ALCOLOCKS IN PUBLIC BUSSES IN NORWAY

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ABSTRACT

As part of a larger European project, alcolocks were installed in 14 public busses in Lillehammer, Norway, for one year to study the psychological, sociological, behavioural and practical impact of alcolocks on some 30 public bus drivers. All busses had override switches in case of malfunction of the alcolocks. Running retests were not included. The bus company and the drivers' unions agreed that the test results would be known to and followed up by the management. Hence, the bus drivers knew that possible positive tests would have severe consequences. Drivers, passengers, company management staff and local authority representatives were interviewed about the alcolocks, and the data registered in the alcolocks were analyzed.

No proven case of drunk driving was recorded during the trial. No severe technical or practical problems with the alcolock appeared. The drivers and the management accepted the alcolocks well. The passengers were so positive towards that they would accept delays caused by alcolocks. The drivers and the company management accepted the alcolocks well enough to continue the use of alcolocks after the trial, but they did not agree on the conditions for continued used. The drivers' unions made it a condition to the continued used of alcolocks, that all company busses in the town of Lillehammer should be equipped with alcolocks. The company management considered it too costly to have alcolocks installed in 10-15 more busses, and asked the local transport authorities for financial support for this purpose. The local authorities were not willing to provide such support the continued use of alcolocks, because the accident-reducing effects of alcolocks in busses were not known.

The conclusion is that it is feasible to implement alcolocks in public busses, as drivers accept alcolocks when the alcolocks do not interfere with the driving. A careful preparation of the inclusion process and the follow-up procedures are, however, necessary. Clear legal follow-up procedures are needed as well as better knowledge of the accident-reducing effect of alcolocks in public transport.

1. OBJECTIVE

This project was part of a larger European project (1) with the aim of assessing the practical, psychological, social and behavioural impact of alcolocks. The purpose of the Norwegian subproject (2) was to study the acceptance of alcolocks among bus drivers, bus company management and bus passengers with the hypotheses that acceptance would depend upon the technical and practical aspects of the use of alcolocks. Consequently, the technical and practical functioning of the alcolocks also had to be studied quite thoroughly.

2. METHOD

Alcolocks* were installed in the 14 busses carrying out the public transport within the town of Lillehammer, Norway.

After an installation and training period of about one month, the trial period lasted for about 12 months. Some time after the trial, the alcolocks were removed from the busses. The bus company management and the drivers' unions insisted that the busses should have override switches installed to make sure that the busses could be driven in case of technical malfunction of the alcolocks. No severe malfunction occurred, and the override switches were removed after about 6 months.

The bus drivers' acceptance and attitudes were studied by interviewing some 30 drivers before and after the trial. These were the drivers who would normally drive these busses. Thus there was no selection of drivers for the trial. For the bus company management proceedings from meetings as well as interviews with managers after the trial were the main data sources. A sample of bus passengers were interviewed in the beginning of the trial and after the trial.

3. RESULTS

3.1. The drivers' acceptance

In general we found that the drivers accepted alcolocks in the busses they drive every day. Initially they worried about technical problems with the alcolocks causing delays and cancellations. Moreover, they were also concerned about possible unfounded suspicion of drinking problems because of the alcolock. These attitudes appeared in the meetings with the drivers and their representatives during the negotiation phase. The majority of the drivers were positive towards working with alcolocks as expressed in the interviews carried out right after the start of the trial period. At that time 75 per cent of the drivers expected that the alcolocks might cause technical problems. The percentage of positive drivers increased during the trial. However, if severe problems had occurred during the trial, the trial group drivers might have become more negative. No severe technical problems occurred, i.e. no delays or cancellations due to alcolock problems occurred. The trial drivers had a high degree of acceptance of alcolocks also after the trial, e.g. in the beginning of the trial 68 per cent of the drivers said that all busses in Norway should have an alcolock and after the trial 91 per cent of the drivers said so.

3.2. Alcolock data

In total 12792 initial tests were recorded. Of those, 11179 tests were accepted technically and 1613 were refused due to incorrect blowing. There were five lockouts or positive tests of the total of 11179 technically accepted tests. Four of these cases were followed by passed retests or had some reasonable explanation other than actual driving with BAC above 0.02 per cent, the legal limit in Norway. One incident remains, however, without a satisfactory explanation. Since it was not possible to determine what actually happened in this case, i.e. who made this test, this incident was dismissed as uncertain and thus not accepted as a positive test. This uncertain incident lead to the removal of the override buttons to avoid future uncertainty.

3.3. Management

Before the trial the main concerns of the management were driver acceptance of the alcolocks, delays or cancellations caused by malfunction of the alcolocks and suspicion of

* Dräger Interlock® XT Breath Alcohol Controlled Vehicle Immobilizers. For further information see (3)

drink driving among the company drivers in Lillehammer. No severe malfunction occurred, and the drivers accepted the alcolocks, Consequently, the management wanted to keep the alcolocks as a safety measure for the passengers after the trial. The drivers' unions agreed on the condition that also the regional busses driving out of Lillehammer had alcolocks installed. The management considered buying another 10 - 15 alcolocks for these busses too costly, and applied to the local transport authorities for financial support for these alcolocks.

3.4. Passengers

In general the passenger surveys show that the passengers were so positive towards the alcolocks that the majority would accept delays caused by alcolocks, but only about a third of the passengers were willing to pay extra for riding by busses equipped with these devices. A positive finding was that the alcolocks made rather few passengers suspicious of drink driving among the bus drivers.

3.5. Local authorities

The local transport authorities were positive to the trial, and were represented in the reference group for the project. Moreover, the authorities agreed to abstain from the fine usually applied for cancellations, if cancellations were caused by technical problems with the alcolocks. Nevertheless, the local authorities were not willing to contribute financially to the continued use of alcolocks in the busses after the end of the trial, because the accident reducing effect of alcolocks in public transport is not known.

4. CONCLUSIONS

The alcolock trial in public busses in Norway has shown that the alcolocks worked satisfactorily. Override switches were installed to avoid possible technical or practical problems, but these switches were removed because they could lead to uncertain conclusions about what really happened when the switch was used. Moreover, no technical or practical problems which called for such switches occurred. The one uncertain incident demonstrates the problem that override switches may cause. When the alcolocks work properly, there is no need for override switches.

Partly due to the well-functioning alcolocks and carefully chosen settings of the alcolocks the drivers accepted the alcolocks quite well, and so did the management and the passengers. Another factor contributing to the drivers' acceptance was the inclusion of the drivers' unions and the drivers in the decision process from the very beginning.

In this project the bus company and the drivers agreed on a contract concerning the use of alcolocks, and the project also showed that agreed procedures are necessary. Such agreements should preferably be replaced by a legal framework if the use of alcolocks in public transport becomes mandatory by law.

The drivers' initial concern for possible drinking-and-driving suspicion seems to have been exaggerated as a large majority of the passengers said that the alcolocks did not make them suspect that the drivers may have drunk alcohol before driving.

Due to the costs of alcolocks, private transport companies cannot be expected to install alcolocks in busses or other vehicles on their own initiative. The motivation for the use of alcolocks must either be general legislation or requirements in the tendering for public transport. The mandatory use of alcolocks by law or by requirement in public transport tenders, depends on better knowledge concerning the accident reducing effects of alcolocks in public transport. Decisions about mandatory accident countermeasures

should be based upon well documented effects of the countermeasures in question. However, alcolocks may also be considered a help for the drivers to avoid drinking and driving and consequent problems and for the passengers a guarantee for sober driving. Such effects can be added to the possible accident-reducing effects of alcolocks in a cost-benefit analysis.

5. RECOMMENDATIONS

Alcolocks used in public transport should have a high technical quality to avoid delays or cancellations due to technical problems with the alcolocks and to avoid the need for override switches.
The drivers and their unions should be included from the very beginning of in the implementation of alcolocks to ensure drivers' acceptance and to avoid practical problems.
Further implementation will depend on knowledge of the accident reducing effects of alcolocks in public transport, and more research concerning this issue is needed.
Legislation concerning the use of alcolocks in public transport should be developed.
Long time (30 – 90 seconds) for warming up in cold weather was one of the most annoying issues for the drivers. The producers should consequently try to reduce the time for warming up.
In the Norwegian trial the attachment of the alcolock handsets to the dashboard of the busses was a problem and so was also the storage of the mouthpieces between tests. The practical use of the alcolocks should be taken into consideration by the producers to facilitate the daily use as much as possible.

REFERENCES

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