ANALYSIS OF CHILDREN ROAD TRAFFIC ACCIDENTS AND PROPOSED MEASURES FOR CHILDREN SAFETY IMPROVEMENT IN HO CHI MINH CITY

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Around the world, an average of 2 minutes a child died in a traffic accident.

In Vietnam, traffic accidents kill nearly 2,000 children a year (UBATGTQG, 2015).

HCMC has the highest number of accidents and deaths due to traffic accidents in Vietnam; Of which 8 ~ 9% relates to children (PC67-BCA, 2015).

Lack of in-depth studies on traffic accidents related to children to support the development of policies and measures to improve traffic safety for children.

**Rate of RTAs related to children/100,000 children**

- Vietnam: 20
- South East Asia: 7.4
- Europe: 4.5

HCMC = Hồ Chí Minh City
Research Objective

Systematic and in-depth analysis on the trend, pattern and cause of road traffic accidents involving children

Propose a package of solutions to enhance road traffic safety for HCMC children.
Traffic characteristics, traffic violation of children & parents

Propose breakthrough solutions to improve children traffic safety

Patterns and causes of RTAs
(Age, sex, location, time)

RTAs Database in the past
(PC67, HCMC Police, 2010-2015)

Camera Survey
(15 schools & 10 roads)

Review and evaluate solutions
(Domestic and international experience)
While the number of traffic accidents, deaths, injuries are declining, traffic accident involving children tend to increase rapidly.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Accidents</th>
<th>Total Deaths</th>
<th>Total Injuries</th>
<th>Child Accidents</th>
<th>Child Deaths</th>
<th>Child Injuries</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>1101</td>
<td>837</td>
<td>432</td>
<td>n.a</td>
<td>n.a</td>
<td>n.a</td>
</tr>
<tr>
<td>2011</td>
<td>1042</td>
<td>887</td>
<td>495</td>
<td>n.a</td>
<td>n.a</td>
<td>n.a</td>
</tr>
<tr>
<td>2012</td>
<td>958</td>
<td>824</td>
<td>388</td>
<td>n.a</td>
<td>n.a</td>
<td>n.a</td>
</tr>
<tr>
<td>2013</td>
<td>941</td>
<td>775</td>
<td>349</td>
<td>36</td>
<td>35 ↑</td>
<td>15</td>
</tr>
<tr>
<td>2014</td>
<td>850</td>
<td>701</td>
<td>322</td>
<td>85</td>
<td>61 ↑</td>
<td>55</td>
</tr>
<tr>
<td>2015*</td>
<td>771</td>
<td>692</td>
<td>268</td>
<td>104</td>
<td>111 ↑</td>
<td>54</td>
</tr>
<tr>
<td>Total 2013-2015</td>
<td>2562</td>
<td>2168</td>
<td>939</td>
<td>225</td>
<td>207</td>
<td>124</td>
</tr>
</tbody>
</table>

*Data source: Highway and Railway Police Division, HCMC Police Dept. (PC67), 2015
(*): Accounted until 15/11/2015
High school students (16-18 years old) has the highest rate of accident, death and injury.
There are more than 80% of traffic accidents involving children occur when high school student are riding motorbike or bicycle.
• RTAs related to secondary school student occurs from 10am to 2pm
• RTAs related to high school student happen from 6pm to 2am of the next day.
• RTAs involving children increase on weekend
• RTAs involving children rise up on summer months

DISTRIBUTION OF CHILD-RELATED RTAs BY TIME

- Child-related traffic accident distribution by hour
- Child-related traffic accident distribution by weekdays
- Child-related traffic accident distribution by month
• Child-related traffic accidents occur **82% on roads**, and **18% at intersections**.

• Traffic accidents have no difference in the number of cases between regions.

Child-related traffic accident distribution by locations

Child-related traffic accident distribution by zones
Analysis Results

- Patterns and causes of RTAs (Age, sex, vehicle, location, time)
- Propose breakthrough solutions to improve children traffic safety
- RTAs Database in the past (PC67, HCMC Police, 2010-2015)
- Camera Survey (15 schools & 10 roads)
- Review and evaluate solutions (Domestic and international experience)
How to encourage primary & secondary school walking or cycling to school?

MEANS OF TRANSPORT TO SCHOOL

(Observed 6,800 students at 15 schools in HCMC)

- Strengthen the patrol, supervision and punishment

Secondary school:
- Walking: 25.3%
- Bicycle: 18.5%
- E-bike: 5.8%
- Bike: 51.8%
- Others: 7%

High school:
- Walking: 20.9%
- Bicycle: 16.3%
- E-bike: 5.8%
- Bike: 56.3%
- Others: 23%

Primary school:
- Walking: 16.6%
- Bicycle: 2.1%
- E-bike: 0.4%
- Bike: 80.9%
- Others: 0.4%

Kindergarten:
- Walking: 11.2%
- Bicycle: 0.4%
- E-bike: 0.4%
- Bike: 86.6%
- Others: 0.4%

→ How to encourage primary & secondary school walking or cycling to school?
**RATE OF VIOLATION OF REGULATIONS ON TRAFFIC SAFETY**

(Observed 6,800 students at 15 schools in HCMC)

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**Kindergarten (N=1,605)**
- No helmet: 74.6%
- No safety belt: 64.0%
- Seating dangerously: 44.2%
- No signal while turning direction: 31.2%
- Dangerously crossing the road: 25.5%
- Wrong lane: 19.3%
- Carrying more than 02 children: 10.1%
- Dangerous pickup/ sendoff: 1.8%

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**Primary School (N=1,591)**
- No helmet: 51.7%
- Carrying more than 02 children: 18.5%
- Dangerous pickup/ sendoff: 16.5%
- No signal while turning: 13.8%
- Wrong lane: 12.4%
- Dangerously crossing the road: 10.3%
- Seating dangerously: 1.9%
- No safety belt: 0.0%

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**Secondary School (N=1,543)**
- No helmet: 35.3%
- Dangerously crossing the road: 18.9%
- Wrong lane: 14.9%
- Carrying more than 02 children: 10.6%
- Dangerous pickup/ sendoff: 10.3%
- No signal while turning: 6.8%
- Seating dangerously: 0.4%
- No safety belt: 0.0%

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**High School (N=2,038)**
- No helmet: 21.8%
- Wrong lane: 18.9%
- No signal while turning: 13.1%
- Dangerous pickup/ sendoff: 16.3%
- Dangerously crossing the road: 5.5%
- Carrying more than 02 children: 3.5%
- Seating dangerously: 0.6%
- No safety belt: 0.0%
INADEQUATE TRAFFIC ORGANIZATION IN THE SCHOOL AREAS

- **Infrastructure**
  - The pavement is damaged;
  - Parking is not available or limited, causing parents park on road and cause traffic disruption;
  - There have no waiting area for student

- **Traffic organization**
  - No regulator, no signal lights, no zebra-crossing, no road humps;
  - Inadequate planning: the zebra-croosings for students and parents is not reasonable;
  - Encroaching on sidewalks to do business (street vendor) makes students and pedestrians have to go down the road, ...
Traffic characteristics, traffic violation of children & parents

Propose breakthrough solutions to improve children traffic safety

Patterns and causes of RTAs
(Age, sex, vehicle, location, time)

RTAs Database in the past
(PC67, HCMC Police, 2010-2015)

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Review and evaluate solutions
(Domestic and international experience)
# 03 GROUPS OF BREAKTHROUGH SOLUTIONS TO IMPROVE TRAFFIC SAFETY FOR CHILDREN FOR HCMC

1. **Amend the traffic law, strengthen surveillance patrols to dramatically reduce traffic safety violations in children and parents**
   - Strengthen punishment of risk-taking behaviors of children when riding,
   - Amending the road traffic law so that helmets may be required for 3-5 year olds.

2. **Promote culture of walking and cycling for children, especially primary and secondary school students:**
   - Reestablish the pavement order, to renovate the sidewalk pavement
   - Study and build bicycle lanes so that children can ride bicycles safely and comfortably to school.

3. **Implementing the School Zone Safety Project:**
   - Set up the traffic safety board at the school level headed by the headmaster
   - Divide the entrance, reorganize the sidewalks, design the waiting areas and pick up children in the different grades, arrange safety equipment (signboards, humps, etc)
   - Arrange staff to regulate and supervise traffic order and safety in the area of school gates; and arranges bus routes for students while enhancing public transport services that connect to schools.
ACTION TO KEEP KIDS SAFE