

Child drowning in Asia: From evidence to action

Michael Linnan¹, Fazlur Rahman², Aminur Rahman^{2,3}, Justin Scarr^{4,5} and Ross Cox¹

The Alliance for Safe Children¹, Centre for Injury Prevention Research, Bangladesh², International Drowning Research Centre – Bangladesh³, Royal Life Saving Society – Australia⁴, Drowning Prevention Commission, International Life Saving Federation⁵

The scale of the child drowning epidemic in Asia has been greatly underestimated by the global public health community, in large part due to the current methods of estimating drowning deaths and projecting them across many countries where there is little, if any, population-based data. The large disparity in the numbers of children drowned estimated by the Global Burden of Disease for Vietnam and Bangladesh and those found in the countries when directly counted, led to a series of large, household surveys in low and middle income countries (LMICs) across east and south Asia.

The surveys have shown a number of fundamental differences with the conventional wisdom on drowning in LMICs in Asia: Beyond the large difference in numbers of children drowned when estimated compared to counting them directly, there are actually two epidemics – one in children under five, and one in children over five and both epidemics differ from those in same-aged children in high income countries.

The surveys collected detailed information on risk factors and examined their association with the risk of the child drowning. For very young children the risk factors examined were those related to loss of active, adult supervision. For the older children, case-control studies nested within the surveys examined the association of the lack of swimming ability and increased risk of drowning. In both groups the risk factors were significantly associated with increased risk of drowning.

Both risk factors were potentially modifiable on a population basis through development of interventions designed to specifically target both factors. Thus began a four year collaborative effort funded by UNICEF Bangladesh with the Centre for Injury Prevention Research, Bangladesh, The Alliance for Safe Children and the Royal Life Saving Society – Australia to show the efficacy and cost-effectiveness of interventions that were suitable for the low resource setting of a rural LMIC, where the largest burden of the child drowning epidemic occurred. The program has shown a four-fold reduction in drowning mortality in children in early childhood and a five-fold drowning mortality reduction in middle childhood and adolescence. With the involvement of AusAID as a participating partner, the program is now focused on developing the means to achieving national scale so that child drowning in LMICs can be reduced to the same scale as HICs.

Corresponding Author

Michael Linnan
Technical Director
The Alliance for Safe Children
Telephone: 662-652-0278
Email: mlinnan@tasc-gcipf.org