

Home oxygen fires in the United States

Research into the prevalence and impact of home oxygen fires in the U.S.: 2017-2019

BPR Medical examined media reports of home oxygen fires between December 2017 and August 2019 in the U.S. The report recorded a total of 311 incidents during this 20-month period and revealed that the actual home oxygen fire death toll is likely to be double compared with previous estimates by the National Fire Protection Association; between 100 and 150 deaths per year.

Death and injury toll

164 number of deaths recorded

1 death every 4 days

71 number of serious injuries

Risk to public health

1 in 3 incidents referenced an exploding cylinder

11 of the reported deaths were third parties, including family members or other residents

2018 The year a firefighter died when a propane tank exploded due to an oxygen fire

Property damage

\$15.3 million Estimated cost of property damage

61% Proportion of incidents in which a **whole dwelling was destroyed** or severely damaged

There were separate cases where **50, 60, 70, 100 and 110** people were forced to relocate as a result of an incident

Home oxygen fires represent a **much higher risk in the United States** than the United Kingdom, where stakeholders work together to reduce risk and where the fitting of oxygen firebreaks (also known as thermal fuses) is mandatory.

Fatalities per 100,000 patients

U.S.
6.6



Japan*
3.3



England**
0.34



A U.S. home oxygen user is twice as likely to die in a home oxygen fire than in Japan, and almost 20 times more likely than in England

19x  England **2x**  Japan

This new data points towards a material public health problem in the U.S., highlighting the urgent need for better practice and regulation.

* Where firebreaks were not universally mandatory (2013-17)

** 1 death was reported among 73% of the patient population (2013-17)

Sources: National Fire Protection Association (U.S.); Japanese Medical Gas Association; BPR Medical (2019) The prevalence and impact of home oxygen fires in the U.S.