



Department
for Transport

Seat belt and mobile phone usage surveys : England and Scotland, 2014 methodology note

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Introduction

- 1.1** Mobile phone and seat belt surveys were commissioned by the Department for Transport between 2002 and 2009. The previous survey in 2009 collected data on mobile phone use in England and seat belt use in both England and Scotland (www.gov.uk/government/statistics/seatbelt-and-mobile-phone-use-surveys-2009-results). In 2014 the Department for Transport and Transport Scotland commissioned mobile phone and seat belt surveys to monitor levels of mobile phone use by drivers and the use of seat belts by vehicle occupants across England and Scotland.

Site selection

- 1.2** The mobile phone survey was carried out across 60 sites in England within four different areas (South East, Manchester, Newcastle/Durham and Norfolk) and 30 sites in Scotland.
- 1.3** Seat belt surveys were carried out at 40 sites in England within the same four areas as the mobile phone survey and at 20 sites in Scotland. For the mobile phone survey, a mixture of sites with stationary and free flowing traffic were used. Seat belt surveys were carried out at the stationary traffic sites in the mobile phone survey. Sites with a selection of road types, speed limits and rural/urban locations were surveyed. A breakdown of the sites by category is outlined in the tables below. A detailed list of site locations is provided in Appendix C of the [main report](#).

Distribution of sites in England by site characteristics^{1,2}

England	Stationary sites		Moving sites		Total
	Rural	Urban	Rural	Urban	
Major	11	9	7	4	31
Minor	9	11	4	5	29
Total	20	20	11	9	60

Distribution of sites in Scotland by site characteristics^{1,2}

Scotland	Stationary sites		Moving sites		Total
	Rural	Urban	Rural	Urban	
Major	7	4	4	2	17
Minor	4	5	2	2	13
Total	11	9	6	4	30

Data collection

- 1.4** Roadside observation methods were used to collect the data with teams of staff visiting each site. For the mobile phone survey, observations were made of drivers of cars, vans, taxis, lorries, buses, minibuses and coaches. For the seat belt survey, observations were made of all occupants of cars, vans, taxis, private hire vehicles and lorries with observations of the driver only for buses, minibuses and coaches. At sites with moving traffic only mobile phone observations were made, and at sites with stationary traffic both mobile phone and seat belt observations were made. At all sites a count was made of vehicles passing by vehicle type.
- 1.5** At moving sites, observations were made of the gender and mobile phone use of the driver, but due to the speed of the passing vehicles it was not possible to assess the age of

¹ Major roads are classified as A roads; B, C and unclassified roads are defined as minor roads.

² Rural road is defined as major roads and minor roads outside urban areas and having a population of less than 10 thousand

drivers. At the stationary sites observers also recorded the age group and whether the vehicle had passengers present in addition to the above. For the seat belt survey, information was collected on the seat belt use, age, gender and seating position of all vehicle occupants, except buses and coaches where only details of the driver were recorded. The seat belt details included additional age categories for children and whether the appropriate child restraint was being used correctly. Details of all the variables collected at the stationary and moving sites can be found below.

Details collected during each survey

		Mobile phone stationary	Mobile phone moving	Seat belt stationary
Site characteristics	Speed limit	✓	✓	✓
	Moving/stationary	✓	✓	✓
	Time of day	✓	✓	✓
	Weekday/weekend	✓	✓	✓
	Road type	✓	✓	✓
	Weather conditions	✓	✓	✓
Vehicle characteristics	Type: car, van, taxi, lorry, bus (or minibus or coach)	✓	✓	✓*
	Passengers present	✓	✗	✗
Driver characteristics	Gender	✓	✓	✓
	Age group	✓	✗	✓
	Hand-held mobile phone use	✓	✓	✗
	Purpose of hand-held mobile phone use	✓	✓	✗
	Driver restraint use	✗	✗	✓
Passenger characteristics	Seating position	✗	✗	✓
	Gender	✗	✗	✓
	Age group	✗	✗	✓
	Restraint use	✗	✗	✓

*Seat belt survey included a breakdown of taxi / private hire vehicles

1.6 Surveys took place during the hours of daylight (07:30 to 18:00) and survey periods accounted for both morning and evening peak periods (see table below). Sites were surveyed in half day sessions³ (either the morning or afternoon sessions). For the mobile phone survey, all 60 sites in England were surveyed on weekdays and 16 of these sites were re-

³ A previous study by TRL compared full and half-day sessions and found that a representative estimate was obtainable through a half-day period. For more info see: TRL (2008). Restraint use by car occupants, 2006–2008. TRL leaflet LF2106. TRL, Wokingham. Available at: http://www.trl.co.uk/umbraco/custom/report_files/LF2106.PDF

surveyed on weekends. All 30 sites in Scotland were surveyed on weekdays with 8 of these sites re-surveyed at the weekend. For the seat belt survey, all 40 sites in England were surveyed on weekdays and 10 of these sites were re-surveyed on weekends. All 20 sites in the Scotland seat belt survey were surveyed on weekdays with 5 of these sites re-surveyed on weekends.

Survey hours for mobile phone and seat belt surveys

Morning shift		Afternoon shift	
Start	End	Start	End
07:30	08:00	13:30	14:00
08:30	09:00	14:30	15:00
09:30	10:00	15:30	16:00
10:30	11:00	16:30	17:00
11:30	12:00	17:30	18:00

Weighting

- 1.7** During the survey periods, traffic counts of all vehicles passing the site were made. This included vehicles where no in-depth observation details were recorded, either because the observer could not accurately record information (if a vehicle passed too quickly or visibility was poor) or because the vehicle was not part of the sample (for example, a moving vehicle passing a stationary site during a green-light phase).
- 1.8** Following collection, the data was quality assured before being weighted using the recorded traffic count and DfT traffic flow data to provide nationally representative estimates for England and Scotland across different road and area types. The weighting procedure also enabled combined estimates of driver mobile phone use and restraint use by vehicle occupants in England and Scotland to be obtained.
- 1.9** Therefore, seat belt wearing rates were calculated as the (weighted) number of vehicles occupants correctly restrained over the (weighted) number observed. In the same way, mobile phone usage rates were calculated as the (weighted) number of drivers using a hand-held mobile phone (at-ear and

in-hand combined) over the (weighted) number of drivers observed.

- 1.10** No data has been collected in Wales, so the results are not necessarily representative of mobile phone use and restraint use in Great Britain, though the combined England and Scotland results presented in the report can be used as a proxy for Great Britain.

Limitations

- 1.11** A known challenge with collecting data from direct observations into vehicles is obscuration of the interior caused by sun glare or tinted windows. This is likely to have made it difficult to record certain observations at sites with moving traffic. Stationary sites were less likely to be affected, as there was additional time available to gather the data.
- 1.12** The data collection also relies on the judgement of the observers. In certain cases it may have been difficult to accurately judge the age or gender of a vehicle occupant. However, observers were given extensive training to ensure they could practice the methodology and all the data was quality assured.
- 1.13** Observers were required to wear hi-visibility jackets at all times which made them easily visible to drivers. Upon seeing the hi-visibility jackets, it is likely that some drivers would have hidden their mobile phone use. However, in this survey and in all the previous surveys it has still resulted in drivers performing illegal actions such as using a hand-held mobile phone or not wearing a seat belt. There is no reason to expect that the number of drivers changing their behaviour just because they are being observed will have changed since 2009.
- 1.14** The survey methodology did not include recording the use of tablets, mp3 players or satellite navigation systems, however being distracted by using such devices is dangerous and also illegal. It is possible that a few uses of these devices are included in the observation data e.g. if the observer thought a driver was using a mobile phone when in fact it was a tablet.