

Alcohol Interlock Systems in Sweden

10 Years of Systematic Work

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Introduction

In this issue of the *American Journal of Preventive Medicine*, the Task Force on Community Preventive Services presents a systematic review of the literature to assess the effectiveness of ignition interlocks for reducing alcohol-impaired driving and alcohol-related crashes.^{1,2} The following commentary highlights the progress made with these devices in Sweden.

In Sweden, there are 9 million inhabitants, of which 6 million have a driving license. A primary goal to improve the fitness of drivers is to separate drinking from driving. Thus, the driving while intoxicated (DWI) limits and sanctions are very strict by comparison to other developed nations. Since 1990, the illegal blood alcohol concentration (BAC) limit in Sweden is $>0.02\%$. The criminal sanction is either high fines at the lower levels or prison at levels $>0.10\%$. The administrative sanction is always suspension of the driving license for a period of up to 3 years depending on BAC and recidivism. The offenders have to prove a sober lifestyle before a new license will be issued. Use of illegal drugs and narcotics is met by zero tolerance. Annually some 22,000 drunk or drugged drivers are convicted in Sweden.

Vision Zero

In 1997 the Swedish Parliament adopted Vision Zero, with the long-term goal of zero killed and zero seriously wounded in traffic. Since then, mortality has been reduced by 35%. It is estimated that among the 358 victims last year, 20% to 25% were killed in traffic crashes caused by alcohol or drugs. These figures are verified by in-depth studies of every traffic fatality. Although the Swedish death figures are accurate from an international point of view, we are not satisfied with the progress. Some new steps have already been taken.

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Alcohol Interlocks (Alcolocks)

Sweden began work on alcohol interlock systems (alcolocks) for the prevention of alcohol-impaired driving in the late 1990s, primarily in professional and commercial transportation. Alcolock devices became a tool in the effort to improve the quality of commercial transportation and reduce hazards associated with commercial driving. The project was directed both to organizations that procure transports and to those that carry them out.

A national demonstration trial, introduced in 1999, involved three companies—one bus, one taxi, and one truck company—over 3 years. One hundred vehicles in each company were equipped with alcolocks. Within the first 2 years of the trial, several other companies requested alcolock installations. During the trial period, several evaluations of attitudes toward the installation and use of alcolocks took place among drivers, corporate leaders, passengers, and fleet purchasers. In addition to this large national trial, many smaller trials took place in Sweden involving both large and small companies.

In December 2004, seven Swedish authorities were given a mandate to install alcolocks in their own and contracted transports. Since January 1, 2010, a government regulation requires alcolocks for all those authorities who purchase, lease, and use vehicles for certain contracted road transports. The number of alcolocks for use in commercial driving has increased gradually over the years, and today more than 55,000 alcolocks have been installed in Sweden. From 2005, many more buyers have started to require alcolocks in transportation contracts.

Installation of alcolocks in trains has followed a similar path. During mid-2000, the Swedish Road Administration introduced installation of alcolocks in a number of locomotives used in their own business enterprises. Only a few alcolocks for locomotives have been a requirement as part of transportation contracts, but the number is expected to increase. Alcolocks have also been installed on a small number of shipping vessels, and to a lesser extent, tested for use in snowmobiles.

Alcohol Interlock Strategic Direction

In 2007, the Swedish Government developed a strategic document for the use of alcolocks. The strategy includes the use of alcolocks for prevention in crashes involving

alcohol, but also for first and repeat offenses of drunk driving. The Swedish Interlock Trial for offenders started in 1999. The deadline was December 2010. To date (as this commentary was written), between 4000 and 5000 people have participated in the program. Among them, 55% had either a dependency or an abuse diagnosis.

Other remarkable results are less recidivism, reduced number of traffic accidents known by the police, reduced need for hospital treatment, reduced number of sick-leave days paid by the National Health, and reduced harmful alcohol consumption confirmed by both audit and biological markers in blood tests. So from the socio-economic perspective, interlocks are effective. The Swedish government wants a public policy that calls for a mandatory interlock for all offenders (first-time and repeat), such that if they do not participate in the program, they will not be relicensed.

At the end of the present trial project, Sweden needs a permanent solution for the offenders as well as for the not-yet offenders. The government is now preparing a proposal to the parliament regarding new programs. The ambition has been to create a system that is simple, cheap, and differentiated. For example, drivers with alcohol problems but no DWI conviction should be able to keep their licenses with an interlock restriction, instead of having them revoked.

Two permanent alcolock programs will be developed starting in 2011: a 2-year program for high-risk offenders and drivers with an abuse or dependency diagnosis and a 1-year program for first-time offenders with low BACs. The alternative to participation in the voluntary programs will be much longer license suspension period.

According to the government's predictions, the participation rate under these new rules will increase from the present 13% to at least 60%. If these ambitions materialize, the Swedish market for offender interlocks will grow significantly.

A growing market means more competition and more research. The Swedish government has been considering mandatory interlocks for all motor vehicles, as a safety tool like the seat belt. This could happen when more-efficient and user-friendly interlocks are manufactured. Vehicle manufacturers such as Volvo Cars, Volvo Trucks, and Saab Automobile have all endorsed this effort and assisted by supporting the development of safe and reliable technologies to prevent drinkers from driving.

It is important that alcolocks or other sobriety support systems continue to develop and become even more user-friendly. This is necessary to sustain their use and improve their application, not only in the commercial driving arena but for future use in privately owned vehicles.

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References

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