

821 A GOOD PRACTICE ON CHILD DROWNING PREVENTION IN RURAL AREAS IN CHINA

Qingtian Huang, Yanling Tan, Yonghong Chen, Junqiang Yang, Wanhua Yi, Youqiao Zhou, Yili Huang, Lin Wang. *Lishui Safe Community, Foshan, Guangdong*

10.1136/injuryprev-2016-042156.821

Back ground (issue/problem) Drowning is the first killer for children aged 14 and under in China. Death rate of drowning among Chinese children's in rural areas is 1.5 times that of children in urban cities. Open water and other water hazards are the main risks.

Description of the problem Lishui is a community in southern China, Guangzhou provinces. It is an open water-based community. Lishui Hushun Primary School is the one with 2085 students from 8 rural villages. 46% of the students are migrant worker's children. Community's injury surveillance told that since 2010, 95% of the children died from drowning were migrant worker's children and during playing in or near open water in the villages.

Results (effects/changes) In addition to the community injury surveillance system, Lishui community initiated a Risk Assessment System (RAS) and a Safety Enforcement System (SES). The RAS conducted by school teachers and community staffs using photovoice method. Data of the photovoice were evaluated, child-readable signs were assigned at the evaluated risky spots and photovoice exhibition were conducted at school and villages regularly. The SES were conducted by village-based team including school teacher, senior students and community staffs who live in each villages. With the RAS, 137 drowning risky spots were identified, 20% environment related risks were changed, all the risks were marked with safety signs. The SES were conducted by a team of 20 school teachers, 24 senior students and 16 community staffs, educating and enforcing behaviour related risks. Since 2013, there was not a single child died or injured by drowning.

Conclusions Risk assessment using photovoice is a good way for environment change. Photovoice exhibition is a good way for awareness building and behaviour guide. Enforcement through local collaborating teams is effective and sustainable. Drowning to children in rural areas with open water is preventable.

822 SWIMSAFE – CHILD SURVIVAL SWIMMING SKILLS – RISKS MANAGEMENT

¹Stephen Beerman, ²Mike Linnan, ³Aminur Rahman, ³Fazlur Rahman, ⁴Justin Scarr. ¹University of British Columbia, Canada; ²The Alliance for Safe Children; ³Centre for Injury Prevention and Research, Bangladesh; ⁴Royal Life Saving Society Australia

10.1136/injuryprev-2016-042156.822

Background Child drowning in LMICs has become a major new public health issue. Drowning is the leading cause of death in children 1–17 yrs in Bangladesh. The lifecycle approach addresses child drowning for each age group. The BASS program is a multi-intervention drowning prevention program in rural Bangladesh demonstrating sustainable, effective interventions that can be scaled up.

Methods Community-based Participatory Research was done in a rural community under injury surveillance. The partners in the research are UBC, CIPRB, TASC and RLSSA. SwimSafe is one of a suite of interventions. Risks of the SwimSafe intervention have been carefully reviewed and mitigated.

Results There is risk assessment and mitigation in the planning and implementation of SwimSafe. The risks are greater when SwimSafe is provided in village ponds. Village pond risk

management is also needed to ensure that the pond is not an add source of risk. Consultation with experts within the RLSSA is ongoing. There is Community Swimming Instructor (CSI) Training and policy on water instructor to child ratios, and other risk management issues. There have been no BASS SwimSafe training significant injuries or drowning events. SwimSafe was provided for 1393 children 3–9 yrs. 73% met the SwimSafe competency. Pass rates are not acceptable until age 6. There is increased safety risk with children under 6 yrs. SwimSafe for children with disabilities is possible but the impact remains unclear.

Conclusions Risk management is a very important part the SwimSafe intervention in pond structures. Training and policy for CSI's and supervision for enforcement is needed to prevent unintended injury or mortality. The risks are greater in children under the age of 6. The ratio of CSI to learners and the careful management of the in water teaching sessions is necessary. SwimSafe training for children under 6 yrs of age, is recommended only in research settings with high risk management ability. Interventions for children with disabilities remains a challenge.

823 VILLAGE INJURY PREVENTION COMMITTEES A DROWNING PREVENTION STRATEGY

¹Stephen Beerman, ²Mike Linnan, ³Aminur Rahman, ³Fazlur Rahman, ⁴Justin Scarr. ¹University of British Columbia, Canada; ²The Alliance for Safe Children; ³Centre for Injury Prevention and Research, Bangladesh; ⁴Royal Life Saving Society Australia

10.1136/injuryprev-2016-042156.823

Background Forming and facilitating Village Injury Prevention Committees is being evaluated as an interventions in the Bangladesh Anchal and SwimSafe (BASS) Child Drowning Prevention Project. The burden of child drowning in Low and Middle Income Countries (LMICs) had become a major new public health issue. Drowning is the leading cause of death in children 1–17 yrs in Bangladesh and other LMICs. Drowning prevention recently emerged as a priority public health intervention focus.

The Bangladesh Anchal and SwimSafe (BASS) Child Drowning Prevention Research introduced low cost child interventions that are culturally appropriate, community based, safe and effective, using a life-cycle approach.

Methods Community-based Participatory Research was undertaken in a rural community under injury surveillance. The partners in the research are UBC, CIPRB, TASC and RLSSA. The interventions included Anchals, SwimSafe, First Responder/CPR and community engagement. Village Injury Prevention Committees are formed as one aspect of community engagement. Elders, spiritual leaders and village elected officials are invited to volunteer to participate in support of the drowning and injury reduction project.

Results Village Injury Prevention Committees provide advice to the BASS Child Drowning Prevention Field Team and Project Leadership Team. They assist with the transitions of thinking and actions when interventions are new or challenge traditional cultural beliefs or behaviours. The Committee assist with selection of pond and Anchal sites, notifications of programs, recruitment, coaching and support for staff. They assist with the event verbal autopsy intervention.

Conclusions Village Injury Prevention Committees assist the BASS Child Drowning Prevention Project in many important ways. Their advice to the project staff/leaders and their education and reassurance to their community, improves the effectiveness and reach of the other interventions.

824 A CROSS COUNTRY ANALYSIS OF DROWNING IN SRI LANKA: 2001 TO 2006 AND 2009

¹Bernadette Matthews, ¹Rhiannon Birch, ¹Mevan Jayawardena, ²Dushani Mathew, ²Asanka Nanayakkara, ²Sanath Wiyayaratne, ³Samath D Dharmaratne. ¹*Life Saving Victoria*; ²*Life Saving Association of Sri Lanka*; ³*Department of Community Medicine, Faculty of Medicine, University of Peradeniya, Sri Lanka*

10.1136/injuryprev-2016-042156.824

Introduction Drowning is a major cause of death and injury in Sri Lanka. Published data on the number and causes of drowning incidents of provinces are scarce. Therefore, we conducted this analysis to describe the burden of drowning in Sri Lanka from 2001 to 2006 and 2009 by province.

Methods Data from the first drowning report, 'Drowning prevention report Sri Lanka', published in December, 2014 by the Life Saving Association of Sri Lanka and Life Saving Victoria was used in this analysis. This report includes unintentional drowning deaths reported in Sri Lanka during the study period.

Results Sri Lanka consists of nine provinces, with the North Central being the largest (16% of total area) and the Western the smallest (5.6% of total area). The highest proportion of the population (28.6%) live in the Western province and the smallest in the Northern province (5.6%). Each year, an estimated 236 people die in the Western province from drowning while 44 die in the Uwa and the Northern provinces. The death rate is highest in the North Western province (6.3 per 100,000) and lowest in the Central province (3.4 per 100,000). North Western (6.3), North Central (5.4) and Southern (4.2) provinces had a higher drowning death rate than the national average (4.4 per 100,000). Even in some of the provinces adjoining the ocean (Eastern and Northern), the commonest location of drowning was reportedly lakes and wells.

Conclusion Significant cross country differences identified in this analysis should be used by policy makers to prevent deaths from drowning in Sri Lanka.

825 THE BURDEN OF DROWNING IN SRI LANKA: 2001 TO 2006 AND 2009

¹Bernadette Matthews, ¹Rhiannon Birch, ¹Mevan Jayawardena, ²Dushani Mathew, ²Asanka Nanayakkara, ²Sanath Wiyayaratne, ³Samath D Dharmaratne. ¹*Life Saving Victoria*; ²*Life Saving Association of Sri Lanka*; ³*Department of Community Medicine, Faculty of Medicine, University of Peradeniya, Sri Lanka*

10.1136/injuryprev-2016-042156.825

Introduction Drowning is a major cause of death and injury in Sri Lanka. Published data on the number and causes of drowning incidents are scarce. Therefore, we undertook this analysis to describe the burden of drowning in Sri Lanka using available data from 2001 to 2006 and 2009.

Methods Data from the first drowning report, 'Drowning prevention report Sri Lanka', published in December, 2014 by the Life Saving Association of Sri Lanka and Life Saving Victoria was used in this analysis. This report includes unintentional drowning deaths reported in Sri Lanka during the study period.

Results During study period, on average, 855 people died from drowning each year, producing a drowning rate of 4.4 deaths per 100,000 persons. Males were four times more likely to drown than females. Adults aged 25 to 44 years had the highest number of drowning deaths, followed by the 45 to 64 year group, but the

age specific death rate was highest in those aged 65 years and over (8.25 deaths per 100,000). Lakes, wells and open cisterns, and the ocean were the commonest reported drowning locations in Sri Lanka.

Conclusions Globally, the drowning rate of Sri Lanka is ranked 12th in a comparison of 61 countries, highlighting that this is an important public health problem. Middle aged males are mainly affected, therefore intervention strategies are needed to target this group. Significantly, the highest risk location is lakes, although Sri Lanka is an island. This analysis, a first of its kind, should be used by policy makers to control and prevent deaths from drowning in Sri Lanka.

826 ANALYSING A DROWNING CASE IN COX'S BAZAR BEACH IN BANGLADESH: IMPLICATION FOR FUTURE INTERVENTION

¹Salim Mahmud Chowdhury, ¹Jahangir Hossain, ²Steve Wills, ¹Fazlur Rahman. ¹*Centre for Injury Prevention and Research, Bangladesh (CIPRB)*; ²*Royal National Lifeboat Institution (RNLI)*

10.1136/injuryprev-2016-042156.826

Background Beach tourism has become very popular in many countries including Bangladesh. However, number people dying in these beaches due to lack of safety measures. In this study, we aimed at identifying possible solution in preventing beach drowning.

Methods An in-depth analysis (case study) of a drowning case of Cox's Bazar beach, Bangladesh was analysed for this study.

Findings Mishu, a university student was on holiday in Cox's Bazar with his family. On 06 September 2014, he went with his family members to the nearest beach to the hotel where they were staying. Mishu, along with his four cousins, agreed to go into the sea to the chest depth. None of them knew how to swim except Minhaz one of the cousins. They went under the rolling and turbulent water when a large wave came in and broke over their heads. Minhaz tried to help Mishu by pulling him back to the shore. But, he couldn't as Mishu was quite heavy. Mishu was under the water for about one minute. A patrolling SeaSafe lifeguard and another SeaSafe lifeguard in the watching tower observed the incidence. Both lifeguards rescued the victims from the water and kept the victims in the recovery position at the shore. Mishu started to vomit blood while he was in recovery position. Unfortunately, there was no ambulance available to transfer him to a hospital. So, the lifeguards hired an auto. After arriving at the hospital, he was kept in the recovery position and oxygen and an intravenous saline drip 10 minutes after his arrival. His family members were requested to fill in various forms before they started treatment. After few minutes, he became conscious and talked to his relatives. There was no doctor in the emergency department at that time. As the hospital lacked any expertise to help drowning victims immersed in saline water, Mishu's family was requested to transfer him to the nearest (143 km from Cox's Bazar) tertiary level hospital for further treatment. Mishu's condition worsened and he died within two hours of his arrival in the hospital.

Conclusion Analysis of this case could be a think point for enforcing beach patrolling by lifeguards (with lifesaving skills) and establishment of emergency medical care with ambulance services.