

# Incidence of infectious diseases after earthquakes: a systematic review and meta-analysis

**Summary:** Evaluation of the incidence of infectious diseases after natural disasters can help develop healthcare policies. This study provides a global review of the most prevalent infectious diseases observed after earthquakes.

**Study design:** A systematic review and meta-analysis were performed.

**Method\_Results:** A systematic review was performed on electronic databases, including PubMe, Scopus and Web of Science, up to March 2020 (with no time limitations). Studies addressing earthquakes and infectious diseases were collected based on specified inclusion and exclusion criteria. Subsequently, the quality of the studies was assessed by the Newcastle-Ottawa scale (NOS). Data analyses were carried out on six subgroups under five different disease categories using comprehensive meta-analysis software. In total, 24 studies qualified for the systematic review and 18 were included in the meta-analysis. The incidences of gastrointestinal infections, dermal infections, respiratory infections, central nervous system infections and other infectious diseases were as follows: odds ratio (OR) 163.4 (95% confidence interval [CI]: 31.0-858.1), OR 84.5 (95% CI: 27.1-262.8), OR 9.9 (95% CI: 3.5-27.7), OR 0.5 (95% CI: 0.2-1.1) and OR 4.4 (95% CI: 1.9-9.9) cases per 100,000 people, respectively. The association between the incidences of infectious diseases before and after earthquakes was significant, namely, 1.561 (95% CI: 1.244-1.957) with a P-value <0.001.

**Conclusions:** The results show an increase in the prevalence of infectious diseases after earthquakes. Governments should take essential measures to be better prepared for such unpredictable catastrophes.