

# Child injury in 5 countries in Asia

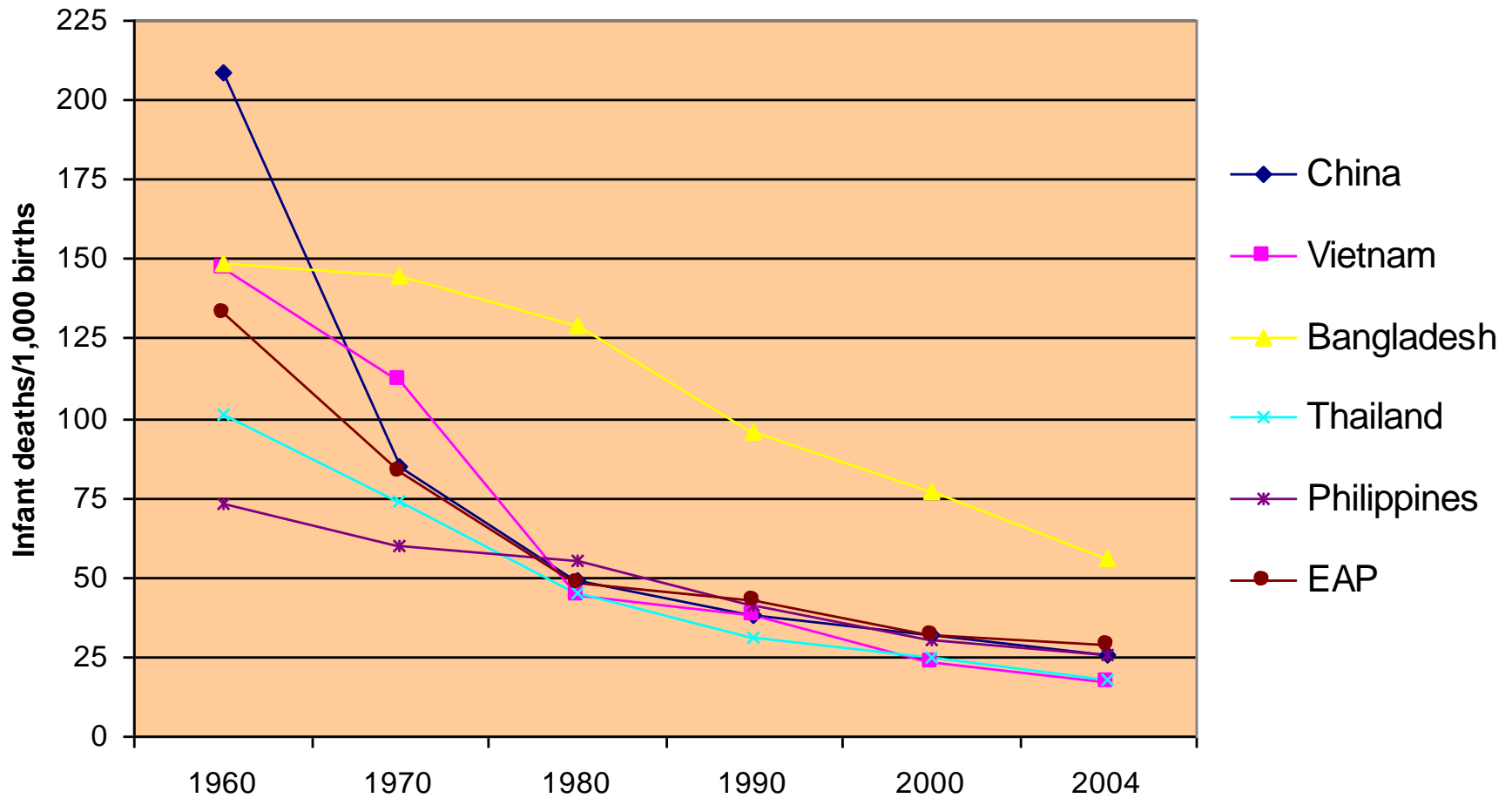
A collaboration between TASC, UNICEF country offices and technical partners in each country

Dr Michael Linnan  
Technical Director,  
The Alliance for Safe Children

# Six lessons from the surveys:

1. Previous estimates were based on the epidemiology of the 1970s and 1980s – Asia is a different place now
2. The way mortality was measured missed many child deaths
3. After infancy, the leading cause of child death was injury
4. One type of injury – drowning- caused over half of all child injury deaths
5. Each stage of childhood has a different pattern of injury
6. Fatal injury is only the tip of the iceberg – nonfatal injury accounts for most of the social and economic costs

# 1. Previous estimates were based on the epidemiology of the 1970s and 1980s – Asia is a different place now



## 2. The way mortality was measured missed many child deaths

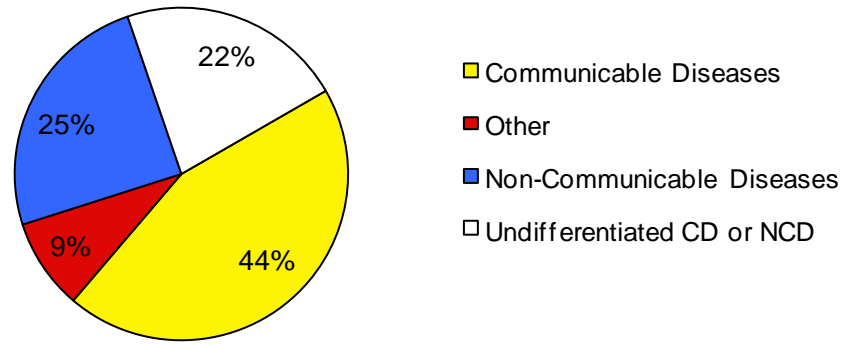
Data from Thailand Survey:

There were 21 child drowning deaths when asked by household interview in the community

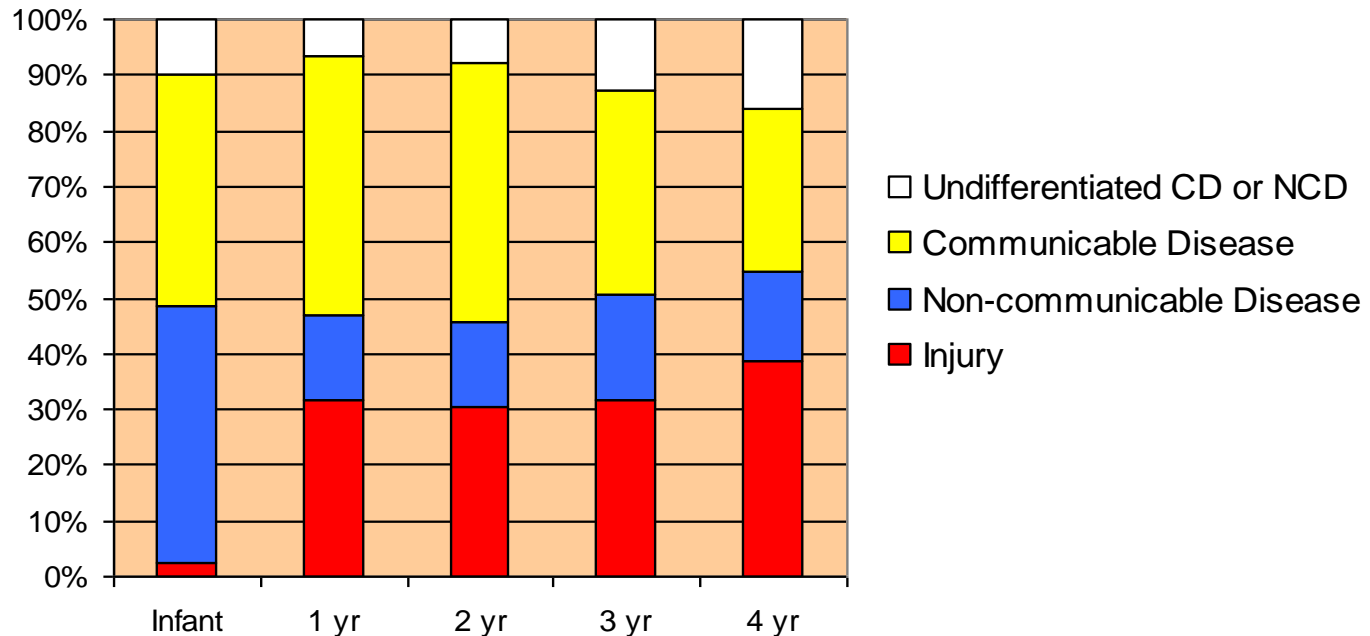
Only 6 drowning deaths were known at the hospital. All six were children who were still alive when brought to the hospital, but died subsequently

Hospital and other health facilities have a very strong survivorship bias – to be reported as dead by a hospital, the child has to survive long enough to get to the hospital

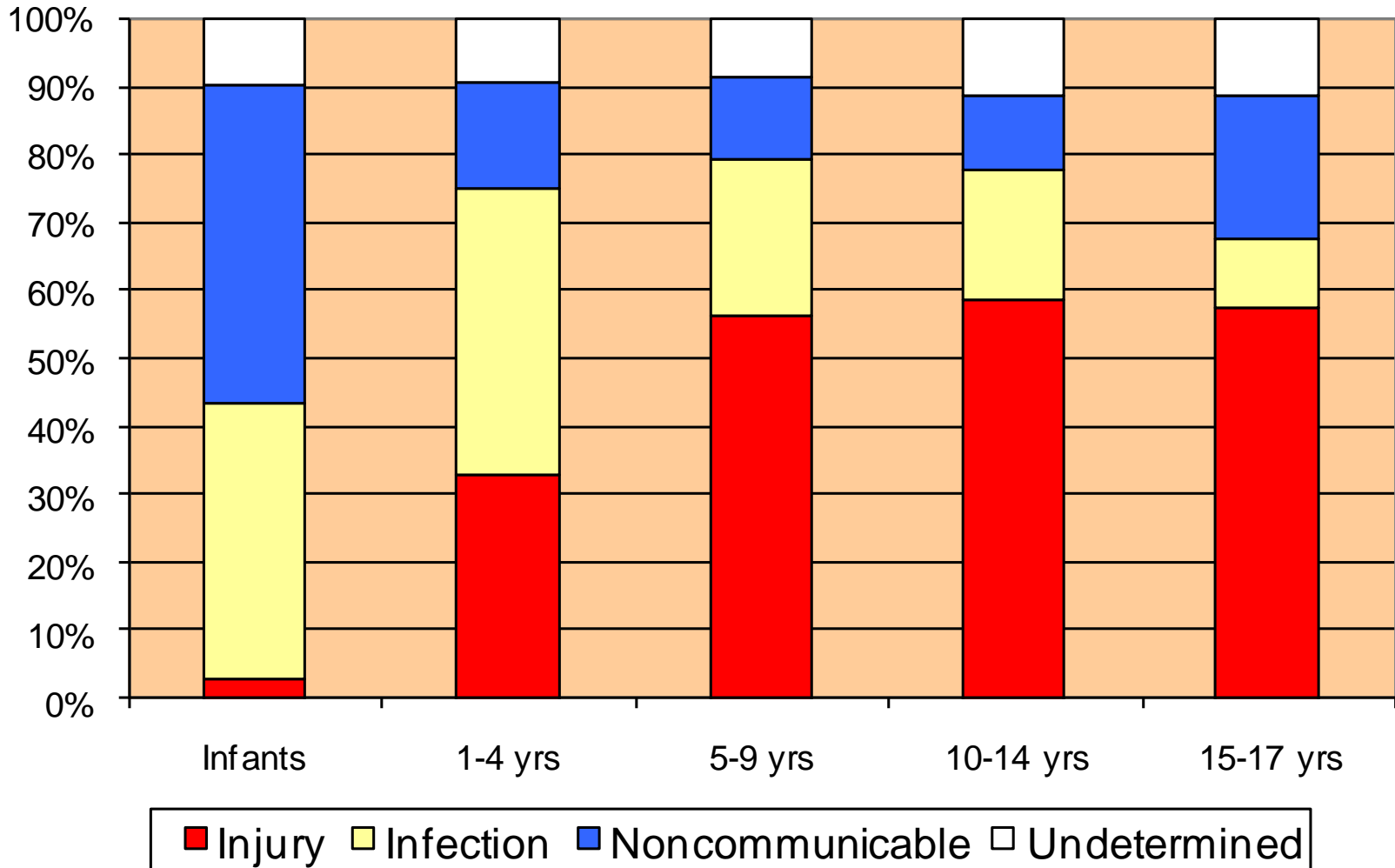
## 2. Also, previous estimates did not include injury



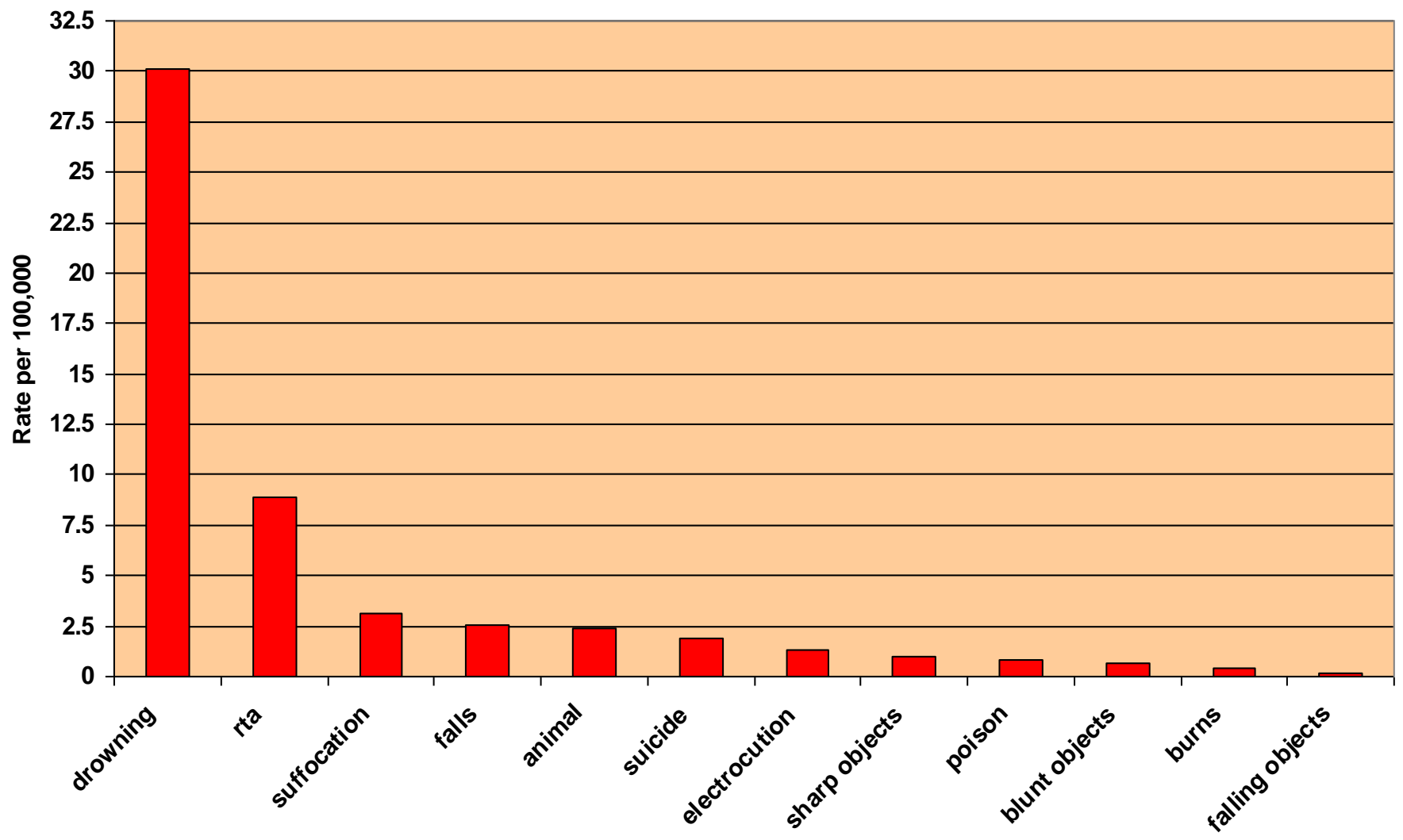
The surveys counted these deaths as well



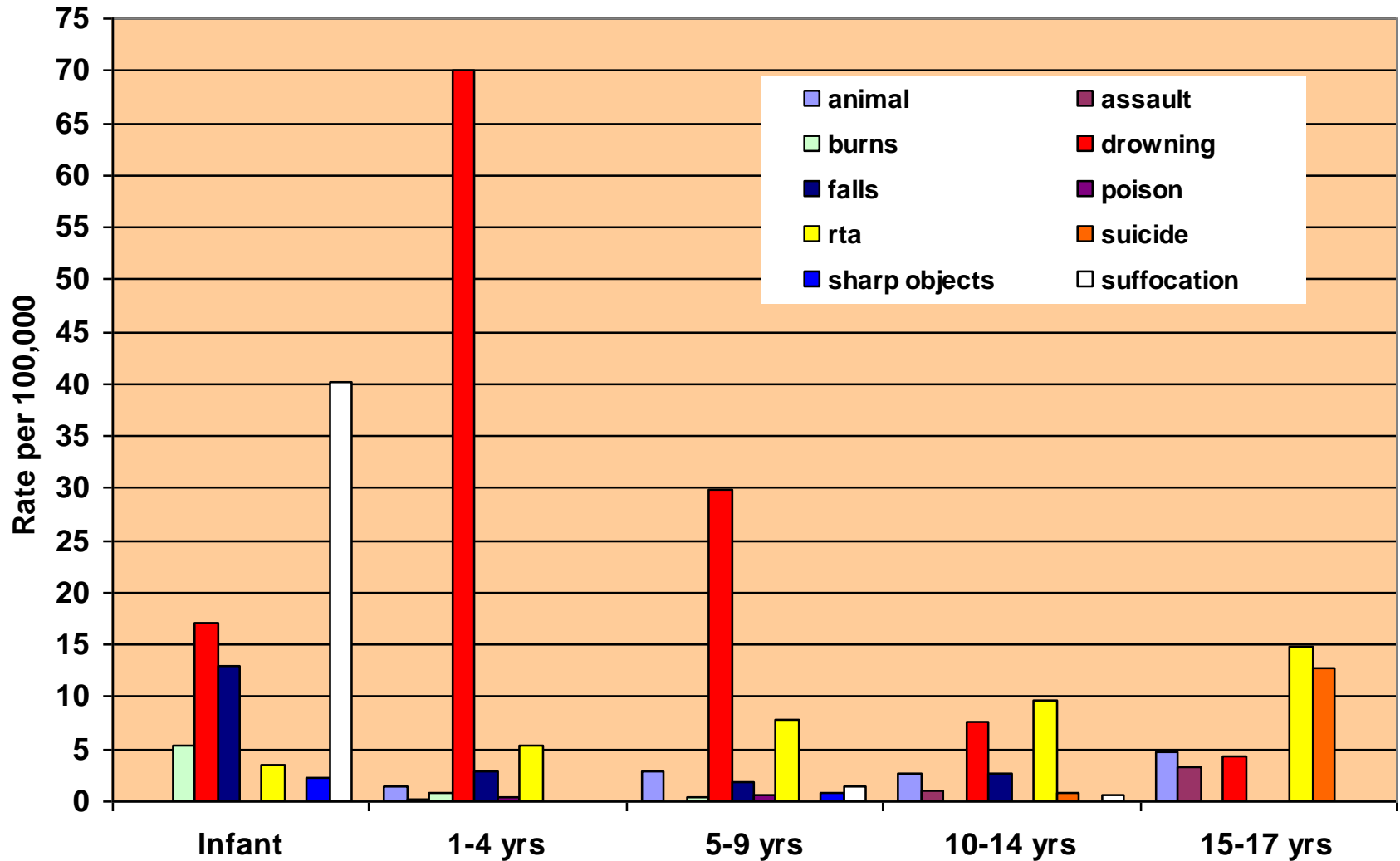
### 3. After infancy, the leading cause of child death was injury



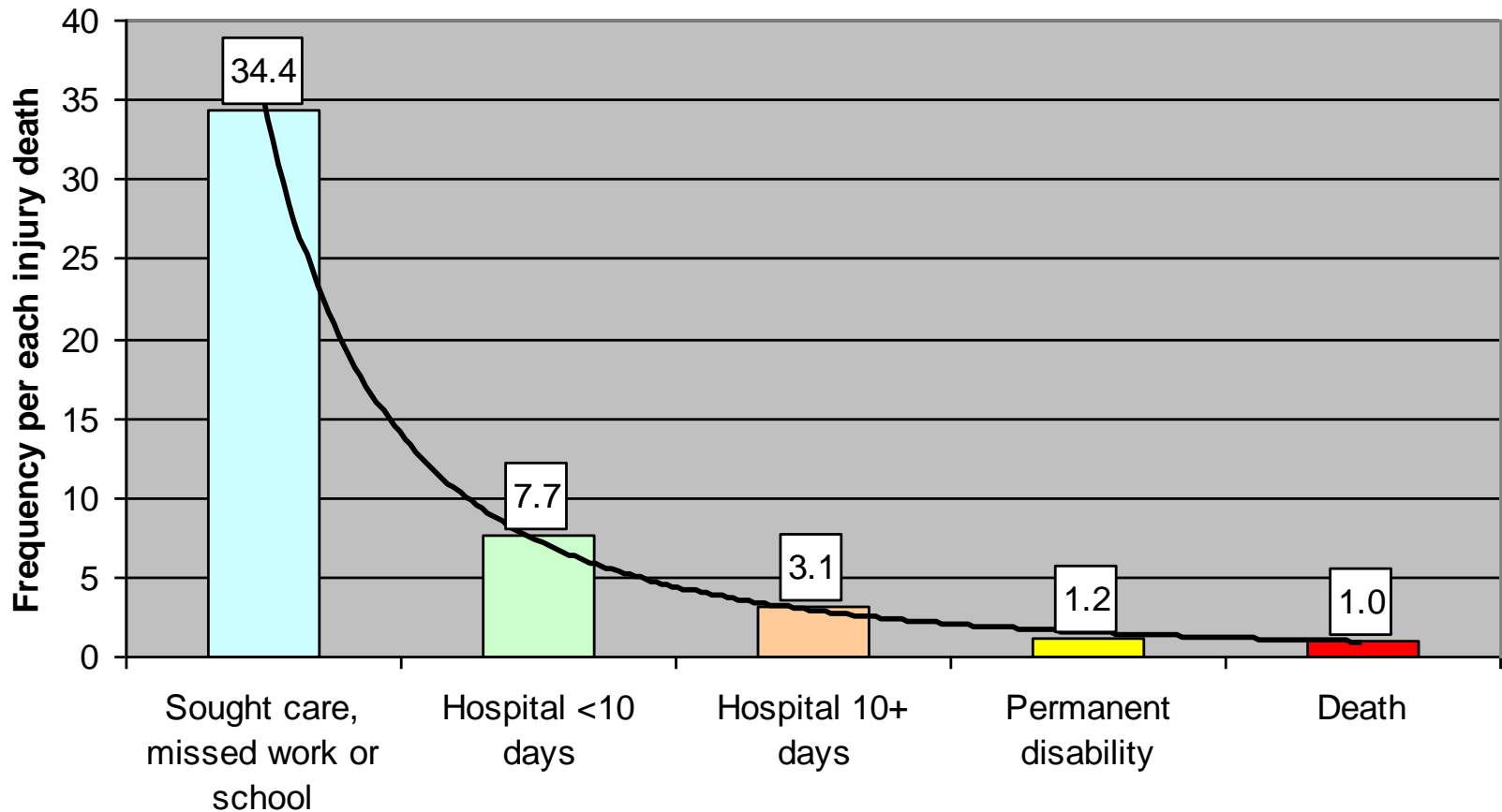
#### 4. One type of injury – drowning – caused over half of all child injury deaths



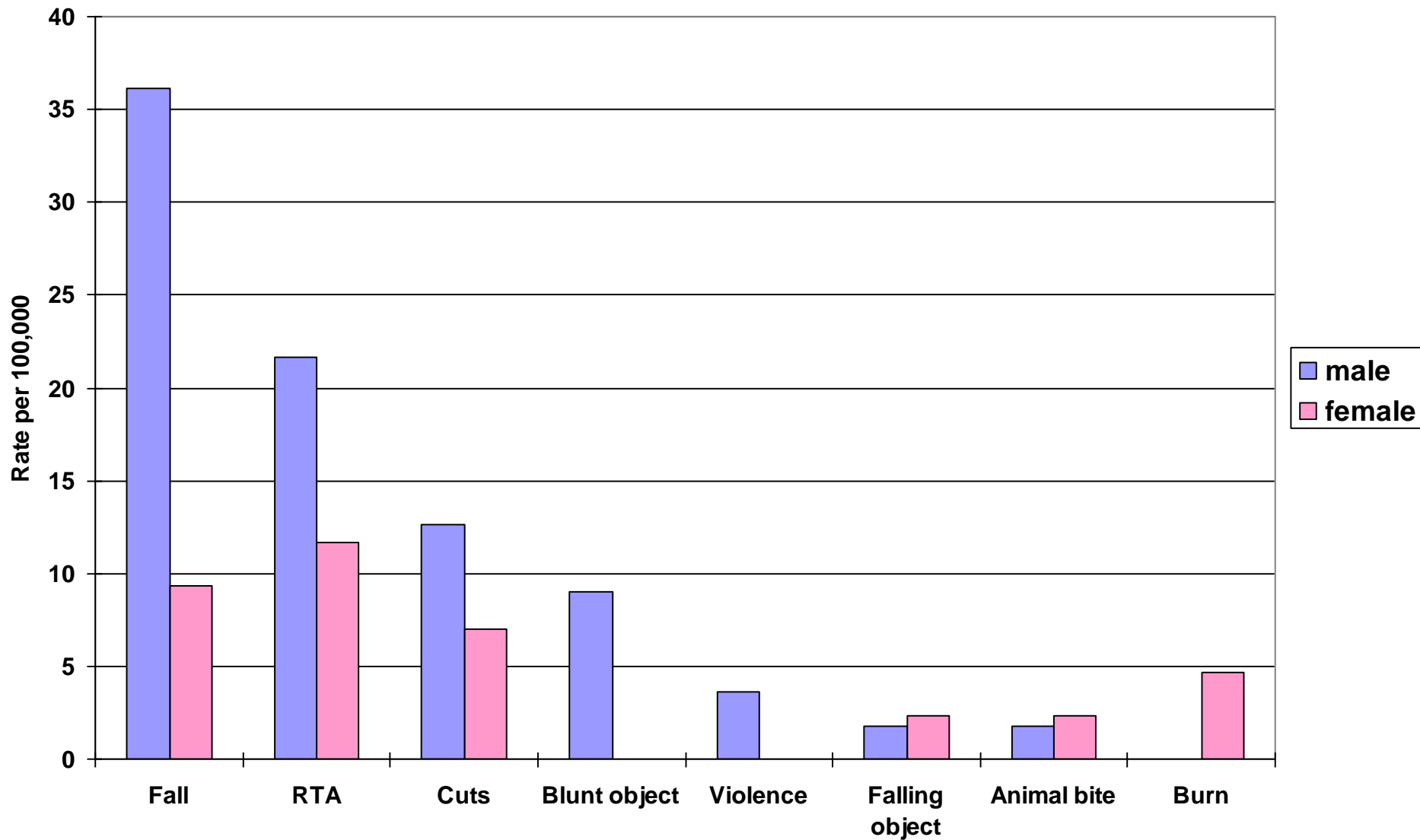
## 5. Each stage of childhood has a different pattern of injury



6. Fatal injury is only the tip of the iceberg – nonfatal injury accounts for most of the social and economic costs

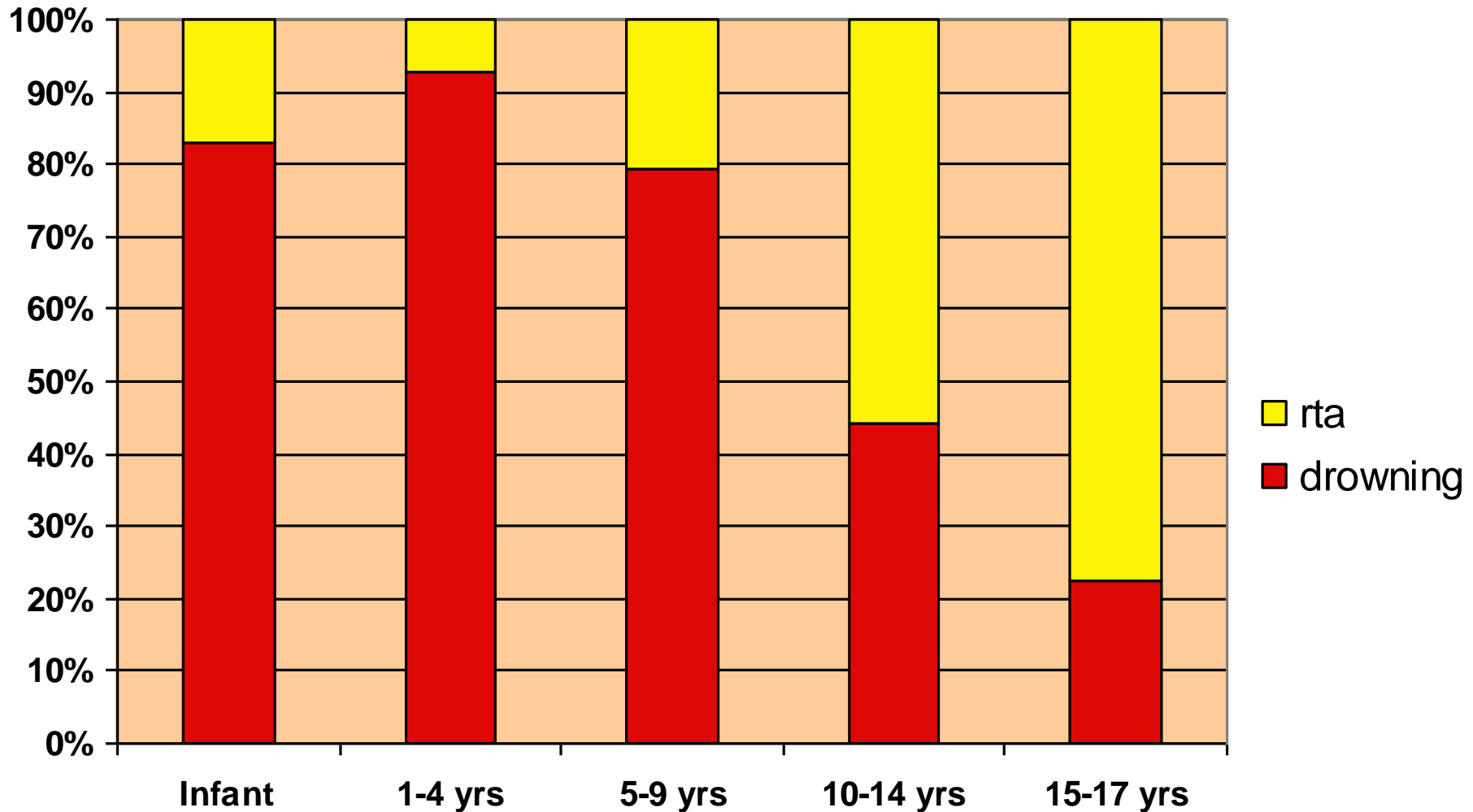


# The highest costs are due to the high rates of permanent disability

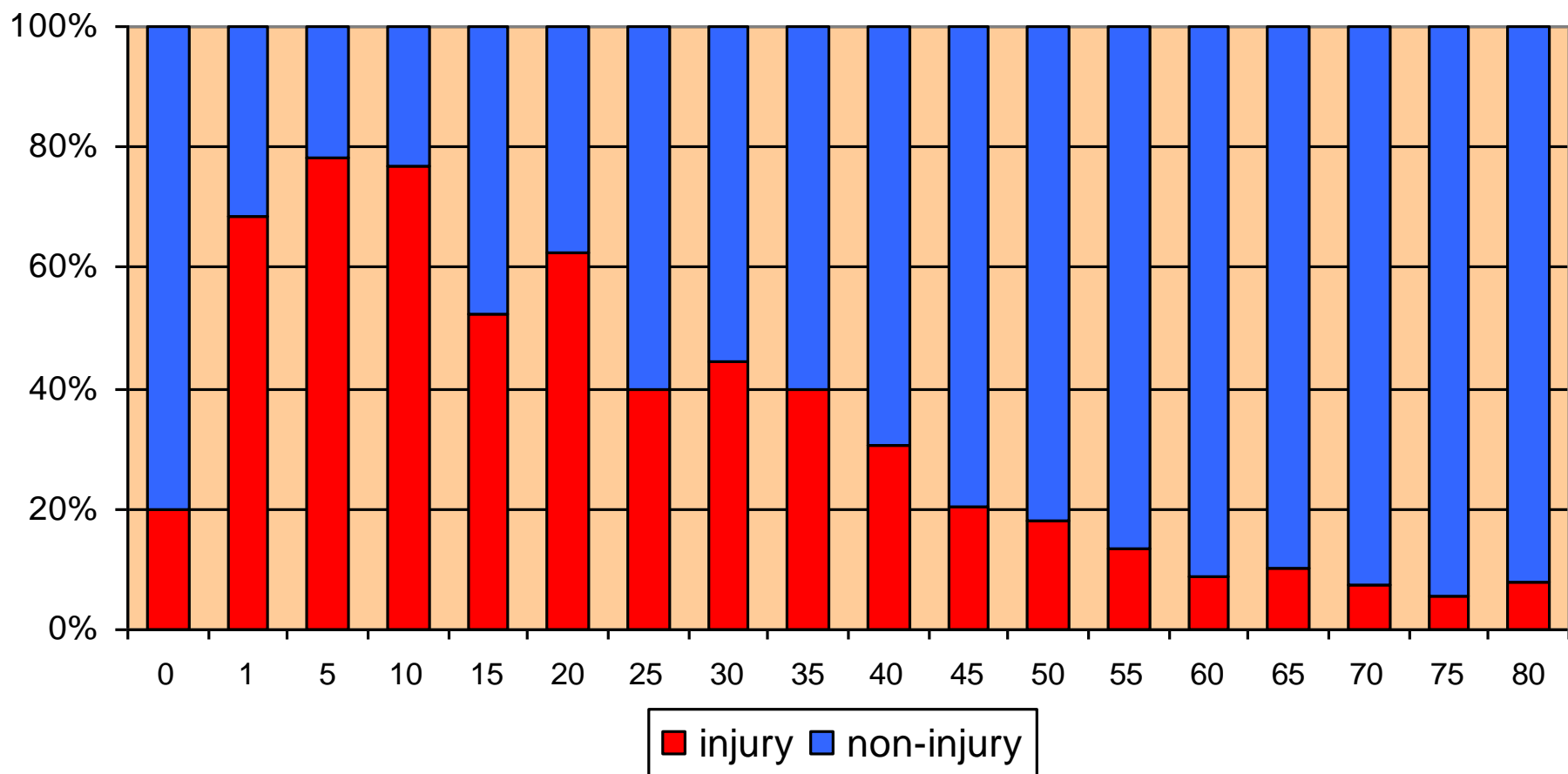




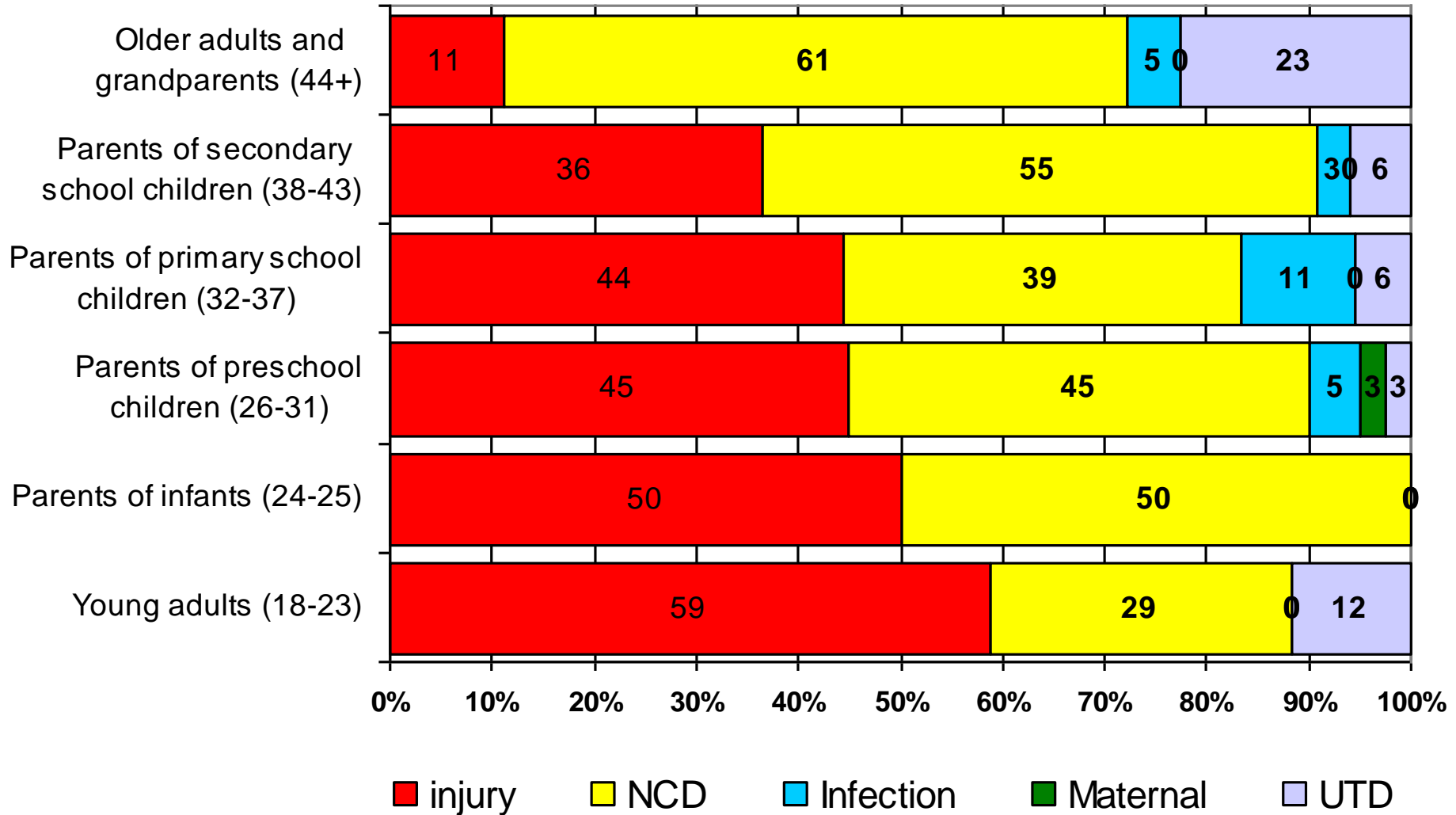
# Proportion of child deaths attributable to drowning and rta within each age group from the surveys



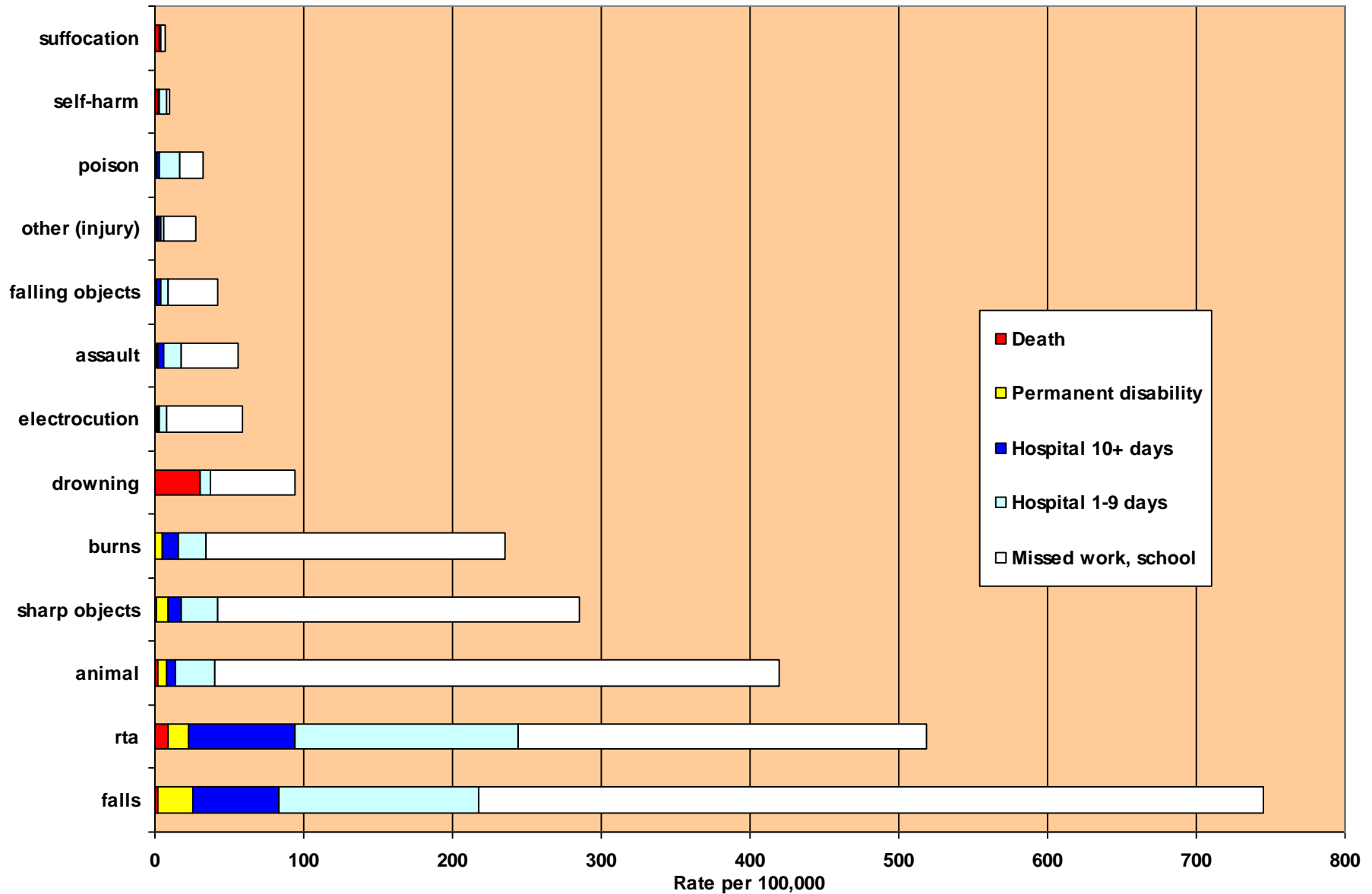
## Mortality from injury and non-injury causes by age, Jiangxi Province



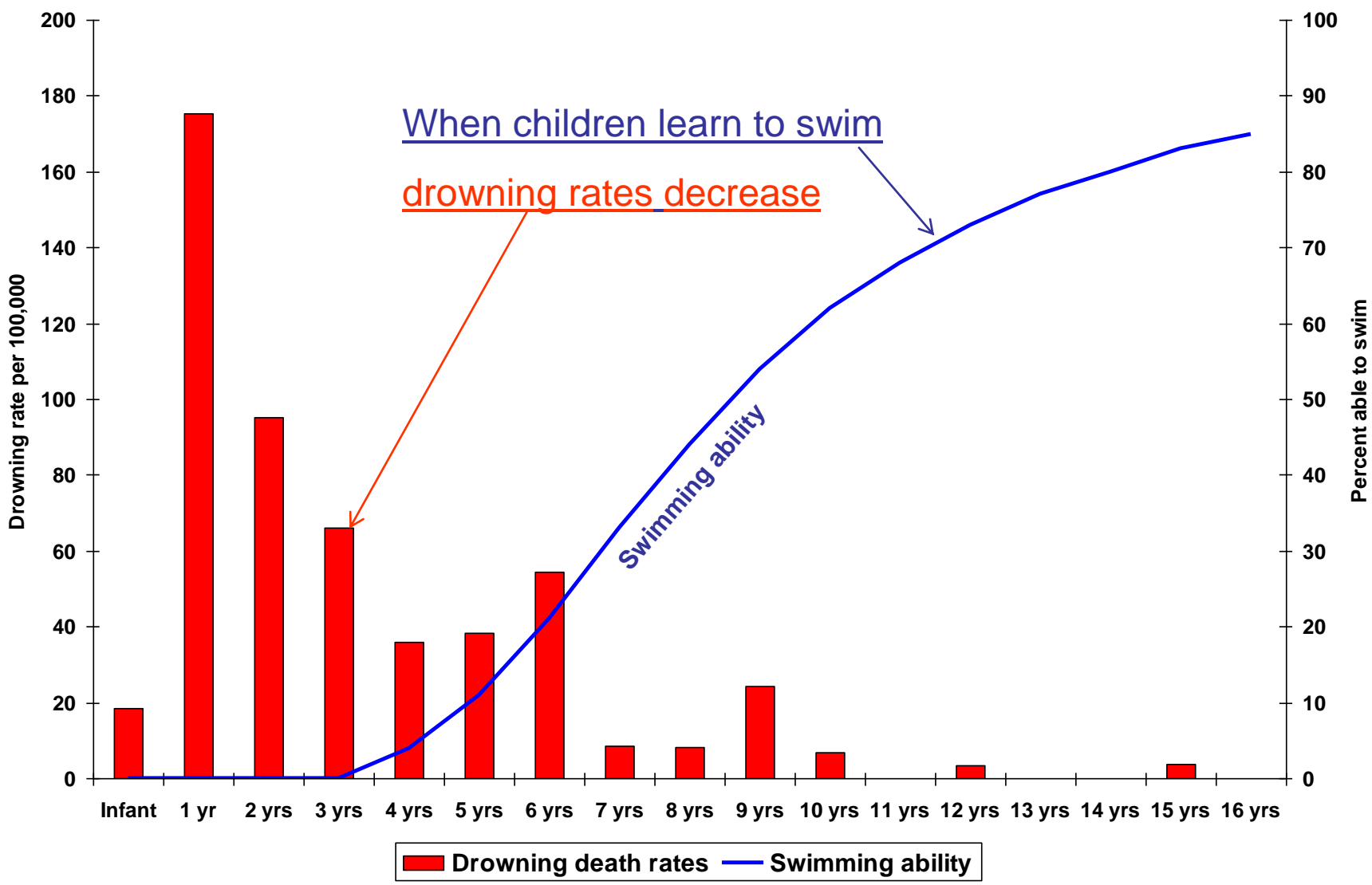
# Injury Orphanhood - Jiangxi



# Types of injury and severity level, children 0-17 years composite



# Bangladesh shows us the problem and the solution



# Standard methodology

- Nationally representative samples based on census sampling
- Includes all ages, all causes of death
- Sample sizes large enough to show types of injury in childhood – and by age group, sex and area of residence
- Medical certificates where available, verbal autopsy where not

# Methodology, cont'd

- Standard recall periods for mortality
  - Three years for mortality
  - One year for morbidity
- Standard definitions for questionnaires
- Standard field and QA procedures
- Nested case-control studies for drownings
- Standard analytic strategy
- Injury incidence, risk factors, economic and social costs, health and care-seeking behaviors, and KAP regarding injury and prevention

## 5 Countries, 6 surveys

	<b>Vietnam</b>	<b>Bangladesh</b>	<b>Thailand</b>	<b>Philippines</b>	<b>Beijing</b>	<b>Jiangxi</b>	<b>Total</b>
<b>Households</b>	<b>26,733</b>	<b>171,366</b>	<b>100,179</b>	<b>90,446</b>	<b>28,084</b>	<b>100,010</b>	<b>516,818</b>
<b>Members</b>	<b>128,662</b>	<b>819,429</b>	<b>389,531</b>	<b>418,522</b>	<b>81,604</b>	<b>319,543</b>	<b>2,157,291</b>
<b>Children</b>	<b>46,858</b>	<b>351,651</b>	<b>98,904</b>	<b>178,938</b>	<b>13,508</b>	<b>98,335</b>	<b>788,194</b>

## Field costs of each survey

<b>Country</b>	<b>Year of fieldwork</b>	<b>Households in sample</b>	<b>US dollars</b>	<b>Cost/HH</b>
<b>Vietnam</b>	<b>2000</b>	<b>26,733</b>	<b>85,000</b>	<b>3.18</b>
<b>Bangladesh</b>	<b>2002</b>	<b>171,366</b>	<b>125,000</b>	<b>0.73</b>
<b>Thailand</b>	<b>2003</b>	<b>100,179</b>	<b>175,000</b>	<b>1.75</b>
<b>Philippines</b>	<b>2003</b>	<b>90,466</b>	<b>150,000</b>	<b>1.66</b>
<b>Beijing</b>	<b>2004</b>	<b>28,084</b>	<b>225,000</b>	<b>8.01</b>
<b>Jiangxi</b>	<b>2005</b>	<b>100,010</b>	<b>400,000</b>	<b>4.00</b>