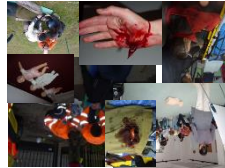




ECTRI – FEHRL – FERSI
Young Researchers Seminar 2015

FIRST AID AS AN IMPORTANT TRAFFIC SAFETY FACTOR



CDV - TRANSPORT RESEARCH CENTRE BRNO, CZECH REPUBLIC

First aid



Worldwide every year 1.24 million people are killed and 50 millions are injured in road accidents.

50% of deaths happen in minutes after the accident.

Some lives can be saved only by the lay rescuers.

10% potential decrease of fatalities.

First aid



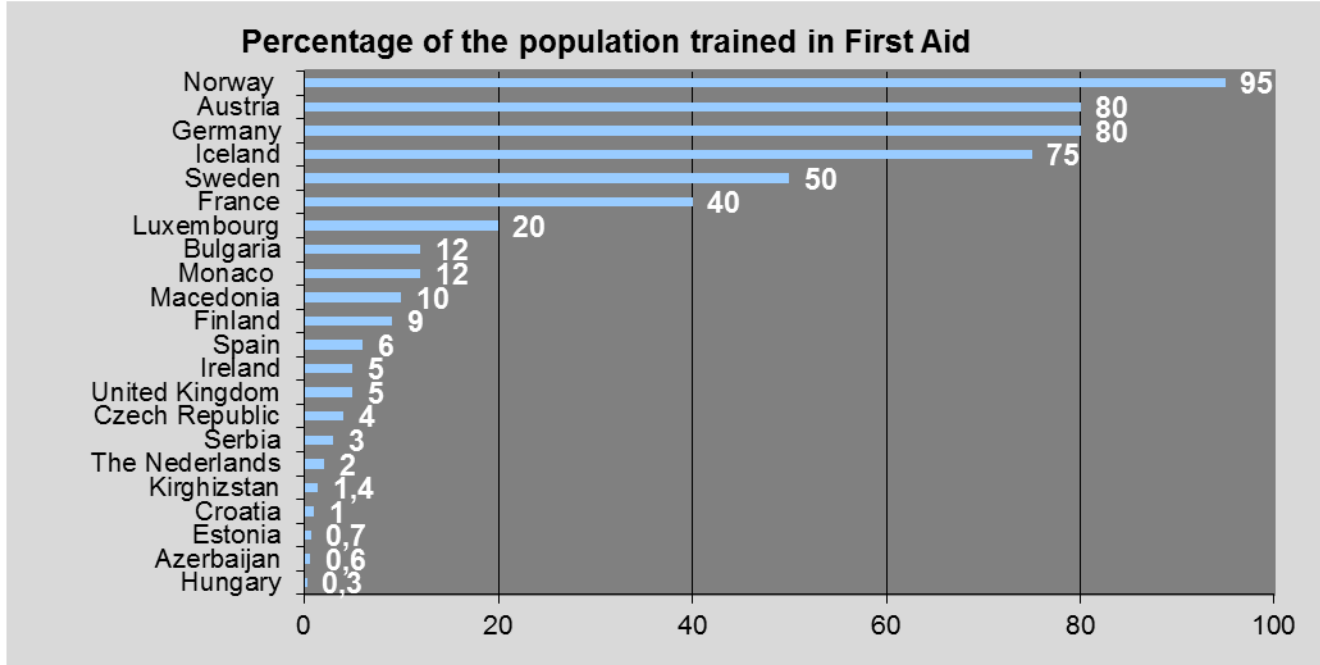
Worldwide every year 1.24 million people are killed and 50 millions are injured in road accidents.

**FIRST AID IS A RELEVANT TRAFFIC
SAFETY FACTOR**

First aid



In the Czech Republic the percentage of people trained in the first aid is relatively low.



IFRC statistics (2009)

First aid



- The research in German speaking countries showed that only 12,5% of people is capable to provide the first aid. Most of the people do not respond at all.
- Myths, lack of information, worries and doubts.
- Low level of preparedness of the people that went through the trainings.



INNOVATIONS IN THE FIRST AID TRAINING ARE NECESSARY.

First aid – necessary competencies



- Knowledge
- Skills
- Psychological setup

Since the traditional 4 hour training seems not to be functional in the Czech Republic, we elaborated a new 16 hours experience-based conception.

First aid – experience-based training



- Reduction of the theoretical information
- Key skills drill
- Self-confidence
- Continual work with the emotion

First aid – pilot evaluation of the new conception



30 participants of the driving improvement courses were randomly divided into two groups:



Traditional 4 hour conception



Experience-based 16 hour conception

First aid – pilot evaluation of the new conception



Traditional 4 hour conception

Experience-based 16 hour conception

- 1. Knowledge**
- 2. Skills**
- 3. Performance in a simulated situation.**

First aid – pilot evaluation of the new conception



1. Knowledge

There were six open questions, focusing on the main topics of the first aid. The accuracy of the answers was then evaluated by the trained lector.

2. Skills

The performance in three basic skills was evaluated by the skilled observer.

3. Performance in a simulated situation.

There were four main aspects evaluated – the activity, the fastness of the reaction, accuracy of the action and the safety risks awareness.

First aid – pilot evaluation of the new conception



There were six open questions, focusing on the main topics of the first aid. The accuracy of the answers was then evaluated by the trained lecturer.

1. Knowledge

**SCALE 1 – 5 (1 THE BEST;
5 THE WORST)**

The performance in three basic skills was evaluated by the skilled observer.

2. Skills

3. Performance

in a simulated situation.

There were four main aspects evaluated – the activity, the fastness of the reaction, accuracy of the action and the safety risks awareness.

First aid – pilot evaluation of the new conception



Comparison of the level of knowledge (average ratings) – 1= the best; 5 = the worst)

Type of training	Emergency line number	Desired proceedings on the scene of traffic accident	Internal injury issues	Spinal injury issues	Priority issues - massive bleeding or resuscitation	When do you take casualties outside of the car	Average knowledge rating	
Improved	Mean	1,00	1,60	1,07	1,07	1,00	1,53	1,2111
	Std. Deviation	0,000	,828	,258	,258	0,000	,516	,23117
Standard	Mean	2,33	4,00	5,00	5,00	2,33	3,93	3,7667
	Std. Deviation	1,447	1,000	0,000	0,000	1,952	,961	,61978

First aid – pilot evaluation of the new conception



Comparison of the level of skills (average ratings; 1= the best; 5 = the worst)

Type of training		Life functions check - unconscious casualty treatment	CPR - artificial breathing	CPR - chest compression
Improved	Mean	1,20	1,60	1,07
	Std. Deviation	,414	,737	,258
Standard	Mean	3,67	3,47	2,27
	Std. Deviation	,724	1,187	,961

First aid – pilot evaluation of the new conception



Comparison of the performance in simulated situations

Type of training		Reaction (active - passive)	Reaction (fast - slow)	Accuracy of performance	Safety risks awareness
Improved	Mean	1,53	1,73	1,20	1,36
	Std. Deviation	,743	,799	,414	,633
Standard	Mean	2,73	2,53	3,47	4,60
	Std. Deviation	1,624	1,552	1,060	,507

First aid - pilot evaluation of the new conception



The pilot testing showed remarkable differences in knowledge, skills as well as the competency to act in the simulated situation.

High efficacy in all relevant levels of competency.

First aid as an important issue.

Higher costs.

Lack of qualified trainers.

Lack of research.

First aid - pilot evaluation of the new conception



The pilot testing showed remarkable differences in knowledge, skills as well as the competency to act in the simulated situation.

- +**
 - High efficacy in all relevant levels of competency.**
 - First aid as an important issue.**
- - Higher costs.**
 - Lack of qualified trainers.**
 - Lack of research.**



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THANK YOU!

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