

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 Further analysis, **Firebreaks: a risk-based approach to safer home oxygen delivery** published in 2021, confirmed 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



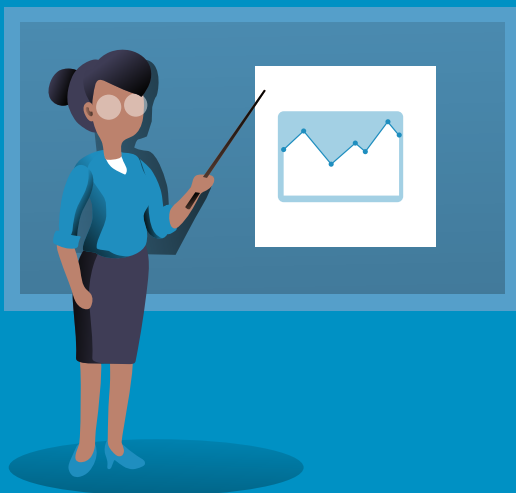
Patient education alone does not work...

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

71%
of incidents.



As many as 50% of home oxygen users continue to smoke while using oxygen therapy.⁵



...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/10.1093/jbcr/iraa097>

5. Wolff, B.K. et al. *Flash Burns While on Home Oxygen Therapy: Tracking Trends and Identifying Areas for Improvement*. *American Journal of Medical Quality*. Pre-published July, 11, 2016, DOI: 10.1177/1062860616658343



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