INSTALLATION OF CRS WITH VEHICLE SEATBELT
COMPLEMENT OF PRESENTATION

GRSP Informal group on CRS – Phase III

Philippe LESIRE – LAB - 31st of August 2017
Data source: compilation of 3 surveys (BSRI2011, BSRI2014, DAL2015)

- Original sample of observations: 3893 children

- During the presentations two sets of questions and 1 remark for further analysis

- After the meeting: one request (sent by multi partners)
First set of questions on previous analysis

<table>
<thead>
<tr>
<th>CRS type</th>
<th>Installation misuse</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONVERTIBLE CRS</td>
<td>57/208</td>
</tr>
<tr>
<td></td>
<td>27,4 %</td>
</tr>
<tr>
<td></td>
<td>% installation misuse similar for FWD and RWD facing installations</td>
</tr>
</tbody>
</table>

*Data source compilation of observation databases (2011-15)*

Why misused?
What kind of misuse
Analysis

**REASONS:** 23 of 57 cases with reasons known:

« Human reasons »:
6 – did not know that it was misused
5 - Didn’t pay attention / In hurry
2 – Reinstalled the CRS for this journey (change often of vehicle)
4 – comfort / resistance of the child

« Technical reasons »:
3 - it’s too difficult
1 - bad quality of CRS
1 - seatbelt insufficient length
1 – lack of space
Categorisation of installation misuse (1/2)

**KIND OF MISUSE:**
- 57 convertible CRS with installation misuse
- 82 installation misuse observed

**5 categories:**
- **CRS NOT ATTACHED**
- **Wrong vehicle seatbelt route (independent from CRS)**
- **Seatbelt performance misuse (slack and twists)**
  Slack in seatbelt for CRS attachment (NFS)
  A little bit of slack in diagonal belt
  Large amount of slack in diagonal belt
  Seatbelt twisted for CRS attachment (NFS)
  diagonal belt - more than 2 twists
  lap belt - more than 2 twists

.../...
Categorisation of installation misuse (2/2)

KIND OF MISUSE: 57 convertible CRS with installation misuse – 82 installation misuse observed

- **Relatively minor CRS adjustments**
  locking devices are not used
  one locking system not locked
  wrong vehicle seatbelt buckle used

- **Major CRS adjustments**
  wrong seatbelt route to restrain the CRS (NFS)
  seatbelt routed in places that have not been designed for
  NFS seatbelt route used is dedicated for another facing direction
  only one seatbelt strap is used to restrain the CRS
  seatbelt not restraining the top of the CRS
  seatbelt only restraining the back (or backrest) of the CRS
## ANALYSIS

**KIND OF MISUSE: 57 convertible CRS with installation misuse – 82 installation misuse observed**

<table>
<thead>
<tr>
<th>Category of installation misuse</th>
<th>Considering all misuses (n=82)</th>
<th>Only considering the more severe of each installation (n=57)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CRS NOT ATTACHED</strong></td>
<td>4%</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Wrong vehicle seatbelt route (independent from CRS)</strong></td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Relatively minor CRS adjustments</strong></td>
<td>24%</td>
<td>23%</td>
</tr>
<tr>
<td><strong>Major CRS adjustments</strong></td>
<td>40%</td>
<td>53%</td>
</tr>
<tr>
<td><strong>Seatbelt performance misuse (slack and twists)</strong></td>
<td>30%</td>
<td>19%</td>
</tr>
</tbody>
</table>
Second point on previous analysis

<table>
<thead>
<tr>
<th>CRS type</th>
<th>RWD FC installation</th>
</tr>
</thead>
<tbody>
<tr>
<td>REAR INFANT CARRIER</td>
<td>87,0%</td>
</tr>
</tbody>
</table>

*Data source compilation of observation databases (2011-15)*

FWD FC known by parents?
Analysis

Are people aware that the RIC should be Rearward facing installed (35 cases)

24 reasons given

5 - people did not know
1 – seatbelt too short
1 – no user manual + not possible to see the baby when RWD FCC
3 – Inattention or someone else installed the CRS (husband)
4 – complexity
2 – short distance
3 – Baby is crying RWD FC
2 – In hurry
1 – Not the usual car
1 – CRS of bad quality
1 – Baby buckled himself !!! (6month old)
Analysis

Reasons given by parents when the RIC is not attached: 14 cases

7 with reasons given:
  3 - it’s not their usual car
  1 - it’s only for this trip, in normal time it is restrained
  1 - did not know that it was mandatory to restrain children in the back
  1 - short trip
  1 - lack of space
Third question on previous analysis

Is it possible to see when transfert from integral to non integral is made by parents/children?
Analysis

Children under 12 with age and restraint system type known: 3838

Data source compilation of observation databases (2011-15)
Post meeting request on previous analysis

Is there any cases of RIC carrier on a belted base for which the misuse of restraining at the same time the base and the module with the seatbelt has been observed?

Misused belt installation, w/o ISOFIX and support leg
Post meeting request on previous analysis

!!! - 13 RIC on belted base observed - !!!

7 cases with misuse of installation = 8 misuse observed

Compatibility CRS / vehicle (support leg)
Seatbelt straps are inverted (X2)
Seatbelt is only restraining a part of the base/CRS
Other wrong seatbelt route NFS
Seatbelt not restraining the back of the CRS
Seatbelt twisted – lap belt part more than 2 twists
Slack in seatbelt NFS
Post meeting observation

Need to well define our terminology