

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

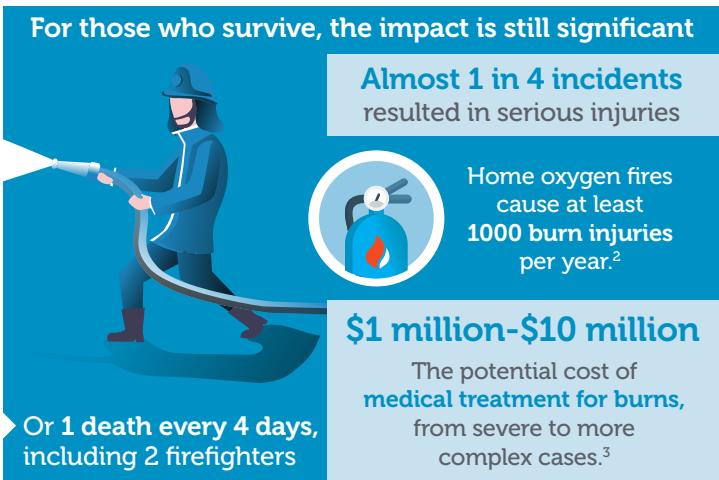
Almost 1 in 4 incidents resulted in serious injuries

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

Or 1 death every 4 days, including 2 firefighters



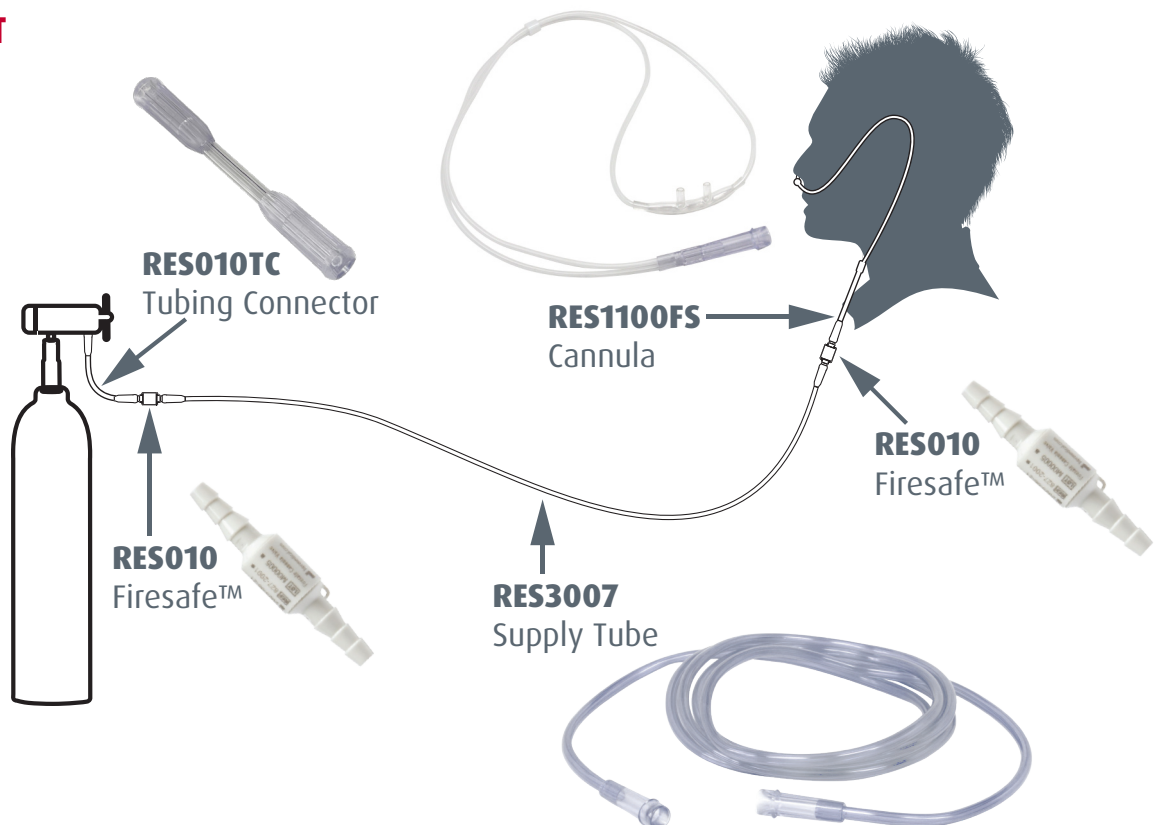
More than half



of patients with burns attributable to **smoking on home oxygen** die within a year of being discharged.⁴



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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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