

## Office of Research

# CHILD DROWNING IN LMICs IN ASIA: KEY DATA, MESSAGES & RECOMMENDATIONS

**Countries covered:** Five low and middle income countries in Asia: Bangladesh, Cambodia, China (Beijing and Jiangxi Province), Thailand and Viet Nam. (Data also included from India's 2005 Million Death Study).

**Data sources:** A series of standardized national and sub-national surveys in the above countries/areas by The Alliance for Safe Children in collaboration with the UNICEF Office of Research/ Innocenti Research Centre, and UNICEF country offices in the respective countries. Surveys counted child deaths directly at households within communities, and compared the data with figures available from health centres and hospitals.

### 8 Key Facts

- 1) Drowning is a leading cause of death for children after infancy (1-17 years) in the Asian countries surveyed for this report. In these countries, one out of five deaths among children after infancy was due to drowning.
- 2) Drowning deaths are heavily concentrated in early childhood; for children aged 1 to 4 years, drowning is responsible for 25% of deaths from all causes.
- 3) Drowning is not a new killer. It has long been a leading killer (after infancy) in low and middle-income countries in Asia, but has been remained undetected as a significant health issue due to structural and cultural factors.  
Previous figures resulted from a heavy reliance on reporting from hospitals and other health facilities. However, most children who drown are never taken to a health facility because their deaths are immediate, facilities may be located far away from the community, and/or because those who may report the drowning fear financial repercussions. Thus, the Report argues that numbers have been markedly underreported. A more accurate assessment of the number of child drowning deaths is now available through the surveys, which interviewed parents in their homes.
- 4) In three countries (Bangladesh, Cambodia and Thailand), the substantial differences between the World Health Organization Global Burden of Diseases (GBD) 2004 fatal drowning estimates *and* the survey estimates lends uncertainty to policymaking processes for prevention of child drowning. (In Bangladesh, for example, the difference was more than 300%.) The GBD process corrects and adjusts reported data, and imputes missing data. There is potential for error given the complexity of the process, the uncertainties involved in adjustments and other factors. In the absence of reliable drowning data that facilitates estimates based on a count of actual deaths, the use of 'virtual' deaths (such as those provided by the GBD) serves a policy purpose by allowing planners to prioritize causes of death. However, if the estimates produced are not accurate this may lead to unintended negative policy consequences. There is a clear need for reliable data to underpin policy formulation.

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- 5) In the countries surveyed, the number of children (1 to 17 years) who die from drowning is more than the number who die from measles, polio, whooping cough, tetanus, diphtheria and tuberculosis combined —and the cost of drowning prevention among children is no more expensive than interventions for these diseases.
- 6) Almost 9 out of 10 children in rural homes in these Asian countries live within 20 meters of a water body that presents a drowning risk. Rural homes lack piped water and need water close by for cooking, bathing and for watering the animals. Very young children escape active supervision and drown in these and other bodies of water very close to the home. After age five, children drown in ponds and other water bodies in the community further away from home.
- 7) For children of all ages, 90% of drowning deaths occur in sunny weather. Catastrophic events such as severe floods, cyclones, typhoons and ship sinkings get media attention but account for a very small proportion of drowning deaths. The vast majority of child drownings occur in the daily routine of children's lives, in good weather.
- 8) New research into prevention interventions in an operational research programme called PRECISE (in Bangladesh) shows startling – and cost-effective - results:
  - As a result of having adequate supervision and protection from drowning hazards, drowning death rates in children aged 1-5 attending village crèches were 82% lower than among children who did not attend. Differences in drowning rates are therefore associated with a child's environment during early childhood.
  - Drowning death rates in children 4 years and older who participated in SwimSafe (water safety, survival swimming and safe rescue training) were more than 90% lower than among children who did not attend.
  - The cost of preventing these drowning deaths was similar to preventing other leading causes of child death such as pneumonia and diarrhoea.

#### **Key Messages/Recommendations for Governments**

- 1) Combating drowning deaths should be made a national priority. This may be done through expanding efforts to identify at-risk children and mapping the true prevalence of drowning, and providing support to non-governmental organizations and civil society efforts in data collection and, critically, prevention programmes.
- 2) Drowning deaths are preventable. There is evidence that interventions are cost-effective, sustainable and can be scaled up.
- 3) Protecting children from drowning goes hand in hand with early childhood development. Ensuring that 1-5 year olds are in safe places (e.g. crèches, day care centres) has a remarkable double benefit. While under supervision in day care children are kept away from the drowning hazards that are ubiquitous in the environment of LMICs, these children

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(and their parents) will also have critical access to early childhood development (ECD). A report released in *The Lancet* on 23 September 2011 was unambiguous: poor nutrition, maternal and family stress and poverty affect brain development from the prenatal period or earlier. The Report noted that 'ECD programmes can a safe haven for children, protecting them from drowning while providing stimulation, health and nutritional support and learning. Early childhood is the most effective and cost-effective time to ensure that children develop to their full potential'.

- 4) Drowning should be counted directly at the community level where it occurs and not only from hospitals and other facilities where it is under-reported. Capacity needs to be built within the health care system and among staff to monitor and record drowning deaths accurately.
- 5) The same capacity for drowning interventions needs to be built into child health, development and protection communities, as the required skills in this new area are unfamiliar to current programme staff.

#### **Key Messages / Recommendations for Development Agencies**

- 1) Raise the issue of drowning in Asian LMICs, given that the number of child fatalities is significant and may affect achievement of the MDGs on child mortality
- 2) Emphasize the linkages between drowning and injury prevention with early childhood development.
- 3) Support drowning-prevention programme integration (survival swimming, for instance) with on-going public health programmes across sectors such as maternal and child health, education, disaster risk reduction, rural development, water and sanitation. All these sectors have existing infrastructure and capacity.
- 4) Develop and initiate public awareness campaigns targeting children, caregivers and communities. Campaigns should take into account the two separate epidemics of child drowning: that which affects children under age four, which requires a focus on parents and other caregivers; and drowning among older children, which happens further from home in the community and require a focus on children themselves.
- 5) Deaths only count when they are counted:
  - Use community-based methods in order to get an accurate count of drowning deaths.
  - Include drowning as an indicator in mortality and health surveys. There is a need for the inclusion of drowning indicators in programme management systems at national, regional and global levels.

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