

# Mortality of a cohort of road construction and maintenance workers with work disability compensation

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## KEY WORDS

Cohort studies; human occupational diseases; epidemiology; work disability; risk factors; road construction; construction industry

## SUMMARY

**Background:** *Surveillance systems of occupational mortality are useful tools to identify cases of diseases suspected as occupational and to monitor their occurrence over time, in space and in population subgroups. Many surveillance systems make use of administrative data in which information about occupations and/or economic sectors of the subjects enrolled is reported, such as death certificates, hospital discharge data, census data, tax and pension records, and workers' compensation archives.* **Objectives:** *In the present study we analyzed the mortality of a cohort of road construction and maintenance workers enrolled through the Italian national archive of work disability compensations, also in order to evaluate the possible use of this administrative source to monitor occupational mortality.* **Methods:** *8,000 subjects (7,879 males) receiving a disability compensation while working in the "road construction and maintenance" sector were identified from INAIL (National Institute for Insurance of Accidents at Work) archives. Vital status of these subjects was ascertained using the information available in INAIL archives and in the national tax register. For those found to be deceased from INAIL or tax archives, or without any information on vital status, a mail follow-up was started. We considered as observation period the years from 1980 to 1993. A record linkage with the ISTAT (Italian Institute of Statistics) national mortality registry was performed and the cause of death was retrieved for 964 out of 1,259 subjects. The analysis was restricted to males, leaving altogether 863 observed deaths with ascertained cause (84.7% of 1,019 total male deaths). SMR for overall mortality and PMR for specific cause mortality were computed, using the general Italian male population as reference.* **Results:** *Overall mortality was significantly reduced (SMR=79.0; 95% CI=74.2-84.0). Proportional mortality analysis revealed significant excess risks for all malignant tumours (332 deaths, PMR=1.08) and for digestive diseases (87 deaths, PMR=1.34), while mortality for cardiovascular diseases was significantly decreased (288 deaths, PMR=0.90). Among specific causes of death, significant excess mortality was found for cancer of testicles (2 deaths, PMR=5.98), liver and biliary ducts (32 deaths, PMR=1.40), and for silicosis (10 deaths, PMR=3.07) and cirrhosis (64 deaths, PMR=1.40).* **Conclusions:** *The excess mortality observed for all cancers, digestive diseases and silicosis, and the decreased risk for cardiovascular diseases are in agreement with the results of other studies conducted on workers in road construction and maintenance. As expected, the low overall mortality and the reduced risk from cardiovascular diseases indicate that these workers present a strong "healthy worker effect".*

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