

A SoLiD base from which to prevent injuries in Bangladesh



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Injuries are often predictable and preventable. Epidemiological studies can identify the mechanisms through which injuries are sustained, and such studies can show how certain types of injuries are the consequence of particular circumstances and affect specific population groups. The identification of these circumstances presents an opportunity for intervention to prevent the injury. Why then, should injury—one of the most preventable public health challenges—continue to be the cause of 10% of the global burden of disease?¹ The Saving of Lives from Drowning (SoLiD) project, described by Olakunle Alonge and colleagues in *Lancet Global Health*,² highlights the complexity of the answer to that question.

The burden of injury is often illustrated as a pyramid, with deaths from injury at the top.³ In the band below are a larger number of people who do not die, but are admitted to hospital after an injury. The next two bands are the increasingly larger numbers of people who seek care for injuries either from emergency departments or primary care. At the bottom of the pyramid are the largest group of people who are injured but never come to the attention of health-care services. Unfortunately, the further down the injury pyramid, the less complete and accurate are the available data. High-quality injury data are needed for two reasons: to understand the injury mechanisms to enable development, testing, and implementation of prevention interventions; and to advocate for actions that can keep people safe—eg, through legislation, environmental changes, or product design.

In high-income countries, we know a great deal about the people who die from injuries. Serious-case reviews, post-mortem examinations, and coroner's enquiries, provide a wealth of information on the circumstances leading to death and opportunities to intervene. However, fewer than half of high-income countries have injury-surveillance systems that enable us to routinely capture data on non-fatal injuries.⁴ WHO has estimated that 90% of global deaths from injuries occur in low-income and middle-income countries (LMICs).³ It is understandable that LMICs might struggle to acquire enough quality data on injuries, given that some do not have access to health care for all, or adequate death registration, let alone injury-

surveillance systems. Population-based injury studies in such countries are therefore rare, yet as Alonge and colleagues show, collection of high-quality local level data is feasible. This team undertook a household survey in 51 rural communities in Bangladesh, including more than 270 000 homes across 451 villages, and captured the injury experiences of almost 1.2 million people.

The estimated annual burden of injury in rural Bangladesh revealed by this study was striking; 44 050 deaths and 21 million people suffering major injury events annually that were severe enough for them either to be unable to go to work or school for a day, or severe enough for them to seek treatment for their injury. Some of these injuries will have lifelong consequences for the individual and the family concerned. Not only are poorer families more likely to suffer injuries, but injuries can also tip families into poverty, both because the individual or their family need to pay for health care that they cannot afford, and because the individual might no longer be able to work, thereby reducing long-term income for the family.^{5,6} Additionally, such vast numbers of patients with injuries place an avoidable burden on the health-care services of these countries.

Global patterns of injury are broadly transferable to many countries, but this study shows the need for local data to identify country-specific issues for injury prevention. Road traffic has been highlighted as one of the most preventable and important causes of ill health, such that there is a Sustainable Development Goal target to halve the number of global deaths from road traffic by 2020.⁷ But although road traffic is an important cause of injury in Bangladesh, more people die from drowning, especially pre-school children, adults with occupations on the water, and people of all ages at times of natural disasters such as monsoons and flooding. Other challenges highlighted by Alonge and colleagues' study² included falls in the elderly, suicide in young women, and significant seasonal variations and sex inequalities in injury incidence. These local data provide Bangladesh with the evidence to enable targeted action to priority areas.

As the UK Chief Medical Officer put it in her 2013 annual report, which focussed on preventable ill health in children, "prevention pays".⁸ The economic argument

for concerted public health actions to prevent injuries is clear.⁹ Unfortunately, the preventability of injury is often unrecognised and neglected, but Alonge and colleagues have shown that any country can generate the evidence to enable the actions needed. Their challenge will now be to ensure that this valuable evidence is acted upon through programmes for injury prevention and disaster resilience, and that there is a system established to enable monitoring of ongoing trends in injury occurrence.

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