Strategies to tackle the issues of helmet, seat belt & child restraint use

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Motorcycle helmet use in ESCAP region

Motorized 2- or 3-wheelers death
- 32.71% of all deaths in 2010 and 39.21% in 2016 in ESCAP region.
- 61.74% of deaths in South-East Asia sub-region.
- 38.19% of deaths in South and South-West Asia sub-region.

Why is motorcycle helmet wearing important?
- Decreases the risk and severity of injuries by about 72%.
- The likelihood of death goes down by 39%.

Data based on WHO's Global Status Report 2018 and Global Health Observatory
Motorcycle helmet use in ESCAP region

Status of fastening requirement in motorcycle helmet law by subregion of ESCAP region (2016)

Status of motorcycle helmet law enforcement by subregion of ESCAP region (2016)

Data based on WHO’s Global Status Report 2018 and Global Health Observatory
Motorcycle helmet use in ESCAP region

Helmet wearing related situation in Thailand

- In 2016, motorcycle death represented 74% of road traffic death in Thailand, nearly twice higher than the ESCAP average 39.21%.

- While the helmet-wearing rate was 51% among drivers, and 20% among passengers.

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Regional Challenges

- Improper motorcycle helmet usage
e.g., do not fasten the helmets or use the proper size helmets.

- Myths and arguments
e.g., helmets are needed only for long trips.

- Inadequate attention towards child passengers on motorcycles
e.g., helmet laws don't restrict child passengers on the motorcycle in many countries.

- Inefficient tracking and detection system for law enforcement of helmet-wearing
e.g., there are problems with CCTV camera detecting system.
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Regional Opportunities

- Helmet use intervention
- Affordable motorcycle helmet price
- Good quality motorcycle helmet
- Law enforcement and awareness
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Recommendations

1. Legislation and enforcement
   - The motorcycle helmet laws need to specify a minimum age that children can ride a motorcycle as passengers and require that all children legally allowed as motorcycle passengers must be wearing a helmet.
   - Member countries need to specify the helmet quality standard. The national helmet standard should cover all riders, including children and adults.
   - It is recommended that member countries have strict enforcement of helmet law.
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Recommendations

2. Education and awareness campaign
   - It is recommended that member countries include education programs in their road safety strategies.
   - It is recommended that member countries include public awareness campaigns in their road safety strategies.

3. Data collection
   - Member countries must improve their data collection system to know precise levels of motorcycle rider fatalities.
   - Member countries must also develop a national information system with high-quality data, such as helmet-wearing rate and head injuries among motorcyclists in each area.
Motorcycle helmet use in ESCAP region

Recommendations

4. Detection system
   - Countries should use efficient tracking and detection systems for law enforcement of helmet-wearing to increase helmet law enforcement.

5. Implementation framework
   - Each country should implement a combination of strategies appropriate to its local conditions and capacities.
Motorcycle helmet use in ESCAP region

Stepwise illustration of the implementation framework

1. PROBLEM ASSESSMENT
   - How significant is the motorcycle helmet wearing problem?
     - (i) In what proportion of road traffic deaths does motorcycle crash contribute?
     - (ii) In what proportion of motorcycle crash deaths is head injury a contributing factor?
   - What is the profile of motorcycle crash victims?
   - What is the profile of motorcycle helmet user?
   - What is the helmet wearing rate in this area?
   - Why do people don’t wear motorcycle helmet in this area?
   - What is the geographic distribution of motorcycle-related head injuries within the region?
   - What legislation and regulations have been adopted with respect to motorcycle helmet?
   - What are the attitudes of communities towards wearing motorcycle helmet?
   - What are the economic and social impacts of motorcycle crashes and injuries on the country’s

2. ASSEMBLE A LEADERSHIP TEAM
   - Identify the road safety stakeholders who are concerned with or responsible for motorcycle helmet use.
   - Identify who is in charge of road safety and the fund resources.
   - Identify a coordinating agency or group.
   - Earmark and commit financial resources.
   - Sustain the involvement of all road safety stakeholders.

3. DEVELOP A STRATEGIC PLAN OF ACTION TO ADDRESS KEY CHALLENGES
   - Formulate a plan of action.
   - Set the programme’s objectives, targets and indicators.
   - Decide on activities
   - Estimate resources
   - Set up monitoring and evaluation mechanism.

4. IMPLEMENT THE STRATEGIC PLAN OF ACTION
   - Public information and education.
   - Monitor progress against the plan and against performance indicators.
   - Introduce and implement legislation.
   - Adopt helmet standards
   - Change knowledge and attitude on helmet use
   - Educate young people

5. EVALUATION OF COUNTERMEASURES IMPLEMENTED
   - Assess changes in baseline measurements collected during problem assessment:
     - (i) Has there been a reduction in motorcycle crash death?
     - (ii) Has the reduction in motorcycle crash death been related to motorcycle helmet use?
     - (iii) Has there been progress with regard to other aspects, such as the attitudes of communities to helmet use?
     - (iv) Has there been an increase in helmet wearing rate?
   - Identify lessons learned.
   - Conduct an economic evaluation of a program.
   - Disseminate evaluation results to gain further report.
   - Using evaluation results to feed back into new planning cycle.
Seat Belt and Child Restraint Use in ESCAP region

Why are seat belts and child restraints important?

- Seat belts reduce the risk of death by **45%** and reduce the risk of serious injury by **50%**.
- Child restraints reduce the risk of death by **71%** for infants under the age of 1 and **54%** for children ages 1 to 4.
### Seat Belt and Child Restraint Use in ESCAP region

**Effect of seat belt on the probability of personal injury in all types of collisions (individual effects)**

<table>
<thead>
<tr>
<th>Injury severity</th>
<th>Percentage change in number of injuries</th>
<th>Best estimate</th>
<th>95% confidence interval</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Drivers of light vehicles (private cars and vans)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Killed</td>
<td>-50</td>
<td></td>
<td>(-55;-45)</td>
</tr>
<tr>
<td>Serious injuries</td>
<td>-45</td>
<td></td>
<td>(-50;-40)</td>
</tr>
<tr>
<td>Minor injuries</td>
<td>-25</td>
<td></td>
<td>(-30;-20)</td>
</tr>
<tr>
<td>All personal injuries</td>
<td>-28</td>
<td></td>
<td>(-33;-23)</td>
</tr>
<tr>
<td></td>
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<tr>
<td><strong>Front seat passengers in light vehicles (private cars and vans)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Killed</td>
<td>-45</td>
<td></td>
<td>(-55;-25)</td>
</tr>
<tr>
<td>Serious injuries</td>
<td>-45</td>
<td></td>
<td>(-60;-30)</td>
</tr>
<tr>
<td>Minor injuries</td>
<td>-20</td>
<td></td>
<td>(-25;-15)</td>
</tr>
<tr>
<td>All personal injuries</td>
<td>-23</td>
<td></td>
<td>(-29;-17)</td>
</tr>
<tr>
<td></td>
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<tr>
<td><strong>Back seat passengers in light vehicles (private cars)</strong></td>
<td></td>
<td></td>
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<tr>
<td>Killed</td>
<td>-25</td>
<td></td>
<td>(-35;-15)</td>
</tr>
<tr>
<td>Serious injuries</td>
<td>-25</td>
<td></td>
<td>(-40;-10)</td>
</tr>
<tr>
<td>Minor injuries</td>
<td>-20</td>
<td></td>
<td>(-35;-5)</td>
</tr>
<tr>
<td>All personal injuries</td>
<td>-21</td>
<td></td>
<td>(-35;-6)</td>
</tr>
</tbody>
</table>
Types of child restraints based on weight

<table>
<thead>
<tr>
<th>Group</th>
<th>Type of Child Restraint</th>
<th>Weight Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 0</td>
<td>Rearward Facing Baby Seat</td>
<td>Birth – 10kgs (22lbs)</td>
</tr>
<tr>
<td>Group 0+</td>
<td>Rearward Facing Baby Seat</td>
<td>Birth – 13kgs (29lbs)</td>
</tr>
<tr>
<td>Group 1</td>
<td>Rearward or Forward Facing Child Seat</td>
<td>9 – 18kgs (20-40lbs)</td>
</tr>
<tr>
<td>Group 1, 2, 3</td>
<td>High Back Booster Seat with removable harness</td>
<td>9 – 36kgs (20-79lbs)</td>
</tr>
<tr>
<td>Group 2</td>
<td>High Back Booster Seat without harness</td>
<td>15 – 25kgs (33-55lbs)</td>
</tr>
<tr>
<td>Group 2, 3</td>
<td>High Back Booster Seat without harness</td>
<td>15 – 36kgs (33-79lbs)</td>
</tr>
<tr>
<td>Group 3</td>
<td>Booster Cushion</td>
<td>22 – 36kgs (48-79lbs)</td>
</tr>
</tbody>
</table>
Seat Belt and Child Restraint Use in ESCAP region

Seat-belt wearing rate in ESCAP region, 2017

- Seat-belt wearing rate (drivers only)
- Seat-belt wearing rate (front)
- Seat-belt wearing rate (rear)
- Seat-belt wearing rate (all occupants)
Seat Belt and Child Restraint Use in ESCAP region

Numbers of ESCAP countries that have child restraint laws, 2016

- YES, 10
- NO, 34

ESCAP countries that refer to child restraint standard in legislation:

- East and North-East Asia
- South-East Asia
- South and South-West Asia
- North and Central Asia
- Pacific

Legend:
- referred to child restraint standard
- NOT referred to child restraint standard
- Data not available
Case Study: Thailand

Deaths by category of road user:

- Riders of motorized 2- and 3-wheelers, 74%
- Drivers and passengers of buses, <1%
- Drivers and passengers of heavy trucks, <1%
- Cyclists, 3%
- Pedestrians, 8%
- Drivers of 4-wheeled cars and light vehicles, 6%
- Passengers of 4-wheeled cars and light vehicles, 6%
- Other, 1%

Seat Belt and Child Restraint Use in ESCAP region
Challenges

- Limitations of seat belt and child restraint use
- Myths, arguments, and lack of awareness
- Lack of legislation and enforcement
Seat Belt and Child Restraint Use in ESCAP region

Opportunities

- **Seat belt and child restraint interventions**

- **Legislation, enforcement, and awareness**
  good examples - *the United States, mandatory seat belt laws and enforcement in practice*. *Argentina: raised the seat belts wearing rate to 77%*
Recommendations

I. Legislation and enforcement

In the case of seat belts, legislation needs to deal with the following key issues:
   a. seat belt fitting by vehicle type and inspection;
   b. seat belt wearing by vehicle type, passenger location, children; and
   c. penalties for non-compliance.

In the case of child restraints, legislation needs to deal with the following key issues:
   a. child restraint fitting by vehicle type and inspection;
   b. child restraint wearing by vehicle type and age, height, and weight of child; and
   c. penalties for non-compliance.
Recommendations

II. Education and awareness campaigns

- It is recommended that member countries include education programs educational programs that focus on learning about road safety and local legislations.
- These educational programs should also include specific skill training and education on the proper use of seat belts and child restraints.

III. Data collection

- It is highly recommended that countries develop data systems and adopt practices to collect data on road safety, specifically on seat belt and child restraint use.
- It is also important to develop a national information system with high-quality data, such as seat belt and child restraint usage in each region.
IV. Detection system

- Countries should use efficient tracking and detection systems for law enforcement of seat belt and child restraint use to increase wearing rates and improve road safety.

V. Implementation framework

- Each country should implement a combination of strategies appropriate to its local conditions and capacities.
# Seat Belt and Child Restraint Use in ESCAP region

## Stepwise illustration of the implementation framework

<table>
<thead>
<tr>
<th>1. PROBLEM ASSESSMENT</th>
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<tbody>
<tr>
<td>How to assess the extent of the problem of non-use of seat-belts and child restraints</td>
</tr>
<tr>
<td>Assessing the extent of the vehicle occupant injury problem</td>
</tr>
<tr>
<td>What are the seat-belt and child restraint wearing rates in the area being considered?</td>
</tr>
<tr>
<td>Why do people not wear seat-belts and use child restraints?</td>
</tr>
<tr>
<td>How to assess what is already in place</td>
</tr>
<tr>
<td>Who is in charge of road safety, and what funds are there for it?</td>
</tr>
<tr>
<td>Who are the stakeholders?</td>
</tr>
<tr>
<td>Is there a seat-belt use law in place?</td>
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<tr>
<td>Is there a seat-belt and child restraint standard in place?</td>
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<tr>
<td>Have any seat-belt and child restraint programs been attempted so far?</td>
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<tr>
<td>Using the situational assessment to prioritize actions</td>
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<table>
<thead>
<tr>
<th>2. ASSEMBLE A LEADERSHIP TEAM</th>
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<tr>
<td>Who to involve?</td>
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<td>Assigning roles to working group members</td>
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<thead>
<tr>
<th>3. DEVELOP A STRATEGIC PLAN OF ACTION TO ADDRESS KEY CHALLENGES</th>
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<tr>
<td>Setting the program’s objectives</td>
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<td>Setting targets</td>
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<td>Choosing performance indicators</td>
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<td>Deciding on activities</td>
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<tr>
<td>Setting a time frame and phasing the program</td>
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<tr>
<td>Estimating resource needs</td>
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<tr>
<td>Setting up a monitoring mechanism</td>
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<tr>
<td>Ensuring sustainability of the program</td>
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<tr>
<th>4. IMPLEMENT THE STRATEGIC PLAN OF ACTION</th>
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<tr>
<td>Legislation and penalties</td>
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<tr>
<td>Standards and equipment</td>
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<tr>
<td>Enforcement</td>
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<td>Publicity Campaigns</td>
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<td>Voluntary approaches</td>
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<tr>
<td>Post-crash response</td>
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<tr>
<th>5. EVALUATION OF COUNTERMEASURES IMPLEMENTED</th>
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<tr>
<td>Planning the evaluation</td>
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<tr>
<td>Choosing the evaluation methods</td>
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<tr>
<td>Dissemination and feedback</td>
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</table>
THANK YOU