

STATISTICS OF OCCUPATIONAL INJURIES

Resolution concerning statistics of occupational injuries resulting from occupational accidents

*adopted by the 17th International
Conference of Labour Statisticians
(Geneva, 1998)*

Dept. of Statistics



Why do we want information about occupational injuries?

↳ to prevent them happening:

- to identify occupations and economic activities where occupational accidents occur
- to set priorities for preventive efforts
- to detect changes in patterns and occurrences
- to inform employers and workers of risks associated with their work and workplaces
- to evaluate effectiveness of preventive measures

Objectives of the resolution

- **Primary:** to provide basic guidance for collection and presentation of statistics of occupational injuries at the national level, for countries wishing:
 - to revise existing statistical systems, or
 - to establish new statistical systems
- **Secondary:** to enhance international comparability



Other ILO statistical standards relating to occupational injuries

- Protocol to the Occupational Safety and Health Convention, 1981 (2002)
- Recommendation concerning the list of occupational diseases and the recording and notification of occupational accidents and diseases (2002)
- ILO Code of Practice on the Recording and Notification of Occupational Accidents and Diseases (1996)



Objectives of the statistics of OI

major component of a comprehensive programme of statistics on occupational safety and health

- ☐ to provide comprehensive and timely information for prevention purposes
- ☐ to meet the needs of the major users, including employers and workers



Coverage (1)

- ☐ all occupational injuries
 - ✦ fatal injuries
 - ✦ non-fatal injuries causing an absence from work of at least one day
 - ✦ (injuries resulting from commuting accidents - compiled and disseminated separately)
- ☐ all workers, including child workers, homeworkers
- ☐ all economic activities and sectors, including informal sector
- ☐ whole country
 - ✦ all persons injured within jurisdiction of country



Coverage (2)

Not included in the resolution, but have been found to be significant, especially in developing countries:

- ☐ ***cases of restricted activity:*** cases of non-fatal injury not resulting in an absence from work, but which prevent the injured workers from carrying out the normal tasks of the job or post occupied at the time of the accident:
- ☐ of particular importance regarding:
 - ☐ the self-employed
 - ☐ workers and activities not covered by accident compensation schemes



What is an occupational injury?

Any personal injury, disease or death resulting from an occupational accident

[distinct from an occupational disease: a disease contracted as a result of exposure over a period of time to risk factors arising from work activity]



What is an occupational accident?

An unexpected and unplanned occurrence, including acts of violence, arising out of or in connection with work, which results in one or more workers incurring a personal injury, disease or death

[includes travel, transport and road traffic accidents in which workers are injured and which arise out of or in the course of work]



What is incapacity to work?

Incapacity for work: inability of the victim, due to an occupational injury, to perform the normal duties of work in the job or post occupied at the time of the occupational accident.

Cases of temporary incapacity are cases of occupational injury where the workers injured were unable to work from the day after the day of the accident, but were later able to perform again the normal duties of work in the job or post occupied at the time of the occupational accident causing the injury within a period of one year from the day of the accident.

Cases of permanent incapacity for work are cases of occupational injury where the persons injured were unable to work from the day of the accident, and were never able to perform again the normal duties of work in the job or post occupied at the time of the occupational accident causing the injury.



What is a fatal occupational injury?

Occupational injury that resulted in death that occurred within one year of the day of the accident.



Basic information to be collected

For each case of occupational injury

- ☐ information about enterprise, establishment or local unit:
 - ↙ location, economic activity, size
 - ☐ information about person injured:
 - ↙ sex, age, occupation, status in employment
 - ☐ information about injury:
 - ↙ fatal/non-fatal, type of injury, part of body injured
 - ☐ information about accident and circumstances:
 - ↙ type of location, date and time, mode of injury, material agency of injury
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Additional data

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Further information where considered useful, and particularly for more serious cases of occupational injury and fatalities

- ☐ information about injury:

- ↙ incapacity for work (calendar days of absence from work)

- ☐ information about accident and its circumstances:

- ↙ shift, start time of work of injured person and hours worked in activity when accident occurred

- ↙ total number of workers injured in accident

- ↙ place of occurrence

- ↙ work process of injured person

- ↙ specific activity of injured person and associated material agency

- ↙ deviation resulting in accident and associated material agency



Measurement

- **Cases of fatal injury:** the number of persons fatally injured as a result of occupational accidents, and where death occurred within one year of the day of the accident.



Measurement

Cases of non-fatal injury with lost work time (temporary and permanent incapacity)

- **Cases of permanent incapacity for work** are cases of occupational injury where the persons injured were unable to work from the day of the accident, and were never able to perform again the normal duties of work in the job or post occupied at the time of the occupational accident causing the injury.
- **Cases of temporary incapacity** are cases of occupational injury where the workers injured were unable to work from the day after the day of the accident, but were later able to perform again the normal duties of work in the job or post occupied at the time of the occupational accident causing the injury within a period of one year from the day of the accident.



Measurement

- **Days lost** by cases of *temporary incapacity*: the number of calendar days during which those persons temporarily incapacitated were unable to work, excluding the day of the accident, up to a maximum of one year.
- for cases of permanent incapacity for work and fatalities: may be estimated, but should be compiled and disseminated separately



What do want to do with the information?

Comparative measures may be calculated for each economic activity, occupation, sex, age group, etc.

- **Frequency rate** (*for fatal and non-fatal cases*) per 1'000'000 hours :
 - the number of new cases of injury during the calendar year divided by the total number of hours worked by workers in the reference group during the year, multiplied by 1,000,000
 - **Incidence rate** (*for fatal and non-fatal cases*) per 100,000 workers :
 - **Incidence rates** calculated as the number of new cases of injury during the calendar year divided by the number of workers in the reference group during the year, multiplied by 100,000.
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Comparative measures

- *if time lost is measured*

- *for cases of temporary incapacity only:*

☐ **Severity rate** (days lost per 1'000'000 hours worked) :

- days lost as a result of new cases during the calendar year divided by the total amount of hours worked by workers in reference group during the calendar year, multiplied by 1,000,000

☐ **Days lost per injury:**

- median or mean number of days lost per injury during the calendar year



Classifications

Using classification schemes that are comparable with or may be related to the most recent versions of the relevant international classifications

- ❑ by economic activity
- ❑ as far as possible, other significant characteristics of persons injured, of enterprises, establishments or local units, injuries and accidents:
 - ↙ location, size of unit
 - ↙ sex, age, occupation, status in employment
 - ↙ fatal or non-fatal injury, type of injury, part of body injured
 - ↙ type of location of accident, mode and material agency of injury



Classifications

International classifications:

- ☐ International Standard Industrial Classification of All Economic Activities (ISIC), Rev. 3, 1990
- ☐ Size of enterprise, etc.: *as in International Recommendations for Industrial Statistics, Rev. 1, 1983*
- ☐ International Standard Classification of Occupations, ISCO-88
- ☐ International Classification of Status in Employment, ICSE-93
- ☐ Type of injury: *from International Statistical Classification of Diseases and Related Health Problems, ICD-10, 1992*
- ☐ Part of body injured: *from ICD-10, 1992*



Classifications

ILO should also develop and disseminate classifications to replace or supplement existing schemes (from 10th ICLS resolution):

- ☐ place of occurrence
- ☐ work process
- ☐ specific activity
- ☐ deviation
- ☐ material agency associated with specific activity or deviation



Further challenges for the ILO

- ☐ preparation of worldwide estimates of fatal occupational injuries
- ☐ estimation of costs of occupational injuries
- ☐ develop standards for statistics of occupational diseases



Sources

Statistics should be based on a range of sources of information

- ☐ existing sources:
 - ↙ notification systems (labour inspection, compensation)
 - ↙ other administrative records (hospitals, employers' /workers' organizations)
 - ↙ surveys (establishment surveys, household surveys)
- ☐ development of new sources to supplement existing ones
- ☐ concepts, definitions, coverage and classifications used by different sources must be consistent:
 - ↙ national coordinating committee
 - ↙ harmonization of statistics from different sources



Sources of data on occupational injuries/diseases

- Labour inspectorate records: notified cases, days lost
- Compensation schemes: cases for which claims submitted / compensation paid, days lost
- Labour force surveys: non-fatal cases, days lost
- Establishment surveys: reported cases (fatal / non-fatal), days lost, costs



Limitations

- Labour inspectorate records and Compensation schemes
 - coverage (workers, economic activities, sectors, establishments, geographic areas, occupational accidents, occupational diseases)
 - quality of reported data (concepts)
 - reference population
 - time lag
 - quality of data produced



Limitations

- Labour force surveys
 - coverage (only non-fatal cases)
 - sample size
 - proxy response, recall errors, subjectivity of concepts
 - response rate
- Establishment surveys
 - Coverage (formal sector only)
 - employers' records
 - response rate
 - time lag

