

PSYCHOLOGICAL AND MEDICAL ASSISTANCE FOR SAFE MOBILITY (PASS)

An interdisciplinary model to promote and secure
mobility competence in Europe ¹⁾

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Preamble

The European Union strives to reduce the number of traffic accidents in Europe. Accidents on the road incur high losses in terms of economic and individual resources and cause the victims and their families immense suffering. Fatal and non-fatal accidents can, however, be avoided. The citizens of Europe expect the best possible protection from traffic risks and more security in the transportation of persons and goods. They expect safe mobility. The European Union therefore has adopted the goal of reducing the number of traffic fatalities by fifty percent by 2010.

Such a reduction is possible. Achieving the goal, however, will demand the consistent utilization of psychological and medical knowledge as it applies to traffic related phenomena – above and beyond previously planned measures. The long term realization of the goal is only feasible with the interdisciplinary support of traffic psychology and traffic medicine. For this reason, the European Union should utilize the accomplishments and potentials of traffic psychology and traffic medicine more intensively than in the past and integrate relevant knowledge and methods with licensing requirements.

The causes of fatal and non-fatal accidents are to be found primarily in the behavior and subjective experience of the participants in road traffic. Models of accident risk are based not on technical but on human factors, and it is here that traffic psychology and traffic medicine can and will contribute to stable progress.

Both the behavior and the subjective experience of motor vehicle operators convicted of serious driving offenses can be stably and positively influenced. The behavior of persons with mental, physical, and age related losses of the integrity of performance can also be diagnosed and treated to effectively improve their competence in coping with the challenges of traffic participation. These tasks presuppose specialized training on the part of professional service providers. The primary goal of traffic psychology and traffic medicine is to improve the safe mobility of traffic participants and to firmly establish these improvements for as long a time as possible.

¹ Translation by Dr. Don Doenges

1. Premises

1.1 Mobility competence

The central concept in PASS is mobility competence, which denotes the sum of mental, physical, attitudinal and behavioral bases for the safe and coregulated operation of motor vehicles. The objective of PASS is to strengthen individual driver's responsibility for his own and others' safety.

1.2 Interdisciplinary approach

Mobility competence depends on such physical and psychological factors as health, individual attitudes, situation specific behaviors and personality traits. This competence is subject to sustained improvement through the development of individual resources. PASS therefore combines traffic medicine and traffic psychology in an interdisciplinary approach to individual development and cooperates with other disciplines that aspire directly or indirectly to influence the behavior of traffic participants in a goal directed manner.

1.4 Goals

PASS contributes to the realization of the objectives of the European Union to improve traffic safety. At the same time PASS contributes to the perception of justice and legal security in single cases and thereby supports the citizens' need for self-determined mobility.

1.5 Concept

A truly European system to improve and develop mobility competence must take into consideration the knowledge accumulated in member countries. PASS provides an interdisciplinary framework for the integration of this knowledge while at the same time insuring adequate space for the implementation of nationally adapted regulations.

1.6 Range of purview

PASS describes the tasks of traffic medicine and traffic psychology in promoting the development of mobility competence and incorporates advances in engineering, law and drivers' education.

2. Levels of improving and securing mobility competence

PASS distinguishes three levels of prevention aimed at improving and securing mobility competence.

2.1 Primary level of prevention

The primary level of prevention comprises traffic participants who conform to traffic laws and restrictions without essential deviations from the requisites of safe driving.

The great majority of drivers is found at this level. Preschool instruction, driving instruction, and the sum of positive influences during socialization (e.g. through parents, teachers, and peer-groups) have contributed to the development of sufficient mobility competence in these traffic participants.

2.2 Secondary level of prevention

Traffic participants at the secondary level have retained their driving privileges after deviating from traffic regulations. Such persons are either restricted by physical disabilities or have manifested deficits in their driving behavior. The risk of their participation in traffic is elevated and their average mobility competence is considerably lower than that of motor vehicle operators at the primary level.

2.3 Tertiary level of prevention

Operators at the tertiary level have been sentenced to suspension of driving privileges after deviating from traffic norms, on the basis of physical disabilities, because of severely deviant behavior associated with personality and/or behavioral deficits, or because of criminal behavior. These persons cannot legally participate in road traffic. They are characterized by a highly elevated risk for dangerous behavior in traffic and by a deficitary development of mobility competence.

3. Preventive interventions for motor vehicle operators at the first level in the PASS model

Motor vehicle operators who participate in traffic without deviating from established norms are not subject to mandatory interventions unless they have been invested with special responsibilities or are at risk for age related performance deficits.

3.1 Examples of interventions to develop mobility competence in selected index groups

- preschool traffic education programs
- drivers' education programs with complementary measures
- interventions to prevent drug and alcohol use in conjunction with traffic participation
- training of competence to cope with interpersonal conflict

3.2 Measures to secure mobility competence in operators invested with special responsibilities.

Operators licensed for class C : Assessment of physical qualification by a traffic physician prior to licensing, and thereafter in fixed time intervals.

Operators occupationally licensed to transport other persons with a taxi or with rented vehicles, and operators licensed for class D: Initial assessment of physical and mental qualification by a traffic physician in conjunction with a traffic psychologist. In advanced age groups the physical assessment should be repeated in fixed intervals. Elderly operators should also be periodically assessed for mental qualification by a traffic psychologist, who is qualified to estimate behavioral and attitudinal prerequisites for compensating the effects of aging.

3.3 Measures to secure the mobility competence of operators in specified age groups

- Licensing applicants who aspire to operate motor vehicles in classes A, B, C, or D before reaching legal age: Initial assessment of physical eligibility by a traffic physician in conjunction with a traffic psychologist qualified to assess the mental and personality specific resources prerequisite to safe vehicle operation.
- Elderly operators of motor vehicles with licenses in the classes A, B, and C: Assessment procedures to estimate physical and mental aspects of mobility competence are offered on a voluntary basis – with services being provided by traffic physicians and traffic psychologists. The procedures can be repeated, and the results have the status of recommendations which in specific cases take supportive medical, psychological, and technical measures into account.

4. Interventions for motor vehicle operators at the secondary level in the PASS model

For motor vehicle operators with disabilities, those with behavioral problems relevant to driving performance, or those conspicuously deviating from traffic norms, intervention measures are differentiated with respect to problem difficulty. The objective of these measures is to re-establish individual mobility competence and to avoid revocation of driving privileges.

4.1 Medical examination

A catalog of physical disabilities that restrict mobility competence is to be developed, in which specific indications for mandatory medical examination are delineated for different degrees of disability. The examinations are to be performed by specially qualified traffic physicians, who may refer the motor vehicle operator to supplementary examination by traffic psychologists.

4.2 Penalty point system to support mobility competence

One condition helpful to the realization of the PASS model is a penalty-credit-point-system, in which traffic offences are mapped on to degrees of dangerousness with penalty points. In the application of such a system, exceeding a predetermined cutoff leads to restrictions in mobility or to license revocation.

As soon as the level deemed by national regulation to serve as a critical cutoff has been exceeded on the basis of a severe offence or by the sum of accumulated minor offenses, the participation in an intervention to improve mobility competence is mandatory. These measures include individual and group interventions with the objective of modifying attitudes and behavior. Service providers are specially qualified traffic psychologists or – when offences are minimal or substance dependency and abuse irrelevant – teachers specialized in driver's education.

In addition, incentives to voluntary participation in interventions for improving mobility competence can be created for individual cases in which the sum of penalty points is not high enough to render such measures obligatory.

4.3 Interventions to secure traffic safety

A catalogue of human factors commonly associated with traffic accidents includes behavioural phenomena (e.g. the previous consumption of drugs and alcohol, chronic speeding) that seriously question any assumption of sufficient mobility competence. The degree of behavioral deficit is used in this catalogue as an indicator for the necessity of a psychological and/or medical examination of the operator's level of mobility competence.

The examinations are conducted by specially qualified traffic physicians and traffic psychologists in institutions that have been officially accredited for this specific task (cf. 5.2).

Pertinent interventions aimed at improving or re-establishing individual mobility competence are provided by specially qualified traffic psychologists.

5. Interventions for motor vehicle operators at the tertiary stage in the PASS model

The suspension of mobility by revoking operators' licenses is experienced as punishment and does not systematically lead to necessary changes in attitude or behavior. The loss of mobility does, however, strengthen the motivation to recognize and modify existing behavioral problems. Interventions to improve mobility competence are based on solution oriented diagnostics and resource oriented treatment objectives that emphasize individual potentials for attitude and behavioral change.

Operators sentenced to loss of mobility therefore receive an opportunity to use the time interval of suspension to re-establish their mobility competence. The utilization of these opportunities is recommended. Pertinent traffic therapies can be conducted for individuals or groups.

Prior to reinstatement of operating privileges, a medical and/or psychological examination must be conducted to exclude any inadmissible risk potential.

5.1 Measures to improve and to re-establish mobility competence

Measures to improve mobility competence in persons with physical disabilities are comprised of the indicated medical therapies.

Motor vehicle operators with behavioral and/or personality specific problems, or with disorders of behavior and subjective experience, or those having been sentenced for serious offences in motor traffic are to be preferably treated with individualized measures of traffic psychology. These interventions are evidence based and must have proven effectiveness as methods of modifying attitudes and behavior. Their effectiveness is to be evaluated with the criterion of maintained legal conformity.

5.2 Examination of mobility competence

Before driving privileges are reinstated the offender is re-examined to ascertain whether mobility competence has been re-established and positive prognosis can be confirmed. The examination is conducted by qualified traffic physicians and traffic psychologists with gov-

ernmental accreditation. Both the scope of the examination and its judgment criteria are binding for all service providers with participating professionals.

Should the examination disconfirm the driver's attainment of intervention objectives but support the prediction that mobility competence can be re-established under specified conditions, then the professionals have the option of recommending conditions under which the reinstatement of operating privileges would be feasible.

6. Continuous quality management and research

The constituent elements of the PASS model are continually subjected to improvement and quality management measures

6.1 Supervision by governmental authority

The services of institutions for the examination of mobility competence are controlled by the member states. Governmental supervision has the objective of securing the neutrality and uniformity of the process of examining mobility competence.

6.2 Confirmation of effectiveness

The effectiveness of interventions to improve mobility competence is evaluated in accordance with criteria of scientific research. This applies to the interventions of traffic psychology as well as to the examination of mobility competence.

6.3 Professional qualification and continuing education

Practicing traffic psychologists and traffic physicians must be adequately qualified for their services and are obligated to continue the development of their occupationally relevant knowledge and abilities. All qualified practitioners have completed their education with a degree minimally equivalent to a master's degree.

The catalogue of degree requirements and criteria for continued postgraduate education for traffic physicians and traffic psychologists must be clearly defined.