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## Emerging methods of car theft – theft of keys

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EU legislation in 1995 made the fitting of electronic immobilisers mandatory on all new cars manufactured after October 1998 (this is designed to prevent a car from starting without the key). While this innovation has been widely regarded as an effective method of reducing theft of new vehicles, anecdotal evidence suggests that some criminals are now concentrating on taking those vehicles by stealing the keys. This Findings summarises an analysis of a total of 8,303 incidents, over three and a half years between 1998 and 2001, of thefts of and attempted thefts of cars in the Northumbria and Greater Manchester areas (both crime types will now be referred to as 'thefts of'). It concludes that there does appear to be some evidence of an increase in the theft of keys over time, particularly through burglaries, although further research would be required to test some of these initial findings.

### Key points

- For cars registered after 1997, keys were used in 85% of incidents where the method of theft (referred to in the main text as *modus operandi* or MO) was known.
- The most common methods of obtaining keys were through burglary (37%) and through the owner leaving the keys in the car (18%).
- There is some evidence of an increasing trend in keys being used to steal cars and, in particular, for these keys to be obtained by committing a burglary. In cases where the MO was known, this occurred in 34% of incidents in the first half of 1998 and had risen to around 44% in the first half of 2001.
- There was a rise in the proportion of key thefts during robberies, almost doubling from around 2% to nearly 4% over the three years. Although these numbers are very small, this could be evidence of a trend towards more concerted attempts to steal cars.

### The national picture

Police in England and Wales recorded more than 1.1 million thefts of vehicles between 1998 and 2001. Although the figure has declined throughout this period, it still accounts for around 6% of all crime recorded.

The annual Home Office Car Theft Index (CTI) publication breaks down the number of cars stolen by first year of registration (see [www.secureyourmotor.gov.uk/cars/index.html](http://www.secureyourmotor.gov.uk/cars/index.html)). Looking at the number of thefts of new and nearly new cars (0–3 years old) stolen over the same period (1998–2001), there was a 21% increase nationally (rising from 31,823 thefts in 1998 to 38,488 in 2001). There was also an increase, from 8% to 11%, in theft of new/nearly new cars as a percentage of the total number of cars stolen.

However, to place these figures in context, it should be noted that the vast majority of cars stolen (303,186 or 89%) in 2001 were more than three years old. The CTI 2003 also shows that a one-year-old car, registered in 2001, had a theft rate of five per 1,000 registered. This can be compared with the rate of theft for a seven-year-old car, registered in 1995, of seven per 1,000, and for a nine-year-old car, registered in 1993, of 15 per 1,000. These figures suggest that new/nearly new cars are now more secure and that established modes of theft, such as forcing the ignition, have not simply been replaced, theft for theft, by stealing keys instead.

## The data

Data was obtained from Northumbria and Greater Manchester Police for cars with an R (1997) registration or later. This starting point was selected as a time when installation of immobilisers in new cars was becoming more prevalent in anticipation of immobilisers becoming a mandatory requirement later in 1998. For Greater Manchester, this applied to cars stolen between January 1998 and June 2001. For Northumbria, the period was January 1999 to April 2001. Information provided included vehicle registration, modus operandi, make and model. The full list of categories provided is shown in Table 1.

Data from	Greater Manchester January 1998 – June 2001	Northumbria January 1999 – April 2001
Make	✓	✓
Model	✓	✓
Vehicle registration mark	✓	✓
MO text	✓	✓
Date stolen	✓	Quarter
Time stolen	✓	✗
MO code (police input)	✓	✗
Recovered	✓	✓
Crime type code	✓	✗
Value stolen	✓	✗
Crime location	✓	✓
Detected	✓	✗

The findings are based on 8,303 recorded incidents – the vast majority (89%) were committed in Greater Manchester. This is partly due to the longer period covered in the Greater Manchester data (see Table 1), but such a large difference can be mostly attributed to the substantially higher rates of recorded car theft in this area than in Northumbria. It is important to note that the MO was unknown in 46% (3,788) of incidents. Analysis was only conducted on incidents where the MO was known.

Comparison of the recorded crime figures for Greater Manchester and Northumbria show that these newer car thefts comprised around 5% and 4% of all recorded thefts of vehicles in these areas respectively. It should be noted that the recorded crime figures used are only for incidents recorded as thefts of a vehicle. The data obtained from the forces does, however, pick up some incidents of car theft that, for the purposes of Home Office crime recording standards, may have been recorded as other crimes. For example, British Crime Survey (BCS) and police coding guidelines regard the theft of vehicle keys from within a property, resulting in the subsequent theft of that vehicle, as burglary, whether or not the keys were the only items stolen. Also, police recorded crime statistics for vehicle theft include a number of different types of vehicles, not just theft of cars.

Some cleansing of the data was required before any analysis could be undertaken. For example, cars that had personalised or customised vehicle registration marks were excluded since the age of the car could not be determined. Duplicate records were also removed, as well as information relating to other types of vehicles such as motorcycles, light commercial vehicles (LCVs), and heavy goods vehicles (HGVs). A further problem was lack of standardisation in the way in which the MO was recorded. Consequently each entry had to be carefully read and coded to fit into one of ten codes used in this analysis.

Although the data for both forces has frequently been combined in this Findings, there are some differences between the format and contents of the data obtained. In particular, Northumbria data for R registration cars (August 1997) was incomplete. This may distort the proportion of thefts conducted by forcing the ignition (as immobilisers were not a mandatory requirement at this time). However, given the likelihood that by 1997 many immobilisers had already been fitted, and as a relatively small number of incidents were involved, it is likely that these factors would have had only a minor impact on overall results.

## Modus operandi

Table 2 shows the different methods used by thieves in order to steal cars in the Greater Manchester and Northumbria police force areas. It illustrates that, overall, keys were used in 85% (3,847) of incidents where the MO was known. The most common method of obtaining the keys was found to be from a burglary (37%), with the next most common method being through the owner leaving the keys in the car (18%). Although only a small proportion (4%) of MOs show keys to be stolen during a robbery, this still accounts for 201 incidents, some of which appeared to be violent. Table 2 also shows that 13% of incidents involved forcing the ignition. It should be emphasised that this figure is made up mostly of unsuccessful attempts (see discussion below). It is assumed that the small minority of cases in which a vehicle has been successfully stolen by forcing the ignition involved those new vehicles without an immobiliser, registered just prior to their becoming compulsory, but still included in the analysis.

It is worthwhile briefly comparing this data with that found in the British Crime Survey (BCS) 2002/03, which states that in only 9% of cases of 'theft of' are keys used to steal the vehicle. This is a large difference with regard to key theft as a percentage of total theft between the data used in this research and that of the BCS and can be attributed to the presence of all cars, rather than just newer cars with immobilisers, in the BCS data. However, the BCS figures are useful in giving an indication of the overall scale of the problem, and for keeping it in perspective. That is, 91% of cars are still stolen by means other than through theft of keys.

## Theft of keys over time

Figure 1 shows trends in method of theft in Greater Manchester. Northumbria data was omitted due to the discrepancies in time periods over which data was

**Table 2 Method of theft: percentage of incidents in each force where MO was known**

Modus operandi	Greater Manchester	Northumbria*	Percentage of total
<b>All not using keys</b>	<b>16</b>	<b>9</b>	<b>15</b>
Forced ignition	14	4	13
Pushed/towed away	2	5	2
<b>All using keys</b>	<b>84</b>	<b>91</b>	<b>85</b>
Forgery/fraud**	5	5	5
Keys stolen in burglary	37	36	37
Keys stolen in robbery***	5	4	4
Keys left in ignition/car	18	17	18
Taking without consent	7	7	7
Other using keys	12	22	13
Total	100	100	100
Base: total number of thefts where MO known	4,052	463	4,515

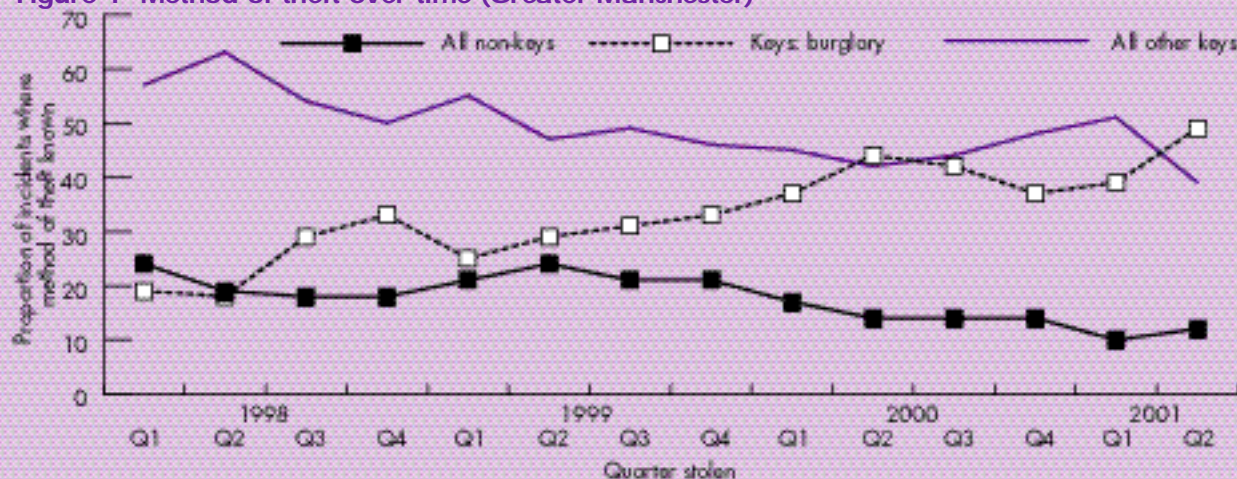
Notes: \* Northumbria data for R registration cars is incomplete, it is possible that the proportion of non-key thefts would be marginally higher if these older cars were included. \*\* Includes use of falsely obtained and non-returned hire cars, fraudulent finance arrangements, use of stolen credit cards. \*\*\* Includes 'car-jacking' i.e., forcing the owner out of a vehicle, theft from bags and coats.

collected. The graph reveals that over time, as a proportion of all incidents, there seems to have been a steady rise in the instances of keys stolen in a burglary. In the first half of 1998, keys stolen in a burglary accounted for 19% of thefts of cars but this had risen to around 44% in the first half of 2001.

Further analysis of the data showed that there was a rise in the proportion of key thefts during robberies, almost doubling from around 2% to nearly 4% over the three years. Although the numbers involved are very small, this could be evidence of a trend of more concerted attempts to steal cars, which may include violence.

On average, over the period studied, 16% of incidents in Greater Manchester did not involve keys. The method used in these cases was either to force the ignition or to tow/push the vehicle away. There was a slight decrease over time, from 19% of all incidents in Greater Manchester in 1998 to 11% in the first half of 2001. This could be a further indication that, for newer cars, the use of keys is becoming a more important and common means of theft.

It is worthwhile noting that, while the category 'all other keys' refers to a range of MOs, the trends for each individual MO are not necessarily moving in the same direction. For example, while the trend was for 'all other keys', as a category of theft, to fall, the proportion of thefts where keys are left in the ignition (one element of 'all other keys') actually rose from 14% of all thefts in 1998, to 23% in the first half of 2001. It is unclear why this increase has occurred, particularly since the details of many of these thefts are not known. However, analysis of the type of site from which many thefts took place (private driveways, business premises, petrol stations, outside shops) suggests that certain sites may have been deliberately targeted by thieves. These are places where owners/drivers are separated from their vehicles for a short period, and where normal security measures (keeping keys on one's person and locking doors) could be neglected. The Home Office has published information on security for motorists which includes advice on keeping car keys safe at all times. See <http://www.secureyourmotor.gov.uk/ourcampaign/downloads.html>

**Figure 1 Method of theft over time (Greater Manchester)**

## Attempted thefts

Analysis was undertaken using the Greater Manchester data to explore the relationship between the MO and the attempted thefts themselves. However, the same analysis was not possible for Northumbria, as the data did not indicate attempts.

In Manchester, fewer than 10% of the incidents where the MO was known were unsuccessful (387 from a total of 4,052). These are recorded as 'attempted thefts'. This is similar to the national average for attempted thefts throughout those three years. However, it should be noted that this is based on an average of vehicle crimes recorded by police over three years and not just car theft. Of these, 92% of all unsuccessful incidents (356 incidents out of 387) involved forcing the ignition. By comparison, trying and failing to steal keys in a robbery and through burglary accounted for only 4% (14) and 1% (5) respectively of all attempts. Thus, it appears that forcing the ignition is the least successful way to steal new cars. This is not surprising as a large percentage of the cars in this analysis would have been fitted with an immobiliser aimed at protecting the car against this type of theft.

However, some caution should be exercised when interpreting these results. It is possible the amount of damage caused to a vehicle in forcing the ignition meant that an attempt was more likely to be noticed by the vehicle owner and consequently more likely to be reported to the police. On the other hand, an unsuccessful attempt to steal keys, even if noticed and reported, would probably be recorded as attempted burglary rather than attempted theft of vehicle and therefore not show up in this data.

This study goes some way to supporting existing evidence about the effectiveness of immobilisation. It should be noted that even with newer cars, thieves seem to have continued attempting to steal them by traditional methods commonly used on cars without immobilisation. However, this may be becoming less common. In Manchester, over the period studied, the proportion of recorded attempts fell from 12% for cars registered in August 1997 (R registration), to 6% for those registered in September 2000 and March 2001 (X and Y registration). Assuming the relative stability of other possible contributory factors, this suggests that there may have been a learning process – those attempting to steal newer cars could have realised, over time, that forcing the ignition was a much more problematic MO.

## Next steps

While it is accepted that a number of conclusions have been drawn based on relatively limited data, what there is does seem to support the anecdotal evidence that suggests there are new methods of theft emerging in response to increased levels of car security. These preliminary findings have thrown up issues that need further exploration and a number of suggestions to take this research forward are offered.

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## The data

In order to make a more robust assessment of this issue an analysis would need to be undertaken using data from a greater number of forces. In addition, given that burglary is recorded as the more serious offence, it would be useful to look at MO data relating to burglary, particularly if the only item stolen was the owner's car.

Analysis could also be extended to examine whether the vehicle was recovered or not. It is anecdotally suggested that, given the perceived increase in risk involved in stealing keys to obtain the car, this type of theft is linked more closely with more organised criminal activity. A high rate of unrecovered cars stolen in this way would go some way to identifying this as a trend.

## Interviews with offenders/police officers

It is anticipated that, taking into account the usual difficulties and qualifications surrounding this type of research (willingness to cooperate and not mislead), something could be learnt from speaking with offenders who are involved in this type of offence. Interviews could be conducted to examine: commonly preferred methods of key theft, perceptions of associated risks, types and value of vehicle stolen.

## Recommendations

### Motorists

Remember to keep your keys safe at all times. Hide a spare set away in your home and never leave them by the front door or window. Also, remove the ignition key every time you leave your vehicle when you are filling the car up with petrol or popping into the newsagents. If you warm your car up in the winter do not leave the vehicle at any time. It only takes a few seconds for someone to jump into your car and drive away.

### Burglary

Never leave car keys near a door or window. Some thieves have been known to use a fishing rod or magnet on a stick to steal them through the letterbox. Burglars have broken in to steal the keys of high-value cars, so take care of keys and, if you have a garage, keep your car in it rather than on the drive. See <http://www.crimereduction.gov.uk/cpghs.htm#keys>

### The police

Police need to continue to improve the detail and accuracy of MO data when recording these offences. A particular concern relating to this study was that the MO was unknown in 46% of cases. It is possible that the true extent of key theft as an emerging problem could be masked by the absence of this data.

### Manufacturers

Manufacturers should consider with motoring organisations, police and others what further improvements in car security might be put in place which would help address this emerging problem. One example might be devices which prevent cars re-starting once they have been reported stolen.