

Public health events in the maritime transport sector

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Introduction:

A literature review to describe evidence on communicable diseases affecting people on ships or at ports, from 1990 to 2013 was carried out. Also, a literature review on radiological and chemical events of public health relevance associated with ships or at ports, from 1940 to 2013 was performed.

Methodology:

Databases reviewed were: Medline, Scopus, Web of Science, Spanish Society of Maritime Medicine, and WebPages of WHO, The International Radio Medical Advice Centre, International Atomic Energy Agency, European Maritime Safety Agency, Marine Accident Investigation Branch, Spanish Nuclear Safety Council and the Major Accident Reporting System.

Results:

From 1990 to 2013, 196 outbreaks relating to ships or ports with more than 24,000 cases and 19 deaths were published. 59% of outbreaks (n = 116) were food- and waterborne, causing 82% (n = 19741) of cases and 12 deaths (11 deaths due to *Legionella*, case fatality ratio of 7%); almost a third was caused by norovirus. Respiratory diseases, mainly Influenza, caused 18% of outbreaks and 2 deaths. Thirteen radiological events were published that affected 500 persons and caused 47 deaths, 24 due to exposure to elevated levels of radiation. During the study period 94 chemical events were published, of which 69 events affected people and in the remaining events

only a public health risk was present. These 69 chemical events generated almost 12,000 cases and more than 2,000 deaths. Thirty countries, including all EU Member States, Norway and Iceland, were requested to complete the questionnaires regarding identification of authorities and practices for management of radiological and chemical events.

Conclusions:

Food- and waterborne diseases are most reported; followed by respiratory diseases. Legionellosis accounted for the highest case fatality ratio. Tuberculosis was reported only on seafarers from cargo or fishing vessels and vaccine preventable diseases was mainly reported on crew members from cruise ships.