

OCCUPATIONAL HEALTH IN BRAZIL: THE PRESENT STATUS

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ABSTRACT

With the foundation, in 1966, of the Instituto Nacional de Previdência Social - INPS (the National Institute of Social Security), the first statistics of accidents due to work became available. These statistics greatly alarmed the Federal Government, especially because of an increasing number of such accidents which occurred in the following years.

To cope with the situation, the Ministry of Labour enacted a new law in 1972 making obligatory the employment of occupational health doctors, nurses and auxiliary nurses as well as of safety engineers and safety supervisors in all enterprises with 100 or more workers. As the large number of such professionals required was not available, the execution of the new law was postponed for two years, while the Brazilian universities provided "crash" courses for the specialization in occupational health of physicians, nurses, auxiliary nurses, engineers and the already existing safety inspectors.

As the large industrial enterprises adapted their medical services to the new law and as the new "Specialized Services of Occupational Hygiene, Safety and Medicine" started to act, the number of accidents at work began to reduce and the percentage of injured workers declined from 18.80% in 1972 to 9.79% in 1977.

These highly satisfactory results were obtained through a series of occupational health and safety activities. To demonstrate in a practical way the efficiency of the new legislation, the example of a large textile industry in the State of São Paulo is presented.

In 1966 the Brazilian Government centralised all existing systems of social security into a single body, the National Institute of Social Security (Instituto Nacional de Previdência Social - INPS). In the following year the insurance against accidents at work became a state monopoly and was put under the guidance of the newly created Institute; this allowed, for the first time in Brazil, the establishment of a national system for recording such accidents and, in 1970, the first official statistics regarding accidents at work and occupational diseases was available for the whole country.

These first statistics greatly alarmed the governmental authorities since it revealed a very serious situation: for a total of 7 284 022 workers as many as 1 220 111 accidents had occurred, that is, 16.75% of all Brazilian workers had

suffered an injury due to work. Besides, 2,232 deaths were recorded as well as 5,937 cases of occupational diseases.

The following year disclosed a worse situation, as 133,052 accidents at work had occurred among 7,649,848 insured workers, meaning that a larger proportion, even 17.39% of the workers had suffered an injury. The number of recorded deaths was 2,587 and 4,050 cases of occupational diseases were reported.

This very critical situation led the Brazilian Government, through its Ministry of Labour, to issue in 1972 a new law requesting that all enterprises employing more than 100 people should employ physicians, nurses and auxiliary nurses specialized in occupational health as well as safety engineers and safety supervisors, in numbers proportional to the number of workers and to the specific risk of each particular enterprise. The law established the risk criterium and Table 1 summarises the present legal exigences.

The main problem was a lack of such a large number of specialists trained in occupational health and safety. Thus, a period of two years was allowed for the new law to take action and "crash" courses of 400 hours for physicians, nurses and engineers and of shorter duration for auxiliary nurses and safety inspectors were set up in the main Brazilian universities. On the other hand, professionals who had worked for more than 5 years in the field of occupational health and safety were permitted to work in the newly created "Specialized Services of Occupational Safety, Hygiene and Medicine"; therefore many enterprises, especially those employing more than 1,000 employees and which had been carrying out activities in the field of occupational health and safety were able to start immediately the ambitious new programme proposed by the new law.

While the new "Specialized Services" slowly went into action, the situation continued to deteriorate. Thus, in 1972 – the year of the promulgation of the new law – for a total number of 8,001,877 insured workers, no fewer than 1,504,723 accidents occurred; the proportion of injured workers reached 18.80%. During the same year 2,805 deaths and 2,389 cases of occupational diseases were also recorded.

However, as both employers and employees became more and more aware of the importance of the problem, the accident situation started to change. Thus, despite the increasing absolute number of accidents, the number of injured workers started to decline. Thus, from the maximum of 18.80% observed in 1972, there was a slow decrease, 14.91% in 1973, 15.57% in 1974 and 14.74% in 1975.

In 1976 for the first time there was a reduction not only in the proportion of injured workers, a fall to 11.66%, but in the absolute number of accidents as well. Therefore, while in 1975 for a total number of 12,996,796 insured workers a total of 1,916,187 accidents occurred, in 1976, despite the fact that the number of insured workers reached 14,945,489 people, the total number of accidents presented an absolute reduction, reaching 1,743,825 cases. Thus, while the number of insured workers increased by nearly 15%, the total number of accidents decreased by 9%, a highly satisfactory result.

TABLE 1
Minimum number of professionals needed for safety and occupational health activities.

| Number of employees | Profession | Risk group | | | |
|------------------------------------------------|--------------------|------------|----|----|----|
| | | 1 | 2 | 3 | 4 |
| 101-500 | Safety supervisor | 0 | 0 | 1 | 1 |
| | Safety engineer | 0 | 0 | 0 | 1* |
| | OH physician | 0 | 0 | 0 | 1* |
| | OH nurse | 0 | 0 | 0 | 0 |
| | OH assistant nurse | 0 | 0 | 0 | 0 |
| 501-1000 | Safety supervisor | 0 | 1 | 1 | 1 |
| | Safety engineer | 0 | 0 | 1* | 1 |
| | OH physician | 0 | 0 | 1* | 0 |
| | OH nurse | 0 | 0 | 0 | 0 |
| | OH assistant nurse | 0 | 0 | 0 | 1* |
| 1001-2000 | Safety supervisor | 1 | 1 | 2 | 3 |
| | Safety engineer | 0 | 1* | 1 | 1 |
| | OH physician | 1* | 1* | 1 | 1 |
| | OH nurse | 0 | 0 | 0 | 0 |
| | OH assistant nurse | 0 | 1 | 1 | 1 |
| 2001-3500 | Safety supervisor | 1 | 2 | 4 | 6 |
| | Safety engineer | 1* | 1 | 1 | 2 |
| | OH physician | 1* | 1 | 1 | 2 |
| | OH nurse | 0 | 0 | 0 | 0 |
| | OH assistant nurse | 1 | 1 | 2 | 2 |
| 3501-5000 | Safety supervisor | 2 | 3 | 5 | 7 |
| | Safety engineer | 1 | 1 | 2 | 3 |
| | OH physician | 1 | 1 | 2 | 3 |
| | OH nurse | 1* | 1 | 1 | 1 |
| | OH assistant nurse | 1 | 1 | 1 | 1 |
| For each group of 3500 in excess of 5000 | Safety supervisor | 1 | 1 | 2 | 2 |
| | Safety engineer | 1* | 1* | 1 | 1 |
| | OH physician | 1* | 1* | 1 | 1 |
| | OH nurse | 0 | 0 | 0 | 0 |
| | OH assistant nurse | 1 | 1 | 1 | 1 |

*Part time work (3 hours daily)

Figures for the year 1977 are even better. For a total number of 16 589 605 insured workers, a total of 1 614 750 accidents occurred, therefore, the proportion of injured workers fell to 9.79%. Thus, although the number of insured workers increased by 11%, the total number of accidents decreased by 8%.

These results clearly demonstrate that the new legislation has been effective. As more than 60 000 professionals in occupational health and safety were trained by the end of 1977 and as most of the country's large enterprises have organized their "Specialized Services of Occupational Safety, Hygiene and Medicine", a very tight control of accidents at work and of occupational diseases is now possible.

To understand how these results could be accomplished, it is important to know that the new legislation attributes 25 very specific activities to the safety engineer, while another 22 are attributed to the occupational health physician. This allows systematic and well organized action from both types of professionals and their natural collaborators (safety inspectors, occupational health nurses and occupational health assistant nurses) acting efficiently through the country as can be proven by the fall in the number of accidents.

To illustrate how the new programme acts, some results from a large textile industry in the State of São Paulo (the most industrialized state of the Brazilian Federation) will be presented.

This industry had an excellent record in the field of occupational health and safety. Since 1948, following previous legal exigencies for all enterprises employing more than 100 workers, there existed a very active Internal Committee for the Prevention of Accidents, composed of workers elected by their fellow workers and of an equal number of persons appointed by the employer. An active and well organized Medical Department existed since 1944, following closely the ILO's Recommendation No 112.

Even in an enterprise like this one, where a long standing programme of occupational health and safety already existed, the new legislation had beneficial effects. Thus, besides the physicians, engineers, safety supervisors and assistant nurses who already existed and who could be recognised as specialists by the Ministry of Labour due to the fact that they had more than 5 years' experience in the field of workers protection, new professionals were admitted and new systems of work were established. The specific activities attributed by law to the

TABLE 2
Specific activities of the Occupational Health Division during the year 1977.

| | |
|--------------------------------------------------------------|-------|
| Establishment of plans for the protection of worker's health | 70 |
| Sanitary surveys of places of work | 12 |
| Pre-admissional medical examinations | 2 074 |
| Periodical medical examinations | 2 365 |
| Medical examination for sick-leave | 3 403 |
| Medical examination after resuming work | 41 |
| Medical examination of pregnant workers | 1 238 |
| Medical examination of minor workers | 43 |
| Study of the human factor of accidents at work | 653 |
| Study of organic and psychological causes of fatigue | 25 |
| Planning and execution of programmes of sanitary education | 103 |
| Vaccinations | 4 445 |
| Medical study of workers who suffered accidents | 78 |
| Participation in the meetings of the CIPA | 32 |
| Courses in occupational health | 36 |
| Utilization of community's resources | 50 |
| Medical studies carried out for the Safety Division | 5 |
| Rehabilitation activities | 126 |
| Collaboration with governmental authorities | 1 |
| Participation in occupational health campaigns | 157 |
| Studies on readaptation to work | 3 |

TABLE 3
Specific activities of the Safety Division during the year 1977.

| | |
|-----------------------------------------------------------------------|----|
| Projects of safety engineering | 4 |
| Advice of safety problems | 1 |
| Proposition of new safety rules | 3 |
| Reports on new risks of accidents | 19 |
| Examination of new projects, installations and equipments | 5 |
| Suggestions for new equipment for personal protection | 15 |
| Treatment and disposal of industrial residues | 4 |
| Development of new systems of fire protection | 54 |
| Delimitation of perilous areas | 4 |
| Analysis and investigation of causes of accidents | 18 |
| Safety education activities | 10 |
| Execution of training programmes | 33 |
| Study of new dangerous substances | 4 |
| Safety studies carried out for the Medical Division | 2 |
| Orientation of outside contractors regarding the risks of accidents | 3 |
| Safety inspections of special areas | 5 |
| Purchase of new equipment for personal protection | 14 |
| Collaboration with safety institutions | 4 |
| Training of fire brigades | 27 |
| Supervision of the Internal Committee for the Prevention of Accidents | 25 |
| Courses on safety for foremen | 6 |

new services were followed and a few of them constituted activities not carried out previously by the enterprise. Tables 2 and 3 summarise the activities carried out by the newly created Division of Occupational Health and Division of Safety, in the terms of the new law.

The new legal programme includes very objective activities, which resulted in very good results even for an enterprise like the one described, where the protection of the worker has always constituted a motive of concern to the employers. During the year 1977 such programme resulted in a reduction of 31% in the number of accidents per million men-hours worked, in comparison with the year 1976; on the other hand, a reduction of 6.08% in the rate of absenteeism due to all causes was observed, while the absenteeism due to illness presented a reduction of 12.63% during the same period. The same results were obtained in the great majority of enterprises all over Brazil, thus explaining the overall reduction in the number of accidents in the country observed in 1976 and 1977.

The results of the Brazilian Government's new policy, therefore, have proved to be highly successful and constitute a very interesting medical-social-economic experience to be considered by other developing countries.