



BURN PREVENTION

**SUCCESS STORIES
LESSONS LEARNED**



**World Health
Organization**

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Burns are a major public health problem globally. Fire-related burns alone account for more than 300 000 deaths per year, with more deaths resulting from scalds, electrical, chemical and other types of burn. Most of these deaths (95%) occur in low- and middle-income countries. Deaths are only part of the problem. For every person who dies from burns, many more are left with lifelong disabilities and disfigurements. These in turn have further consequences, including stigma, rejection and economic loss, both for the burn victim and their family.

There are many committed individuals and organizations working to confront the burden of burns in their own locations and globally. In order to assist these efforts, the World Health Organization (WHO) in 2008 – in collaboration with burn experts from around the world – released *A WHO plan for burn prevention and care* – hereafter referred to as the *Burn plan*. This set out a broad-based strategic plan to catalyse burn prevention and care efforts globally. It highlighted the need for improvements in burn prevention and burn care, as well as better information and surveillance systems, and increased attention to research and training. The plan included actions for WHO to undertake, and other actions for those working in burn and public health communities everywhere to take on.

One of the needs identified in the *Burn plan* was for more implementation of burn prevention strategies globally, especially in low- and middle-income countries. Those who compiled the *Burn plan* felt this could be encouraged by sharing information about effective burn prevention strategies already underway, and how to implement them. Also identified was a strong need for information to help burn prevention groups carry out more rigorous programme evaluation and monitoring.

In response to these needs, WHO compiled this publication, which includes examples of successful burn prevention strategies from around the world, and from a wide spectrum of economic situations. Strategies that have been shown to lower burn rates in high-income countries include smoke alarms, lowering hot water heater temperatures, and regulating the flammability of clothing, especially children's sleepwear. Some of these interventions are applicable to burn prevention globally, especially in urban areas and middle-income countries, but for much of the world, additional risk factors for burns exist and additional strategies are therefore needed. Thus, this publication also contains examples of promising burn prevention efforts that specifically address the burn scenario in low- and middle-income settings, such as safe wood-burning stoves and a comprehensive programme to decrease acid-throwing against women.

These examples have common themes and lessons learned. Foremost among them is that, as with any other health problem, burns can be addressed effectively and scientifically. This includes identifying the risk factors for burns through surveillance and research; developing well thought out prevention strategies that target these risk factors; and evaluating the results of these strategies rigorously, so that those that work can be promoted and those that do not can be stopped, with resources shifted elsewhere. Developing effective interventions is only part of the picture. There is a need to implement them population-wide, which requires a public health approach combining engineering, legislation and enforcement, and education and social marketing. For all of this, there is a need for advocacy, coalition building, and collaboration between different sectors and groups who may not be used to working together.

On behalf of the many people who have contributed to this publication and the millions of people whose lives could be saved, I call upon all of those working in burn prevention, those working more broadly in public health, and all who would like to reduce the unacceptable burden of burns globally, to make use of the lessons learned from the examples in this publication.

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EXECUTIVE SUMMARY

Greater application of burn prevention strategies globally would go a long way towards lowering the unacceptable burden of death and suffering from burns. There are many strategies that have proved to be effective, but have not been sufficiently promulgated globally.

The goal of this publication is to disseminate information on burn prevention strategies that have been successful, as well as those for which there is preliminary evidence suggesting their effectiveness, especially in low- and middle-income countries. This publication focuses on practical, affordable, and sustainable solutions and provides useful “how to do” methods. It also seeks to dispel the belief that little can be done to prevent burns. By so doing, and by providing lessons learned about on-the-ground methods for promoting burn prevention, this publication also seeks to catalyze increased burn prevention activities globally.

The publication first provides an overview of the basic principles of injury prevention, as applied to burns. Injuries in general and burns in particular can be addressed scientifically and effectively, just like any other health problem. Case studies of burn prevention strategies are then provided in two main categories – those that have been proven effective or have promising evidence of effectiveness, and those with preliminary evidence of effectiveness. Evidence for those in the proven/promising category includes well-documented scientific studies showing their effectiveness, as well as population-wide rates of burns decreasing sustainably over years and decades in response to widespread implementation of the strategies. Most of the evidence for successful strategies (e.g. smoke alarms, hot water heater temperature regulation) comes from high-income countries. Many of these strategies are indeed relevant globally, in locations where the epidemiological patterns and risk factors for burns are similar, such as in urban areas of middle-income countries.

However, for much of the world, especially rural areas and low-income countries, different risk factors contribute to the incidence of burns and different epidemiological patterns apply. In some settings, these risk factors are additional to risk factors found in high-income countries. In some settings, a totally different set of risk factors applies. Hence, there is a need

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