Suicide classification in road traffic accident recording - an important part of intervention in Sweden

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Suicide

• Unusual topic for the road safety world
• A sensitive area
• Reluctance in being associated with the topic
• A world wide problem

Still a taboo subject
My college

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Vision Zero

The Swedish ethical standpoint in 1997

“Any loss of life in traffic is unacceptable“

“No-one should be killed or permanently disabled because of road traffic“
No person should feel driven to take their own life
Total number of suicides in Sweden (by all means)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Uncertain</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>1478</td>
<td>344</td>
</tr>
</tbody>
</table>

More than 4 people per day

- The most common cause of death among men aged 15-44 years
- The second most common cause of death among women in the same age group, after tumor disease
- The most common cause of death among young people aged 15-24 years

National Center for Suicide Research and Prevention of Mental Health
**Fatalities on the railway 2016**

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accident</td>
<td>13</td>
</tr>
<tr>
<td>Suicide</td>
<td>68</td>
</tr>
<tr>
<td>Total</td>
<td>81</td>
</tr>
<tr>
<td>Percentage suicide</td>
<td>84%</td>
</tr>
</tbody>
</table>

More than four out of five deaths on the railway are suicides
Jumps from bridges

How many deaths?

Which bridges?

Barriers on bridges?

Ten years ago the former Road Administration assessed 40-50 cases per year. No authority has kept statistics about this problem. A project has begun.
Background – suicide in road traffic

Since 2010 Sweden has been presenting statistics on suicides in road traffic separately from fatalities caused by accidents.

A method for suicide and accident classification has been developed.
Fatalities in road traffic accidents 2006-2016, and expected development until 2020

Suicides presented separately

Number

Actual development
National target
Suicides
EU target
Partners

The work has been carried out in cooperation between The Swedish Transport Administration, The Swedish Transport Agency, The National Board of Forensic Medicine and Suicide Prevention Western Sweden.
In Sweden all fatalities in road traffic undergo an in-depth study by accident investigators by The Swedish Transport Administration.
The road

- Type of road
- Width
- Speed limit
- Rifling
- Barrier
- Slope of the road
- Skewness
- Road damage
- Road side area
- Lines of light
- Distraction
- Road signs
- Road markings
- Traffic flow
- Road conditions
- Statistics about past accidents
- ...
The vehicle

- Tyres
- Deformation
- Use of seatbelt
- Seatbelt automatic reminder
- Airbags
- Active safety equipment
- Lights
- Load
- Direction of force
- Presence/Use of mobile phone
- Rating in Euro Ncap
- ...
The human element

- Driving license
- Home address
- Purpose of the journey
- Level of distraction
- Alcohol/Drugs
- Seatbelt
- Helmet - if applicable
- Position
- Illness
- Suicide
- Autopsy
- …
Human factors are extremely important

Ordinary road user data like gender, age, influence of alcohol, etc. are not sufficient.

This information should be completed with psychosocial data.
Aim of the suicide classification method

The method aims to reduce the number of “unclear cases” by a structured method including data from in-depth studies and psychosocial investigations.

Is it a suicide or not?
A method for classification of road traffic fatalities

The method includes:

• criteria for cases that are to undergo the classification process

• psychosocial examinations

• a classification scale

• an expert group that carries out the classification
Criteria for cases to undergo the classification process

1. Farewell message, oral or written, where intention is clearly communicated and where the traffic event supports a suicide

2. A traffic event that indicates suicide in combination with knowledge of
   a) recent known suicide attempts
   b) recent indirect suicidal communication
   c) communication about committing suicide or having no reason to live
   d) ongoing prolonged depression or mental illness
   e) previous severe emotional or stressful life event

3. A traffic event that strongly indicates a suicide
Socio-economic background and life situation

- marital status or family situation
- education
- working situation
- economy
- residence
- alcohol, drug or medicine abuse
- health status
- psychiatric history
- previous suicide attempts
- suicidal communication
- emotional or stressful life event
Classification of suicides

An expert group of experienced professionals in

- forensic medicine
- psychology and behavioral science
- traffic safety
<table>
<thead>
<tr>
<th>Level</th>
<th>The result of the examination...</th>
</tr>
</thead>
</table>
| 1     | shows that the manner of death was suicide  
      - requires a farewell letter or equivalent |
| 2     | strongly supports that the manner of death was suicide  
      - an almost certain suicide but the intention is based primarily on the course of event and psychosocial information of the road user |
| 3     | cannot determine whether the manner of death was suicide or the result of an accident  
      - the information has not been sufficient to determine whether the fatality was the result of a suicide or an accident |
| 4     | strongly supports that the manner of death was a result of an accident  
      - an almost certain accident |
| 5     | shows that the manner of death was an accident |
### Fatalities in road traffic

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<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Suicides</td>
<td>16</td>
<td>23</td>
<td>36</td>
<td>28</td>
<td>25</td>
<td>23</td>
<td>31</td>
</tr>
<tr>
<td>Accidents</td>
<td>266</td>
<td>319</td>
<td>285</td>
<td>260</td>
<td>270</td>
<td>259</td>
<td>270</td>
</tr>
<tr>
<td>Total</td>
<td>282</td>
<td>342</td>
<td>321</td>
<td>288</td>
<td>295</td>
<td>282</td>
<td>301</td>
</tr>
</tbody>
</table>

**Percentage of suicides**

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<tbody>
<tr>
<td>5,7%</td>
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<tr>
<td>6,7%</td>
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<tr>
<td>11,2%</td>
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<tr>
<td>9,7%</td>
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<tr>
<td>8,5%</td>
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<td></td>
</tr>
<tr>
<td>8,2%</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10,3%</td>
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</tbody>
</table>

10% of the road traffic fatalities has been classified as suicides 2012 to 2016.

* Natural deaths excluded
Suicides in road traffic – psychosocial findings

- The majority of these people had been diagnosed with mental illness, however lacking psychopharmacologic drugs.

- Psychosocial factors such as alcohol and drug abuse, unemployment and money troubles were seen as triggering risks, as well as relationship problems, crime and in some cases among the elderly - severe somatic diseases.
Conclusions about the classification

• To determine if a fatality is caused by suicidal act or the result of an accident is a complex task and demands a well-structured and methodical approach.

• The basis for the assessment should be to examine all the available data regarding the accident and the psychosocial history.

• This must be considered in all traffic safety work even though suicides are reported separately.
Safe system approach to road safety

Suicide prevention?

- Collision warning with brake support
- Driver alert
- Lane-keeping aid
- Pedestrian detection with full auto brake
Suicide prevention in the transport system

• Intrusion protection of the transport system

• Prevent, obstruct and reduce the means and methods of suicide
Strategies for suicide prevention in the transport system

• Describe the development and distribution of suicide events within the transport system

• Use a uniform method of suicide classification for all modes of transport.

• Ensure that suicide-preventive measures are included in the design of new roads, railways, bridges, platforms, etc.

• Locate and remedy exposed places and stretches

• Highlight good examples such as rapid alert chains and cooperation between Emergency services

• Analyse and discuss psychosocial contexts and patterns of transport related suicides and the need for intervention with responsible authorities.
For those who did not endure,
for those who are struggling
and perhaps for some of us who are left behind