

Non-Mandatory Appendix F to §1910.900: Ergonomics Program Evaluation Criteria

These measures can be for the entire facility, parts of a facility, or each job. The most meaningful tend to be those based on individual jobs. They are especially useful when compared with past periods (usually years) and/or representative comparison values such as those for similar jobs, those for sister operations, company wide statistics, or industry wide statistics.

The incidence and severity rates can be calculated for the entire establishment, departments, or jobs. This allows comparison between and within establishments, departments, and jobs from period to period (usually a year).

OUTCOME MEASURES RELATING TO MSDs	FACILITY	JOB
O1. Number of lost and restricted workday cases due to MSDs - LWDII*	XX	XX
O2. Number of lost and restricted workdays due to MSDs - SR**	XX	XX
O3. Number of surgeries and disabling conditions	XX	XX
O4. Total number of permanent job transfers due to MSDs	XX	XX
O5. Annual workers compensation costs due to MSDs	X	X
O6. Employee absentee days for each job title	X	X
O7. Employee turnover rates for each job title	X	X
O8. Average number of lost workdays per case due to MSDs	X	X
O9. Number of MSD-related workers' compensation claims	X	X
O10. Average workers compensation cost per MSD case	X	X
O11. Number of OSHA recordable MSDs	x	x
O12. Number of employees reporting symptoms of MSDs	x	x
O13. Annual medical costs for MSDs	x	x
O14. Annual medical costs per MSD case	x	x
O15. Job problem survey results	x	x
O16. Symptom survey results	x	x

ACTIVITY MEASURES RELATING TO MSDs	FACILITY	JOB
A1. Program in place and functioning adequately***		XX
A2. Number of jobs controlled	XX	
A3. Number of jobs analyzed	XX	
A4. Number of jobs awaiting analysis	XX	
A5. Number of controls implemented	XX	XX
A6. Average time between employee reports and the employer response	XX	XX
A7. Range of times between employee reports and the employer response	XX	XX
A8. Length of time since the last review of safety and health records	XX	XX
A9. Number of employees trained	XX	XX
A10. Number of employees waiting or needing to be trained	XX	XX
A11. Number of employees who have received ergonomics information	XX	XX
A12. Number of employee hours devoted to the ergonomics program	X	X
A13. Annual expenditures on the ergonomics program	X	X
A14. Annual expenditures on the ergonomics controls	X	X
A15. Number of employee reports and recommendations	x	x
A16. Number of hazards identified	x	x
A17. Number of employees interviewed for job analyses	x	x
A18. Number of employees awaiting being interviewed for job analysis	x	x
A19. Number of symptom surveys conducted	x	x
A20. Number of job problem surveys conducted	x	x

XX indicates measures most likely to be used in determining compliance.

X indicates measures that are appropriate and important.

x indicates measures that are appropriate but of lesser importance.

* Lost Work Day Injury and Illness rate (LWDII) = (Number of cases)*(200,000)/Total population at risk in a given period.

Numerator: Number of lost or restricted time incidents (cases) in the specified establishment, department, or job that involve a covered MSD in a specified time period multiplied by 200,000. Multiplying the number of employees by 200,000 normalizes the observed work population to a standard work population of 100 employees working a 50 week year.

Denominator: The total number of hours worked in a specified establishment, department, or job within the same time period. If these numbers are not available, an approximation can be made by multiplying the actual number of employees by 2,000.

** Severity Rate (SR) = This same calculation as was performed to produce the LWDII except that the days away from work and restricted days are substituted into the numerator for the number of incidents. This calculation provides a measure of the severity of the cases and is used in conjunction with the LWDII to determine the magnitude of the cases.

*** A1. Program in place and functioning adequately.
Written program
Regular meetings - minimum of monthly
Meeting records
Safety and health records reviews
Documentation of job problems addressed, controls implemented, and follow-up

INCIDENCE AND SEVERITY RATES

The incidence and severity rates can be calculated for the entire establishment, departments, or jobs. This allows comparison between and within establishments, departments, and jobs from period to period (usually a year).

Lost Work Day Injury and Illness rate (LWDII) = (Number of cases)*(200,000)/Total population at risk in a given period.

Numerator: Number of lost or restricted time incidents (cases) in the specified establishment, department, or job that involve a covered MSD in a specified time period multiplied by 200,000. Multiplying the number of employees by 200,000 normalizes the observed work population to a standard work population of 100 employees working a 50 week year.

Denominator: The total number of hours worked in a specified establishment, department, or job within the same time period. If these numbers are not available, an approximation can be made by multiplying the actual number of employees by 2,000.

Severity Rate (SR) = This same calculation as was performed to produce the LWDII except that the days away from work and restricted days are substituted into the numerator for the number of incidents. This calculation provides a measure of the severity of the cases and is used in conjunction with the LWDII to determine the magnitude of the cases.

Statistics/Measures Interpretation

New Program - look for activities

Up = expected, reporting, working,

Steady = too early, ineffective program

Down = Good early response, impediments to reporting

In Between or Transition Program - look for activities and changing statistics

Up =

Steady = preceded by Up, good; preceded by steady, OK; preceded by down, ?

Down = good

Mature Program - look for steady, randomly fluctuating activity measures and steady, randomly fluctuating activity measures, or gradual decline in outcome measures.

Up = change, not functioning,

Steady = expected, within expected range?

Down = change, functioning

- 1 really dropping or low number
- 2 dropping
- 3 steady with random variation
- 4 increasing
- 5 rapid increase or high number

ABC

A expected response in a starting program

B expected response in a program in transition from a starting one to a mature one

C expected response in a mature program

ACTIVITY MEASURE EXAMPLES	OUTCOME MEASURE EXAMPLES
<ul style="list-style-type: none"> • Plan to implement ergonomics program has been developed • Number of employee reports and recommendations • Average time between employee reports and the employer response • Range of times between employee reports and the employer response • Length of time since the last review of safety and health records • Number of hazards identified • Number of employees who have received ergonomics information • Number of jobs analyzed • Number of jobs awaiting analysis • Number of employees interviewed for job analyses • Number of employees awaiting being interviewed for job analysis • Number of symptom surveys conducted • Number of job problem surveys conducted • Number of jobs controlled • Number of job changes made • Number of employees trained • Number of employees waiting to be trained • Number of employee hours devoted to the ergonomics program • Annual expenditures on the ergonomics program • Annual expenditures on the ergonomics controls 	<ul style="list-style-type: none"> • Number of OSHA recordable MSDs • Number of employees reporting symptoms of MSDs • Number of surgeries • Number of MSD-related workers' compensation claims • Number of lost workday cases due to MSDs • Number of lost workdays due to MSDs • Average number of lost workdays per case due to MSDs • Severity rate of MSDs • Symptom survey results • Job problem survey results • Annual medical costs for MSDs • Annual medical costs per MSD case • Annual workers compensation costs due to MSDs • Average workers compensation cost per MSD case • Total number of job transfers due to MSDs • Number of job transfers due to MSDs for each job • Employee absentee days for each job title • Employee turnover rates for each job title