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## THE ACTIVITY OF THE AVIATION-MEDICAL AND OCCUPATIONAL MEDICINE CERTIFICATION EXAMINATION CENTRE AT THE MILITARY INSTITUTE OF AVIATION MEDICINE IN THE FIELD OF ASSESSING THE ABILITY TO DRIVE VEHICLES\*

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**SUMMARY:** *The authors of this article have tackled the problem of road safety, especially in the aspect of health, and alcohol abuse among drivers. The article also covers the activity of the Aviation-medical and Occupational Medicine Certification Examination Centre at the Military Institute of Aviation Medicine in the field of appeal examinations of vehicle users. Having taken into consideration the overall number of road accidents in Poland the authors have presented their own data stemming from analysis of drivers' appeal examinations*

**KEYWORDS:** *road safety, traffic collision, drivers' appeal examinations, alcohol consumption major cause of road accidents*

Road safety is an extremely important issue and any measures should be taken to improve it. Poland belongs to a group of countries in which the number of road accidents, including the most serious accidents with casualties, is the highest in the whole EU. The main reason for such a high death toll, apart from the poor state of road infrastructure, is the behaviour of drivers: speeding, driving under the influence of alcohol or drugs, tiredness, ignoring seatbelts, etc.

According to data collected by the General Headquarters of Police intoxicated participants of road traffic took part in 4,524 accidents (11.6 per cent of the total number of accidents), in which 455 people were killed (11.6 per cent of the total number of killed) and 5,620 were injured (11.5 per cent of the total number of injured)

Another issue of great significance is the health condition of drivers who often do not realize that various illnesses and, consequently, taking drugs might have a bad

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\* The data used in this publication was acquired from the Prevention and Analysis Team at the Road Traffic Bureau of the General Headquarters of Police

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influence on their ability to drive vehicles. Taking into consideration the fact that there are more and more cases of abusing alcohol and other drugs, also among drivers, it is of utmost importance to carry out comprehensive and detailed medical examinations for people applying for a driving licence and ensuing certifying proceedings.

Despite broad actions raising awareness about dangers connected with driving under the influence of alcohol the problem in Poland still has not been solved. In 2010, during traffic controls, nearly 170,000 drivers were found intoxicated.

Qualified specialists of psychology have found in their research that people driving cars after drinking alcohol present the following disorders:

- states of euphoria, which make the driver overestimate his abilities,
- narrowed field of sight, especially when it comes to moving objects,
- deteriorated distance and width assessment and risk appraisal,
- hindsight.

These observations are backed by the data received from the General Headquarters of Police, according to which the main cause of accidents was excessive speed. While not giving way was second, the third main cause was driving on the wrong side of the road, overtaking and not keeping safe distance. The statistics on the number of accidents caused by intoxicated drivers and on the period of when they happened are also not surprising. From May till October, the warmest time of a year that most find best to socialize and party, there was of a total of 65 per cent of such accidents. To no surprise Saturdays and Sundays are more abound with drunk drivers than regular working days. The data on the age of accident perpetrators is alarming. The biggest age group was constituted by those of age 25-39 (983 accidents) and 18-24 (684 accidents) respectively. The fact that the youngest and the least experienced drivers are in the second group in terms of accidents is also worrying.

Another piece of information worth noticing is the distinction of voivodeships in terms of the highest amount of accidents caused by intoxicated drivers and by the highest detention rate. The disgraceful top places in the classification of accidents were taken by the Slaskie (14 per cent), Lodzkie (10.9 per cent) and Malopolskie (9.2 per cent) voivodeships, whereas the Lubuskie voivodeship had the lowest rating (1.7 per cent). Traffic controls showed that the highest number of intoxicated drivers (15,815) in 2010 held the wielkopolskie voivodeship. In Silesia, where drunk drivers were the perpetrators of the largest number of accidents, 15,387 were held. The third place goes to the Dolnoslaskie voivodeship with 13,814 drivers held.

One of the major tasks carried out by the Aviation Medical and Occupational Medicine Certification Center (OBOLLiMP) is conducting medical and psychological examinations for applicants for a driving licence in all categories. In addition, pursuant to the order of the Minister of Health dated 7 January 2004 (Journal of Laws No 30, item 15, as amended), OBOLLiMP is one of the five institutions in Poland entitled to carry out the final appeal examinations in the area above mentioned.

In compliance with appropriate legal regulations a medical examination, carried out in order to assess the presence of contraindications, or lack thereof, for driving mechanical vehicles, is for:

1. An applicant for a driving licence.
2. A person applying for a reinstatement of a driving licence suspended because of health reasons.

3. An active driver referred to examination by an appropriate road traffic control authority in situations when he:
  - a. took part in a road accident, in the result of which somebody died or was severely injured,
  - b. was driving under the influence of alcohol or drugs of similar effect as alcohol intoxication.
4. A driver, whose health condition is put at issue, is referred to examination by the decision of the prefect of a district.
5. A disabled holder of a driving licence or a permit to drive trams is referred to examination by the decision of the starost of a district basing on a notice of the district or voivodeship team for determining the degree of disability.
6. A candidate for a driving instructor or a driving licence examiner.

At the Aviation-Medical and Occupational Medicine Certification Examination Centre at the Military Institute of Aviation Medicine utmost attention is paid to conducting medical and psychological appeal examinations, especially which attendants are referred to by traffic control authorities or by the decision of the starost of a district. This happens when a driver is found driving under the influence of alcohol or other psychoactive substances or his health condition is doubtful.

The scope of laboratory examinations, as well as medical consultations, is defined individually, according to patient's physical condition or the kind of crime/traffic offence he committed. After analyzing the results of the above-mentioned, the certifying doctor makes the final decision and produces an appropriate medical certificate on the ability or lack thereof to drive mechanic vehicles of the appropriate category.

In Table No.1 the most significant figures regarding the activity of the OBOL-LiMP WIML certifying examinations were showed.

It should be remembered that the Military Institute of Aviation Medicine in one of the few Institutes in Poland entitled to carry out appeal examinations. That is why the data presented in the Table do not show the whole situation in this field. It seems however that similar tendencies have been observed in other research centers. The majority of patients examined at WIML came from the Mazowieckie, Pomorskie, Zachodniopomorskie and Podlaskie voivodeships. According to the 2010 data from the General Headquarters of Police, the total number of accidents, deaths and injured in these voivodeships was as follows:

- the Mazowieckie voivodeship, including the capital city of Warsaw - 509 accidents, 61 deaths and 650 injured,
- the Zachodniopomorskie voivodeship – 157 accidents, 15 deaths, 194 injured,
- the Podlaskie voivodeship – 133 accidents, 19 deaths, 198 injured,
- the Pomorskie voivodeship – 247 accidents, 16 deaths, 290 injured.

Analyzing the data from the Table the following conclusions can be made:

1. In all the years analyzed the biggest percentage of appeals regarded drivers holding driving licence B category. It can indicate that its holders commit way more traffic violations or road crimes and/or their health condition is worse than that of professional drivers.
2. The average age of examined drivers (39-43) is similar in all the years presented in the table; also the period of holding a driving licence is similar (17-22 years). It

can be concluded that with the passage of time and gain of experience in driving mechanical vehicles the criticism of own behaviour decreases, whereas deceptive self-confidence in one's skills raises. A detailed analysis of particular cases indicates the lack of criticism towards one's behaviour, which can be observed especially in case of intoxicated drivers.

3. The main reason for appeal examinations was driving under the influence of alcohol. The analysis of data collected over the last four years indicates an upward trend, which unfortunately is consistent with publicly available information on this topic. It turns out that despite intense prevention activity in this field of the police, increased traffic control and publicizing road safety issues in media, the problem of excess alcohol abuse still remains.
4. Another crucial reason for appeal examinations were mental disorders of various etiologies. It may seem that some of them had existed since the early years and further discovering of pathological changes was accidental and took place after causing some road accident or driving under the influence of alcohol. Bearing that in mind, it should be considered whether qualifying examinations which determine the suspension of a driving licence are not too liberal. Respective authorities should also think whether there is no need to introduce qualifying psychological examinations for applicants for A or B category driving licence.
5. Based on available data, as well as on own research, it should be noted that the number of road accidents caused by drivers who are under the influence of psychoactive substances is relatively low. It seems however that this problem is growing while the number of traffic controls in this field is too limited. With the increase of people, especially young people, who have occasional or constant contact with drugs or substances of similar effects it seems recommended that the Police and other traffic control authorities should be equipped with certified drug-test, which would allow to monitor the situation and increase the road safety.
6. Taking into consideration the fact that at WIML only a small population of drivers from a limited number of voivodeships is examined, it should be understood that the problem is much more serious in the scale of the entire country. This in turn looms large over road safety on Polish roads.

The conclusions presented in this article partially correspond with the changes that were included in an amendment to Minister of Health Regulation of 28 April 2011 on medical examinations for drivers and applicants for driving vehicles (Journal of Laws No 88, item 503). The aim of the amendment was to implement some of the decisions included in the European Commission Directives, in which medical factors affecting driving ability were defined. The new regulations are to contribute to the increase of road safety. The changes will concern carrying out ophthalmological examinations (applicants will undergo mesopic vision and increased sensitivity to glare tests) and people suffering from diabetes and epilepsy will be taken into account. In the last two cases the aim of an examination is to exclude the possibility of syncope as a result of an illness.

In the above mentioned amendment some changes in assessing the organs of hearing and balance were also introduced. It should be stated that the new scope of examinations can eliminate the sick from road traffic and limit the amount of accidents committed by them.

Table I.

Year		2006	2007	2008	2009
<b>Number of drivers examined</b>		21	28	27	34
<b>Holders of driving licence of category *</b>	<b>A</b>	7	10	15	12
	<b>B</b>	21	23	24	28
	<b>C</b>	7	19	8	16
	<b>D</b>	1	2	3	4
	<b>T</b>	4	10	9	10
<b>Average age of drivers examined</b>		39.3	40.0	42.4	43.0
<b>Period of holding driving licence (in years)</b>		17	17	20.3	22.0
<b>Main reasons for appeal examinations</b>	<b>Drink driving</b>	6	19	15	21
	<b>Psychiatric causes</b>	4	2	7	9
	<b>Inco-rect EEG feedback/epilepsy</b>	4	3	3	12
	<b>Injuries</b>	4	-	-	-
	<b>Drugs</b>	-	-	2	-
<b>Result of examination **</b>	<b>Fit to drive</b>	5	14	9	16
	<b>Unfit to drive</b>	16	16	18	18

NOTICE:

\* - the total number of people examined may differ from the number of driving licence holders of particular category, because one person can hold several licences.

\*\* - the number of appeals can differ from the total number of examined people, because one person can get several certificates (e.g. B category – fit, D category – unfit)

