Home oxygen fires in the United States: 2017-2021

In September 2019, **BPR Medical** reported that someone dies in a home oxygen fire at least every four days in the US.[1] Our latest analysis, **Firebreaks: a risk-based approach to safer home oxygen delivery** confirms that these fires remain a material public health issue, with burns delivering a significant human impact and financial burden.

From 2017-2021, there were:

567 Fires involving home oxygen

316 Fatalities

For those who survive, the impact is still significant

Or **1 death every 4 days,** including 2 firefighters

Almost 1 in 4 incidents resulted in serious injuries

Home oxygen fires cause at least **1000 burn injuries** per year.[2]

$1 million-$10 million

The potential cost of **medical treatment for burns,** from severe to more complex cases.[3]

More than half of patients with burns attributable to **smoking on home oxygen** die within a year of being discharged.[4]

Property Damage – Out of the 567 incidents:

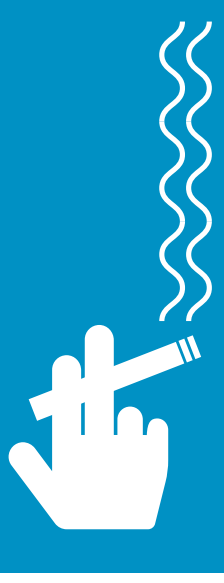
32% may have resulted in a cylinder explosion

35% saw a whole dwelling destroyed

45% led to evacuation

Patient education alone does not work…

Despite patient education on the risks, **smoking was associated** with the source of ignition in **71%** of incidents.



As many as 52% of home oxygen users **continue to smoke** while using oxygen therapy.[2]

…and should be combined with low-cost risk control measures such as thermal fuses (firebreaks):

63% The decrease in the number of patients admitted to hospital as a result **of oxygen-related burns** following the distribution of firebreak kits.[2]

In England, where firebreaks have been mandatory since 2006, there are **nearly 20x fewer oxygen fire fatalities** than in the US.[1]

1. *Weighted to reflect population differences: BPR Medical (2019), The prevalence and impact of home oxygen fires in the US, available at: http://www.firebreaks.info/wp-content/uploads/2019/09/BPR-WhitePaper-2019-v6.1.pdf*
2. *Mastropieri et al. (2020), 18 Stop the Burn: A Smoking and Home Oxygen Safety Initiative with Use of Firebreaks, Journal of Burn Care & Research, 41(1):S15. DOI: https://doi.org/10.1093/jbcr/iraa024.022*
3. *Paradigm (2018), The High Price of Burn Injuries, available at: https://www.paradigmcorp.com/news/the-high-price-of-burn-injuries/*
4. *Singer. et al. (2020), Mortality From Burns Sustained on Home Oxygen Therapy Exceeds Predicted Mortality, Journal of Burn Care & Research, 41(5):976–980. DOI: https://doi.org/110.1093/jbcr/iraa097*

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