylosis and allied disorders, osteoarthritis and allied disorders, which accounted for 60% of sickness days of the whole group (7). In the category of diseases of female genital organs and pregnancy complications, sickness days increased by 71% (2). A high sickness-day increase was recorded during that period also for cancer (by 67%) and the peripheral nervous system diseases (by 69%), for nerve root and plexus disorders, the increase was 85% (Fig. 1).

Sickness absence in 1995 made 84% of the total sickness and accident-related absenteeism (191 million sickness days, corresponding to 21 sickness days/year/employee). The lost time rate due to all diseases was 5.82 (5.66 for males, 6.00 for females). The highest level of disease absenteeism was recorded among the employees aged 40–49 years, the rate was 9.65 (9.71 for males, and 9.60 for females). The relationships between rates of male and female sickness absence varied in individual age groups. In age groups under 19 years and above 40 years of age sickness absence was higher in males than in females (Table 2).

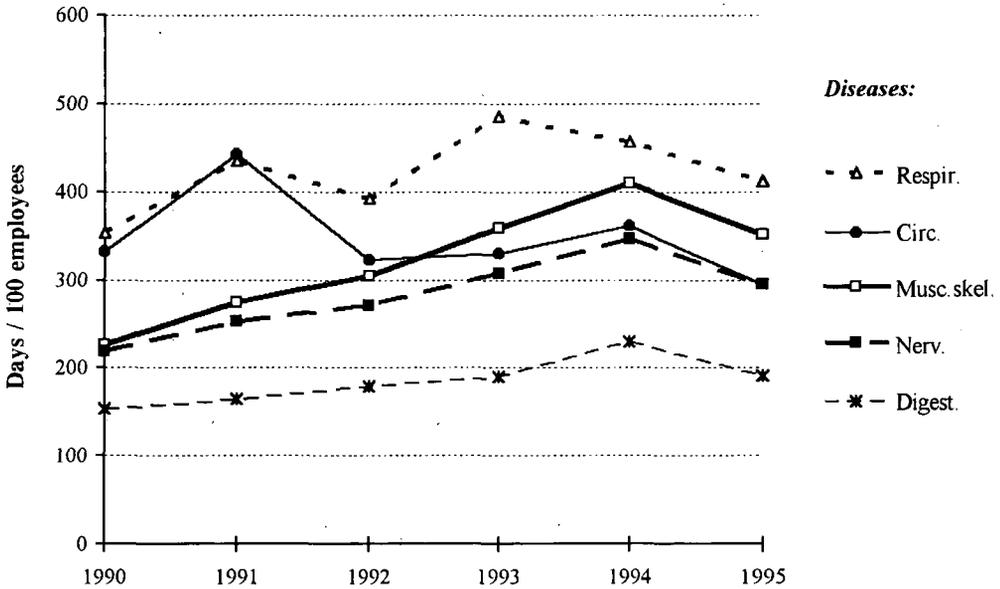


Fig. 1. Sickness absence by the main causes in Poland, 1990-95.

Table 2. Sickness absence by sex and age, 1990-95

Sex	Years	Lost time rate by age groups:						Total
		-19	20-29	30-39	40-49	50-59	60-	
Male	1990	4.08	1.78	3.21	4.27	5.42	4.08	3.40
	1993	4.22	2.70	5.35	8.71	8.83	4.98	5.62
	1994	5.37	3.69	5.33	10.77	8.70	7.06	6.50
	1995	5.07	3.46	4.44	9.71	7.12	5.78	5.66
Female	1990	6.93	4.31	5.57	7.32	9.97	7.58	6.28
	1993	3.40	3.35	5.94	10.88	11.20	4.64	6.59
	1994	3.83	5.05	5.23	11.07	8.77	5.20	6.89
	1995	3.57	4.97	4.48	9.60	6.60	3.96	6.00
Total	1990	5.48	2.92	4.32	5.78	7.44	5.36	4.74
	1993	3.82	3.03	5.64	9.80	9.81	4.80	6.09
	1994	4.63	4.34	5.28	10.93	8.74	6.33	6.69
	1995	4.36	4.17	4.44	9.65	6.88	5.07	5.82

In 1995, the main causes of sickness absence were:

a) in males:

- respiratory system diseases (21.4%),
- musculoskeletal system and connective tissue diseases (18.2%),
- nervous system and sense organ diseases (16.6%),
- circulatory system diseases (15.4%),
- digestive system diseases (11.5%),



b) in females:

- female genital organ diseases and pregnancy complications (19.7%),
- respiratory system diseases (17.3%),
- musculoskeletal system and connective tissue diseases (14.8%),
- circulatory system diseases (12.3%),
- nervous system and sense organ diseases (10.8%).

In 1995, sickness absence was reduced by 13% in relation to 1994. The reduction was most evident in females aged 50–59 years. An analysis of sickness absenteeism sources indicates that musculoskeletal diseases (dorsopathies, rheumatism, osteopathies, chondropathies and acquired musculoskeletal deformities), acute infections of the respiratory system, and disorders of the peripheral nervous system create major health problems for the occupationally active population in Poland. These diseases account for 35% of overall sickness absence and 41% of sickness absence in males. In females, pregnancy complications were the first leading source of sickness absence, and when combined with the diseases quoted above, they are responsible for 43% of sickness absence in the female population.

Our analysis of sickness and accident-related absenteeism among the employees according to sectors of the Polish economy indicates that the highest rates of sickness absenteeism in 1995 was recorded in the mining (lost time rate 11.36), and fishing (9.00) industries, public administration and in the army (8.56), and the lowest in the education sector (4.43), transportation, warehousing, telecommunication (4.43), and health and welfare services (4.84). In the production sectors the rate accounted for 6.63 (4% lower than in the whole national economy).

A great difference in the sickness and accident absenteeism rates between individual voivodships of Poland was also observed (Fig 2). Increased sickness

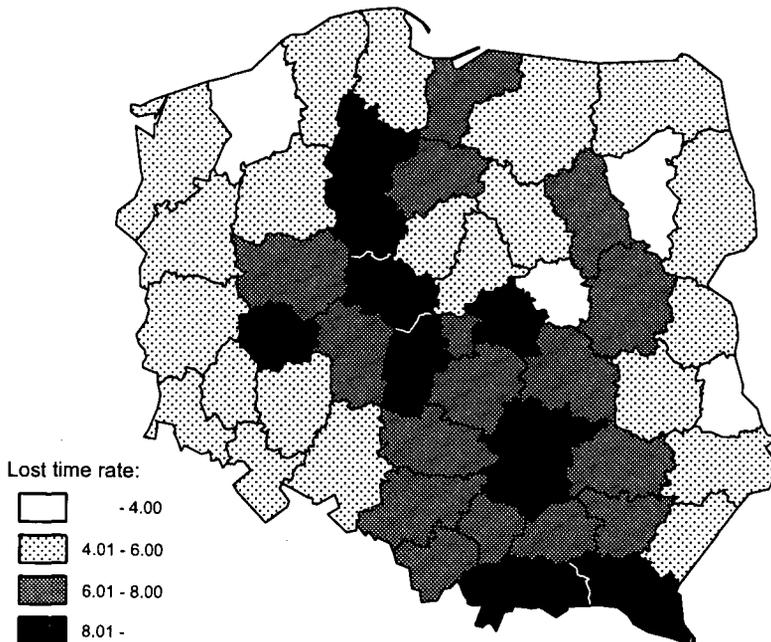


Fig. 2. Sickness and accident-related absenteeism by voivodships, 1995.



absenteeism, particularly in the category of chronic diseases, observed in the rural areas reflects poor health condition among farm workers which became even more evident when the right to sickness benefits granted recently to farmers encouraged them to see doctors more frequently. Some time ago, in highly urbanized and industrialized regions, sickness absenteeism rates were affected by harmful work conditions as well as by occupational and environmental hazards. On the other hand, the current restructuring of the national economy with the increase in the number of small industrial plants, and granting the agriculture workers the right to sickness benefits yielded serious changes in patterns of sickness absenteeism in different voivodships.

## CONCLUSIONS

Analyses of disease- and accident-related sickness absenteeism carried out each year in Poland within the statistical system lead to the following conclusions:

1. Diseases of the musculoskeletal and peripheral nervous systems contributing to one third of the total sickness absenteeism, pose a major health problem for the working population in Poland. During the past five years, incapacity for work caused by these diseases in males increased 2.5 times. Musculoskeletal and nervous system diseases are the first leading cause of permanent disability for work, with the resultant reduction in the mean productive age of people in Poland. The highest rates of work disability due to these disease categories are noted in the employees of the mining industry (7).

2. Circulatory diseases, and arterial hypertension and ischaemic heart disease in particular (41% and 27% of sickness days, respectively), constitute a major health problem among males at the productive age, especially in the 40 and older age groups. Over a two-fold increase in male absenteeism due to these diseases has been noted (3).

3. The increase in disease-related temporary incapacity for work in the whole national economy has been due to combined factors, among which transformations occurring in Poland's society, its national economy and industry in particular, and enhanced unemployment rates are most important (8).

4. The pattern of sickness absenteeism in Poland differs from that in Western countries: respiratory diseases and other acute pathologies are the dominant source of the general sickness absenteeism in Poland (4,6). The differences result from different legal regulations on temporary incapacity for work. Polish legal regulations require that every absence from work, irrespective of the duration of the disease, be recorded; and according to their provisions sickness benefit is paid for the whole period of incapacity for work.

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