Is it true that children are not affected when motorcycle use increase?

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Low and middle income
Motorcycle use is increasing rapidly in the Region.
New Delhi, India

Used as family vehicle with children as passengers
Introduction

- Due to scarcity of epidemiological information, the pattern of child transport injuries was taken as true by some, for all SEA countries: "majority is pedestrian".

- Moreover, some believe children are not affected when motorcycle use increases.
Objectives

• Provide evidence from the South-East Asian (SEA) countries that children are affected when motorcycle use increases
• Call for appropriate actions
Definition of terms used

- **Child** – person less than 15 years old
- **Motorcycle (MC)** - all types/classes of motorized two-wheelers, including mopeds
- **MC rider, user** – driver & passenger
Methods

- Template for secondary data collection was sent to all 11 MOH in SEA Region
- Document review and web search also conducted
Findings

• 9 / 11 countries responded
• Data were from different sources and information systems
Findings

- 2009, about 73 millions motorcycles (MCs) registered in SEA Region
- MCs accounted for 56 % of all types of registered vehicles in SEA countries
  (HIC, registered MCs < 4 %)
<table>
<thead>
<tr>
<th>SEA Countries</th>
<th>‘yr</th>
<th>Registered Vehicle (No.)</th>
<th>Registered Motorcycle (No.)</th>
<th>% MC among all vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>‘07</td>
<td>1.1 mil</td>
<td>525,751</td>
<td>49.9</td>
</tr>
<tr>
<td>Bhutan</td>
<td>‘09</td>
<td>41,262</td>
<td>7,740</td>
<td>18.8</td>
</tr>
<tr>
<td>India</td>
<td>‘04</td>
<td>***72.7 mil</td>
<td>***51.9 mil</td>
<td>71.4</td>
</tr>
<tr>
<td>Indonesia</td>
<td>‘03</td>
<td>*25.0 mil</td>
<td>**18.8 mil</td>
<td>*75.2</td>
</tr>
<tr>
<td>Maldives</td>
<td>‘07</td>
<td>39,338</td>
<td>31,414</td>
<td>**79.9</td>
</tr>
<tr>
<td>Myanmar</td>
<td>‘08</td>
<td>1.0 mil</td>
<td>658,997</td>
<td>63.8</td>
</tr>
<tr>
<td>Nepal</td>
<td>‘07</td>
<td>88,735</td>
<td>72,568</td>
<td>***81.8</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>‘06</td>
<td>2.8 mil</td>
<td>1.4</td>
<td>50.3</td>
</tr>
<tr>
<td>Thailand</td>
<td>‘08</td>
<td>**27.2 mil</td>
<td>*17.8 mil</td>
<td>*65.3</td>
</tr>
<tr>
<td>DPR K &amp; TLS</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>All countries</td>
<td></td>
<td>129.7 mil</td>
<td>72.5 mil</td>
<td>55.7</td>
</tr>
</tbody>
</table>
The registered system has been revised.
**Fig. 2** Cumulative number of registered motorcycles, Sri Lanka 1990-2006

Source: Department of Motor Traffic, Sri Lanka
Fig. 3 cumulative number of registered motorcycles, India 1996-2004
Findings

Child MC injury

4 / 7 countries provided data
National estimate from inj. surveillance, 2002
1.5 child deaths/day from using MC
~ 4 times of DHF deaths !!!
Findings

Thailand National Sentinel Inj. Surveillance

• National estimate (2003-2007) > 12,000 children severely injured (admitted as inpatient) from transport crashes, riding on MCs
Findings

Thailand National Sentinel Inj. Surveillance (contd.)

- 2007, 62% of severely injured children from transport crash were MC users (5,718).
  - Among children severely injured in transport crash while using any vehicles, 70% were riding MC.
Motorcycle helmet for kids, with love and care

2005 Thailand
Sri Lanka
Sri Lanka
Pilot injury surveillance data, 6 m, 6 hospital, 2009
- 34% of children severely injured from transport accident while using vehicles (98 person), were children riding on MCs
Findings

India

1 yr data, 2 cities study on development of RTI surveillance 2006-7

- *13% of 1,071 child transport crash cases injured while riding on MCs,
  55% with head injuries
Nepal
Findings

Nepal

pilot surveillance, 1 m data, 2 cities, 2008

- 37% of 72 children injured from transport crashes, got injured while riding on MCs; 3 were driving MCs
Indonesia started producing standard child MC helmet 2007
Child MC injuries happened unplanned, but the increase of MC use was not unplanned......
Honda’s MC production record

'49  Honda's first production on MCs

'67  MC produced in Thailand* (exported afterwards to ASEAN countries)

'69  MC produced in Malaysia,

Honda “Dream” exported to North America

'71  MC produced in Indonesia*
Honda’s MC production record

'73 MC produced in the Philippines

'85 MC produced in India*

'87 Japanese MC production reaches 50 mil. unit

'92 produced in China

'97 produced in Vietnam
Discussion

• Limitations
  – Most data were small in number, not representing country, not able to show trends of child motorcycle injuries
Discussion

• However, may be used as sentinel events, to detect potential public health problem

• Health problem previously detected in one country, may after time, become health problem in others, in this globalization period
Discussion

- MC riders reported as largest proportion of transport crash victims, all age, as early as 1995 by Thailand
- Now, other SEA countries are reporting similarly
Discussion

• Pattern of child MC injuries/deaths in Thailand, may again be seen in other SEA countries, if nothing is done specifically to response to this problem
Children driving or riding as passenger on MC has been normalized by people in many countries in Region.

Source: Dr. Witaya, Thailand
Child MC helmet may be able to protect some children....
• It is NOT true that children are not affected when motorcycle use increase
“The silent epidemic of motorcycle injuries” has already spread to children in SEA Region.

Source: EMS team Maharaj Nakonrajsima, Thailand
It might have spread to children in other countries in the world...
The spread of the epidemic to children will not be controlled…..
Recommendation

- National data systems report severe child injury and deaths by causes, investigation done and result disseminated to public

- Appropriate standards, laws and stringent enforcement on child MC helmet, age for children to ride as passenger/ driver in MC popular country
Recommendation

- Increase of eligible age for moped/ MC driving license
- More discourse regarding “unsafe transportation of children on MC, appropriate response, and alternatives” made, in community and policy level
With alertness and appropriate responses...
Together, we can save the kids!!

Source: http://www.isara.org/
Acknowledgement

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• Ms. Besty Ernani, Indonesia
• WHO CO and MOH of 11 SEA countries