Methadone Maintenance Treatment and Drugs

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A B S T R A C T

The mental and physical capabilities of drivers in traffic are often seriously challenged these days. Not only do they need to concentrate on driving, predict connections between various phenomena, take appropriate judgements in current situations and foresee the sequence of measures to be taken, but they are also expected to be emotionally stable, etc.[1,2]. The problem with drugs in traffic is often encountered when assessing the actual safe driving capability of a person in a given moment, for example after a car accident or a police check, or medical check-ups that are required for a driving license. The Road Traffic Safety Law considers methadone a drug. Drug addicts do not meet the health standards required of drivers. This research program deals with the attitude of drivers who are in methadone maintenance treatment programs with respect to the driving ability as well as the effects of methadone use in combination with other drugs on driving. It has been established that drivers undergoing the methadone maintenance program, regularly drive not only under the influence of methadone but also under the influence of marijuana (20%) and heroin (18%) and sometimes under the influence of marijuana (58.6%), heroin (55.7%), and alcohol (48.6%). Certain initiatives have been taken by some therapists to give, under certain circumstances, a clean bill of health to responsible methadone maintenance patients who have an adequate level of responsibility for themselves and their deeds, in order to help them obtain a driving license. Since it has been established that methadone maintenance patients use methadone quite commonly in combination with illegal drugs and/or alcohol, the classification of this type of addicts among possible driving candidates remains disputable. Long term interdisciplinary research is still required to determine the basic principles required to asses and possibly admit this type of drivers to participate in traffic, as well as to determine which professional therapists can participate and evaluate the driving capabilities of these patients.

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Introduction

The problem of drugs and medication has to be dealt with in order to evaluate the actual ability of a person to drive safely, for example, after car accidents, police checks or medical check-ups required to obtain a driving license[3].

The term »under the influence of alcohol or psychoactive medication«, is usually associated with changes that are provoked by substances that have a major effect on our consciousness, reaction times, emotional attitude and behavior. It has to be noted here that it is not the same in the case of: a one time use, a critical introductory period of a new medicament, an overdose, hypersensitivity, long-term therapy, chronic use (or abuse), abstention phenomena, in which case age and the state of health are important. It is quite understandable that the assessment of such a condition is a demanding and complex process[3].

Methadone, a »medicament« prescribed by doctors, is regarded by the Road Traffic Safety Law[4] as a narcotic and psychoactive medicament. A methadone maintenance patient is a methadone addict. Persons, addicted to drugs, do not meet the stipulated medical conditions, required for drivers[5]. A police officer that suggests penalizing a driver – a methadone maintenance patient – and the doctor, occupational, traffic and sport health specialist, who does not give a clean bill of health, required to obtain a driving license, is acting on the basis of the current legislation.

The methadone maintenance treatment consists of three phases. In the first, introductory phase, a patient is stabilized and psychosocial help is made available. After moving to the maintenance phase of a methadone treatment, a patient is taught new social skills. In the last phase of the program, a patient can give up methadone and abstain, or he/she can use it for the rest of their life without any special health problems.

A number of studies have proven that the methadone maintenance program, if efficiently started and implemented, is really effective as a means for reducing opiate abuse, crime, and the HIV virus and hepatitis risk. It helps to reduce other health problems as well as mortality. The optimum daily dose, high level medical and psychosocial services and perseverance in the program are major factors for positive results. The individual's social status improves, as well as his/her condition and physical function: methadone reduces and often even completely stops the use of heroin among addicts. Along with the proper daily dose of methadone and thanks to a more suitable lifestyle, drug addicts reduce the intake of other drugs or even completely stop using them. Previous abnormalities of the organism will become normal and among others also the hormone imbalance.

In the opinion of experts who are coordinating different Centers for drug abuse prevention and drug addition treatment, methadone does not represent a drug replacement, it is a substitute for the endorphin level insufficiency, since the body is temporarily or permanently unable to produce it in adequate quantities. With the help of experts, some methadone maintenance patients succeed in stopping the administration of methadone and to abstain[6].

The World Health Organization recommends methadone as a medication of choice used in the treatment of opiate addiction and it is widely used all over the world. The administration of methadone in the framework of doctrinal recommendations for drug addition treatment, at a certain moment represents for some patients the best possible way of treating their addiction. Such patients are integrated into an environment where they are not regarded as patients undergoing

the methadone maintenance therapy or as former drug addicts[6].

In 1999, Centers for drug abuse prevention and drug addiction treatment in the Republic of Slovenia served 2,342 participating patients, 1,097 only in the methadone maintenance program. From 1995 to mid 2000, the Center for drug addiction treatment hospitalized 530 persons and 2,400 people were treated as outpatients[6]. The Centers organize prevention activities, consulting rooms for drug addicts, their relatives and pedagogues, outpatient detoxification, intensive work with those who abstain in the form of individual, group or family therapy, preparation for hospital treatment, substitution programs, assistance during rehabilitation and reintegration into the society, etc.

According to some other experts, the methadone maintenance program is in many cases only a legal way of receiving a certain psychoactive substance, with three aims[7]:

- To reduce the need for buying psychoactive substances on the black market and therefore to reduce the need for criminal behavior;
- To stop the intravenous administration of a psychoactive substance and therefore reduce the risk of infection by the hepatitis virus and the HIV virus; and
- It should offer certain forms of social and psychological help that could lead to giving up the habit of using psychoactive substances.

Subjects and Methods

Over 500 questionnaires were distributed by Centers for drug addiction treatment all over Slovenia. The therapists explained the contents and handed them out as an anonymous questionnaire to patients undergoing the methadone maintenance program. Along with some basic data regarding sex, age, driving categories and experience, the primary interest was focused on their attitude towards driving and in particular driving under the influence of drugs or/and methadone, and their opinion about the problem of a medical selection for this type of drivers.

The research included 70 individuals, all undergoing the methadone maintenance program and all in the possession of driving licenses of various categories, who had all correctly and completely filled in the questionnaire. The data were processed according to standard statistical methods.

Results

70 drivers, participants in the methadone maintenance program, took part in the opinion poll and returned the completed form in the time frame requested. 60 of those questioned were men (85.7%) and 10 (14.3%) were women. 84.3% were aged between 18 and 35 and 15.7% between 36 and 65. As far as education was concerned, the majority finished secondary schools (45.7%), 27.1% vocational schools, 20% finished primary school or did not finish it, while 4.3% went to university and 2.9% had a university degree.

The majority (35.7%) were unemployed, followed by those employed in the services sector (24.3%), workers with no skills (10%), 8.5% employees and 7.1% students. 60 (85.7%) of the questioned had a driving license category B, 21.4% had category A, 5.7% category C, 4.3% category F and 2.9% category E. Among them were 51 (75.7%) amateur drivers, 11 (15.7%) drove to work, and 6 (8.6%) were professional drivers. In average they made 33,000 km per year.

Even before receiving their driving license, those questioned occasionally or regularly took various psychoactive substances:

– on a regular basis mostly marijuana (30%), methadone (28.6%), heroin (18.6%) and alcohol (10%);
– and occasionally marijuana (48.6%), alcohol (44.3%), heroin (34.3%) and cocaine (30%). (Figure 1).

The majority of those who drove under the influence of psychoactive substances (45.7%) were under the influence of methadone, followed by marijuana (20%) and heroin (18.6%) and occasionally marijuana (58.6%), heroin (55.7%), alcohol (48,6%) and methadone (31.4%).

The majority of drivers (60.2%) never violated any traffic regulations under the influence of psychoactive substances, 19.9% committed one traffic regulation violation and the same percentage more than one.

71.4% of the questioned have never been involved in a traffic accident, 20% were involved once and 8.6% more than once. The majority of the questioned people (85.7%) have never caused a traffic accident, 12.9% have caused one and 1.4% more than one traffic accident. 62.9% were never prosecuted, although the police did note that they drove under the influence of psychoactive substances, 21.4% were prosecuted once and as many as 15.7% more than once.

Those questioned responded also to the question regarding problems they may have had when driving under the influence of some psychoactive substances. Most of them – as many as 49 (70%) did not name any problems when using methadone, 42 (60%) when using marijuana, 34 (48.6%) when using heroine and 27 (38.6%) when using other stimulants. The most frequently named problems were those of paying less attention to traffic (heroin and marijuana prevail), impaired vision, misjudgment of distance and difficulties when braking. (Figure 2.).

During a withdrawal crisis, 38 (54.3%) did not name any problems at all while driving. The remaining half of those questioned experienced most problems by paying less attention to traffic (34.3%), impaired vision (21.4%) and bad assessment of distance (11.4%).

Our interest was also to know what measures should be taken if a doctor or

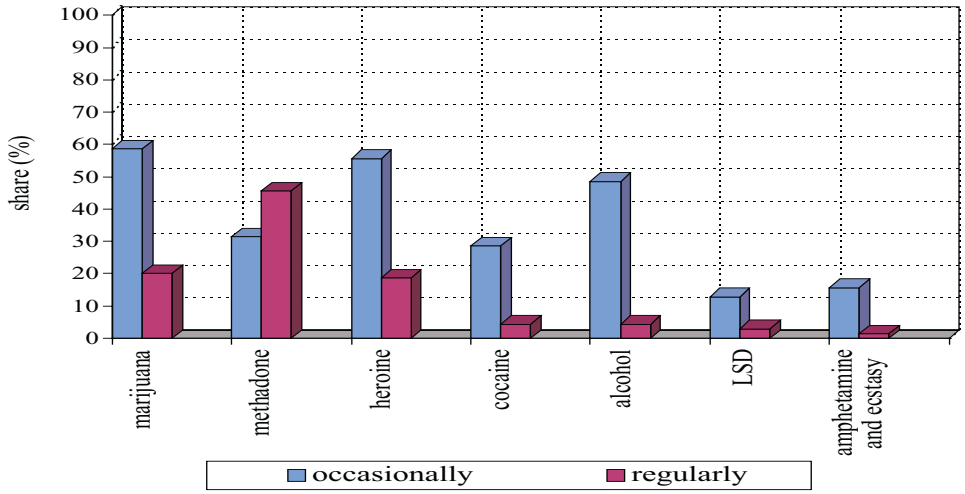

Fig. 1. Driving under the influence of various psychoactive substances.

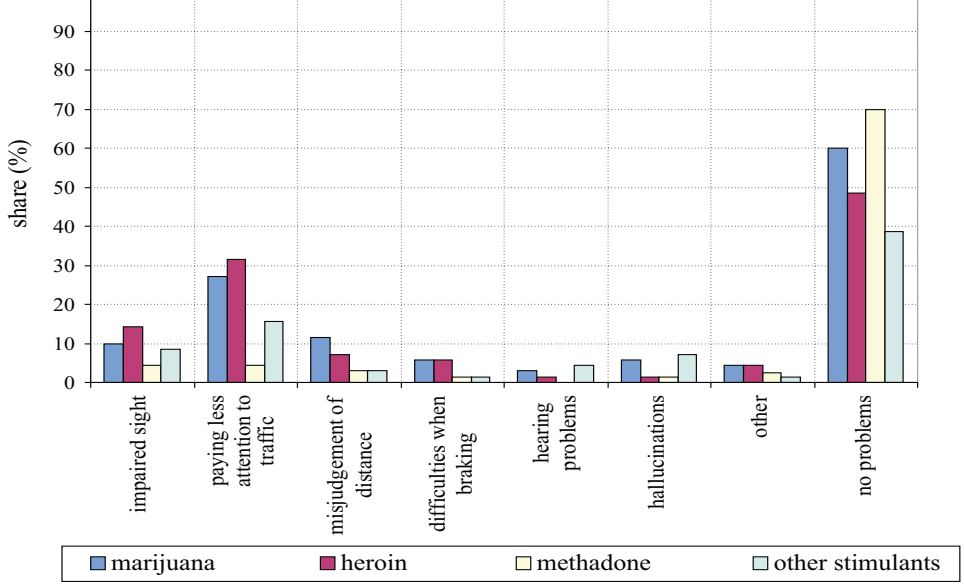

Fig. 2. Driving problems of those questioned when using psychoactive substances.

an occupational, traffic and sport medicine specialist, suspects drug use when evaluating the driving capabilities.

In as many as 70% of the cases, the specialist in occupational medicine did not express any kind of suspicion (or was not interested in this information during the conversation). In 14.3% of cases he demanded a test of body liquids, in 11.4% doctors requested extra medical documentation and in 4.7% of cases a written statement saying that they do not use psychoactive substances was requested.

The questioned were also asked under what condition would they allow users of psychoactive substances to drive if it was up them to decide. As many as 82% thought that there should be no obstacles if only the prescribed dose of methadone was used, 38.6% – if the use of alcoholic drinks was completely eliminated, and 30% – if the users took only soft drugs; 25.7% – if medical check-ups were more frequent, and 17.1% when the absence of other organic and psychical symptoms was provided.

The opinions of those questioned about when to allow drivers, who abstain completely or use only methadone, to drive were quite different. About 40% thought that there should be no time limits (about 30% of them refused to answer this question), whereas the rest of them suggested various periods of time (from one to 6 or 12 months (the majority)), and up to 4 years between the beginning of complete abstention or introduction to a methadone maintenance program.

More than one half of those questioned (55.7%) believe that there is an important difference between their driving now, when taking part in a methadone maintenance program, and the time when they drove under the influence of other psychoactive substances.

A large percentage of the questioned drivers had used various psychoactive substances even before they passed their

driving test (apart from methadone, they occasionally in the majority of cases used marijuana, alcohol, heroin and cocaine and regularly marijuana, heroin and alcohol). They often drove under the influence of the above mentioned substances (regularly methadone was most often accompanied by marijuana and heroin and occasionally by marijuana, heroin, alcohol and cocaine) and only slightly more than a half of them never committed a traffic offence, more than 70% have never taken part in a traffic accident, more than 85% have never caused a traffic accident, and 63% have never been prosecuted for driving under the influence of psychoactive substances.

They had the least of problems when driving and using methadone, followed by marijuana and heroin. The most frequent problems were lack of attention paid to traffic, impaired vision, misjudgment of distances and problems with braking. During withdrawal crises, almost half of them had problems; mostly it was lack of attention paid to traffic.

When evaluating the abilities of a person for driving, doctors, occupational medicine specialists, didn't report any suspicion about the presence of psychoactive substances in more than two thirds of the cases.

A large group of those questioned found that the isolated and (guided) use of methadone does not represent an obstacle for driving, many had given different time intervals that should pass between total abstention or inclusion into the methadone maintenance programs and the time when they should be allowed to drive again. Very similar results were shown in the study carried out by M. Krek and J. Mišigoj Krek[8].

Discussion

In Slovenia, just like anywhere else, one of the biggest problems of public health is the use of drugs and their abuse. A special problem is the presence of drugs in road traffic, which represents a constant threat to its safety[8]. Experts estimate that there are currently 6 to 7 thousand problematic heroin users in Slovenia (most of them are male, belong to a younger age category and are also drivers). From our statistic indexes and studies, carried out in other countries all over the world, we can deduce that driving under the influence of drugs is quite common[8]. Among most widely used drugs are heroin and marijuana, often followed by benzodiazepines and alcohol[9–17]. The combination of the latter substantially increases the risk of causing a road accident and its seriousness.

Beside persons who drive under the influence of illicit drugs, in the past years the drivers, undergoing the methadone maintenance therapy has increased. The percentage of those who take exclusively the prescribed doses of methadone is very small (about 10–15%), the majority of others use predominantly illicit psychoactive substances (opiates, benzodiazepines, cannabis) and alcohol, which represents a large number of substances, identified with most persons who caused traffic offense and accidents[8].

In 1999 only, Slovene police ordered 1,448 tests to prove the presence of drugs or psychoactive substances among participants in road traffic. In 67.3% of cases, people refused to take the test, in 26.1% the result was positive and in 6.6% of cases the result proved negative. Police data analysis shows that in road traffic we can that a potential offender of traffic regulations to be under the influence of drugs if he is a man (95% share), a car driver (over 85%) – followed by riders of motorized bicycles and motorcycles, aged between 18 and 24 (over 45%) – followed by age groups 24 to 34 and then 16 to 18 years, most often caught committing a traffic offense during weekends (Friday,

Saturday), caught in evening, afternoon or night time, caught in streets of urban areas and taking drugs and combining them with the following offenses: drunk driving, inappropriate speed, wrong side and direction of driving, disrespect for the right of way, incorrect overtaking, etc.[18].

From the analyses, carried out by the Institute for Forensic Medicine at the Faculty of Medicine, we can deduct that between 1991 and 1999, 1,449 urine tests were carried out for suspected presence of psychoactive substances. 42.9% of the tests proved negative and the remaining 57.1% (827) were positive. In 35.4% of cases the presence of one psychoactive substance was detected, in 13.3% two, and in 8.4% three or more substances. Among positive results cannabinoides ranked first with 438 cases, in 249 cases opiates were detected, in 236 methadone, and in 158 cases benzodiazepines. The fact that methadone with no other psychoactive substance was used only in 33 (12.7%) out of 236 cases, is alarming. Most often, it was detected in combination with one (34.7%), two (22.9%) or three (9.7%) types of drugs and/or alcohol. Among simultaneously used drugs, beside alcohol, the most frequently used were opiates (in about 60%), followed by benzodiazepines (in about 30%) and cannabinoides (in about 23%)[13,19].

This survey has shown that drivers who drove under the influence of psychoactive substances, most often experienced problems due to lack of attention paid to traffic (heroin ranks first), followed by impaired vision, misjudgment of distances, problems with braking, hearing problems, hallucinations etc.

In most studies on psychophysical abilities, e.g.: reactivity, the ability of concentration and of the ability to detect external activities, the examined individuals who took part in the methadone maintenance treatments, passed the tests almost as equally well as the control group. Here we have to consider the fact that a large number of the examined individuals could not take part in the tests due to their use of additional psychoactive substances. The personality test evaluation and the psychopathologic results showed even bigger differences – many of the cases were even more complicated and will need a more complex assessment. Most methadone maintenance patients have mental problems, so they have to administrate additional psychotropic medicines[20,21].

A comparison of psychophysical capabilities of the group using methadone and the control group which was not under the influence of any of the psychoactive substances, showed that patients with methadone substitution achieve worse results in all tests, whereas compared with the valid standard for the individual tests their results were average. Patients, who did not use any other psychotropic substances, showed better abilities compared to the whole methadone group. The results of patients taking methadone only, particularly those who did not experience any subjective effects of methadone, practically matched the ones of those of the control group[17]. Evaluated from a broader perspective, they achieved best results in accuracy tests on selective attention to speed and distance assessment, they scored the highest number of correct reactions in the test on the speed of reactions and the highest number of correct answers in the test on long-term attention. The typically reduced attention and reactive capabilities were recorded on the examined person under the influence of other psychotropic substances or in the case of the subjective effect of methadone. Research work has shown that groups of methadone maintenance patients, motivated to abandon the world of illicit drugs, are able to perform test driving equally well as the groups of the examined healthy individuals of the same

age group, same sex and education, who did not take any medicaments. The differences between the groups are far greater when evaluating the personality tests and in psychopathological results[20–23]. In order to be able to drive, personal features of the examined individual are of particular importance and weather or not the examined person has taken any other psychoactive substance. A group of straight methadone maintenance patients, compared to a control group, has shown shorter processing times, which means that speed had precedence over accuracy. This could indicate a stronger tendency towards risks, or overestimating of one's own abilities.

Experts agree beyond doubt that some drivers, treated with methadone, are capable of driving, as far as reactivity times, attention and motor activity are considered. Nevertheless, some personality deviations are quite common, which could represent reasons to doubt his/her driving ability. The methadone patients are inclined to emotional tensions, feelings of subordination (inferiority); they are emotionally less stable, more anxious and lack self-criticism if compared to healthy people.

Experts who have practical experience with methadone maintenance patients agree that the psychological abilities of some maintenance patients meet the standard level (after a period of time, and immediately after the »admission« to the methadone maintenance program) and could be considered capable of driving. They also point out the need for verification of driving abilities of drivers undergoing methadone maintenance programs, for each case separately.

There are certain initiatives by our therapists according to which responsible methadone maintenance patients, with an appropriate level of responsibility for themselves and their deeds, could take a medical check-up. In the case of negative results of the toxicological test, they would be given a clean bill of health that could help them to obtain a driving license.

Along with the observations that with methadone maintenance patients the presence of illicit drugs and other medicaments is quite common – be it for parallel diagnoses or administration of medicaments according to their own judgement – accepting this type of patients among possible candidates for drivers remains questionable.

The studies confirm that a small number of drivers are extremely motivated and well disciplined. In tests of psychophysical abilities those drivers meet all the criteria for safe driving, but on the basis of this data a general result is not possible, since other studies – among them some national ones – confirm that this is only a small number (only about 10 to 15% of those who are participating in methadone maintenance treatment programs have proven to take only the prescribed methadone), while the rest would like to drive or even continue to drive, and according to our evaluations they represent the majority. A large number of them are those who are affected in a psychophysical way to such an extent that they cannot stand any selection, and of course those who in the course of treatment did not succeed to develop the awareness on the importance of giving up the parallel use of other psychoactive substances (alcohol included). There are many foreign and local studies showing that the inability of a controlled use of the prescribed dose only is a major problem of this group, since along with methadone they too often take whatever they can get.

Since the current law dealing with road safety does not even lay out legal grounds for not considering the ability of methadone maintenance patients to participate in road traffic, this possibility

certainly should not be rejected categorically.

Since the problem is not widely known (especially in Slovenia), interdisciplinary studies are needed over several years to monitor the multitude of aspects concerning the use of methadone in the society and in road traffic. The results could be a basis in preparing new criteria for the medical selection of potential drivers:

- Definition of the required psychophysical abilities and personality features;
- Driver license categories which would qualify for the issue of a driving license;
- Schedule of medical check-ups (preliminary for obtaining a driver's license and periodic ones for repeated assessment of abilities);
- The time required from the start of abstention and/or inclusion in the methadone maintenance programs to the possibility of assessing the ability for driving;
- Methods for gathering information on eventual prosecution;
- Methods for collaborating with the therapist and the patient's personal doctor;
- The conditions of random medical check-ups (urine tests for metabolites of psychoactive substances, etc.);
- Designate an interdisciplinary group of evaluation experts of the 1st and the 2nd degree for evaluating the ability to drive;
- Definition of epidemiological criteria required for monitoring the success of their participation in road traffic;
- Adding new elements to the doctrine of professional work, etc.;
- Based on such professional criteria, which could and should be tested in practice, as well as by comparing similar studies, carried out in other parts of the world, we would be able to agree on when and who should be permitted to drive (and which categories) in spite of methadone.

The relative lack of criticism in patients undergoing the methadone maintenance program regarding this and other issues (shown also in our study and in that by dr. Krek), is logical up to a certain extent – on the one hand it reflects the desire for »equality« within the society, and eventual which leads to personality deviations, emotional instability, lack of criticism, etc. and on the other hand, it leads to addiction, for the sake of which the patients initially went astray, or it could be the consequence of the addiction itself. This lack of criticism should not and cannot appear on the side of the therapist who wish to uncritically support or even force their patient to think that driving is part of their integral rights in order to attain their maximum social reintegration. Even if professional arguments are in favor of the idea that these patients should drive, it would be appropriate to consider amateur categories only, and by no means professional driving, where the level of requirements and responsibilities is completely different.

A patient who is undergoing a methadone maintenance treatment and who wishes to keep or have a driving license, should also agree that his/her therapist is discharged of his/her obligation of discretion as well as his/her personal doctor and/or therapist. The question arises whether or not a therapist should be ready and/or obliged to intervene in the withdrawal of his/her patient's driving license, if he/she suspects that the disease or behavior changes represent a threat to safety in traffic. The medical Deontology Code[24] implies that a doctor can be discharged of his/her obligation of discretion if the patient agrees and when it is necessary for the benefit of the patient, his/her family or the society, or if it is provided for in special provisions, or the law. Our

study, as well as the study by dr. Krek, are not flawless mainly due to the fact that the doctor who was asked to evaluate the driving abilities of patients, simply did not have information whether these patient were in a position of obtaining illicit drugs (health records do not provide this information, nor do patients disclose such information during medical check-ups, and without this knowledge a medical expert should not be suspecting). To carry out tests for metabolites in urine with all the driver candidates would be too expensive, and professionally disputable.

From a legal point of view, we would certainly have to sacrifice professional secrecy and discharge from it on the one hand, on behalf of the numerous traffic victims due to one or another deficiency, illness or other particularity of the driver that we were aware of, but on the other hand it would be considered unethical to speak about it.[25]. Again and again the question whether doctors should primarily fight for life which is sacred and which in traffic (also under the influence of psychoactive substances) is lost too often, or should they stick to some rigid rules which under threat of penalty and of violation of moral-ethic norms stand in the way of preventing »attacks« on those lives on time.

The problem can not be dealt with by looking at it from one aspect only – the rights of an individual, although it definitely should not be disregarded, but also from the aspect of the society as a whole, which is threatened and restrained by the presence of drivers addicted to psychoactive substances and since doctors are also part of this society, they have to take care of everyone's safety and health. Therefore this problem, which might be new to some people, will have to be dealt with seriously, accompanied with a lot of negotiation and professionally supported compromise. Reaching the patients in the methadone treatment program will not be an easy nor simple task and aimed only at offering these patients to participate in road traffic as much as they can. The given dilemmas are much more comprehensive and more complicated and will require serious interdisciplinary work and participation of the widest professional public.

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METADONSKI POTPORNI PROGRAM I VOŽNJA MOTORNIH VOZILA

S A Ž E T A K

Zahtjevi koji se postavljaju pred vozače motornih vozila u cestovnom prometu, često su snažna iskušenja njihovih psihofizičkih sposobnosti. Vozač mora biti sposoban koncentrirati se na vožnju, moći predvidjeti vezu među pojavama, procijeniti nastalu situaciju, predvidjeti slijed postupaka, mora biti emocionalno stabilan. Droga i funkcioniranje pod njenim utjecajem prisutni su u konzumenata opijata, kako tijekom vožnje, za vrijeme akcidentalnih situacija, tako i pri provjeri i ocjeni zdravstvenog stanja za dobivanje vozačke dozvole. Ovisnici o drogama ne zadovoljavaju zdravstvene uvjete za vozače motornih vozila. Zakon o sigurnosti cestovnog prometa, metadon (potporni preparat u procesu odvikavanja od droge) karakterizira također kao drogu. U ovoj studiji analiziran je odnos vozača iz metadonskog programa i vozačkih sposobnosti, bilo nakon primjene samo metadona ili nakon istovremenog uživanja metadona uz jedan ili više drugih narkotika. Nađeno je, da je u skupini od 70 vozača, uz metadon redovno vozilo 45,7% vozača. Pored toga su isti vozači vozili još uz marihuanu u 20% i uz heroin u 18%. Povremeno su testirani vozači vozili uz marihuanu u 58,6%, heroin u 55,7% ili alkohol u 48,6%. Nakon analiza namjere terapeuta su da ovisnici iz metadonskog programa, bez istovremenog uživanja drugih narkotika i uz potrebne mjere odgovornosti, dobiju pozitivno liječničko mišljenje za dobivanje vozačke dozvole. No tu su još neophodna daljnja interdisciplinarna istraživanja, koja bi uključivala i terapeute pacijenata ovisnika pri ocjeni njihovih vozačkih mogućnosti.