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BURN INJURIES IN PAKISTAN: A TWO-DECADE EPIDEMIOLOGICAL REVIEW AND A CALL FOR INTEGRATED ACTION

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Between 2001 and 2021, Pakistan's estimated burns prevalence rose from roughly 0.56 million to 0.85 million (around 51% increase), while the age-standardized prevalence rate fell from about 396 to 360 per 100,000 population. Over the same period, annual incident cases increased from around 75,800 to 105,00 (around 39% rise), yet the age-standardized rate declined from about 53 to 45 per 100,000 and the age-standardized mortality rate dropped by about 20% (2.6 to 2.1 per 100,000) despite deaths increasing in absolute terms from around 3700 to nearly 5000 at peak. These numbers capture a dangerous paradox: Pakistan is becoming relatively safer per capita, but more people than ever are being burned, surviving and living with long-term disability. [1]

This pattern mirrors global trends where burn incidence and mortality have declined in many regions, but progress lags in low and middle income countries (LMICs), which still account for the vast majority of burn deaths. A GBD 2017 analysis of injuries from fire, heat, and hot substances showed substantial reductions in age-standardized disability-adjusted life year (DALY) rates worldwide, yet much slower gains in low sociodemographic index settings, including South Asia. Pakistan's rising absolute burden against falling rates is therefore consistent with regional demographic expansion coupled with incomplete prevention and uneven access to timely, specialized care. [2,3]

Local clinical data underscores how these national trends translate at the bedside. A recent national burn centre cohort from Islamabad reported more than 14,000 burn visits and 613 admissions in a single year, with most injuries occurring at home, high proportions of flame burns, and substantial sepsis and wound-infection complications, despite an in-hospital mortality under 10%. Hospital stays for burn victims are longer than most conditions, estimated at approximately 16 days on average by a study at a burns centrre in Karachi. A systematic review of Pakistani burn studies found mean total body surface area involvement near 30% and an average mortality around 26%, reflecting the severity of cases reaching hospitals and the limited reach of specialized care. [4,5,6]

Taking together these data indicate that Pakistan has likely made genuine gains in acute survival through more burn units, better resuscitation, and improved critical care, while failing to reduce exposure to underlying risks or to provide comprehensive long-term support. The rising prevalence of survivors with burn sequelae implies growing need for reconstructive surgery, rehabilitation, mental health care, and social reintegration that are largely unmet in service models. Without a strategic shift, the health system will continue to inherit a steadily growing cohort of individuals with contractures, disfigurement, chronic pain, and psychosocial distress. [6]

This warrants more rigorous action. First, Pakistan needs to build a national burns surveillance and registry platform that links emergency departments, burn centers and other facilities to generate real-time data, equally accessible to primary as well as tertiary care hospitals. A system where burns data accessible through the patient's unique national identity card number will help form the exact framework. The same system is already practiced in Pakistan in the forms of TB and HIV/AIDS control programs.

Such data are essential to not only document and adjust response but to also identify population at risk and deploy effective targeted preventive measures.

Studies have shown that certain population groups like housewives, students are more prone to get burn injuries. Furthermore, open flames in kitchens, hot water in the winters and electrical burns are the most common causes of burns. Prevention must move upstream into housing, energy, occupational policies like safer LPG and electrical infrastructure, enforcement of industrial safety standards and safe homes/kitchens programs targeted to poor, crowded urban and rural settings. Burns should also be integrated into universal health coverage and government sponsored Sehat Card program, under which appropriate medical, surgical and psychological support must be provided, so that survival doesn't mean lifelong disability. [6,8]

Finally, sustained research is needed to close persistent evidence gaps, especially sex and age stratified analyses, provincial disparities, and the long term quality of life outcomes of survivors. The GBD based trends provide a powerful national narrative, however on-ground studies from various parts of Pakistan to identify the 'modifiable' risk factors are the need of time. The imperative then is to translate that narrative into policy, infrastructure and practice that bend both the rates and the absolute numbers of burn injuries, deaths, and disabilities downward over the coming decades. The fight against can only be won with careful planning and patience.

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