Alcohol ignition interlocks: Evidence of effectiveness in reducing repeat drink-driving and supporting behaviour change

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Executive summary

There is a substantial international evidence base showing that alcohol ignition interlocks - commonly known as ‘alcolocks’ - can significantly reduce repeat drink driving. The evidence extends across more than two decades and includes systematic reviews, a randomised controlled trial, large-scale offender programme evaluations and population-level studies of alcohol-related fatal crashes.

The strongest and most consistent finding is that people using an alcohol interlock are less likely to reoffend while the device is fitted. A systematic review conducted for the United States Community Preventive Services Task Force found a median 67% reduction in alcohol-impaired-driving re-arrests while interlocks were installed[i]. The Cochrane systematic review reached a similar conclusion: in the randomised controlled trial it examined, offenders using an interlock were around 64% less likely to reoffend than those in the control group[ii]. In the underlying trial, 6.7% of offenders in the control group reoffended during the first year, compared with just 2.4% of those assigned to the interlock programme.

The evidence also goes beyond reducing reoffending. Large population studies have associated interlock requirements with reductions in alcohol-impaired drivers involved in fatal crashes. A major study covering US states between 2001 and 2019 found that all-offender interlock laws were associated with 26% fewer drivers with a blood alcohol concentration (BAC) of 0.08 or above involved in fatal crashes, compared with states without an interlock requirement[ix].

More recent research also shows how interlocks can form part of a wider behaviour-change intervention. The technology reduces immediate risk by separating drinking from driving in the fitted vehicle. When interlock data are combined with monitoring, rehabilitation and treatment, the period of installation can also be used to identify problematic behaviour, reinforce sustained sober driving and support longer-term change.

The evidence on post-removal effects is smaller than the evidence on effectiveness while fitted, but it is increasingly encouraging. A Dutch study found a 54% relative reduction in subsequent drink-driving recidivism among participants after completion of the programme[xii]. A Florida study found 32% lower recidivism following removal among offenders whose interlock performance triggered alcohol treatment[xi]. A French national evaluation also found lower drink-driving reoffending in the year after an interlock requirement ended, while Finnish administrative data recorded relatively few offences following completion of the interlock period.

The evidence at a glance

EVIDENCE	CONCLUSION
UNITED STATES: COMMUNITY GUIDE SYSTEMATIC REVIEW - 15 STUDIES, 2006	67% median reduction in alcohol-impaired-driving re-arrests while interlocks were installed.
UNITED STATES: COCHRANE SYSTEMATIC REVIEW, 2004	Randomised trial found approximately 64% lower risk of reoffending while the interlock was fitted.
UNITED STATES: FATAL-CRASH STUDY, 2001–2019	All-offender laws associated with 26% fewer BAC 0.08+ drivers involved in fatal crashes.
UNITED STATES: FLORIDA INTERLOCK + TREATMENT STUDY, 2016	32% lower post-removal recidivism among offenders receiving treatment triggered by interlock violations.
UNITED STATES: CALIFORNIA OFFICIAL EVALUATION, 2024	Installation estimated to reduce subsequent DUI by 16.9%, crashes by 25.9% and injury crashes by 17.2% over two years.
CANADA: QUEBEC PROGRAMME REVIEW	Participation in the interlock program resulted in a reduction in the repeat DWI (driving while impaired) rate by 80% during the first 12 months for first-time offenders and by 74% during the first 24 months among repeat offenders.
AUSTRALIA: NEW SOUTH WALES MANDATORY ALCOHOL INTERLOCK PROGRAMME (MAIP)	Found a 43% reduction in drink-driving reoffending among eligible serious and repeat offenders
NEW ZEALAND: REOFFENDING EVALUATION FROM 2013-2017	Offenders subject to an alcohol interlock order had 33% lower drink-driving reoffending over four years than a matched comparison group.
FRANCE: NATIONAL IID ASSESSMENT, 2025	12 months after the measure: 1.6% reoffending (administrative ignition interlock device (IID) – an 'alcolock'), 2.1% (judicial IID), versus 6.0% after suspension.
BELGIUM: VIAS EVIDENCE SUMMARY, 2018	At least 75% lower recidivism than conventional sanctions, primarily while an interlock is fitted; not a post-removal estimate.
NETHERLANDS: LONG-TERM EVALUATION, 2021	Estimated 54% relative reduction in subsequent DUI recidivism among programme participants.
FINLAND: TRAFI EVALUATION, 2013	2.5% caught drink driving after controlled driving rights ended (up to three years' follow-up); no matched control group.

Alcolocks substantially reduce repeat drink driving

The strongest evidence that alcolocks reduce repeat drink driving comes from reviews that examine results across multiple programmes and jurisdictions. The Community Preventive Services Task Force based its recommendation on two systematic reviews covering 15 studies. Across the 13 studies reporting results separately for the period when the interlock was fitted, re-arrest rates fell by a median 67% relative to comparison groups[i]. It concluded that there was strong evidence of effectiveness while interlocks were in use.

The Cochrane review reached a consistent conclusion. It identified one randomised controlled trial and ten controlled trials. In the randomised trial, the relative risk of reoffending while the device was installed was

0.36 - approximately a 64% reduction in risk[ii]. The wider controlled studies also showed a general trend towards lower recidivism among both first-time and repeat offenders.

These findings are reflected in more recent programme evaluations across different jurisdictions. An evaluation of New South Wales' Mandatory Alcohol Interlock Program found a 43% reduction in drink-driving reoffending among serious and repeat offenders eligible for the programme.[iii] In New Zealand, offenders subject to an Alcohol Interlock Order had 33% lower drink-driving reoffending over four years than a matched comparison group.[iv] Earlier evidence from Quebec was similarly positive: participation in its interlock programme was associated with an 80% reduction in repeat drink driving during the first 12 months among first-time offenders and a 74% reduction during the first 24 months among repeat offenders.[v]

A 2018 briefing from Belgium's Vias institute reported that drink-driving reoffending among drivers assigned an interlock was at least 75% lower than among those receiving traditional sanctions. This estimate draws on the wider evidence base and primarily concerns the period when the device is installed; it should not be read as a 75% reduction after removal. Vias also emphasised the importance of the accompanying support programme[vi].

This effect reflects a fundamental difference between an interlock and many conventional sanctions. License disqualification relies upon the offender complying with a prohibition on driving. Yet repeat offending remains a significant problem: DVLA data obtained through Freedom of Information requests show that, over the past 11 years, 26,819 license holders have been convicted of drink-driving offences more than once[vii]. An alcolock fitted to a vehicle introduces a physical and measurable separation between alcohol consumption and driving: if the driver's breath alcohol exceeds the programmed threshold, that vehicle cannot be started.

UK experience demonstrates this intervention at the point of risk. In a government-sponsored UK trial, interlock records identified 328 breath-alcohol readings above 80mg/100ml, corresponding to 172 potential journeys[viii]. Participants described the device as protecting them from making a poor decision after drinking.

The benefit extends to collisions and serious road harm

Reducing convictions and reoffending is an important measure of progress, but the ultimate objective of drink-drive policy is to prevent collisions, injuries and deaths. Population-level research provides evidence that the reduction in reoffending associated with interlocks can translate into wider road-safety benefits.

The 2021 study by Teoh and colleagues analysed fatal-crash experience across US states from 2001 to 2019. Compared with states without an interlock law, laws covering repeat offenders were associated with a 9% reduction in impaired drivers involved in fatal crashes; requirements covering repeat and high-BAC offenders with a 20% reduction; and all-offender laws with a 26% reduction[ix].

Particularly important is the latest California evidence. An independent evaluation for the California State Transportation Agency published in December 2024 found that installing an ignition interlock within two years of a Driving Under the Influence (DUI) arrest reduced subsequent recidivism whether measured by further DUI arrests, crashes or injury crashes. The estimated reductions over two years were 16.9% for further DUI, 25.9% for any crash and 17.2% for injury crashes[x]. The researchers concluded that increasing installation rates would increase the effectiveness of interlock policy.

The evidence therefore supports a clear distinction: programme reach and implementation affect the size of the overall impact, but offenders who actually use interlocks demonstrate substantially better outcomes.

An opportunity for behaviour change, not simply temporary restraint

An interlock provides an immediate safety benefit by preventing a vehicle from being started when the driver's breath alcohol concentration exceeds the prescribed limit. Its wider value lies in the opportunity to address an offender's behaviour while the device is fitted. Modern interlocks generate objective information about attempts to start a vehicle after drinking and other programme violations. Rather than waiting for another police stop or conviction to reveal continuing high-risk behaviour, the programme can identify that behaviour as it occurs.

DEVICE REDUCES IMMEDIATE RISK → BEHAVIOUR IS MONITORED → PROBLEMS TRIGGER INTERVENTION → SAFER BEHAVIOUR IS REINFORCED → SUSTAINED COMPLIANCE BEFORE COMPLETION

The independent PACTS review, funded by a Department for Transport Road Safety Grant, concluded that an interlock programme should not consist simply of fitting and monitoring a device. It described rehabilitation as having a fundamental role within a co-ordinated package of interventions[viii].

That conclusion is consistent with the broader international evidence. Programme evaluations in jurisdictions including Colorado, Nova Scotia, Florida, Michigan and Minnesota indicate that interlocks can be more effective when combined with education, treatment and supervision.

It is important not to overstate this part of the evidence. The evidence for reduced reoffending while fitted is larger and more established than the evidence for permanent behavioural change after removal. Earlier systematic reviews found that recidivism often returned towards comparison-group levels once the device was removed. But that finding has itself informed better programme design[i].

Well-designed programmes can support longer-term change

More recent research suggests that combining interlocks with appropriate behavioural interventions can help sustain reductions in reoffending after the device is removed. Florida provides a particularly instructive example. Interlock violations were used to identify multiple DUI offenders displaying continued problematic drinking behaviour. Treatment was then mandated for offenders reaching the prescribed violation threshold. Following removal of the interlock, the interlock-plus-treatment group experienced 32% lower recidivism than matched offenders who had not received the treatment. Researchers estimated that among the 640 treated offenders this reduction would have prevented 41 re-arrests, 13 crashes and almost nine crash injuries[xi].

Evidence from the Netherlands is also significant. A retrospective cohort study comparing 1,676 participants in the Alcohol Ignition Interlock Programme with 907 comparable offenders found that subsequent DUI offending was lower among programme participants. The researchers estimated that imposing the programme alongside the criminal sanction could produce a 54% relative reduction in recidivism, from approximately 8% to 4%[xii].

An official French evaluation provides direct evidence on outcomes after the requirement ends. The French Road Safety Observatory's 2024 annual report summarises a national assessment, completed in June 2025, using driving-licence records. In the 12 months following the end of the measure, recorded drink-driving reoffending was 1.6% after administrative interlock requirements and 2.1% after judicial interlock requirements, compared with 6.0% following an administrative licence suspension. These are observational comparisons, rather than randomised estimates, but they directly measure the period after the interlock requirement has ended[xiii].

Finland's Transport Safety Agency examined the records of 1,687 drivers granted alcohol-interlock-controlled driving rights between 2008 and 2012. It found that 41 drivers (2.5%) were caught drink driving after their controlled-driving period ended, with follow-up extending up to three years after completion. A

further 54 (3.3%) had been caught during the period, giving 5.7% during or after participation combined. Researchers contrasted this with a 29–30% reoffending figure for drink-driving offenders more generally. However, this was not a matched comparison, observation periods varied, and some participants retained an interlock voluntarily. The findings are therefore encouraging post-programme evidence, rather than a definitive measure of the effect of physical device removal[xiv].

These findings point to an important policy lesson: an interlock is most valuable when it is regarded not simply as an alternative sanction, but as an offender-management tool around which monitoring, rehabilitation and treatment can be organised.

A strong evidence base on which the UK can build

The UK can draw on a substantial body of international evidence and experience. PACTS's Locking Out the Drink Driver report was funded by a DfT Road Safety Grant, although its findings and recommendations remained independently those of PACTS. It reviewed experience across Europe, North America, Australia and New Zealand and concluded that interlocks reduce recidivism, alcohol-related collisions and casualties and are more effective than licence disqualification at reducing offender recidivism[viii].

PACTS recommended that participants should demonstrate sustained compliance before leaving an interlock programme, and that programmes should incorporate rehabilitation, monitoring and appropriate responses to violations. It concluded that the international evidence was already substantial enough that further UK trials were not necessary before moving to consultation on implementation[viii].

The policy environment has subsequently moved forward. The Government's Road Safety Strategy, published in January 2026, explicitly included a review of drink- and drug-driving penalties and mandatory training, including consultation on alcohol interlock devices. The associated Department for Transport consultation stated that the Government believes the option of fitting an alcolock as part of a drink-driving sentence "would be an effective measure in reducing reoffending" and asked whether alcolocks should be available as part of the drink-drive rehabilitation process[xv].

Conclusion

The evidence base is substantial, international and consistent. Alcohol ignition interlocks significantly reduce repeat drink driving while they are fitted. There is evidence that their use reduces collisions and serious road harm. And there is increasingly encouraging evidence that programmes combining interlocks with monitoring, rehabilitation and treatment can support reductions in reoffending after the device is removed.

When properly incorporated into drink-drive offender management, an alcolock can serve as both a preventive and rehabilitative tool. It offers three complementary benefits: it reduces immediate risk; provides objective evidence about an offender's behaviour; and creates an opportunity to support sustained behaviour change.

For UK policymakers, the international evidence provides a strong foundation for action. The priority now is to design a British programme that applies the lessons from existing schemes and delivers the greatest possible reductions in reoffending and road harm.

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