

Synthesis Title: Convictions and Violations (Offending, Crashing, Policing and Deterring)

Category: Compliance and Law

Other Relevant Topics:

- Training (Roads)
- Young Drivers (Drivers)
- Distraction (Drivers)
- Drink Driving (Drivers)
- Drug Driving (Drivers)
- Safety Cameras (Drivers)
- Speed (Drivers)

Keywords:

Offending, drink-driving, criminal, crash

Key Facts

- There is a need for more detailed research in this area, especially into any link between offending and crash involvement.
- Research carried out in Huddersfield into illegal parking in disabled bays found that those parking illegally were more likely to have a history of traffic violations or be driving a vehicle in an illegal condition than those parking legally. (Chenery et al, 1999)
- Roads policing is key to identifying offenders. From a case-study of forces, 46% of drink-drivers were caught through observation of driving and 39% of dangerous driving prosecutions from attendance at accidents. (Rose, 2000)
- In research into fatal crashes and committing a traffic offence found that non-compliance with the law contributed to nearly two-thirds of all deaths reviewed. (Clarke et al, 2007)
- Research from the On the Spot study demonstrates a clear link between offence history and being at fault in a road crash. (Stannard et al, 2010 and Dodson & Hill, 2010)
- The relationship between levels of policing and accident/casualty rates is non-linear (Elliott and Broughton, 2005).
- Visible policing in Operation Radar brought reductions in speeds measured at the ACPO enforcement level of 10% plus 2mph (from 35% non-compliance to 24%). (Walter et al, 2008)
- Drivers with penalty points for speeding are more likely to be male, aged between 35 and 64, have high annual mileages and drive for work compared with drivers without points. A focus on driving for work is likely to see improvements in road traffic compliance. (Corbett et al, 2008)

Summary

- There is a clear correlation between offending on the roads and other criminal activity.
- Serious offending on the roads is primarily a male activity.
- There is a link between offence history and being at fault in a road crash.
- Visible policing can make a difference in raising levels of compliance and reducing crash involvement.
- Increases in road traffic compliance could lead to a significant reduction in road deaths.

Methodology

This review looks at a series of reports from both the United Kingdom and abroad that have attempted to establish a link between offending on the roads, other criminal offences and crash involvement.

The reports were collated during the period August 2012 and January 2013.

This is an under-researched area and the traditional document searches were not easily available. The reports used were, therefore, those known to, and recommended to, the author concerned. Information about other relevant reports would be gratefully received.

A detailed description of the methodology used to produce this review is provided in the Methodology section of the Observatory website at <http://www.roadsafetyobservatory.com/Introduction/Methods>.

Research findings

Review: Offending, Crashing, Policing and Deterring

The purpose of this synthesis is to review the research evidence underlying discussions about the links between offending both on and off the roads, crash involvement and compliance with the law. It is in four sections, focussing on the different aspects. It should be said at the outset that compared to other aspects of road safety, this is a relatively under-researched area both nationally and, more importantly, internationally.

The Connection between Motoring Offences and Other Offences

The first report to explore the link between different types of offending was by Chenery et al., published by the Home Office in 1999. This reported on a small local sample undertaken in Huddersfield.

The study took two key premises as its starting point: that the people who are the most committed criminals are also the most versatile and that it must be an action rather than a condition (such as wearing a tattoo) that awakens police interest. The study took place between July and September 1998 and compared cars illegally parked in disabled parking spaces with cars legally parked close by.

Four key findings emerged from the comparison study:

- That 20% of those cars parked illegally would occasion immediate police interest compared to 2% parked legally;
- That 10% of those illegally parked were currently in an illegal condition compared to 1% parked legally;
- That 50% of cars illegally parked had a history of traffic violations compared to 11% parked legally; and
- One in three of cars parked illegally were connected to other offences ranging between unpaid tickets, drugs, assault, vehicle crime, theft and burglary.

It also identified a key question: the extent to which its findings were replicated elsewhere.

An important conclusion from the report was that drawn for operational policing. This was expressed as “A great and common sin in policing is for one officer to have in his or her pocket the answer to another officer’s problem”. The involvement of traffic wardens in providing information to police officers would clearly be of benefit for wider action on prevention of offending.

(Chenery et al, 1999)

Rose (2000) took this approach one stage further by focussing on data sets that had newly become available and on the operational work of three police forces. This national study was able to benefit from the inclusion of traffic offences in the Home Office Offenders Index alongside a national survey of Young People and Crime. Its starting point was the question: Are those who commit serious traffic offences normally law-abiding or are they more likely to be involved in other types of crime? In answering this question, it focussed on drink-drivers, disqualified drivers and dangerous drivers.

Key conclusions emerge around the areas of gender, age, social class and ethnicity. First, serious traffic offending is an overwhelmingly male activity: 92% of drink-drivers, 97% of disqualified drivers and 95% of dangerous drivers were men. Secondly, between 60% and 75% of those convicted for disqualified or dangerous driving or for other mainstream offences were aged between 18 and 32 with drink-drivers tending to be slightly older. Thirdly, young males from higher socio-economic groups were significantly more likely to commit drink-drive offences whereas young males from lower socio-economic groups were marginally more likely – and still statistically significantly - to commit licence and insurance offences. Fourthly, among young people, the prevalence of offending was higher among white males at 44% compared to Indian and Pakistani males at 27% and 29% respectively.

The report also analysed the Offenders Index (OI), attempting to link serious traffic offences with other criminal activity. The OI draws a distinction between mainstream offences, other standard list offences, breaking bail and breach cases and car theft. In 1996, serious traffic offences were also added to the Index. On that basis, it is possible to conclude that serious traffic offenders are not “specialist” offenders but also involved in more mainstream criminal activity.

Drink-drivers, for example, were twice as likely to have a previous conviction for a criminal offence as the general population although they usually appeared in court for that offence alone. 50% of dangerous drivers had a previous conviction and 25% were reconvicted within a year. Disqualified drivers had the highest level of criminal history with 79% having a previous conviction and 37% reconvicted within a year.

The section of the report dealing with three police forces takes a case-study approach with limitations therefore emerging about the national applicability of the data, However, one finding is important about how roads policing identified offenders:

- 52% of disqualified drivers were caught through routine stops;
- 46% of drink-drivers were caught through observation of the offender’s driving;
- 39% of dangerous driving prosecutions arose from attendance at accidents and 33% from direct observation in action.

The report concludes that serious traffic offenders cannot, therefore, be thought of as “otherwise law-abiding members of the public”. The previous distinction between “dishonest offenders” and “driving offenders” therefore needs to be revised and the work of traffic policing more fully integrated into overall police activity.

(Rose, 2000)

The third key report in this area is Broughton (2006). This report is, in part, intended to demonstrate that data contained in the archive of driving licence information at TRL could be linked to the Home Office Offenders Index with reliable conclusions able to be drawn from the linked sets. It is, however, the conclusions that are of greater interest here.

Conclusions from the report confirm those previously drawn by Chenery and Rose. The numbers of motoring and non-motoring offences committed by individual drivers are strongly correlated: 2.5% of male drivers committed at least one primary non-motoring offence between 1999 and 2003 but accounted for 30.6% of the men committing at least one motoring offence included in the Offenders Index.

In addition, the report, by linking the two data sets, allows for wider understanding of other factors such as the regional effect on both offending and recidivism. The report concludes that the region where a driver lives influences the number of motoring offences committed with men in the South West shown in Figure 4.5 to be the most likely to commit serious motoring offences. What is not possible to explain is whether this reflects a greater willingness to comply with the law in certain parts of the country or a greater likelihood of being caught.

(Broughton, 2006)

The Connection between Offences and Crashes

Clarke et al. (2007) identifies a strong correlation between fatal crashes and committing a traffic offence. This study of 1,185 fatal vehicle occupant cases from 10 police forces between 1994 and 2005 reviewed the files for each case and applied a human interpretation and judgement methodology to draw conclusions from the sample. Its key conclusion was that 65% of accidents involved driving at excessive speed, a driver in excess of the legal alcohol limit or the failure to wear a seat belt by a fatality or some combination of these. Non-compliance with the law therefore contributed to nearly two-thirds of all deaths reviewed. In addition, age was a compounding factor with drivers aged 16 to 19 years old over 20 times more likely to have caused a fatal accident than to be innocently involved in one.

(Clarke et al, 2007)

Stannard et al. (2010) and Dodson et al. (2010) jointly attempted to link offence histories to accidents using data provided by the On the Spot (OTS) study supported by the Department for Transport. This study looked in detail at crashes in the Thames Valley and Nottinghamshire police areas. The study was not originally set up to look at this aspect of crashes and the two reports are intended primarily to demonstrate that such a linkage is feasible in terms of the data available. Both reports highlight the need to ensure that data is nationally representative which may not be the case with data provided from the two police forces even if the datasets were merged to provide a more robust set on which to draw.

Both reports confirm that there is a clear link between offence history and being at fault in a road crash. A conclusion drawn from this is that driving behaviour is linked to other behaviours and that it is part of a complex system linked to other social and attitudinal factors.

Three other factors emerge in common between the reports. The first is the importance of age. The highest percentage of DVLA recorded driving offences was found for the 20 to 24 year age range. However, this may be explained in part by recency of offence, with older drivers having committed similar levels of offending when young but whose records no longer include these.

The second issue is the high level of traffic offences committed by HGV and LGV drivers. Levels of offending among people driving for work were higher than expected, suggesting that there is scope for reducing these via programmes targeted at employers.

Thirdly, active road users who were found to have committed a drugs-related general offence or a drink and/or drug driving offence were more likely to be at fault in a collision. For the purpose of this research an “active road user” was defined as a person in charge of their own movement such as a driver, motorcyclist, cyclist or pedestrian but not a pillion rider or passenger.

(Stannard et al, 2010 and Dodson et al, 2010)

Brace et al. (2009) provides a very comprehensive international overview of the issues surrounding criminal behaviour, traffic offending and road safety in the Australian context. The report identifies a number of important international studies that have looked at this area. It cites the work undertaken by Giacomassi and Forde (2000) looking at the importance of visible police enforcement based on the concept of “crumpled fenders” and by Junger et al (2001) analysing the higher odds ratio of individuals displaying risky traffic behaviour also having a police record for violent crime, vandalism or involvement in traffic crime. At the same time, the report rightly concludes that there has been very little work undertaken to explore the effects of the relationship between general criminal behaviour and traffic offences on road safety and specifically crash involvement. This is clearly an area where more comprehensive research is needed bringing together the disciplines of road safety and criminology.

(Brace et al, 2009)

At a slight tangent, Wundersitz (2011) analysed fatalities and injuries in South Australia from a systems-based perspective, categorising these into three groups: those caused by extreme behaviour, illegal system failure and system failure. In the first of these, the road user had deliberately taken risks and displayed dangerous or “extreme” behaviour such as illegal levels of alcohol, failure to wear a seat-belt, breaking the speed limit or driving dangerously. Illegal system failure is defined as a crash in which the driver or rider was undertaking an illegal act (such as using a hand-held mobile phone) or where the driver had consumed an amount of alcohol but was still within the legal limit and where the action of the driver was not solely responsible for the death or injury.

The conclusion of the analysis was that in 2008 43.4% of deaths were the result of extreme behaviour, suggesting that an increase in compliance could lead to a significant reduction in road deaths. While there was no attempt in the report to make a connection between such extreme behaviour on the road and more general criminal activity, the report is one of very few that have attempted to make a connection between illegal behaviour and levels of casualty reduction that might be achieved through more effective enforcement of the existing law.

(Wundersitz, 2011)

The Effect of Policing

Elliott and Broughton (2005) provide a detailed summary of the issues surrounding effective policing of the road and a review of the research evidence. The majority of studies reviewed show that increased levels of traffic policing have reduced road casualties and traffic violations. However, there is limited evidence about the levels of enforcement that are actually required to have an effect on safety since the relationship between levels of policing and accident/casualty rates is non-linear.

The report offers a taxonomy of four types of policing: stationary visible and unmarked and mobile visible and unmarked. Of the four, stationary and highly visible policing appears to be the most effective method especially if it is distributed around the network in a random fashion. However, this also creates the tension between maximising deterrence among the driving public as a whole and targeted enforcement that will maximise the impact of policing on the offending minority.

This report was commissioned by Transport for London and led to the funding of Operation Radar, reported in Walter (2008). This operation ran during May 2008, took place on a stretch of the A23 in Surrey and concentrated on mobile phone, seat belt and speeding offences. It was undertaken through a mixture of enforcement methods including static speed checks and mobile patrolling on motorcycles and was accompanied by advertising.

During the fortnight 17 arrests were made and 939 endorsable fixed penalty notices were issued. In addition, 28 vehicles were found to be without MoT or tax and 45 vehicles were seized by the police. 41 drivers were found to be driving not in accordance with their licences and 12 were arrested in connection with other offences.

In terms of speed enforcement, 7 sites on or around the route were monitored. At all of these both 85th percentile and mean speeds fell. At the two sites where the biggest falls occurred, the proportion of drivers exceeding the speed limit fell from 69% before to 59% in the final week. Speeds at the ACPO enforcement level of 10% plus 2mph fell from 35% to 24% and the percentage driving at more than 15mph above the limit dropped from 6.4% to 2.7%. While the Operation period was too short to show a fall in casualties, it nevertheless suggests that targeted enforcement can have a significant impact. Further evaluations of such targeted police interventions are clearly needed.

(Elliott and Broughton, 2005)

Deterrence

Corbett (2003) identifies the importance of deterrence in terms of improving compliance with road traffic law. Deterrence relies on four key components: detection, prosecution, swiftness and certainty. It can be general – deterring through the threat of future punishment – or specific – deterring convicted offenders through the impact of the last penalty. It is also predicated on social acceptance of both the crime itself and the punishment associated with it.

(Corbett, 2003)

Following on from this, Corbett et al. (2008) looked at the impact of the threat of disqualification on drivers convicted of speeding. The report makes an interesting contrast with earlier research on the link between offences both on and off the road. Many drivers having points for speeding did not accept that they were “speeders” or that their speeding had been dangerous. Two-thirds said that they were deterred by the risk of detection. In addition, drivers with points were more likely to be male, aged between 35 and 64, have high annual mileages and drive for work compared with drivers without points. This is a completely different cohort from those convicted of dangerous or disqualified driving identified earlier, perhaps explaining why the debate about speeding as an offence is a very difficult one for the road safety community to win.

(Corbett et al, 2008)

Finally, SWOV (2011) offers a different perspective on how to improve compliance suggesting that rewards for safe road behaviour should be considered. It argues that rewarding road safety behaviour through additional penalty points for specific safe driving behaviours such as keeping to the speed limit or selecting safe following distances, increased no-claims bonuses or work-based initiatives for devising safe routes can be effective. However, small-scale reward programmes among more or less homogeneous groups lead to better results than larger-scale programmes. In addition, a combination of enforcement and reward turns out to have greater impact than each of these measures separately. Rewarding should be seen as a supplement to traditional police enforcement, not a replacement of it.

(SWOV, 2011)

How Effective?

- There is a need for more detailed research in this area, especially into any link between offending and crash involvement.
- Research carried out in Huddersfield into illegal parking in disabled bays found that those parking illegally were more likely to have a history of traffic violations or be driving a vehicle in an illegal condition than those parking legally. (Chenery et al, 1999)
- Roads policing is key to identifying offenders. From a case-study of forces, 46% of drink-drivers were caught through observation of driving and 39% of dangerous driving prosecutions from attendance at accidents. (Rose, 2000)
- In research into fatal crashes and committing a traffic offence found that non-compliance with the law contributed to nearly two-thirds of all deaths reviewed. (Clarke et al, 2007)
- Research from the On the Spot study demonstrates a clear link between offence history and being at fault in a road crash. (Stannard et al, 2010 and Dodson & Hill, 2010)
- The relationship between levels of policing and accident/casualty rates is non-linear (Elliott and Broughton, 2005).
- Visible policing in Operation Radar brought reductions in speeds measured at the ACPO enforcement level of 10% plus 2mph (from 35% non-compliance to 24%). (Walter et al, 2008)
- Drivers with penalty points for speeding are more likely to be male, aged between 35 and 64, have high annual mileages and drive for work compared with drivers without points. A focus on driving for work is likely to see improvements in road traffic compliance. (Corbett et al, 2008)

References

Title: The Relationship between Crime and Road Safety
Author / organisation: C Brace, M Whelan, B Clark and J Oxley, Monash University, Accident Research Centre
Date: 2009
Format: Pdf
Link: http://www.monash.edu.au/miri/research/reports/muarc284.pdf
Free / priced: Free
Objectives: To examine the relationship between crime and road safety.
Methodology: Literature review and consultation with international experts.
Key Findings <ul style="list-style-type: none">• There is a proven relationship between general negative behaviour and risky driving• There is a positive relationship between criminal behaviour and traffic offences• Criminal history increases the risk of crash involvement• Cultural differences may also be a factor

Title: Further Analysis of Driver Licence Records from DVLA
Author / organisation: J Broughton, PPR498, TRL
Date: 2010
Format: Pdf
Link: https://trl.co.uk/reports/PPR498
Free / priced: Free
Objectives: To investigate the distribution of driving offences among licence holders.
Methodology: Analysis of the DVLA database
Key Findings <ul style="list-style-type: none">• The rate of driving offences varies considerably by age and sex of driver• Men commit significantly more offences than women• A significant number of offences is committed by unlicensed drivers• The number of drivers disqualified under "totting up" scarcely changed between 1997 and 2007.

Title: Recent Trends for Speeding Convictions and Totting-up Disqualifications
Author / organisation: J Broughton, PPR181,TRL Date: 2008 Format: Pdf Link: https://trl.co.uk/reports/PPR181
Free / priced: Free
Objectives: To analyse conviction data for speeding offences.
Methodology: A statistical analysis of the DVLA database and TRL archive of driving licence details
Key Findings <ul style="list-style-type: none"> • The threat of disqualification causes drivers to modify their behaviour • The number of convicted drivers has increased in line with the increase of camera use • The age of convicted drivers has also risen over the period analysed.

Title: The Correlation between Motoring Offences and Other Types of Offence
Author / organisation: J Broughton, TRL Report 650, TRL Date: 2006 Format: Pdf Link: https://trl.co.uk/reports/TRL650 Free / priced: Free
Objectives: To link the numbers of motoring and non-motoring offences committed by drivers.
Methodology: The study was based on a linkage of the data held by DVLA on driver licensing and offending with that held on general offending by the Home Office.
Key Findings <ul style="list-style-type: none"> • Motoring and non-motoring offences are strongly correlated • The strongest correlation is for offences involving vehicle theft • The region where a driver lives can also influence the number of motoring offences committed

Title: Illegal Parking in Disabled Bays: A Means of Offender Targeting
Author / organisation: S Chenery, C Henshaw, K Pease, Policing and Reducing Crime Unit, Home Office Research, Development and Statistics Directorate
Date: 1999
Format: Pdf
Link: http://webarchive.nationalarchives.gov.uk/20110220105210/rds.homeoffice.gov.uk/rds/prgpdfs/brf199.pdf
Free / priced: Free
Objectives: To assess the scope for offender targeting through self-selection.
Methodology: An analysis of drivers parking illegally in disabled parking bays.
Key Findings <ul style="list-style-type: none"> • Those who park illegally in disabled parking bays contain a high proportion of people and vehicles of interest to the police • There is a need to involve traffic wardens in sharing information with other parts of the police family • “Joined up” policing is more effective in reducing crime

Title: Fatal Vehicle Occupant Collisions: An in-depth study
Author / organisation: D Clarke, P Ward, W Truman, C Bartle, Department for Transport, Road Safety Research Report 75
Date: 2007
Format: Pdf
Link: http://webarchive.nationalarchives.gov.uk/20110509101621/http://www.dft.gov.uk/pgr/roadsafety/research/rsrr/theme5/fatalvehicleoccupant75.pdf
Free / priced: Free
Objectives: To assess why vehicle occupant fatalities were not falling in line with the 2010 casualty reduction targets.
Methodology: An analysis of 1185 fatal occupant cases from 10 police forces between 1994 and 2005.
Key Findings <ul style="list-style-type: none"> • 65% of crashes involved driving at excessive speed, driving above the legal alcohol limit or failure to wear a seat belt or any combination of these • Younger drivers had the majority of crashes involving loss of control • Fatal crashes for older drivers tended to involve misjudgements or perceptual errors

Title: Does the Threat of Disqualification Deter Drivers from Speeding?
Author / organisation: C Corbett, E Delmonte, A Quimby, G Grayson, Department for Transport, Road Safety Research Report 96
Date: 2008
Format: Pdf
Link: http://webarchive.nationalarchives.gov.uk/20090417002224/http://www.dft.gov.uk/pgr/roadsafety/research/rsrr/theme2/threat.pdf
Free / priced: Free
Objectives: To analyse the effect of the threat of disqualification.
Methodology: A postal survey of 1100 drivers followed by qualitative study of a sample of those responding and two focus groups.
Key Findings <ul style="list-style-type: none"> • The threat of disqualification from driving is effective • Not all drivers with penalty points perceive themselves as dangerous • The risk of detection acts as a deterrent • Drivers with penalty points are more likely to be male, aged between 35 and 64, have high annual mileages and drive for work

Title: The Deterrence of High Speed Driving: a criminological perspective
Author / organisation: C Corbett, F Simon, M O'Connell, TRL, TRL Report 296
Date: 1998
Format: Pdf
Link: https://trl.co.uk/reports/TRL296
Free / priced: Free
Objectives: To investigate how best to deter high speed driving.
Methodology: In-depth interviews of 112 drivers.
Key Findings <ul style="list-style-type: none"> • Those who drive fastest do so because of a feeling of control • More attention needs to be given to how this sense of invulnerability is acquired and maintained

Title: Linking Offence Histories to Accidents Using OTS Data
<p>Author / organisation: E Dodson, J Hill. Loughborough University, Vehicle Safety Research Centre</p> <p>Date: 2010</p> <p>Format: Pdf</p> <p>Link: http://www.lboro.ac.uk/media/www/lboroacuk/content/lbs/downloads/research/researchgroups/tsrc/luel5730-ots-offence-histories.pdf</p> <p>Free / priced: Free</p>
<p>Objectives: To match a sample of crash involved road users to data held by the Police National Computer and DVLA records</p>
<p>Methodology: An analysis of the three data sources</p>
<p>Key Findings</p> <ul style="list-style-type: none"> • People who take risks by offending also take greater risks as drivers • Further on harmonising the data sets is crucial for further research to be effective

Title: How Methods and Levels of Policing Affect Road Casualty Rates
<p>Author / organisation: M Elliott, J Broughton, TRL, TRL Report 637</p> <p>Date: 2005</p> <p>Format: Pdf</p> <p>Link: https://trl.co.uk/reports/TRL637</p> <p>Free / priced: Free</p>
<p>Objectives: To assess the potential impact of the level of policing on reductions in casualties.</p>
<p>Methodology: Literature review</p>
<p>Key Findings</p> <ul style="list-style-type: none"> • Increasing the level of traffic policing reduces the number of crashes and traffic violations • Increased visible policing makes a real difference • Stopping 1 in 6 speeding offenders has a noticeable effect • Studies of enforcement of drink-driving show that increasing policing tends to reduce accidents and casualties

Title: The Criminal Histories of Serious Traffic Offenders
Author / organisation: G Rose, Home Office Research Study 206, Home Office
Date: 2000
Format: Pdf
Link: http://library.npia.police.uk/docs/hors/hors206.pdf
Free / priced: Free
Objectives: To examine the extent to which anti-social behaviour on the road is linked to other criminal activities.
Methodology: An analysis of three types of serious traffic offender – drink-drivers, disqualified drivers and dangerous drivers.
Key Findings <ul style="list-style-type: none"> • Disqualified drivers had criminal histories and age profiles similar to mainstream offenders • Drink-drivers were older and less involved in other offending • Serious traffic offending is predominantly a male activity

Title: Linking Offence Histories to Accident Causation using OTS Data
Author / organisation: J Stannard, R Cookson, R Hitchins, TRL Report No. PPR572, TRL
Date: 2010
Format: Pdf
Link: http://webarchive.nationalarchives.gov.uk/20121105134522/http://www.dft.gov.uk/publications/trl-ppr572/
Free / priced: Free
Objectives: To link offending behaviour and accident causation.
Methodology: An analysis of road crashes assessed in the On the Spot research project.
Key Findings <ul style="list-style-type: none"> • Road traffic collisions are often the result of risk-taking • Research is limited into the links between offending and accident involvement • More work should be done with fleet managers to monitor the offence histories of HGV and LGV drivers

Title: Rewards for Safe Behaviour Factsheet
Author / organisation: SWOV
Date: 2011
Format: Pdf
Link: http://www.swov.nl/rapport/Factsheets/UK/FS_Rewards.pdf
Free / priced: Free
Objectives: To assess whether behaviour can be positively affected by offering rewards rather than punishment.
Methodology: Literature review
Key Findings <ul style="list-style-type: none"> • Rewards can be effective. • However, they need to be targeted, on a small scale and aimed at homogenous groups • Enforcement and rewarding as a combination have a greater effect than when used in isolation

Title: Evaluation of Operation Radar
Author / organisation: L Walter. TRL Published Project Report 379, TRL
Date: 2008
Format: Pdf
Link: http://www.tfl.gov.uk/assets/downloads/evaluation-of-operation-radar.pdf
Free / priced: Free
Objectives: To evaluate the impact of increased police activity on the A23 in May 2008.
Methodology: Analysis of police fixed penalty notices and arrest figures
Key Findings <ul style="list-style-type: none"> • Speeds were down • Increased police activity enabled better targeting in insurance and vehicle offences

Title: The Relative Contribution of Systems Failures and Extreme Behaviour in South Australian Crashes
Author / organisation: L Wundersitz, M Baldock, CASR Report 092, Centre for Automotive Safety Research
Date: 2011
Format: Pdf
Link: http://casr.adelaide.edu.au/publications/list/?id=1231
Free / priced: Free
Objectives: To examine the relative contributions of systems failure and extreme behaviour on South Australia roads.
Methodology: Analysis of fatal and non-fatal injury crashes.
Key Findings <ul style="list-style-type: none"> • Fatal crashes are more likely to involve extreme (illegal) behaviours • Injury crashes are more likely to be prevented through environmental/design/enforcement factors