

## Report 47

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### **Police checks and road safety**

#### **Summary**

Traffic regulation violations are a major cause of accidents and thus of accident-related injuries and 600 fatalities in Switzerland every year. But they also place a burden on the national economy in another way: roughly every other legal decision handed down by the courts concerns a violation of the traffic regulations. Police road checks have an effect on motorists' behaviour; used systematically, this instrument can help to reduce the number of accident victims in a cost-efficient manner. The purpose of the study was to summarize the level of knowledge regarding police road checks, to outline the overall picture relating to the respective police road check operations, to survey the opinions and attitudes of motorists and police towards traffic offences and police road checks and make an assessment, and to explain the viewpoint of carrying out a permanent survey on police road check operations.

The extensive literature concerning experience with police road checks shows that the influence on motorists' behaviour is at its greatest if the checks achieve a widespread effect, i.e. drivers must reckon on being checked and, if guilty of an infringement, can expect to be penalized as quickly as possible. This objective is most likely to be achieved if the checks are of a certain intensity, are for the most part easily visible, are planned on the basis of criteria relevant to safety, and are accompanied by supporting measures. Adequate intensity in the field of alcohol misuse can only be achieved with the help of random breath testing (i.e. without cause); in the field of speeding checks by using automatic methods. Other requirements for success are dealing with offences quickly in administrative terms, uniform strategies on the part of the various police forces and quality management of police work.

The first survey throughout Switzerland of police resources and operations in the field of road traffic shows that traffic checks in Switzerland are carried out quite uniformly, that they are aimed mainly at improving road safety and that the combination with educational measures is realized to a certain degree. In strategic terms the emphasis of the checks is on detecting offences, which is the reason why they probably have an insufficiently widespread effect and the preventive benefit of the police work is not felt to the full.

In 1998 in Switzerland at least 120 million vehicles – i.e. each registered vehicle 30 times per year – were monitored by speed checks. This considerable monitoring ratio is achieved by the use of 119 permanently installed radar systems throughout the country. The effect of these checks is limited for two reasons. Motorists who know the locations of the radar installations temporarily modify their speed and then accelerate after passing them. In addition, the critical speed threshold is usually above the speed limit because – apart from the measuring tolerance – it must be coordinated with measuring and processing capacities. The registered speeding violation rates of 0.2 to 1.9 per cent thus do not give a realistic picture of the extent of speeding violations. The actual violation rates are between 5% and 60%. New technical possibilities, such as digital camera monitoring and automatic tracking, will enable much greater processing capacity. Only 11% of all vehicles checked were monitored by stationary radar or laser systems. In the case of stationary radar systems, the violation rate is higher (6%) than that recorded by permanently installed systems (average 0.5%). Only 10% of the speed checks were carried out on out-of-town roads, despite the fact that 29% of the injured persons and 50% of the fatalities were injured or killed on such roads. All Swiss cantons gather important parameters concerning road check operations. However, the difficulty in drawing up statistics for the whole of Switzerland lies in the considerable differences in data aggregation between the cantons, whether concerning the type of radar system used or the localities. Few cantons have data that provide the required degree of detail.

The practice concerning alcohol checks had to be established by means of a special survey carried out in three cantons, because police forces do not maintain the appropriate statistics. This involved the three police forces recording all road checks carried out in one month. Although the results are not representative, they do provide important indications concerning the execution and results of these checks. The current legal situation only permits Swiss police to carry out reactive checks. The testing ratio is thus lower than in other countries. The testing for alcohol of approximately every tenth motorist annually (e.g. The Netherlands) can be considered a reasonable testing ratio and a realistic goal. In Switzerland it is estimated – based on the survey in the three cantons – that it is approximately every hundredth motorist. The introduction of the random alcohol breath test is a necessary condition for a higher testing ratio. In the case of the static checks carried out within the framework of the special survey, 11% of all the motorists stopped were required to undergo a breath test, of which 18% were found to have an illegal breath-alcohol concentration. Some 77% of the motorists stopped in the survey month following suspicious driving were given an alcohol breath test, of which 48% had consumed too much alcohol. In the case of the accidents occurring in the same period, 54% of the motorists involved were tested, of whom 43% were beyond the breath-alcohol limit. This means that only roughly every other motorist involved in an accident was given a breath test, which suggests that the official accident statistics underestimate the percentage of alcohol-related accidents. Of all persons who had a breath-alcohol concentration equal to or in excess of 0.8 parts per thousand, 23% were caught as part of a general traffic check, 34% following an accident and 43% in a check carried out by a police patrol following suspicious driving behaviour.

The poll of motorists showed that the Swiss believe that the police are capable of having a relatively large influence on the reduction of road accidents. With regard to police powers in the matter of alcohol breath testing the interviewees exhibited a lack of knowledge. The fact that 66% of those asked think that random breath testing is already possible clearly shows that the introduction of the respective law without increasing the frequency of breath tests cannot have a large effect. The violation rate concerning speed limits is estimated by Switzerland's motorists to be 52% and that regarding driving under the influence of alcohol to be 27%. The extent of alcohol-influenced driving, in particular, is therefore massively over-estimated. This assessment is problematic, because it leads drivers to think that violations of the traffic regulations are considered normal, and serves to justify their own offences. Information campaigns accompanying police checks should therefore aim to promote a realistic assessment of violation rates. On the other hand, the subjectively assessed likelihood of being checked was on the whole low, with motorists considering they are less likely to encounter a breath test than a speed check: 81% think that they will seldom or never be involved in an alcohol test. In the case of a speed check, the figure is 38%. In view of the importance of this factor, it is necessary to orient control strategies towards increasing the expectation of being checked. Among Switzerland's motorists two groups of drivers were found who expressed problematic attitudes concerning police checks and traffic offences and to whom particular attention should be paid within the framework of checks and the campaigns that accompany them. One group consists mainly of middle-aged males with a good education and a good income. These motorists severely underestimate road traffic hazards, exhibit problematic attitudes towards traffic regulations and police checks and have a low expectation of encountering a police check. The second group is made up mostly of the well-known risk group of young male drivers. They estimate the social pressure to behave according to the regulations as being low and considerably overestimate the violation rate, which can also be interpreted as justification for their own behaviour. The content of campaigns that accompany police checks should be oriented to a certain extent towards these target groups.

In five of the seven categories the police officers interviewed expressed considerably different views than the normal driving public: police have greater knowledge concerning alcohol limits, the respective amounts that can be consumed and the possibilities for road checks. Furthermore, police officers tend to assess the situation on the roads in terms of violation rates and accidents more realistically.

This study provides an insight into traffic checks and the perception of them by the public. Quality assurance – including analysis of police road check operations and carefully targeted control of them – is, however, a permanent duty. But target-oriented behaviour in the field of traffic checks will only be

possible if longitudinal data about police road check operations and the factors to be influenced are available. In connection with the surveys on which this study is based it was fortunately possible to form a study group in which the traffic commissions of the cantonal and municipal police forces, the Swiss Federal Statistical Office (legal department) and the bfu are represented. This group is drawing up an appropriate proposal. It was clear that recording and evaluation of police road check operations is equally in the interests of the police and the researchers. In view of the great importance of road check operations for road safety, police checks should be planned systematically and pursue quantitative targets. A prerequisite for this is longitudinal data which provides information about police road check operations, traffic offence frequency, the attitudes of motorists and road accident trends.