



Interplast Study Summary
Fall 2007

The Burning Global Health Crisis

As the world's attention and resources focus on three major diseases (malaria, tuberculosis and HIV/AIDS), Interplast has undertaken a study to see how the impact of severe burns compares. The findings are surprising: numbers like 3.8 million women fall victim to a severe burn from fire each year—the same number who are diagnosed with HIV or AIDS every year.ⁱ

During its almost 40 years of working in developing countries, Interplast has helped those who survive burns—restoring their ability to walk or to use their hands through reconstructive surgery.

Most burn-related disability is due to permanent tightening or contracture of the skin as the burn wound heals, which occurs when there is no immediate access to adequate medical care. Such burn contractures can severely limit mobility and may damage the underlying nerves. For example, without adequate acute burn care, a burned foot may attach to the shin as the wound “heals” and the skin contracts, consequently eliminating the ability to walk. By releasing contractures, surgeons restore movement and function to the afflicted areas.

Over the decades, Interplast has witnessed the devastating consequences of burn-related injuries—but this study demonstrates that the grave need Interplast has seen in the field is also a health care crisis of global proportions.

Using World Health Organization's (WHO) statistical databases to compare diseases, Interplast finds that:

- Just as many women worldwide suffer a severe burn from fire each year as are diagnosed with HIV or AIDS.ⁱⁱ
- More school-aged children die of fires each year than of tuberculosis or malaria.ⁱⁱⁱ
- Three times as many Southeast Asians suffer a severe burn than contract HIV/AIDS;^{iv} and
- More girls in that region die of fires than die of tuberculosis, HIV/AIDS and malaria combined.^v

The above statistics describe the scope of severe burns from fires, but do not adequately illustrate the impact a burn has on the survivor, who may be forced to live with the economic, physical and psychological scars of disfigurement and permanent disability. This impact is measured in terms of disability-adjusted life years (DALYs), which is a WHO calculation of the productive years lost due to the burden of having a certain disease or disability, like a disabling burn. With this measurement,

- Worldwide, school-aged girls lose almost as many productive years because of a disabling fire burn as from tuberculosis and malaria combined.^{vi}
- African children lose six times more productive years from disabling fire burns than from war.^{vii}
- Females in Southeast Asia lose more productive years from fire burns than from malaria and HIV/AIDS combined;^{viii}
- School-aged girls in the same region lose 1.5 times more productive years from fire burns than malaria, HIV/AIDS *and* tuberculosis combined.^{ix}
- And even in developing countries with high mortality rates due to rampant disease, girls still lose almost as many productive years due to fire burns as from tuberculosis and malaria combined.^x

But the ability to show the complete scope and impact of severe burns remains limited; these global statistics do not account for burns caused by means other than fire. The only type of burn statistic currently gathered by the WHO is on burns caused by fires; yet, disabling burns also frequently occur because of electrocutions, hot cooking liquids and acids in cases of domestic violence—and those disproportionately impact women and those living in poverty, especially in developing countries. Therefore, the prevalence of burns and its impact on women and the poor is higher than the WHO data present. . In developing countries, it is speculated that fire burns represent only around 60 percent of all burns. While one cannot assume that ratio for burns worldwide, it is reasonable to conclude that the problem of burns may be significantly higher than presented here.

ⁱ Source: WHO's Estimated annual incidence ('000s) for selected causes: by sex, age and WHO subregion 2002.

ⁱⁱ Same as above.

ⁱⁱⁱ Source: WHO's GDB 2002: Deaths by age, sex and cause for the year 2002. Children 5-14 who die of fires each year: 34,180; of tuberculosis: 33,182; of malaria: 15,633

^{iv} Source: WHO's Estimated annual incidence ('000s) for selected causes: by sex, age and WHO subregion 2002. The sum of HIV and AIDs in SEARO is 1,211,000; fire burns in SEARO: 3,641,000.

^v Source: WHO's GDB 2002: Deaths by age, sex and cause for the year 2002. Girls 5-14 who die of fires each year, 9700; of TB, 6337; of HIV/AIDS, 2105; of malaria, 352. Last three together: 8,794.

^{vi} Source: WHO's GBD 2002: DALYs by age, sex and cause for the year 2002, World. Girls 5-14 DALYs from fire, 1,373,826; from TB and malaria, 1,423,693.

^{vii} Source: WHO's GBD 2002: DALYs by age, sex and cause for the year 2002, AFRO. Children 0-14 DALYs from fire, 1,659,465; from war, 259,774. $259,744 \times 6 = 1,558,464$.

^{viii} Source: WHO's GBD 2002: DALYs by age, sex and cause for the year 2002, SEARO. Females DALYs from fire, 4,634,030; from HIV/AIDS, 3,031,666; from malaria, 1,288,938.

^{ix} Source: WHO's GBD 2002: DALYs by age, sex and cause for the year 2002, SEARO. Girls 5-14 DALYs from fire, 841,284; from tuberculosis, HIV/AIDS and malaria, 533,466.

^x Source: WHO's GBD 2002: DALYs by age, sex and cause for the year 2002, Developing Countries High Mortality. Girls 5-14 DALYs from fire, 1,186,752; from malaria, 544,525; from tuberculosis, 681,562; malaria and tuberculosis combined, 1,226,087.