

Summary:

Evaluation of the anti-speeding campaign “Which side of the speed limit are you on?”

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The attitudes of car drivers to speeding have improved substantially during the four years of the anti-speeding campaign “Which side of the speed limit are you on?”. There are also fewer who say that they exceed the speed limit now, than before the campaign in 2008. Although survey responses show no increase in drivers’ factual knowledge about speed, braking distance and risk as communicated by the campaign, we do not exclude the possibility of an increase in general understanding about the effect of moderate speeding on accident and injury risks. Despite clear reductions in subjective reports of speeding from 2008, ca. half of drivers still break the speed limits on 80 km/h roads according to roadside observations. These observations also indicate only modest reductions in average speed, of 1 km/h since 2008, although this could be important in terms of accident levels.

“Which side of the speed limit are you on?” is an information campaign launched in Norway in May 2009, by the Norwegian Public Roads Administration (NPRA) and the police. The focus of the campaign is the disproportionately large increase in accident risk that result from only moderate excesses of the speed limit. The aims of the campaign are to get drivers in Norway to keep to the speed limit, adapt speed according to the driving conditions, and to reduce moderate speeding transgressions. The target group was drivers between 25 and 40 years of age. Most campaign material concerned the dangers of even moderate speeding on roads with a speed limit of 80 km/h.

TØI was given the task of evaluating the campaign by the Road Directorate of the NPRA. The evaluation consisted of two ongoing sub-projects carried out by TØI:

- (i) an annual survey on attitudes, knowledge and self-reported behaviour, and
- (ii) an overall campaign evaluation, again carried out annually, which included several other data sources in addition to the survey in (i).

These additional data sources in (ii) were actual speed measurements from the NPRA, data from the traffic police on speed-related roadside checks, and data from a survey carried out by Mediacom. The latter was used mostly to help assess campaign awareness.

A baseline survey was conducted in 2008 before the campaign began, and after this follow-up surveys were conducted annually. This report assembles results for the whole of the period 2008 to 2012.

NPRA formulated a set of goals for the campaign, and a main objective for the evaluation was to assess the extent to which these goals have been achieved.

Campaign awareness

If a campaign is to have an effect, its message must reach the target group.

By 2010, 75 per cent of all respondents said that they had noticed the anti-speeding campaign. By 2011, 92 per cent of all respondents and 95 per cent of the target group remembered seeing or hearing about the campaign. In 2012 these respective shares had increased further still to 96.5 and 98 per cent.

Such a high level of campaign awareness gives the campaign a good platform from which to influence the target group to drive more slowly. However, campaign awareness was measured by asking respondents if they remembered a campaign about speed while prompting them with cues in the form of stills from campaign films or pictures of a road sign used in the campaign. Thus campaign *recognition* was used as an indicator of campaign awareness, rather than campaign *recall*, where the question would be asked without prompts or cues. The extent to which the respondents process the campaign message is thus not evaluated when recognition is used as a proxy for awareness. However, Mediacom did include a measure of campaign recall in their surveys, and responses from those show that between 50 and 60 per cent of all respondents could recall the campaign throughout the campaign period.

Knowledge

Several items in the survey were included to measure any change in knowledge about risk, speed and accidents in the driving population and/or target group.

According to the annual survey conducted by TØI there were no clear changes in the shares answering correctly.

However in surveys carried out by Mediacom, there were increases in the shares answering correctly in response to two knowledge questions. Notably, one of these assessed knowledge that was communicated directly by the main campaign film, about collision speed on hitting an object after braking from a speed of 90 km/h (if one would have been able to stop on braking from a speed of 80 km/h). There was also a significantly higher share of correct answers from those who said they were aware of the campaign. The other of the two questions concerned how much speed would have to increase from 80 km/h in order to double the risk of dying in a frontal collision.

It must be said however that there were no changes in answers to most of the knowledge questions assessing facts communicated by the campaign. In other words a substantial increase in campaign awareness over time did not lead to a corresponding increase in knowledge about speeding, either in the target group or otherwise.

The strategy of the campaign was to influence and change attitudes (and thus speeding behaviour) through information conveying improved knowledge of the risks involved. It might therefore be concluded as negative for the campaign that a clear increase in factual knowledge was not achieved. However, we cannot exclude the possibility that the survey items used to assess changes in knowledge failed to assess any change in broader knowledge about speed and risk effected by the campaign, which may nevertheless have been important in relation to changing attitudes and self-reported speeding behaviour. Most of the knowledge questions demanded that the respondents remember concrete facts (e.g. about braking

distances). Even if the respondents could not remember precise numbers communicated by the campaign, it is still possible that they had processed the central message, which was that there is a large increase in accident risk when one drives only a little over the speed limit. Such general knowledge can also influence attitudes, even if it was not evaluated by the survey.

Attitude to the speed limit

Campaigns aimed at changing attitudes are based on a theory that behaviour can be changed if there is a change in the attitude corresponding to that behaviour.

Several questions in the survey were therefore included to assess changes in attitudes to the speed limit and to driving over the speed limit.

As the campaign progressed there was a significant reduction in the share of respondents who thought that the speed limit of 80 km/h was too low outside of built-up areas, and a corresponding increase in the share who thought it was too high.

The campaign was intended to influence the speeding behaviour of the target group by increasing knowledge about the risks and thereby “improving” attitudes to speeding, especially on roads with speed limits of 80 km/h. Despite little sign of a change in knowledge, the results imply that attitudes to the speed limit of 80 km/h have improved. Thus in theory there is reason to believe that the campaign could have contributed to a change in speeding behaviour.

Social acceptance

A long-term goal for the campaign is to help make driving over the speed limit socially unacceptable. Questions in the survey concerning people’s understanding of how many in Norway exceed the speed limit (included in the surveys from 2008 to 2012), and what most people think about exceeding the speed limit (included in the surveys from 2009 to 2012) were included to assess any changes in social acceptance for speeding.

There was a significant change during the campaign period in what people think others think about speeding: more disagreed with the statement that people think it is ok to drive over the speed limit (whether it is 80 or 90 km/h). There was also a significant change in what people think others actually do in relation to speeding. The share believing that almost everyone drives over the speed limit on 80 km/h-roads decreased from 16 per cent in the 2008 survey, before the campaign, to 12 per cent in 2011 and 2012.

Even though over two out of three respondents say they ensure they keep to the speed limit, over two out of three also believe that others think it is ok to drive over the speed limit (i.e. to drive 90 km/h where the limit is 80 km/h). This paradox indicates that the “average” driver may be mistaken when he or she believes that most others think it is ok to drive over the speed limit. This may also reflect a tendency for most drivers to view themselves as more law-abiding than the average driver. This is important because there is a clear link between what one believes other think about speeding and how often one speeds oneself. A campaign strategy that aims to change social norms could therefore be important with respect to speeding behaviour.

Self-reported speeding

The self-report survey ultimately included items assessing speeding behaviour. Respondents were asked how often they speed on roads where the speed limit is 30, 50 or 80 km/h.

Before the campaign, in 2008, 24 per cent of the whole sample said that they often drive a little too fast on 80-roads, against 17 per cent in 2012. The share of the target group who say they often drive a little too fast on 80-roads decreased from 38 per cent before the campaign to 26 per cent in 2012 (Figure S-1).

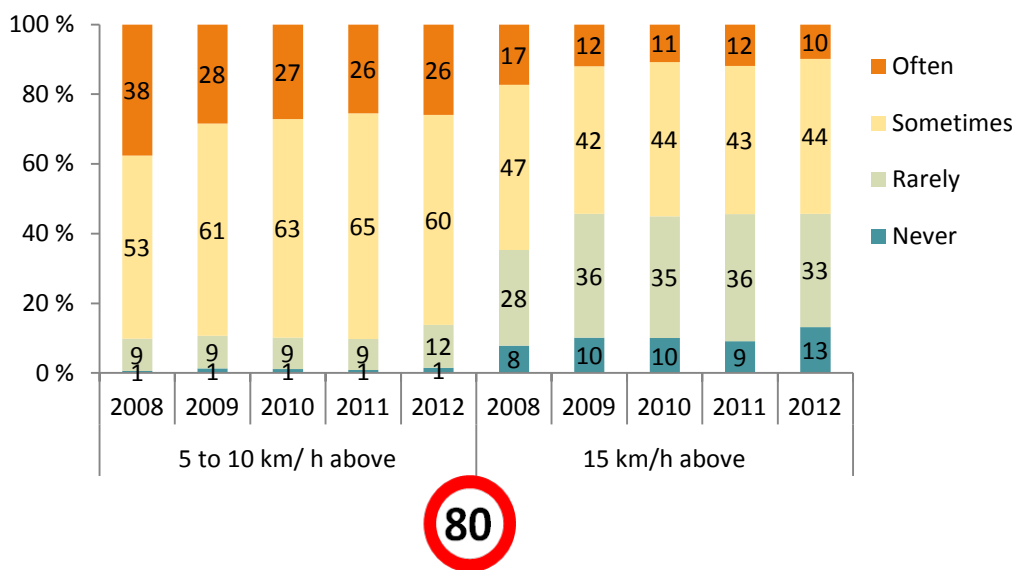


Figure S-1. Self reported speeding (5 to 10 km/h and 15 km/h over the limit) on roads with speed limit 80 km/h, in the target group (25-40 years old) according to survey year (2008-2012).

There were also changes in the share who say they drive over the speed limit on roads with speed limits of 30 and 50 km/h, but these changes are less clear than they are for 80-roads, which were the subject of most of the campaign material.

Real driving speed

The basis for our analyses of real driving speeds was data from a sample of the NPRA’s traffic counting stations, which measure the speed of the passing traffic, for the years 2005-2012 during a period of 12 weeks in each year from August to October. Usable data was available for all or part of these periods for a total of 12 counting stations. For each period, separate analyses of traffic were conducted for daytime (10:00-16:00 h) and evenings (18:00-23:00 h).

There was a reduction in average speed of between 0.5 and 0.6 km/h from 2008 (before the campaign) to 2009 (after the campaign launch). There was also a reduction in speed in the pre-campaign period of 2007 to 2008, such that it is not clear whether the continued reduction from 2008 to 2009 can be attributed to the campaign, or whether it reflects a continuation of an earlier trend. In line with the

reduction in average speed from 2008 to 2009, there also was a reduction in the number who drove over 80 or 90 km/h, and in the 85th and 95th percentiles (i.e. the speed that 85 and 95 per cent of drivers keep under).

There was a further reduction from 2009 to 2012 of 0.5 km/h, such that the total reduction in speed for the whole campaign period was ca. 1 km/h.

The results from one counting station where a roadside campaign sign had been placed (known as the “girl motif”), showed that speed reduced substantially (by 2 km/h) after the sign had been set up, and only in that direction in which the sign faced the traffic. This clearly shows that the sign, which prompted drivers to keep to the speed limit, had a local speed-reducing effect. However, we do not know the extent to which this effect lasts, either in time or space.

All in all there were small changes in real speed after 2009, and the changes vary a lot between different counting stations such that it is difficult to trace a clear effect of the campaign.

Relationship between self-reported and real speeding behaviour

The changes in real speed on the roads did not reflect the substantial changes in self-reported speeding. There are several possible explanations for this. Many factors influence real speed along particular stretches of road (e.g. other drivers, changing road conditions, traffic patterns and flows, perceived behavioural control). Interpretation of the data is also complicated by other factors, such as “holes” in the available data or the reduction in speed that begun before the campaign had started. In addition we have had to exclude data from counting stations with heavy traffic because of the effects that dense traffic has on reducing speed, and there was substantial attrition of counting stations that could be included because of changes in the local road environment during the campaign period that could have influenced speed. Another explanation for the difference between self-reported and real speeding behaviour, is that people do not consider the flow of traffic when they report their own speed behaviour, which may cause them to drive faster or slower than they intended to. Moreover, the measures of self-reported and real speeding behaviour are not directly comparable.

A further complicating factor concerning the link between real and actual behaviour, is that the car’s speedometer almost always shows a speed that is slightly higher than the actual speed at which the driver is travelling. In other words, nearly all drivers drive slower than the speedometer would indicate. If it is such that modern digital technology has resulted in a narrower margin of error in newer cars, the driver would think that he or she is driving more slowly than before, even if the actual speed is the same.

Has the campaign achieved its goals?

It is difficult to ascribe the reductions in speed to the campaign, largely because we do not have a control group. As the campaign has progressed, there do seem to have been changes in Norwegian society and on Norwegian roads independent of the campaign that could be thought to have influenced speeding behaviour. In terms of the larger traffic safety perspective, however, the clear and positive changes in attitudes to the speed limit and self-reported speeding behaviour are nevertheless

interesting and important. Thus some of the campaign’s goals have clearly been partly or wholly achieved (table S-1).

Table S-1. Goal achievement by the campaign “Which side of the speed limit are you on?”. “Partly” means that there is a statistically significant change in the desired direction, but that the size of the change is less than that stated in the original goal.

Goal	Achieved?
At least 80% to have noticed the campaign	Yes
At least 50% to recognise the main campaign message (“Driving a little faster than the speed limit is more dangerous than you think”)	Not evaluated
At least 50% to realise that NPRA and the police are responsible for the campaign	No
Improve road user comprehension of how much braking distances vary with speed and the driving conditions.	No
Improve road user knowledge about what humans can tolerate in a collision	Yes
Increase the share who have a realistic appreciation of how little time is saved by driving faster	No
Reduce by a quarter the share who think that the 80 km/h speed limit is too low.	Partly
Increase the share who respond correctly to “If while driving along at 80 km/h you managed to stop before hitting an object, at which speed would you hit the object if you had been driving at 90 km/h?”	Yes
Reduce by a quarter the share who say that they “often” or “sometimes” drive 5 to 10 km/h over the speed limit 80 km/h.	Partly
Reduce by a quarter the share who say they “often” or “sometimes” drive 15 km/h over the speed limit 80 km/h.	Partly
Reduce by a quarter the share who actually break the speed limit.	Partly

Conclusions

During the campaign period there have been desirable changes in attitudes to speed limits and speeding, self-reported excesses of the speed limit and actual speed on the roads. However, as with most national campaigns we lack an appropriate control group, and so we do not know the extent to which these changes can be attributed to the campaign. During the campaign period there will of course have been many other changes in Norwegian society and on Norwegian roads, and we cannot rule out that these will have influenced attitudes to speeding and speeding itself.

In summary we can say that while many of our findings suggest that the campaign has had the desired effect, other possible explanations must be borne in mind.

The following suggests that the campaign has had an effect:

- Change in desired direction for most indicators (attitude, self-reported speed, actual speed)
- Effects increase over time during the course of the campaign
- Greater changes in attitude and self-reported behaviour in 80 zones than in 30 zones
- A trend for greater change in the target group (25 to 40 years old) than for other age groups

- Local speed reductions in the vicinity of a roadside campaign sign

The following suggests that changes in self-reports are due to factors other than the campaign:

- There has been an increase in positive attitudes in traffic behaviour other than speeding

The following suggests that changes in actual driving are due to factors other than the campaign:

- Downward trend in speeding which began before the campaign launch
- Little correspondence in time between attitude change and change in self-reports on the one hand, and actual driving speed on the other
- There has been an increase in the share of older car drivers in Norway since 2008 (older drivers drive more slowly)
- The campaign period saw reductions in average speeds in Sweden and Denmark, as well as in Norway

The main conclusion is that there have been desirable changes in attitudes to speed, and in self-reported and real speeds during the campaign period, but we are unable to say the extent to which the campaign has effected these changes.