Assessing the impact of a sustained drug law enforcement operation in London

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Contents

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Key findings

This independent research study by the Institute for Criminal Policy Research (ICPR), School of Law, Birkbeck, University of London, sought to provide one London Community Safety Partnership (CSP) and the Metropolitan Police Service (MPS) with an independent assessment of the impact of a sustained drug law enforcement (DLE) operation targeting street and 'middle-level' dealers, in contributing towards reducing rates of general and serious acquisitive crime (SAC) in one London borough (Area A), following its implementation in 2006. The focus on SAC here includes consideration of offences such as domestic burglary, robbery (both personal and commercial), and theft of and from motor vehicles.

Methods

The research involved the linkage and analyses of various administrative datasets, including information derived from the following five sources:

(i) NPSIS Custody System;
(ii) drug test recorder (DTR);
(iii) drug interventions record (DIR);
(iv) Ministry of Justice held extract of the Police National Computer (PNC); and
(v) recorded crime statistics.

Data sources i to iv were used to assemble the following three cohorts:

- those arrestees exposed to the DLE initiative between January 2007 and December 2009 (the experimental group) (N=1,163);
- all other Misuse of Drugs Act offence arrestees in Area A during this period (comparison group 1) (N=2,097); and
- Class A (heroin and/or cocaine) drug suspects arrested between 1st January 2007 and 31st March 2009 in two neighbouring London boroughs (Areas B and C) and matched to the PNC (comparison group 2) (N=1,465).

Results

Trends and rates of SAC

Between 2005/06 and 2008/09 there was a 39 per cent reduction in the number of recorded SAC offences in Area A. This was twice the rate of reduction observed in other London areas (17.7%) and the neighbouring Area C (19.5%) during this period, but comparable with that observed in Area B (37.2%). However, recorded SAC offences had been falling across London since 2001/02 (and from 2002/03 in Area A), with the largest and most consistent falls observed in Area B between 2000/01 and 2008/09. Areas A and C and other London boroughs all observed a relative spike in recorded SAC offences during 2005/06.

The nature and extent of displacement

Available DTR data indicated that the proportion of Area A residents arrested for 'drug-related' offences[1] in the neighbouring Areas B and C fell in the period following the introduction of the DLE operation: from 3.9 per cent in 2006/07 to 2.6 per cent in 2008/09. The available information does not suggest that displacement of 'drug-related' offending by residents of Area A occurred in the neighbouring boroughs as a consequence of this sustained drug law enforcement operation.

The known offending behaviour of the three cohorts

Over three-quarters of those exposed to the DLE initiative had a prior conviction[2], having assembled over 6,300 convictions for 11,196 proven offences. Around 10 per cent of the cohort (n=122) was responsible for half the known offences (5,637), however. (This finding was consistent across the three assembled groups: 10 per cent (n=481) of the suspected drug offenders arrested by the police across the three London boroughs between 2007 and 2009 were responsible for half of all the proven offences (22,946) committed by this group.)

Data from the PNC indicates that the number of known and proven SAC offences committed by the experimental cohort (573 offences) and other drug arrestees in Area A (1,010 offences) between April 2000 and March 2009 was equivalent to 1.9 per cent of the 81,699 such offences recorded in the borough over this period. Importantly, for the purposes of this

[1] This relates to the 20 'trigger' offences covered by the 2005 Drugs Act and includes any offences committed in violation of the Theft Act (1968), Misuse of Drugs Act (1971) (in respect of a specified Class A drug only), Fraud Act (2006), Criminal Attempts Act (1981) and/or Vagrancy Act (1824).

[2] This includes any prior cautions, warnings and reprimands, as well as court convictions. This figure also includes any offence leading to a conviction arising from the index arrest.

research, analyses of data derived from the PNC also confirmed that there were no significant differences observed between those targeted via the DLE operation and other suspected drug offenders assembled for the study, in terms of the prevalence and frequency of their known SAC offending up to the point of the index arrest.

Changes in the prevalence and frequency of known offending

One-year rates of proven reoffending[3] were comparable for those identified via the DLE initiative (the experimental group) (44.5%) and other drug arrestees in Area A (comparison group 1) (44.6%) between 2007 and 2009, but significantly lower among suspected Class A drug offenders in Areas B and C (comparison group 2) during the same period (28.7%) (p=0.000)[4].

Compared with the experimental DLE group, the unadjusted[5] frequency of known offending in the 12 months following the index arrest was 23 per cent lower among Class A arrestees in Areas B and C and two per cent lower among other suspected drug offenders in Area A (but this latter difference was not significant statistically)[6].

There were no significant reductions in the average (mean) number of unadjusted proven offences leading to conviction among both the experimental DLE group (1.4 vs. 1.3) and other drug arrestees in Area A (1.4 vs. 1.3) in the 12 months preceding the index arrest between 2007 and 2009 and the corresponding period post-arrest. There was a statistically significant reduction observed for those Class A suspects arrested in Areas B and C, however (from 1.6 to 1.0) (p=0.000). Changes in the unadjusted number of proven offences committed in the 12 months pre and post the index arrest were similar for the experimental group and comparison group 1 between 2007 and 2009. These groups recorded a three and four per cent reduction respectively in the total number of known offences committed in the year post-arrest, relative to the corresponding 12-month period leading up to this point.

[3] Consistent with the definition used by the Ministry of Justice, we have defined proven reoffending as any offence committed in this one-year period which is proven by a court conviction (either in the one-year period, or in a further six months) (2010: 47).

[4] This includes 10 members of the experimental group for whom a breach offence was the primary and only reconviction in the 12-month follow-up period. There was no significant difference in that rate at which other drug arrestees in Area A (n=16) and Class A drug arrestees in Areas B and C (n=15) acquired a conviction in the 12 months following the index arrest for a primary and solitary breach offence. We have included these breach offences in recognition of the possible costs arising from such a conviction for both society and the individual offender (i.e. when this leads to a sentence of imprisonment).

[5] These conviction data are unadjusted in the sense that they include breach offences and have not been adjusted to consider time at reduced risk due to imprisonment or regression to the mean effects (i.e. by excluding any proven index offence).

[6] Results of a negative binomial regression model: comparison group 2 vs. experimental group (χ^2=24.8, Exp(B)=0.77, p=0.000); comparison group 1 vs. experimental group (χ^2=0.122, Exp(B)=0.98, p=0.727).

However, whilst 32 per cent of the experimental DLE group recorded a 75 per cent reduction in known offending, a similar proportion (29%) also saw their offending increase by 312 per cent. For the remainder of this cohort (39%) there was no change observed in the frequency of their known offending, with over four-fifths of this sub-group (n=394) having no proven offences registered against them in the 12 months pre or post the index arrest.

This pattern was broadly replicated among arrestees in comparison group 1 (but with larger reductions and smaller proportional increases detected). By contrast suspects in comparison group 2 registered a 36 per cent overall reduction in the number of known offences during this time. There was also a tendency towards larger reductions in proven offending 12 months following the index arrest and smaller increases in this known offending behaviour.

The most common observation across all three groups however was for the frequency of known offending to remain static and unchanged for a large minority of arrestees (40.9%; n=1,934). For one in three the frequency of this offending had reduced over this period (34.6%; n=1,633), while for one in four it had increased (24.5%; n=1,158). Furthermore, one-third (35.6%; n=1,683) of the suspects arrested across the three sites and considered here had no proven offences recorded on the PNC for the 12 months preceding or following the index arrest. Members of comparison group 2 (Areas B and C) were more likely to have no proven offences in the 12 months pre and post the index arrest (39.7%; n=581) than those identified via the experimental DLE operation (33.9%; n=394) and other suspected drug offenders in comparison group 1 (33.8%; n=708) (p=0.001).

Changes in the prevalence and frequency of known SAC offending

One in four of the assembled sample of arrestees from across the three London boroughs had a conviction for a proven SAC offence committed up to the point of the index arrest between 2007 and 2009 (25.4%; n=1,202). In the 12 months following this point three per cent (n=126) had acquired a conviction for a proven SAC offence. There were no significant differences between the groups in the prevalence of proven SAC offending at both points. There was also no significant difference observed in the distribution of proven SAC offences committed in the 12 months following the index arrest among the experimental DLE cohort and other suspects in comparison groups 1 and 2 (U=2066640, N=4,725, p=0.679).

What factors were predictive of a reduction in known offending?

Survival analysis was used in order to determine which variables were most predictive of proven reoffending among suspected drug offenders arrested by police in Area A (i.e. the experimental group and comparison group 1) between 2007 and 2009 (N=3,260). After testing for associations between a range of independent predictor variables (relating to demographics (age, sex, ethnicity), criminal history, drug use, a proxy measure of treatment engagement[7] and exposure to the DLE operation), the final model identified three of four factors[8] as being significantly predictive of proven reoffending. Those with a previous drug conviction had a 49 per cent greater risk of proven reoffending at 12 months following the index arrest than those without[9]. Each conviction acquired also increased this risk by an additional 4 per cent[10]. And while relative to Asian suspects, white arrestees in Area A had a 22 per cent reduced risk of recidivism at 12 months, there was a significant interaction observed within the model between ethnicity and number of previous convictions (p=0.000). Assessing more fully the reasons for this disproportionality is far from straightforward and was beyond the scope of the current study. This finding is however at odds with previous research highlighting a pattern of under-representation for some Asian groups within the criminal justice system.

Conclusions

On the basis of the administrative data considered as part of this independent study, the evidence to support the contention that the experimental DLE initiative contributed directly towards reducing rates of both general and serious acquisitive crime in Area A, following the operation's implementation in 2006, is limited. In addition to raising questions about the efficacy of this particular supply reduction initiative as a crime prevention measure, these findings also cast doubt on the extent to which those involved in selling and misusing illicit drugs were the principal drivers of SAC offending in the three London boroughs considered as part of this study. That said, the known offending that comes to official attention clearly represents only a small proportion of all offending.

[7] Compliance with the DIR process was used as a proxy measure of initial engagement with therapeutic support via the drug interventions programme (DIP).

[8] Only those independent variables significantly associated with proven reoffending via univariate analysis were included in the model. These included (in order of entry based on p-values): number of previous convictions, any prior drug conviction, drug Class of offence following index arrest (i.e. A, B or C) and ethnicity.

[9] χ^2 = 39.0; p<0.001; *HR* = 1.49*; 95% CI* = 1.32 – 1.69.

[10] χ^2 = 143.5; p<0.001; *HR* = 1.04*; 95% CI* = 1.03 – 1.05.

Assessing more robustly the extent to which a reduction in demand for, or supply of, heroin and/or cocaine may have contributed towards the reductions in SAC recorded in Area A was beyond the scope of the current study. Future studies assessing the impact of supply reduction initiatives of this sort would benefit from access to reliable data on the impact of drug treatment. This research could also explore the feasibility of integrating routinely collated police indicators (such as test purchase data) to more fully assess how changes to price and purity of heroin and/or cocaine affects levels of crime, including SAC.

The research was informed exclusively using existing administrative data. Importantly, we had no qualitative information available to us on how local policing priorities, styles and practices shaped the implementation and delivery of the experimental DLE initiative during the period examined here (the same is true for enforcement and policing activity in the comparison areas), or a clear sense of how individual suspects were targeted as part of the operation.

With these important caveats in mind, a consistent finding to emerge across each of the three groups assembled for the study was that a small proportion of the suspected drug offenders from each cohort were found to be responsible for a disproportionate amount of the prior offending that had come to official attention. Moreover, the nature and extent of this prior offending (i.e. the number of previous convictions acquired and having a prior proven drug offence) was also found to significantly increase the risk of subsequent reoffending among suspected drug offenders arrested in Area A between 2007 and 2009.

The results from this study would therefore appear to suggest that using an intelligence-led approach to better target resources at the most criminally involved (and thus most harmful) offenders within a given local drug market may generate the greatest crime reduction return on this investment. This more targeted approach should clearly be sensitive to the risks and consequences of over-policing certain groups or individuals and continue to form part of a balanced and integrated local strategy which also includes complimentary drug prevention and demand reduction activities.

1. Introduction

This independent research study by the Institute for Criminal Policy Research (ICPR), School of Law, Birkbeck, University of London, sought to provide one London Community Safety Partnership (CSP) and the Metropolitan Police Service (MPS) with an independent assessment of the impact of a sustained drug law enforcement (DLE) operation targeting street and 'middle-level' dealers, in contributing towards reducing rates of general and serious acquisitive crime (SAC) in one London borough (Area A), following its implementation in 2006. The focus on SAC here includes consideration of offences such as domestic burglary, robbery (both personal and commercial), and theft of and from motor vehicles[11].

A key objective for the research was to provide a robust assessment of the nature and extent of known offending among:

- those suspects exposed to the DLE initiative between January 2007 and December 2009 (the experimental group);
- all other Misuse of Drugs Act offence arrestees in Area A during this period (comparison group 1); and
- Class A (heroin and/or cocaine) drug suspects arrested between 1st January 2007 and 31st March 2009 in two neighbouring London boroughs (Areas B and C).

This would also enable ICPR to further assess any changes in the prevalence and frequency of this known offending (including SAC) as part of a comparative assessment of the impact of the experimental DLE initiative.

The three London boroughs under examination have high levels of income deprivation and are among the highest scoring areas[12] within the English Indices of Deprivation Crime Domain (Lesser, 2011).

[11] In line with the definition for National Indicator 16 (see below for further details).
[12] At Lower layer Super Output Area (LSOA) level.

Drug misuse and acquisitive crime

In their meta-analytical review of 30 international published studies, Bennett, Holloway and Farrington (2008) found that the odds of offending were three to four times greater for drug users than non-drug users, with the odds of offending being highest amongst crack cocaine (who were six times more likely to offend) and heroin users (who were three times more likely to offend) and lowest among recreational users of drugs like cannabis. This relationship was also consistently found across a range of offence types, including robbery, burglary, prostitution and shoplifting.

The misuse of Class A drugs like heroin and cocaine (particularly crack) have long been associated as amplifiers of acquisitive crime rates in Britain (Parker and Newcombe, 1987; Harocopos et al., 2000; Hearnden and Magill, 2004; May, 2005; Howard, 2006; see Seddon (2006) for an overview of this body of research), but with offences such as shoplifting, handling stolen goods and drug dealing tending to feature more prominently in self-report accounts than SAC (Gossop et al., 2000; Boreham et al., 2007; Jones et al., 2007; Seddon et al., 2009).

Policy responses

The 2007 Comprehensive Spending Review heralded the introduction of 198 indicators which reflected the (then) Government's national priorities against which the performance of local government and their partners (including statutory agencies like the police) would be measured. In each area, priority targets were selected from among the national indicators and strategies for achieving them were negotiated and developed through new Local Area Agreements (LAAs). Each LAA included up to 35 targets from among the 198 national indicators[13]. One of these priorities (National Indicator 16) was concerned with tackling SAC[14].

Both the current national (Home Office, 2010) and MPS (undated) drug strategies also seek to integrate approaches aimed at reducing the demand, supply and harms associated with illicit drugs (including a targeted focus on those considered to be involved in SAC). And whilst the British evidence base to support the use of demand reduction strategies like drug treatment in a bid to tackle acquisitive crime is encouraging (e.g. Gossop et al., 2006; McIntosh et al., 2007; Millar et al., 2008), it is far more limited and equivocal when it comes

[13] Complemented by 17 statutory targets on educational attainment and early years

[14] In October 2010, the Coalition Government announced its intention to abolish LAAs and replace National Indictors with alternative data requirements for local government.

to establishing the impact of enforcement orientated supply reduction approaches (Webster, Hough and Clancy, 2001; Best et al., 2001; Parker and Egginton, 2004; McSweeney, Turnbull and Hough, 2008; Hales and Hobbs, 2010). This is despite the latter accounting for the lion share of 'drug-related' expenditure in Britain and elsewhere (Degenhardt, Hallam and Bewley-Taylor, 2009).

However, in light of the unprecedented cuts to public sector budgets, police forces across England now anticipate a significant reduction in the resources (in terms of both time and money) that will be allocated towards tackling illicit drugs (Beck, 2011). It is against this backdrop that our research sought to provide the MPS with evidence to inform the appropriate allocation of these increasingly scarce resources.

2. Aim

This CSP and MPS funded research study undertaken by ICPR sought to provide an independent assessment of the impact of a sustained drug law enforcement operation in contributing towards reducing rates of SAC (i.e. domestic burglary, robbery - both personal and commercial, and theft of and from motor vehicles) and general offending in one London borough (Area A), following its implementation in 2006.

This aim translated into the following research questions:

- Describe trends and rates of recorded SAC and related offending
- Consider the nature and extent of any displacement following the introduction of the experimental DLE operation
- Undertake a comparative profile of (i) those exposed to the DLE initiative in Area A, (ii) others arrested on suspicion of Misuse of Drugs Act offences in Area A, and (iii) those arrested for Class A drug offences in neighbouring boroughs (Areas B and C)
- Establish the nature and extent of the known offending of these groups, and any changes in the prevalence and frequency of this known offending
- Document the nature and extent of the known SAC offending of these groups, and any changes in the prevalence and frequency of this SAC offending
- Identify those factors (i.e. demographic, criminal history, drug use, treatment engagement and exposure to the experimental DLE operation) which were most predictive of a reduction in known offending among suspects in Area A.

3. Methods

The research involved the linkage and secondary analyses of various administrative datasets, including information derived from the following five sources:

- NPSIS Custody System;
- drug test recorder;
- drug interventions record;
- Ministry of Justice (MoJ) held extract of the Police National Computer; and
- recorded crime statistics.

An extract from the **NPSIS Custody System** was provided to ICPR by the local police Intelligence Unit from Area A containing details of all arrests[15] for suspected drugs offences made by police from this area between 1st January 2007 and 30th December 2009[16].

The extract contained details of 1,302 arrests made during this period as part of the experimental DLE initiative against 1,163 individuals. One in ten (n=110; 9.5%) of these suspects had been exposed to the initiative on two or more occasions between 2007 and 2009 (range 2–5; mean 2; a total of 139 additional exposures). In the event of multiple exposures, the first arrest was chosen as the reference point for assessing the impact of the DLE operation.

The extract also contained details of 2,338 arrests made by Area A police for suspected drug offences during 2007 and 2009 relating to 2,097 individual suspects who had not been exposed to the DLE initiative at any point during this time. Similarly, nine per cent of these suspects (n=186; 8.9%) had been arrested for a drugs offence on two or more occasions during this period (range 2-5; mean 2; a total of 241 additional arrests). Again, in the event of multiple arrests, the first encounter served as a reference point for undertaking a comparative assessment of impact.

[15] Individuals were identified and distinguished using first forename, surname and date of birth recorded on the NPSIS extract. Two arrests for which the name of the suspect was not recorded were excluded from the analysis.
[16] Data for the full period during which the DLE initiative operated (i.e. for January 2006) were not stored and available on the NPSIS Custody System at the time of extraction.

Selected data from the **drug test recorder (DTR)** and the **drug interventions record (DIR)** were sourced from the Drugs, Alcohol and Community Safety Directorate within the Home Office (HO). The DTR collects key data[17] on all detainees tested for recent use of heroin and/or cocaine following their arrest or charge for a 'trigger' offence under the provisions of the 2005 Drugs Act[18]. The main intention when using these DIR data were to assist with:

- assembling a sampling frame of those arrested for Class A drug offences in neighbouring London boroughs (Areas B and C) during the corresponding period to serve as a comparison group;
- identifying the nature and extent of recent heroin and/or cocaine use amongst those suspects identified across the three boroughs; and
- assessing the degree of displacement resulting from any changes in the proportion of Area A residents arrested for Class A drug offences in neighbouring Areas B and C between 2006 and 2009.

The HO provided ICPR with DTR data relating to 26,447 arrests for 'trigger' offences in the three London sites between 1st April 2006 and 31st March 2009. The DTR extract enabled the identification of 1,573 arrests (range 1-4; mean 1) relating to 1,465 suspects[19] for Class A drug offences in the neighbouring London boroughs (Areas B and C) between 1st January 2007 and 31st March 2009. Ninety-four (6.4%) of these suspects had been arrested for Class A drug offences on two or more separate occasions during this period (range 2-4; mean 2; a total of 108 additional arrests). In the event of multiple arrests, the first encounter during this three-year period was chosen as the reference point for undertaking a comparative assessment of impact.

Following a positive test for recent use of heroin and/or cocaine, arrestees are then required to complete a compulsory DIR screening assessment known as a Required Assessment. (In the event of an arrest for a 'trigger' offence, failure to comply with either the test or - for those

[17] The variables extracted included: first name initial, surname initial, date of birth, gender, ethnicity, DAT of residence, PNC ID (however this was missing in 56% of cases), custody suite location, date of test, test outcome and offence.

[18] Under the Act a drug test (oral swab) is required to be administered in custody following an arrest for one or more of the 20 offences believed to have been committed in violation of the Theft Act (1968), Misuse of Drugs Act (1971) (in respect of a specified Class A drug only), Fraud Act (2006), Criminal Attempts Act (1981) and/or Vagrancy Act (1824). A test can also be administered where a senior police officer (of Inspector rank or above) has reasonable grounds to suspect that the misuse of crack/cocaine or heroin caused or contributed to the commission of a 'non-trigger' offence.

[19] Individuals were identified and distinguished using an attributor constructed using initials, date of birth and gender variables contained within the DTR output file.

testing positive - the Required Assessment process is an offence in itself.) Since 2005 the DIR has been used by all Drug Action Team areas in England and all prison establishments across England and Wales. It consists of a suite of forms which aim to collect standardised information about the demographics, circumstances, substance misuse and treatment needs[20] of those engaging with the drug interventions programme (DIP).

Two-fifths of the 26,161 tests[21] undertaken following an arrest in the three sites between 2006 and 2009 produced a positive result for recent use of heroin and/or cocaine (n=10,765; 41.1%). This led to data from 5,726 DIR completions[22] within 28 days[23] of the positive test result being identified by the HO and made available to ICPR.

These data sources were used to assemble the following three cohorts:

- those exposed to the DLE initiative of interest between January 2007 and December 2009 (who served as the experimental group) (N=1,163);
- all other Misuse of Drugs Act offence arrestees in Area A during this period (comparison group 1) (N=2,097); and
- Class A drug (heroin and/or cocaine) suspects arrested between 1st January 2007 and 31st March 2009 in neighbouring London boroughs (Areas B and C) and matched to the PNC[24] (comparison group 2) (N=1,465).

The **Police National Computer (PNC)** was used to assess the nature and extend of known and proven reoffending among these three groups. The PNC is a live operational database for police forces in Britain. An extract of the database, held by the MoJ for research purposes, contains the complete criminal history for all known offenders with activity from the 1960s and provides data on recorded court convictions, reprimands, police cautions and warnings.

[20] Key variables extracted from the DIR included those relating to whether the arrestee, at the time of assessment, had ever misused drugs; misused Class A drugs in the last month; age they started misusing drugs; whether they had received treatment for their drug misuse in the last two years; and, whether they were currently receiving treatment for their drug use.
[21] A small number of tests were aborted due to equipment failure (n=66), the arrestee being unable to provide a sample (n=24), the suspect refusing to provide a sample (n=152) or for 'other' (unstated) reasons (n=44).
[22] Or an abbreviated DIR activity form (section 3 or 4) for positive testing arrestees already on the DIP caseload.
[23] A further 241 DIRs were also completed within 28 days of the test date despite a negative result being recorded on the DTR.
[24] Given the availability of initials only (rather than full names of arrestees) and the absence of PNC ID numbers in most records sourced via the DTR (56% of cases), it was not possible to reliably match details of 985 (40%) Class A suspects arrested in Areas B and C between January 2007 and March 2009. These cases have therefore been excluded from our analysis of known and proven reoffending.

Data on **trends and rates of recorded SAC and related offences** were sourced from the Metropolitan Police Service[25] and the Department for Communities and Local Government[26].

The study received ethical approval from the Birkbeck College Research Ethics Committee. Once ethical approval had been obtained formal applications were then made to the various data custodians (e.g. the PNC Information Access Panel (PIAP) and Offender Management and Sentencing – Analytical Services Unit (OMSAS) at the MoJ) for the release of extracts from the data sources described above.

All data were analysed in MS Excel and IBM SPSS Data Collection (version 18).

[25] Sourced from http://maps.met.police.uk/tables.htm (accessed November 2011).
[26] Sourced from http://www.places.communities.gov.uk/ (accessed November 2011).

4. Results

4.1 Trends and rates of SAC and related offending

Using published data this section describes trends and rates of recorded SAC in the period pre- and post the introduction of the DLE initiative in Area A. There is also an attempt to explore the extent of any unintended consequences from disruptions to the local drug market as a result of the operation. This includes assessing the extent of changes to those offences most commonly reported by English drug misusers as being committed to finance their use (i.e. theft from shop, handling stolen goods and drug possession offences)[27] (Gossop et al., 2000; Boreham et al., 2007; Jones et al., 2007) and trends in violent crime, since the incidence of such offending has potential scope to increase as a result of disputes to fill voids left by those dealers displaced through enforcement activity (Werb et al., 2011).

By way of comparison trends in these offences in neighbouring Areas B and C, and across London as a whole during this period, were considered too. This assessment of changes in trends and rates of SAC and related offending is clearly intended to be indicative only. Given the range of complex and inter-related factors at play, any observed changes (in either a positive or negative direction) cannot be attributed to the DLE initiative with any degree of certainty. Furthermore, we lacked information on any comparable initiatives taking place within neighbouring boroughs during this period.

As described in Table 1 (below), following the introduction of the DLE operation in 2006 there was a 39 per cent reduction in the number of SAC offences recorded by 2008/09. This was twice the rate of reduction observed in other London areas (17.7%) and Area C (19.5%) during this period, but comparable with that reported in Area B (37.2%).

[27] See Degenhardt and colleagues (2005) for an Australian example of how a reduction in the supply of heroin there in 2001 led to short-term increases in robbery offences.

Table 1: Trends in recorded SAC offences (2005/06 – 2008/09)

		2005/06	2006/07	2007/08	2008/09
Area A	% change (2005/06 is base)	100	**-13.3%**	**-20.9%**	**-39.0%**
Area B	% change (2005/06 is base)	100	**-20.2%**	**-26.3%**	**-37.2%**
Area C	% change (2005/06 is base)	100	**-9.0%**	**-6.8%**	**-19.5%**
Other London boroughs	Number of recorded offences	216,382	208,809	190,685	178,087
	% change (2005/06 is base)	100	**-3.5%**	**-11.9%**	**-17.7%**
London (overall)	Number of recorded offences	247,257	235,440	216,297	199,476
	% change (2005/06 is base)	100	**-4.8%**	**-12.5%**	**-19.3%**

However, recorded SAC offences had been falling across London since 2001/02 (and from 2002/03 in Area A), with the largest and most consistent falls observed in Area B between 2000/01 and 2008/09. Areas A and C, and other London boroughs all observed a relative spike in recorded SAC offences during 2005/06. These results are set out below in Table 2.

Table 2: Trends in recorded SAC offences (2000/01 – 2008/09)

		2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
Area A	% change (2000/01 is base)	100	**+8.2%**	**+16.4%**	**-5.8%**	**-19.5%**	**-14.1%**	**-25.5%**	**-32.1%**	**-47.6%**
Area B	% change (2000/01 is base)	100	**+1.7%**	**+0.1%**	**-6.1%**	**-25.1%**	**-28.1%**	**-42.6%**	**-47.0%**	**-54.8%**
Area C	% change (2000/01 is base)	100	**+6.2%**	**-1.1%**	**-7.9%**	**-23.4%**	**-6.2%**	**-14.6%**	**-12.5%**	**-24.4%**
Other London boroughs	Number of recorded offences	242,370	262,901	249,593	233,199	209,822	216,382	208,809	190,685	178,087
	% change (2000/01 is base)	100	**+8.5%**	**+3.0%**	**-3.8%**	**-13.4%**	**-10.7%**	**-13.8%**	**-21.3%**	**-26.5%**
London (overall)	Number of recorded offences	279,313	301,738	288,125	267,693	238,307	247,257	235,440	216,297	199,476
	% change (2000/01 is base)	100	**+8.0%**	**+3.2%**	**-4.2%**	**-14.7%**	**-11.5%**	**-15.7%**	**-22.6%**	**-28.6%**

Adjusting recorded rates of individual SAC offences (per 1,000 of the population) also revealed a similar trend: rates of burglary[28], robbery and theft of and from motor vehicles fell to a greater extent in Area A between 2005/06 and 2008/09 than in Area C and London overall, but with larger reductions observed in Area B with regards to robbery and thefts from vehicles (see Table 3).

Table 3: Recorded SAC rates per 1,000 population (2005/06 – 2008/09)

		2005/06	2006/07	2007/08	2008/09	% change
Area A	Burglary	23.4	19.5	18.9	11.7	**-50.0%**
	Robbery	8.0	9.0	6.4	5.0	**-37.5%**
	Theft from a vehicle	17.4	13.9	14.1	11.4	**-34.5%**
	Theft of a vehicle	7.5	6.1	5.4	4.2	**-44.0%**
Area B	Burglary	26.8	21.2	21.1	17.9	**-33.2%**
	Robbery	9.0	8.1	6.3	5.3	**-41.1%**
	Theft from a vehicle	17.6	13.6	13.1	11.3	**-35.8%**
	Theft of a vehicle	8.4	6.7	6.1	4.9	**-41.7%**
Area C	Burglary	27.3	23.2	21.9	20.1	**-26.4%**
	Robbery	10.1	10.2	9.5	6.8	**-32.7%**
	Theft from a vehicle	18.9	18.4	20.9	19.1	**+1.1%**
	Theft of a vehicle	9.3	7.7	6.9	5.6	**-39.8%**
London (overall)	Burglary	19.8	19.3	19.3	18.3	**-7.6%**
	Robbery	6.1	6.1	4.9	4.3	**-29.5%**
	Theft from a vehicle	12.7	12.2	11.4	10.4	**-18.1%**
	Theft of a vehicle	5.9	5.0	4.5	3.8	**-35.6%**

[28] This rate also includes commercial burglaries, however.

Again however rates of SAC (per 1,000 of the population) had been falling across London as a whole and Area A since 2003/04. In Area C by contrast rates of burglary (27.3) and robbery (10.2) had peaked during 2005/06 and 2006/07 respectively. Full details are provided in the appendices (see Table A1).

As Table 4 illustrates, in the period immediately following the introduction of the DLE operation the number of theft from shop offences fell to a greater extent in Area A (-9.8%) than in Areas C (-6.2%), B (-1.5%) and other London Boroughs (-2.4%).

Table 4: Trends in recorded theft from shop offences (2005/06 – 2008/09)

		2005/06	**2006/07**	**2007/08**	**2008/09**
Area A	% change (2005/06 is base)	**100**	**-12.5%**	**-2.5%**	**-9.8%**
Area B	% change (2005/06 is base)	**100**	**+7.0%**	**+6.7%**	**-1.5%**
Area C	% change (2005/06 is base)	**100**	**-16.0%**	**-2.2%**	**-6.2%**
Other London boroughs	Number of recorded offences	38,514	34,639	31,891	37,590
	% change (2005/06 is base)	**100**	**-10.1%**	**-17.2%**	**-2.4%**
London (overall)	Number of recorded offences	41,040	36,944	34,420	40,104
	% change (2005/06 is base)	**100**	**-10.0%**	**-16.1%**	**-2.3%**

A longer term assessment of trends in theft from shop offences (beginning in 2000/01) indicates a general peak in 2001/02 in the number of recorded offences (2002/03 in Area C), but with greater reductions recorded in Area A by 2008/09 (-25.6%) than Area B (-5.7%), Area C (+5.8%) and other London boroughs (-3.6%) (see Appendices, Table A2).

With regards to trends in recorded handling stolen goods (HSG) offences between 2005/06 and 2008/09, the rate of increase registered in Area A (51.5%) was considerably higher than in the adjacent borough of Area B (4.4%) and other London boroughs (29.5%) during this time, but lower than that recorded in Area C (159%). As described in Table 5 (below), both Area A (77.9%) and Area C (124%) experienced a sharp increase in recorded HSG offences in the period during which the DLE of interest was implemented.

Table 5: Trends in recorded handling stolen goods offences (2005/06 – 2008/09)

		2005/06	2006/07	2007/08	2008/09
Area A	% change (2005/06 is base)	**100**	**+77.9%**	**+48.5%**	**+51.5%**
Area B	% change (2005/06 is base)	**100**	**+8.8%**	**+8.0%**	**+4.4%**
Area C	% change (2005/06 is base)	**100**	**+124%**	**+107%**	**+159%**
Other London boroughs	Number of recorded offences	1,769	1,951	2,435	2,290
	% change (2005/06 is base)	**100**	**+10.3%**	**+37.6%**	**+29.5%**
London (overall)	Number of recorded offences	1,996	2,298	2,753	2,630
	% change (2005/06 is base)	**100**	**+15.1%**	**+37.9%**	**+31.8%**

This increase in recorded HSG offences during 2006/07 in Area A represented the peak in such offending, as measured from 2000/01. The rate of increase in recorded HSG offences from 2000/01 to 2008/09 in Area A was however lower (37.3%) than the adjoining Areas B (57.3%) and C (58.7%) during this period, but higher than the rate observed for other London boroughs (2.7%) (see Appendices, Table A3).

As described below in Table 6, in the period following the introduction of the sustained DLE operation in 2006 there was a 129 per cent increase in the number of drug possession offences recorded (by 2008/09). This was more than twice the rate of increase observed in Area C (58.0%) and around a third higher than those recorded in other London areas (88.6%) over the corresponding period. Area B however saw the greatest increase in recorded drug possession offences between 2005/06 and 2008/09 (147.0%).

Table 6: Trends in recorded drug possession offences (2005/06 – 2008/09)

		2005/06	**2006/07**	**2007/08**	**2008/09**
Area A	% change (2005/06 is base)	**100**	**+56.1%**	**+121%**	**+129%**
Area B	% change (2005/06 is base)	**100**	**+21.8%**	**+139%**	**+147%**
Area C	% change (2005/06 is base)	**100**	**-12.5%**	**+38.6%**	**+58.0%**
Other London boroughs	Number of recorded offences	32,574	43,464	57,359	61,425
	% change (2005/06 is base)	**100**	**+33.4%**	**+76.1%**	**+88.6%**
London (overall)	Number of recorded offences	37,296	49,087	66,759	71,383
	% change (2005/06 is base)	**100**	**+31.6%**	**+79.0%**	**+91.4%**

A longer term view of trends in drug possession offences indicated that whilst these rose markedly in Area A between 2000/01 and 2008/09 (261%), it was a rate broadly comparable with other London boroughs (252%) and markedly lower than the neighbouring Areas B (484%) and C (343%) (see Appendices, Table A4).

Overall falls in recorded violent offences were greater between 2005/06 and 2008/09 in Area A (-18.6%) than those observed for London as a whole (-11.6%) and neighbouring boroughs B and C (-14.9% and -13.5% respectively). As described in Table 7, however, there was a 3.6 per cent increase in such offences across Area A which coincided with the introduction of the DLE initiative in 2006/07. This was the only such increase recorded over this period.

Table 7: Trends in recorded violence against the person offences (2005/06 – 2008/09)

		2005/06	2006/07	2007/08	2008/09
Area A	% change (2005/06 is base)	**100**	**+3.6%**	**-10.1%**	**-18.6%**
Area B	% change (2005/06 is base)	**100**	**-4.3%**	**-5.6%**	**-13.5%**
Area C	% change (2005/06 is base)	**100**	**-10.0%**	**-8.4%**	**-14.9%**
Other London boroughs	Number of recorded offences	173,916	159,902	151,277	154,718
	% change (2005/06 is base)	**100**	**-8.1%**	**-13.0%**	**-11.0%**
London (overall)	Number of recorded offences	197,264	182,355	172,743	174,414
	% change (2005/06 is base)	**100**	**-7.6%**	**2.4%**	**-11.6%**

A longer term assessment (between 2000/01 and 2008/09) showed that increases in recorded violence against the person offences were lower in Area A (+1.8%) than other London boroughs (+14.1%) and the neighbouring Area B (+2.3%), but higher than that observed in Area C (-2.5%) over the this period (full details are provided in Appendices, Table A5).

4.2 The nature and extent of displacement

Here we assess the degree of displacement as measured by changes in the proportion of Area A residents arrested for 'drug-related' offences in neighbouring Areas B and C between 2006 and 2009. This was done using data relating to trigger offences derived from the drug test recorder (DTR) during this period (which also provides a mechanism for recording the drug action team (DAT) of residence for each arrestee)[29].

As described in Table 8, available DTR data indicated that the proportion of Area A residents arrested for 'drug-related' offences in neighbouring boroughs fell in the period following the introduction of the DLE operation: from 3.9 per cent in 2006/07 to 2.6 per cent in 2008/09. Whilst the extent of missing data means that these results need to be interpreted with caution, the available information does not suggest that displacement of 'drug-related' offending by residents of Area A occurred in the neighbouring boroughs as a consequence of this sustained drug law enforcement operation.

Table 8: Proportion of Area A residents arrested for 'drug-related' offences in Areas B and C, 2006/07 – 2008/09 (N=17,205)

	2006/07	**2007/08**	**2008/09**
% of Area A residents arrested for 'trigger' offences in Areas B and C	3.9% (n=76)	4.4% (n=132)	2.6% (n=140)
Number of valid cases	N=1,940	N=2,993	N=5,348
Number of cases with missing DAT of residence data	N=3,574 (64.8%)	N=2,670 (47.1%)	N=680 (11.3%)

[29] Data on DAT of residence were missing in 26.3% of cases (n=6,955), however. As illustrated in Table 8, above, the rate at which DTR data on DAT of residence were missing reduced considerably over time.

4.3 A comparative profile of the cohorts

Here we present a comparative profile (including demographics, offence, criminal history, drug use and treatment exposure) of (i) those exposed to the DLE initiative in Area A between 2007 and 2009, (ii) others arrested on suspicion of drug offences in the borough during this time (comparison group 1) and (iii) those arrested for alleged Class A drug offences in the neighbouring boroughs (Areas B and C) during the corresponding period.

Table 9: A comparative demographic assessment of the assembled cohorts (2007-2009) (N=4,725)

	Experimental group (N=1,163)	**Comparison group 1 (N=2,097)**	**Comparison group 2 (N=1,465)**	**All (N=4,725)**
Male	94.4% (n=1,098)	93.0% (n=1,950)	85.3% (n=1,249)***	90.9% (n=4,297)
Age	Mean (M) = 26.3 Median (Mdn) = 24.0 Range = 13 - 68 SD[30] = 9.0 MV[31] = 1	M = 27.2** Mdn = 26.0 Range = 12 - 68 SD = 9.1 MV = 5	M = 30.1*** Mdn = 28.0 Range = 18 - 70 SD = 9.3 MV = 0	M = 27.9 Mdn = 26.0 Range = 12 - 70 SD = 9.2 MV = 6
White	35.9% (n=373)[32]	35.2% (n=650)	45.1% (n=645)***	38.6% (n=1,668)
Black	15.7% (n=163)	16.1% (n=298)	38.5% (n=551)***	23.4% (n=1,012)
Asian	46.1% (n=478)	47.3% (n=875)	14.5% (n=207)***	36.1% (n=1,560)
Other	2.3% (n=24)	1.4% (n=25)	2.0% (n=28)	1.8% (n=77)

*p<0.05; **p<0.01; ***p<0.001

[30] SD = Standard deviation.
[31] MV = Missing value
[32] Data on the ethnicity of the experimental DLE cohort were missing in 10.7% (n=125) of cases. A similar proportion of cases relating to the other drug arrestees in Area A (11.9%; n=249) had missing data on ethnicity. These data were less likely to be missing for Class A suspects in Areas B and C (2.3%; n=34), however.

As described in Table 9, with the exception of age, there were no significant differences in the demographics (gender or ethnicity[33]) of the experimental DLE cohort compared with other drug arrestees in Area A between 2007 and 2009. By contrast, there were significant differences observed across all demographic domains between the experimental group and and Class A drug arrestees in Areas B and C during this period (all at $p<0.001$), with the former more likely to be made up of younger Asian males).

Table 10: A comparative offence profile of the assembled cohorts (2007-2009) (N=4,725)

	Experimental group (N=1,163)	**Comparison group 1 (N=2,097)**	**Comparison group 2 (N=1,465)**	**All (N=4,725)**
Class A	63.3% (n=735)[34]	60.3% (n=1,182)	97.7%*** (n=1,431)	73.6% (n=3,348)
Class B	11.5% (n=133)	14.3%* (n=281)	0***	9.1% (n=414)
Class C	25.2% (n=293)	25.3% (n=496)	0***	17.3% (n=789)
Production	7.0% (n=81)	0***	3.5%*** (n=51)	2.8% (n=132)
Importation	1.1% (n=13)	0***	0***	0.3% (n=13)
Supply	23.0% (n=268)	0***	8.6%*** (n=126)	8.4% (n=394)
Possession with intent to supply	68.9% (n=801)	0***	20.1%*** (n=295)	23.4% (n=1,096)
Possession	0	93.5%*** (n=1,961)	65.5%*** (n=959)	62.2% (n=2,920)
Other	0	6.5%*** (n=136)	0	2.9% (n=136)

*$p<0.05$; **$p<0.01$; ***$p<0.001$

[33] This refers to a police officer's perceived view of an individual suspect's ethnicity (as distinct from the individual's self-definition of their ethnic origin, which is gathered post-arrest). Though problematic (the assumed homogeneity within these diverse groups clearly limits their analytical utility), these data were available for most suspects and provide a broad indication of the perceived ethnic groups using standardised police classifications.

[34] Data on the Class of drug offence were missing in two experimental cases and 138 (6.6%) of the cases from comparison group 1 during 2007-2009. The nature and Class of drug were not stated in relation to 2.3 per cent (n=34) of cases processed via test on arrest arrangements following a detention for a Misuse of Drugs Act offence in Areas B and C during this period. It seems likely that these cases related to Class B or C arrests which were processed under test on arrest arrangements and resulted in a test being administered for recent use of heroin and/or cocaine using an Inspector's discretion.

Although those exposed to the experimental DLE initiative were less likely to have been arrested for Class B drug offences than other drug arrestees in comparison group 1 ($p<0.05$), as anticipated they were more likely to have been arrested on suspicion of production, importation, supply or possession with intent to supply offences, but less likely to have been detained in relation to possession offences (all at $p<0.001$).

By contrast, suspects in comparison group 2 detained by police in Areas B and C between 2007 and 2009 were also less likely to have been arrested for dealing type offences, but more likely to have been detained on suspicion of possession offences (both at $p<0.001$).

Over three-quarters of those exposed to the DLE initiative had a prior conviction[35], having assembled over 6,300 convictions for 11,196 proven offences. Around 10 per cent of the cohort (n=122) was responsible for half the known offences (n=5,637). (This finding was consistent across the larger sample too: 10 per cent (n=481) of the suspected drug offenders arrested by the police across the three London boroughs between 2007 and 2009 were responsible for half of all the proven offences (n=22,946) committed by this group.)

There were however no significant differences observed between the experimental group and comparison group 1 in terms of the prevalence and frequency of their known offending career, or the age at which this offending came to official attention. Arrestees in comparison group 2 were less likely to have a prior conviction and to have acquired their first conviction at an older age (both at $p<0.001$), relative to the experimental DLE group.

The results of these analyses are described in Table 11, below.

[35] This includes any prior cautions, warnings and reprimands, as well as court convictions. This figure also includes any offence leading to a conviction arising from the index arrest.

Table 11: The nature and extent of prior proven offending, by group (N=4,725)

	Experimental group (N=1,163)	Comparison group 1 (N=2,097)	Comparison group 2 (N=1,465)	All (N=4,725)
Any prior conviction	78.3% (n=911)	76.6% (n=1,607)	65.5%*** (n=960)	73.6% (n=3,478)
Number of prior convictions[36]	M = 5.4 Mdn = 3.0 Range = 0 - 62 SD = 7.2 Total = 6,319	M = 5.5 Mdn = 3.0 Range = 0 - 64 SD = 7.5 Total = 11,578	M = 5.2 Mdn = 2.0 Range = 0 - 64 SD = 7.9 Total = 7,641	M = 5.4 Mdn = 2.0 Range = 0 - 64 SD = 7.6 Total = 25,538
Number of known prior offences	M = 9.6 Mdn = 4.0 Range = 0 - 140 SD = 15.3 Total = 11,196	M = 9.8 Mdn = 4.0 Range = 0 - 149 SD = 15.7 Total = 20,615	M = 9.6 Mdn = 3.0 Range = 0 - 153 SD = 16.5 Total = 14,043	M = 9.7 Mdn = 3.0 Range = 0 - 153 SD = 15.8 Total = 45,854
Age at first conviction	M = 19.2 Mdn = 17.0 Range = 10 - 53 SD = 6.2	M = 19.2 Mdn = 17.0 Range = 10 - 60 SD = 6.5	M = 20.4***[37] Mdn = 19.0 Range = 8 - 62 SD = 6.8	M = 19.5 Mdn = 18.0 Range = 8 - 62 SD = 6.5

*p<0.05; **p<0.01; ***p<0.001

Data from the PNC indicated that the number of known and proven SAC offences committed by the experimental DLE cohort (n=573) and other drug arrestees in Area A (n=1,010) between April 2000 and March 2009 was equivalent to 1.9 per cent of the 81,699 such offences recorded in the borough over this period. Importantly, for the purposes of this research, analyses of data derived from the PNC (and presented in Table 12) also confirmed that there were no significant differences observed between those targeted via the DLE operation of interest and other suspected drug offenders assembled for the study, in terms of the prevalence and frequency of their known SAC offending up to the point of the index arrest.

[36] This includes convictions for any breach offences, which accounted for 4.3 per cent (n=1,961) of all offences leading to conviction. There were no significant differences between the groups in the rate of previous breach recorded on the PNC.

[37] The Levene's test for equality of variance yielded a significant p-value (i.e. p<0.05), indicating that the variances observed in age of first conviction between the experimental group and comparison group 2 could not be considered equal (SD = 6.2 vs. SD = 6.8; t(1868)=4.20).

Table 12: The prevalence and frequency of known prior SAC, by group (N=4,725)

	Experimental group (N=1,163)	**Comparison group 1 (N=2,097)**	**Comparison group 2 (N=1,465)**	**All (N=4,725)**
Any prior SAC conviction	26.8% (n=312)	25.4% (n=532)	24.4% (n=358)	25.4% (n=1,202)
Number of proven SAC offences	M = 0.9 Mdn = 0 Range = 0 - 28 SD = 2.6 Total = 1,022	M = 0.8 Mdn = 0 Range = 0 - 43 SD = 2.7 Total = 1,759	M = 1.0 Mdn = 0 Range = 0 - 40 SD = 3.1 Total = 1,467	M = 0.9 Mdn = 0 Range = 0 - 43 SD = 2.8 Total = 4,248

*p<0.05; **p<0.01; ***p<0.001

The assembled cohorts were more than twice as likely to have acquired a prior drugs conviction (61.2%) than one for a serious acquisitive offence (25.4%). And while there were no differences in the prevalence and frequency of proven prior drug offending amongst those processed by Area A custody suites between 2007 and 2009, those detained for suspected Class A drug offences in Areas B and C had both a significantly lower prevalence and number of previous drug convictions than the experimental group (both at p<0.01) (see Table 13).

Table 13: The prevalence and frequency of known prior drug offending, by group (N=4,725)

	Experimental group (N=1,163)	Comparison group 1 (N=2,097)	Comparison group 2 (N=1,465)	All (N=4,725)
Any prior drug conviction	64.0% (n=744)	62.1% (n=1,303)	57.7%** (n=845)	61.2% (n=2,892)
Number of proven drug offences	M = 2.2 Mdn = 1.0 Range = 0 - 34 SD = 3.1 Total = 2,502	M = 2.1 Mdn = 1.0 Range = 0 - 24 SD = 3.1 Total = 4,451	M = 1.8**[38] Mdn = 1.0 Range = 0 - 24 SD = 2.7 Total = 2,660	M = 2.0 Mdn = 1.0 Range = 0 - 34 SD = 2.9 Total = 9,613

*p<0.05; **p<0.01; ***p<0.001

Table 14: The extent of previous correctional services' supervision, by group (N=4,725)

	Experimental group (N=1,163)	Comparison group 1 (N=2,097)	Comparison group 2 (N=1,465)	All (N=4,725)
Any prior custodial sentence	32.4% (n=377)	32.3% (n=677)	31.5% (n=462)	32.1% (n=1,516)
Any prior community supervision	44.3% (n=515)	44.5% (n=933)	38.2%** (n=559)	42.5% (n=2,007)

*p<0.05; **p<0.01; ***p<0.001

Just under one-third (32.1%) of the cohort had served a prior custodial sentence, with no significant differences between the three groups in terms of the rate of previous imprisonment. The rate at which the overall sample had previously been sentenced to a community penalty was higher (42.5%). As set out in Table 14, above, when compared with those exposed to the DLE operation of interest, the rate of prior probation supervision as

[38] Equal variance not assumed (SD = 3.1 vs. SD = 2.7; t(2308)= -2.95).

part of a community penalty was identical for other Misuse of Drugs Act arrestees in Area A between 2007 and 2009, but significantly lower for comparison group 2 during this period (p<0.01).

Table 15: The nature and extent of recent opiate and/or cocaine use, by group (N=4,725)

	Experimental group (N=1,163)	**Comparison group 1 (N=2,097)**	**Comparison group 2 (N=1,465)**	**All (N=4,725)**
Any test undertaken	35.7% (n=415)	37.7%* (n=791)	99.0%*** (n=1,451)[39]	56.2% (n=2,657)
% of tests positive	50.1% (n=208)	69.7%*** (n=551)	61.2%*** (n=888)	62.0% (n=1,647)
+/ive for poly (opiate & cocaine) use	41.8% (n=87)	39.4% (n=217)	31.4%** (n=279)	35.4% (n=583)
+/ive for opiate use only	16.4% (n=34)	16.2% (n=89)	11.2%* (n=99)	13.5% (n=222)
+/ive for cocaine use only	41.8% (n=87)	44.4% (n=245)	57.4%*** (n=510)	51.1% (n=842)

*p<0.05; **p<0.01; ***p<0.001

As described in Table 15, above, the experimental group was less likely to be drug tested for recent use of opiates and/or cocaine following their arrest than other suspected drug offenders in Area A (p<0.05) and others arrested in Areas B and C (p<0.001) for Class A offences. Although the provisions of the 2005 Drugs Act are restricted to Class A drug offences, all such suspects could have been tested using an Inspector's Authority if there was considered to be reasonable grounds to suspect that the misuse of opiates and/or cocaine caused or contributed to the commission of other 'non-trigger' offences.

[39] Testing data were missing in 14 (1.0%) of cases.

Nevertheless, those members of the experimental group subject to a test were less likely to produce a positive result for recent use of opiates and/or cocaine than others ($p<0.001$). Although there were no significant differences observed between the DLE cohort and other drug arrestees in Area A - in terms of the nature and type of positive test produced, the experimental group was more likely to test positive for combined (poly) use of these drugs ($p<0.01$) or opiates in isolation ($p<0.05$), but less likely to have recently used cocaine ($p<0.001$) than positive testing Class A drug arrestees in Areas B and C during the same period ($p<0.001$).

Table 16: The nature and extent of drug misuse and recent exposure to structured drug treatment services, by group (N=1,647)

	Experimental group	Comparison group 1	Comparison group 2	All
Eligible to complete the DIR[40]	N=208	N=551	N=888	N=1,647
Completed the DIR[41]	68.3% (n=142)	65.5% (n=361)	76.0%* (n=675)	71.5% (n=1,178)
Ever misused	100% (n=130) MV = 12	99.7% (n=336) MV = 24	98.2% (n=638) MV = 25	98.8% (n=1,104) MV = 61
Age started misusing drugs	M = 20.3 Mdn = 18.0 Range = 12 – 40 SD = 6.5 MV = 3	M = 21.9* Mdn = 20.0 Range = 9 – 53 SD = 7.8 MV = 6	M = 20.9* Mdn = 18.0 Range = 7 – 55 SD = 7.4 MV = 78	M = 21.0 Mdn = 18.0 Range = 7 – 55 SD = 7.2 MV = 87
Received drug treatment in last 2 years	33.8% (n=44) MV = 12	35.5% (n=118) MV = 29	26.1% (n=168) MV = 31	29.8% (n=330) MV = 72
In treatment at time of arrest	5.5% (n=7) MV = 15	13.1%* (n=44) MV = 26	8.9% (n=55) MV = 56	9.8% (n=106) MV = 97

*p<0.05; **p<0.01; ***p<0.001

Rates of compliance with the required assessment process (as measured via completion of the drug interventions record – DIR) following a positive test for recent use of opiates and/or cocaine were higher among suspects in comparison group 2 (p<0.05) than others. Despite there being no significant differences in the rate of illicit drug misuse reported among those completing the DIR, the experimental group started misusing illicit drugs at an earlier age (p<0.05). Between one-quarter and a third of those completing the DIR had reportedly received drug treatment in the two years prior to doing so, but the experimental DLE group

[40] A suspect was considered eligible to complete a DIR if they tested positive for recent use of opiates and/or cocaine following their arrest.
[41] As a proportion of those eligible (i.e. within 28 days of producing a positive test). Those already in treatment at this time or on the DIP caseload would have instead completed an abbreviated version of the DIR.

were the least likely to be in treatment at the time of their arrest. The results of these analyses are set out in Table 16, above.

4.4 Changes in the prevalence and frequency of known offending

A key challenge associated with attempts to assess the impact of any intervention on rates of proven reoffending relates to the need to accurately control for any incapacitation bias, or time at reduced risk because of imprisonment. Controlling for this using data from the PNC is particularly problematic for a number of reasons:

- the PNC does not record dates of when an offender was admitted to or released from custody; and
- it is not possible to accurately calculate how much of any custodial sentence imposed was actually served.

Of equal importance, it is not possible to determine if or how long an offender may have spent on remand awaiting trial and/or sentence. With these important caveats in mind, we sought to control for any incapacitation bias as best we could by using a similar approach to that deployed by Skodbo and colleagues (2007). This involved isolating any custodial sentences recorded on the PNC as having been imposed within 12 months of the date of the index arrest and taking 50 per cent of the total length of the prison sentence(s) imposed in order to estimate the total time spent in custody during this follow-up period. Details of our analysis of time at reduced risk because of imprisonment are set out in Table 17 below. The results indicate that there were no significant differences observed between the groups in this regard.

Table 17: Estimated time at reduced risk due to imprisonment in the 12 months post-index arrest, by group (N=4,725)

	Experimental group (N=1,163)	**Comparison group 1 (N=2,097)**	**Comparison group 2 (N=1,465)**	**All (N=4,725)**
Any custodial sentence imposed during follow-up	12.6% (n=146)	11.1% (n=232)	15.2% (n=223)	12.7% (n=601)
Total length of sentence imposed (days)[42]	M = 1,094 Mdn = 318 R = 5 – 16,380[43] SD = 2,050 Total = 159,699	M = 769 Mdn = 240 R = 7 – 7,200 SD = 1,161 Total = 178,405	M = 1,001 Mdn = 330 R = 4 – 16,425[44] SD = 1,695 Total = 223,174	M = 943 Mdn = 270 R = 4–16,425 SD = 1,642 T = 561,278
Estimated length of sentence served (days)	M = 547 Mdn = 159 R = 2 – 8,190 SD = 1,025 Total = 79,850	M = 385 Mdn = 120 R = 4 – 3,600 SD = 580 Total = 89,204	M = 500 Mdn = 165 R = 2 – 8,212 SD = 847 Total = 111,588	M = 467 Mdn = 140 R = 2 -8,212 SD = 809 T = 280,642
% with 30 'free' days during follow-up	95.6% (n=1,112)	96.6% (n=2,026)	94.5% (n=1,384)	95.7% (n=4,522)
% with 183 'free' days during follow-up	94.4% (n=1,097)	95.7% (n=2,007)	93.0% (n=1,362)	94.5% (n=4,466)

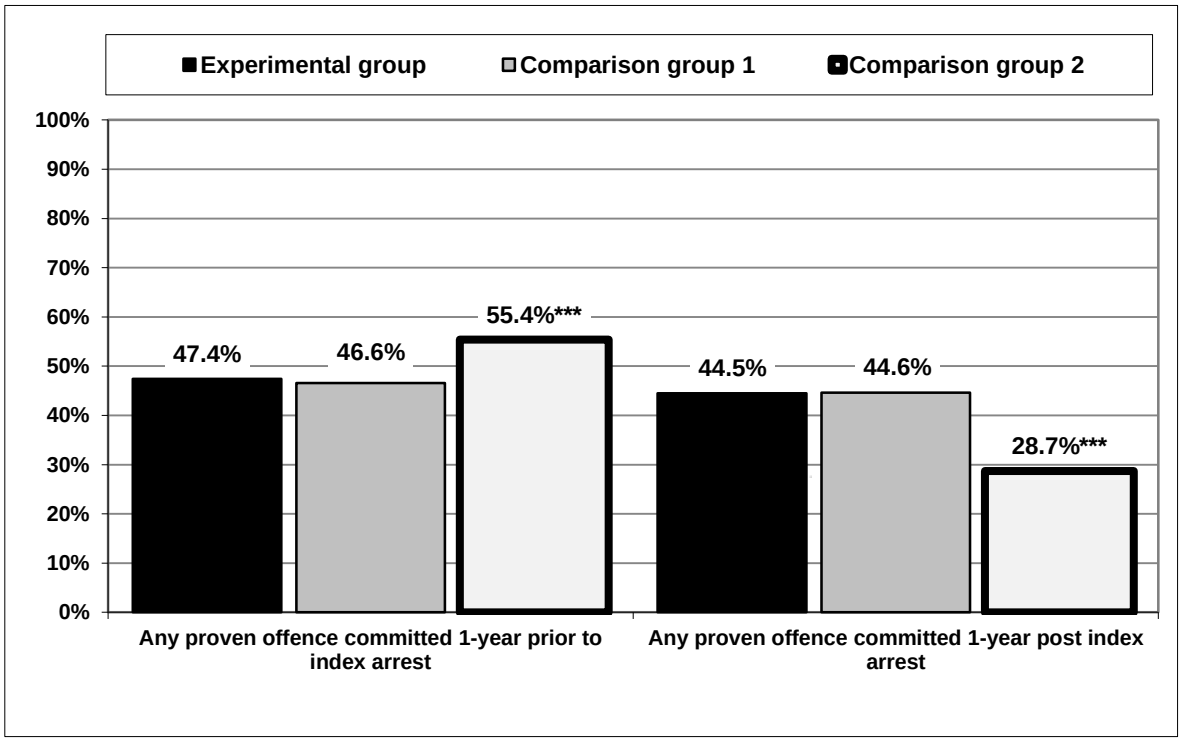
*p<0.05; **p<0.01; ***p<0.001

[42] All custodial sentences recorded on the PNC have been treated as consecutive ones. As such these figures are likely to over-estimate the total length of sentences imposed.
[43] Two cases each with sentence lengths of 364,635 days on the PNC were considered errors and re-coded as 365 days.
[44] One case with a sentence length of 365,895 was considered an error and re-coded as 365 days.

One-year rates of proven reoffending were comparable for those identified by the experimental DLE initiative and other drug arrestees in Area A between 2007 and 2009, but significantly lower amongst Class A drug arrestees in Areas B and C during the same period.

Overall, 44.5 per cent (n=517) of the experimental group was reconvicted for another offence[45] committed in the 12 months following the index arrest[46]. This compares to 44.6 per cent (n=936) of suspects in comparison group 1 (the difference in proven reoffending rates between the two groups was not statistically significant). The rate of proven reoffending among arrestees in comparison group 2 was significantly lower than that observed for both groups of suspected drug offender identified in Area A (28.7%; n=420) (*p*=0.000).

Figure 1: Rates of proven offending 12 months pre and post, by group (N=4,725)



*p<0.05; **p<0.01; ***p<0.001

[45] This includes 10 members of the experimental group for whom a breach offence was the primary and only reconviction in the 12-month follow-up period. There was no significant difference in that rate at which suspects in comparison group 1 (n=16) and comparison group 2 (n=15) acquired a conviction in the 12 months following the index arrest for a primary and solitary breach offence. We have included these breach offences in recognition of the possible costs arising from such a conviction for both society and the individual offender (i.e. when this leads to a sentence of imprisonment).

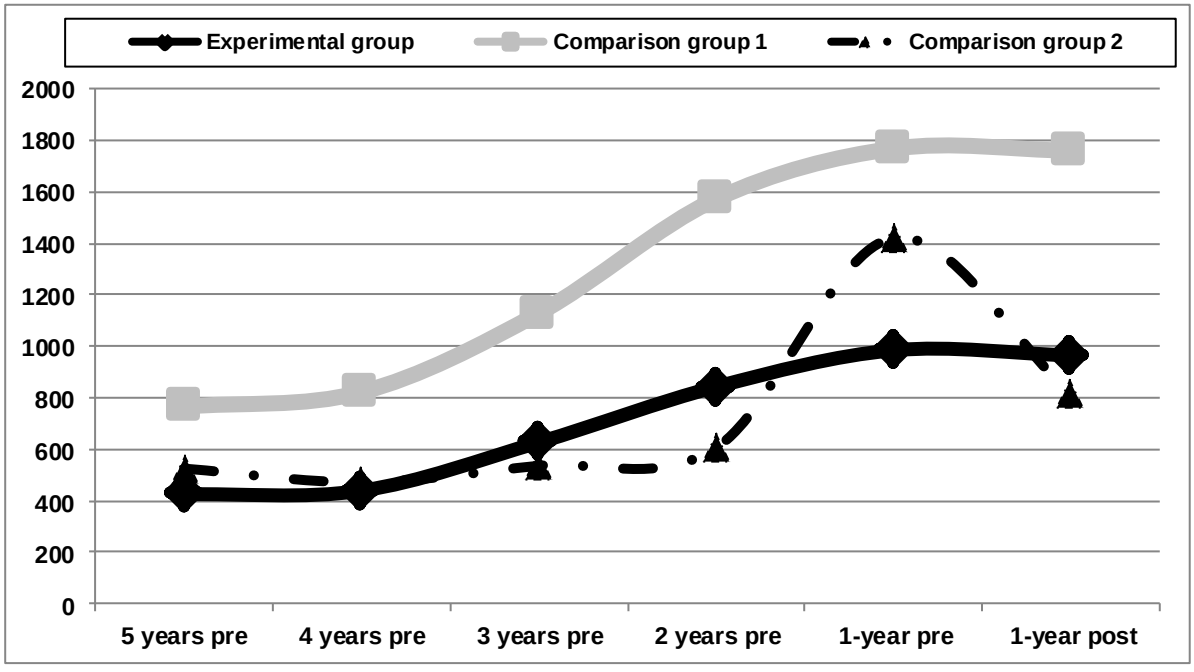
[46] Consistent with the definition used by the Ministry of Justice, we have defined proven reoffending as any offence committed in this one-year period which is proven by a court conviction (either in the one-year period, or in a further six months) (2010: 47).

More than half (53.1%; n=1,732) of those arrested for suspected drug offences in Area A had no convictions for a proven offence committed in the 12 months prior to and including the index arrest recorded on the PNC. The comparable figure for suspects arrested in comparison group 2 from Areas B and C was 44.6 per cent (n=653)[47].

Furthermore, the 12-month rate of proven reoffending was not found to be significantly higher amongst those testing positive for recent use of opiates and/or cocaine between arrestees from Area A (experimental group: 56.3% for positive testers vs. 49.3% for those testing negative, n=415; comparison group 1: 49.7% vs. 53.3%, n=791), but varied considerably for suspected Class A drug offenders in Areas B and C (31.6% vs. 24.0%, n=1,451; $p<0.01$).

In order to set any impact of the experimental DLE initiative on rates of 'related' proven reoffending into some context, we have also considered the total number of convictions during each year of the five years prior to the index arrest for all three groups, and the 12 months after this point. The results are set out in Figure 2.

Figure 2: Trends in total number of convictions per year, by group (N=4,725)



[47] These figures are somewhat consistent with those reported by Barclay and Tavares (1999: 30) who described how 52 per cent of arrested suspects were subsequently charged. More recent data indicates that 83.4 per cent of the 1.6 million defendants charged and proceeded against in England and Wales during 2011 were subsequently convicted (Ministry of Justice, 2012: 3).

Over a six-year period the overall trend for all three groups tended towards an increase in the total number of convictions acquired. For both groups of arrestee identified via Area A the total number of convictions increased year-on-year up to the point of the index arrest. Moreover, convictions for proven offences committed in the 12 months following the index arrest remained high relative to those observed during the preceding five years. Compared to the 12-month period in the five years prior to the index arrest, the number of convictions acquired by the experimental cohort for offences committed during the corresponding period 12 months post the index arrest increased by 127 per cent (from 425 convictions to 965; z = -11.32; r = -0.24; p=0.000)[48]. For comparison group 1 the number of convictions per year increased by 130 per cent over the same period (from 766 convictions to 1,761; z = -15.39; r = -0.24*;* p=0.000). And whilst the number of convictions for offences committed in the 12 months prior to the index arrest spiked markedly for Class A drug suspects in comparison group 2[49], this cohort nevertheless recorded a 56 per cent increase in the number of convictions incurred over the corresponding period (from 525 convictions to 817; z = -6.13; r = -0.11*;* p=0.000).

Table 18 shows the result of fitting a univariate negative binomial regression model to the number of known and proven offences committed in the 12 months following the index arrest, using status within either the experimental or comparison groups as a covariate. This confirmed that compared with the experimental DLE group, the unadjusted[50] frequency of known offending was 23 per cent lower among comparison group 2 and two per cent lower among other suspected drug offenders in comparison group 1 (but this latter difference was not significant statistically). The likelihood ratio chi-square, which tests the model against a null one without predictors as part of an Omnibus Test, also indicated that the inclusion of status group significantly improved the model (χ^2 (2, N=4,725)=34.5, p=0.000)).

[48] R values below 0.5 denote medium or small effect sizes

[49] Such as spike is likely to be a product of the way in which the cases were sampled at the point of arrest, however. See National Treatment Agency (2012: 17) for a recent discussion.

[50] These conviction data are unadjusted in the sense that they include breach offences and have not been adjusted to consider time at reduced risk due to imprisonment or regression to the mean effects (i.e. by excluding any proven index offence).

Table 18: Negative binomial regression model for the unadjusted number of known and proven offences committed in the 12 months following the index arrest (N=4,725)

Parameter	(B)	(SE)	Wald 95% confidence limits[51]		Chi-square	Sig	Exp(B)
Intercept	.296	0.39	.220	.372	58.3	*p*=0.000	
Comparison group 2 vs. experimental group	-.265	0.53	-.370	-.161	24.8	*p*=0.000	.77
Comparison group 1 vs. experimental group	-.017	0.48	-.112	.078	.122	*p=0.727*	.98

In an attempt to minimise the effect of any incapacitation bias, we followed the approach used by Lulham (2009) and replicated the regression analysis including only those suspects who (i) were estimated to have spent at least 183 days in the community during the 12-month follow-up period and (ii) who had spent no time in custody during this interval. The results, set out in Table 19 below, indicate that for those estimated to have spent 183 days or more in the community in the 12 months following the index arrest (94.5%; n=4,466), the frequency of known offending was 20 per cent lower among comparison group 2 but eight per cent higher among other suspected drug offenders in comparison group 1 when compared with the experimental group (but again this latter finding was not statistically significant).

Excluding those for whom a custodial sentence was imposed during the 12-month follow-up (12.7%; n=601) indicated that relative to the experimental group, the frequency of known offending was 35 per cent lower among Class A arrestees in comparison group 2, but 12 per cent higher among other suspected drug offenders from Area A who made up comparison group 1 (with both results reaching statistical significance).

[51] The parameter's (intercept) 95% confidence interval does not include zero. This suggests that the negative binomial model is more appropriate in this instance than a poisson one since an estimate greater than zero indicates over-dispersion. (SPSS Data Analysis Examples: Negative Binomial Regression. UCLA: Academic Technology Services, Statistical Consulting Group, from http://www.ats.ucla.edu/stat/spss/dae/neg_binom.htm (accessed April 19, 2012).

Table 19: Negative binomial regression model for the number of known and proven offences committed in the 12 months following the index arrest, adjusted for time at reduced risk due to imprisonment

Parameter		(B)	(SE)	Wald 95% confidence limits		Chi-square	Sig	Exp (B)
Intercept		.16	0.04	.083	.244	15.9	*p*=0.000	
183+ days in the community (n=4,466)	Comparison group 2 vs. experimental group	-.23	0.57	-.337	-.115	15.9	*p*=0.000	.80
	Comparison group 1 vs. experimental group	.073	.051	-.026	.173	2.1	*p*=0.150	1.08
Intercept		-.12	.046	-.214	-.035	7.4	*p*=0.007	
No custody (n=4,124)	Comparison group 2 vs. experimental group	-.43	0.66	-.555	-.298	42.3	*p*=0.000	.65
	Comparison group 1 vs. experimental group	.116	.056	.005	.226	4.2	*p*=0.04	1.12

In statistical terms there were no significant reductions in the average (mean) number of unadjusted proven offences leading to conviction among both the experimental group (1.4 vs. 1.3) (z = -.871; r = -0.02; p=0.384) and other drug arrestees in Area A (1.4 vs. 1.3) (z = -.868; r = -0.01; p=0.385) in the 12 months preceding the index arrest between 2007 and 2009 and the corresponding period post-arrest. There was a statistically significant reduction observed for those arrestees in comparison group 2, however (from 1.6 to 1.0) (z = -11.24; r = -0.21; p=0.000).

As described in Table 20 (below), changes in the unadjusted number of proven offences committed in the 12 months pre and post the index arrest were similar for those identified via the experimental DLE initiative and comparison group 1 between 2007 and 2009. These groups recorded a three and four per cent reduction respectively in the total number of known offences committed in the year post-arrest, relative to the corresponding 12-month period leading up to this point. However, whilst 32 per cent of the experimental group recorded a 75 per cent reduction in known offending, a similar proportion (29%) also saw their offending increase by 312 per cent. For the remainder of this cohort (39%) there was no change observed in the frequency of their known offending, with over four-fifths of this sub-group (n=394) having no proven offences registered against them in the 12 months pre or post the index arrest.

This pattern was broadly replicated among other drug arrestees identified in Area A as part of comparison group 1 (but with larger reductions and smaller proportional increases detected). By contrast, comparison group 2 comprising suspected Class A drug offenders arrested in Areas B and C during this time registered a 36 per cent overall reduction in the number of known offences. There was also a tendency towards larger reductions in proven offending 12 months following the index arrest and smaller increases in this known offending behaviour.

The most common observation across all three groups however was for the frequency of known offending to remain static and unchanged for a large minority of arrestees (40.9%; n=1,934). For one in three the frequency of this offending had reduced over this period (34.6%; n=1,633), while for one in four it had increased (24.5%; n=1,158). Furthermore, one-third (35.6%; n=1,683) of the suspects arrested across the three sites and considered here had no proven offences recorded on the PNC for the 12 months preceding or following the index arrest. Comparison group 2 were more likely to have no proven offences in the 12 months pre and post the index arrest (39.7%; n=581) than the experimental group (33.9%; n=394) and other suspected drug offenders in Area A (comparison group 1) (33.8%; n=708) (p=0.001).

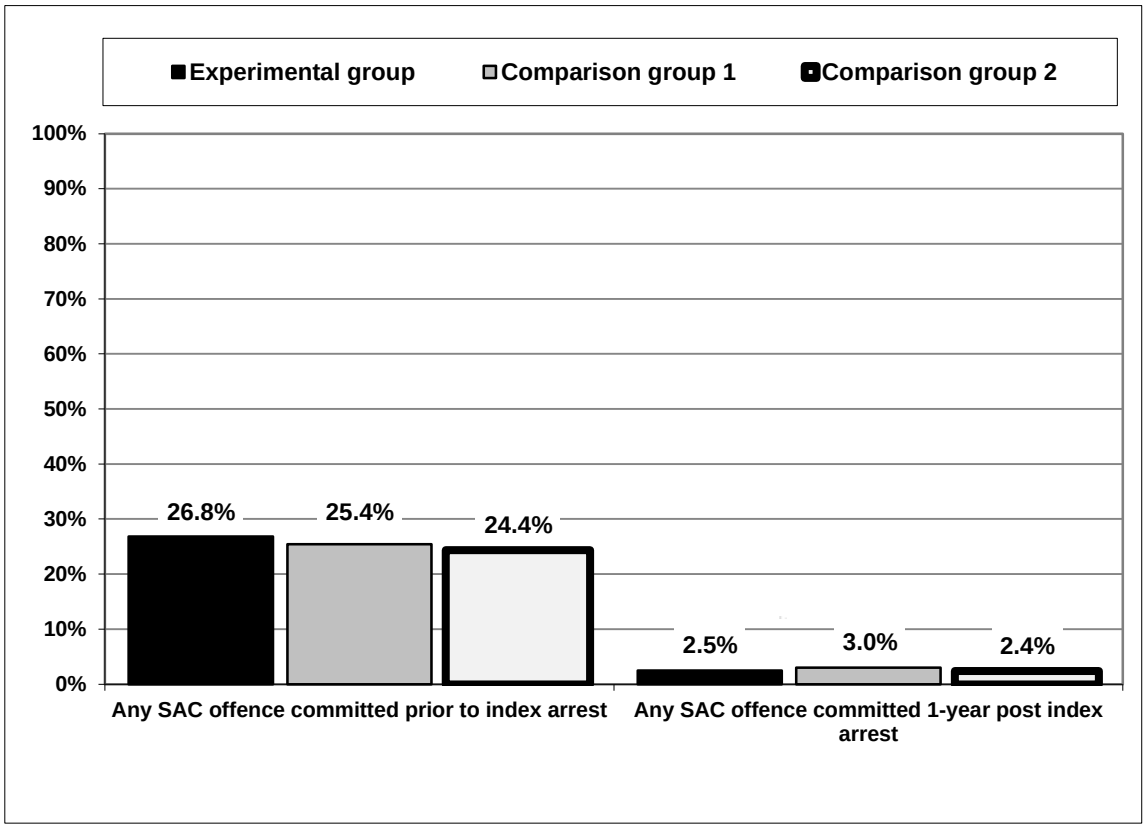
Table 20: Changes in the unadjusted number of proven offences committed in the 12 months pre and post the index arrest (N=4,725)

Group	Direction of change	N	(%)	Proven offences committed 12 months pre-index arrest		Proven offences committed 12 months post-index arrest		% change
				Sum	Mean	Sum	Mean	
Experimental	Reduction	369	32	1,213	3.3	304	0.8	-75%
	No change	455	39	113	0.3	113	0.3	0%
	Increase	339	29	278	0.8	1,146	3.4	+312%
	Total	**1,163**	**100**	**1,604**	**1.4**	**1,563**	**1.3**	**-2.6%**
Comparison group 1	Reduction	665	32	2,148	3.2	482	0.7	-78%
	No change	815	39	209	0.3	209	0.3	0%
	Increase	617	29	520	0.8	2,080	3.4	+300%
	Total	**2,097**	**100**	**2,877**	**1.4**	**2,771**	**1.3**	**-3.7%**
Comparison group 2	Reduction	599	41	1,808	3.0	383	0.6	-79%
	No change	664	45	177	0.3	177	0.3	0%
	Increase	202	14	379	1.9	950	4.7	+151%
	Total	**1,465**	**100**	**2,364**	**1.6**	**1,510**	**1.0**	**-36.1%**

4.5 Changes in the prevalence and frequency of known SAC offending

One in four of the assembled sample of arrestees from across the three London boroughs had a conviction for a proven SAC offence committed at the point of the index arrest between 2007 and 2009 (25.4%; n=1,202). In the 12 months following this point three per cent (n=126) had acquired a conviction for a proven SAC offence. As illustrated in Figure 3, below, there were no significant differences between the groups in the prevalence of proven SAC offending at both points.

Figure 3: Rates of proven SAC offending, by group (N=4,725)



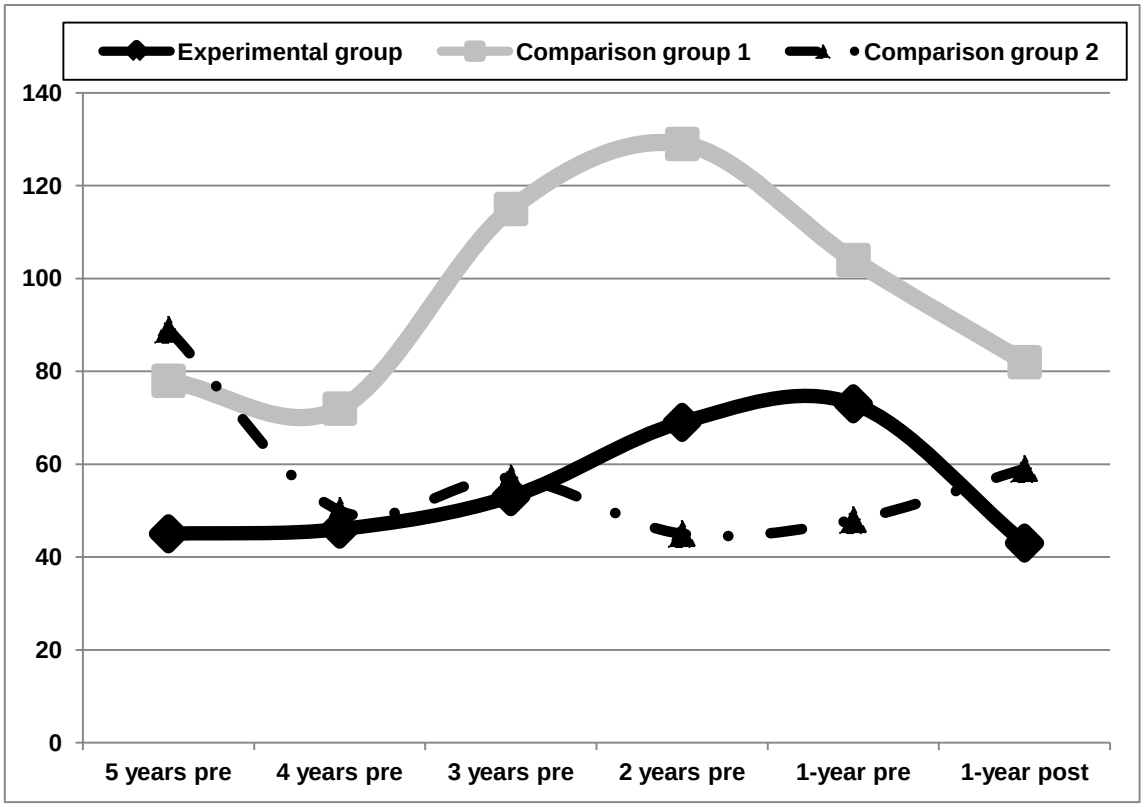
*p<0.05; **p<0.01; ***p<0.001

There was also no significant difference observed in the distribution of proven SAC offences committed in the 12 months following the index arrest among the experimental DLE group (median=0, mean=0.04, range=0-3, total=43, SD=0.03, n=1,163) and other suspects (median=0, mean=0.04, range=0-7, total=141, SD=0.03, n=3,562) (U=2066640, N=4,725, p=0.679).

Compared to trends in general offending described above, patterns of known SAC offending were subject to greater variability over time (see Figure 4). In contrast to the 12-month period in the five years prior to the index arrest, the number of unadjusted convictions acquired by the experimental group for SAC offences committed during the 12 months following this arrest reduced by four per cent (from 45 convictions to 43; z = -.25; r = -0.005; p=0.802). There was a larger reduction recorded among suspects in comparison group 2 in Areas B and C. This group recorded a 34 per cent reduction in the number of SAC convictions incurred over the corresponding period (from 89 convictions to 59; z = -2.52; r = -0.05; p=0.012). For other drug arrestees in Area A (comparison group 1) the number of convictions per year increased by five per cent over the same period (from 78 convictions to 82; z = -.31; r = -0.005; p=0.761).

However, comparing trends in unadjusted SAC convictions over a shorter time period (i.e. considering proven SAC offences committed in the 12 months pre versus the 12 months post the index arrest) indicated a significant reduction in the number of such convictions among those identified via the DLE operation of interest in Area A (-41.1%) (from 73 convictions to 43; z = -2.30;r = -0.05; p=0.022). This was twice the rate of reduction observed among other suspected drug offenders in the same area (-21.2%) (from 104 convictions to 82; z = -1.53; r = -0.02; p=0.126) over this period and contrasted with a 23 per cent increase in SAC convictions recorded by suspects from comparison group 2 (from 48 convictions to 59; z = -.67; r = -0.01; p=0.503). Nevertheless, the experimental group was more likely to have had a proven SAC offence recorded against them during this two-year period (6.3%) than other suspects in Area A (5.8%) and detainees from comparison group 2 (4.2%) (p=0.042).

Figure 4: Trends in total number of SAC convictions per year, by group (N=4,725)



4.6 What factors were predictive of a reduction in known offending?

In order to determine which variables were most predictive of proven reoffending we used survival analysis to develop a Cox Regression model to predict the probability that this outcome would occur within 12 months for given values of selected predictor variables among suspected drug offenders arrested by police in Area A (i.e. the experimental group and comparison group 1) between 2007 and 2009 (N=3,260).

Using this approach involved censoring arrestees who had not acquired a conviction for a proven offence committed within 365 days of the index arrest during this period (55.4%; n=1,807) and any missing data within individual items from the model. In the first instance only those variables significantly associated with proven reoffending were included in the model. The variables hypothesised as potential factors included:

- demographics (age, sex, ethnicity);
- drug type (Class A, B or C);
- offence type ('Dealer'[52] or possession);
- number of previous convictions;
- any prior drug convictions;
- whether identified as a recent opiates/cocaine user;
- whether completed the DIR process[53]; and
- exposure to the experimental DLE initiative.

Full details of one-year rates of proven reoffending by each of these independent variables are provided in Table 21.

[52] 'Dealer' type offences included production, importation, supply and possession with intent to supply.
[53] Compliance with the DIR process was used as a proxy measure of initial engagement with therapeutic support via the drug interventions programme (DIP).

Table 21: Factors associated with proven reoffending at one year (N=3,260)

Factors	% (and number)
Age group	**(n=3,254)**
Up to 20 years	42.8
21-24 years	43.4
25-40 years	46.7
41+ years	43.3
Sex	**(N=3,260)**
Female	48.6
Male	44.3
Ethnicity	**(n=2,886)**
White	45.7[54]
Black	54.9
Asian	52.0
Other	46.4
Drug type	**(n=3,120)**
Class A	46.2[55]
Class B	35.5
Class C	44.5
Offence type	**(N=3,260)**
Production	34.6
Importation	30.8
Supply	49.3
Possession with intent to supply	44.1
Possession	44.3
Other	49.3
Number of prior convictions	**(N=3,260)**
None	29.0[56]
1-3	39.5
4-6	47.8
7-9	58.5
10+	62.5
Any prior drug convictions	**(N=3,260)**
Yes	47.7[57]
No	39.3
Recent user of opiates and/or cocaine	**(n=1,206)**
Yes	51.5
No	51.5
Completed the DIR process	**(n=1,209)**
Yes	49.9
No	52.5
Exposed to DLE operation	**(N=3,260)**
Yes	44.5
No	44.6

[54] χ^2 (3) = 14.4, p<0.01
[55] χ^2 (2) = 15.8, p<0.001
[56] χ^2 (4) = 1.9, p<0.001
[57] χ^2 (1) = 21.5, p<0.001

Tests of equality were undertaken to determine whether individual predictor variables were retained for inclusion in multivariate analysis. Categorical variables were assessed using log-rank tests while univariate Cox proportional hazards regression were undertaken for continuous data. Categorical predictor variables with log-rank *p*-values of <0.25 and continuous data with Wald *p*-values of <0.25 were included in the model. From the hypothesised factors listed above, the following variables were excluded from multivariate analysis using these criteria:

- age;
- sex;
- offence type;
- whether identified as a recent opiates/cocaine user;
- whether completed the DIR process; and
- exposure to the experimental DLE initiative.

Only those factors significantly associated with proven reoffending were included in the final model. These included (in order of entry based on *p*-values): number of previous convictions, any prior drug conviction, drug type/Class and ethnicity. The final model identified three of the four factors as being significantly predictive of proven reoffending. The factor with the largest effect on risk of recidivism was having a prior drug conviction. Those with a previous drug conviction had a 49 per cent greater risk of proven reoffending at 12 months following the index arrest than those without (all other factors remaining constant). Each conviction acquired also increased this risk by an additional four per cent.

And while relative to Asian suspects, white arrestees in Area A had a 22 per cent reduced risk of recidivism at 12 months (see Table 22 for full results), there was a significant interaction observed within the model between ethnicity and number of previous convictions (*p*=0.000), with Asian detainees having a higher distribution of prior convictions than white suspects (median 4 vs. 2) (*U*= 625781, *n*=2,397, *p*=0.000). These Asian suspects in Area A were also more likely to have had a prior drug conviction than white detainees (71.0% vs. 66.2%; *p*=0.05). Understanding more fully the reasons for this disproportionality is far from straightforward and beyond the scope of the current study. This finding is however at odds with previous research highlighting a pattern of under-representation for some Asian groups within the criminal justice system (Jones and Singer, 2008).

Table 22: Factors predictive of proven re-offending (n=1,378)

Variable	χ^2	*P*	Hazard ratio	95% Confidence interval
Number of previous convictions	143.5	*p*=0.000	1.04	(1.03 – 1.05)
Prior drug conviction	39.0	*p*=0.000	1.49	(1.32 – 1.69)
Index arrest related to a Class B offence*	1.29	*p*=0.255	0.90	(0.76 – 1.08)
Index arrest related to a Class C offence*	1.98	*p*=0.160	1.10	(0.96 – 1.25)
Ethnicity is white**	16.9	*p*=0.000	0.78	(0.69 – 0.88)
Ethnicity is black**	0.21	*p*=0.651	1.04	(0.89 – 1.20)
Ethnicity is 'other'**	0.95	*p*=0.330	0.76	(0.44 – 1.32)

*Reference is 'Class A'; ** Reference is 'Asian'.

5. Conclusions

On the basis of the administrative data considered as part of this independent study, the evidence to support the contention that the sustained DLE operation in Area A contributed directly towards reducing rates of both general and serious acquisitive crime in the London borough concerned, following its implementation in 2006, is limited. The key findings from this research instead indicate that:

- the reduction in recorded SAC offending in Area A had begun prior to the introduction of the experimental DLE initiative (with the number of recorded offences peaking in 2002/03 and falling thereafter);
- there were no significant differences observed between those targeted by this particular DLE operation and other suspected Misuse of Drugs Act offenders assembled for the study, in terms of the prevalence and frequency of their known SAC offending pre and post their initial arrest between 2007 and 2009; and
- the prevalence and frequency of known general offending in the 12 months post-identification were comparable among those exposed to the sustained DLE operation and other drug arrestees in Area A between 2007 and 2009, but fell significantly by comparison among Class A drug arrestees identified in neighbouring boroughs (Areas B and C).

In addition to raising questions about the efficacy of this particular supply reduction initiative as a crime prevention measure (there was no significant reduction in the average number of convictions acquired during the 12 months post-exposure compared with the corresponding period before and around one in three suspects recorded a 312 per cent increase in the number of known offences committed during this period), these findings also cast doubt on the extent to which those involved in selling and misusing illicit drugs were the principal drivers of SAC offending in the three London boroughs considered as part of this study.

That said, the known offending that comes to official attention clearly represents only a small proportion of all offending. Although the use of convictions data is an internationally established benchmark with which to measure rates of re-offending, previous estimates indicate that only three in every 100 offences committed will result in a police caution or court conviction (Barclay and Tavares, 1999: 29). And while there is certainly some

contemporary British research evidence which speaks to the complex relationship between substance use and involvement in offences like robbery (Wright et. al., 2006) and burglary (Hearnden and Magill, 2004), accounts from offending substance misusers tend instead to emphasis involvement in other crimes such as shoplifting, handling stolen goods and drug dealing as being more commonly reported methods of generating an illicit income (Gossop et al., 2000; Boreham et al., 2007; Jones et al., 2007; Seddon et al., 2009).

Assessing more robustly the extent to which a reduction in demand for, or supply of, heroin and/or cocaine may have contributed towards the reductions in SAC recorded in Area A was beyond the scope of the current study. Future studies assessing the impact of supply reduction initiatives like the experimental DLE initiative would benefit from access to reliable data on the impact of drug treatment (our use of compliance with the DIR process as a proxy measure of initial engagement with therapeutic support via the drug interventions programme was clearly limited in this regard).

Details relating to the nature and extent of any exposure to structured drug treatment could potentially be explored in greater detail via the Home Office Drug Data Warehouse and/or using the National Drug Treatment Monitoring System (NDTMS), for instance. This research could also explore the feasibility of integrating routinely collated police indicators (such as test purchase data) to more fully assess how changes to price and purity of heroin and/or cocaine affects levels of crime, including SAC (for a broader view of recent developments in this area, see European Monitoring Centre for Drugs and Drug Addiction, 2010).

The research was informed exclusively using existing administrative data, with all their attendant problems[58]. Importantly, we had no qualitative information available to us on how local policing priorities, styles and practices shaped the implementation and delivery of the sustained DLE initiative during the period examined here (the same is true for enforcement and policing activity in the comparison areas), or a clear sense of how individual suspects were targeted as part of the operation.

With these important caveats in mind, a consistent finding to emerge across each of the three groups assembled for the study was that a small proportion of the suspected drug offenders from each cohort were found to be responsible for a disproportionate amount of the prior offending that had come to official attention. Moreover, the nature and extent of this

[58] In this particular context this includes acknowledging how arrest and conviction data are constructed and influenced by the way in which different actors within the criminal justice process might identify, report, record and respond to crime. See Maguire (2007) for a discussion.

prior offending (i.e. the number of previous convictions acquired and having a prior proven drug offence) was also found to significantly increase the risk of subsequent reoffending among suspected drug offenders arrested in Area A between 2007 and 2009.

The results from this study would therefore appear to suggest that in light of the significant cuts facing police budgets (and the substantial social and economic costs associated with 'drug-related' recidivism), using an intelligence-led approach to better target these dwindling resources at the most criminally involved (and thus most harmful) offenders within a given local drug market may generate the greatest crime reduction return on this investment. This could include a greater focus on *"targeting specific individuals or groups identified as being particularly harmful (e.g. using Prolific and other Priority Offender schemes or one-off targeted operations)"* (UK Drug Policy Commission, 2009: 2; see also Caulkins and Reuter, 2009). This more targeted approach should clearly be sensitive to the risks and consequences of over-policing certain groups or individuals in the context of drug law enforcement activities (see Lister and colleagues (2008), Babor et al (2010) and Stevens (2011) for recent discussions[59]). It should also continue to form part of a balanced and integrated local strategy which includes complimentary drug prevention and demand reduction activities.

[59] Hough and colleagues (2010) have also considered these sorts of issues and their implications for policing and justice institutions more generally.

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Appendices

Table A1: Recorded SAC rates per 1,000 population (2000/01 – 2008/09)

		2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	% change
Area A	Burglary	24.5	24.4	26.9	19.3	18.9	23.4	19.5	18.9	11.7	**-52.2%**
	Robbery	9.5	11.3	9.1	7.6	7.1	8.0	9.0	6.4	5.0	**-47.4%**
	Theft from a vehicle	23.6	27.3	30.7	21.6	16.6	17.4	13.9	14.1	11.4	**-51.7%**
	Theft of a vehicle	13.3	11.9	11.5	10.1	8.9	7.5	6.1	5.4	4.2	**-68.4%**
Area B	Burglary	36.1	35.0	42.4	35.1	29.7	26.8	21.2	21.1	17.9	**-50.4%**
	Robbery	11.4	14.8	12.1	11.6	9.2	9.0	8.1	6.3	5.3	**-53.5%**
	Theft from a vehicle	25.7	23.7	24.1	21.6	17.5	17.6	13.6	13.1	11.3	**-56.0%**
	Theft of a vehicle	15.0	13.8	12.3	11.6	8.7	8.4	6.7	6.1	4.9	**-67.3%**
Area C	Burglary	20.6	25.5	21.9	20.6	19.8	27.3	23.2	21.9	20.1	**-2.4%**
	Robbery	8.9	10.0	8.8	8.8	7.7	10.1	10.2	9.5	6.8	**-23.6%**
	Theft from a vehicle	22.0	21.8	20.5	19.3	15.4	18.9	18.4	20.9	19.1	**-13.2%**
	Theft of a vehicle	16.3	16.1	15.0	10.9	8.8	9.3	7.7	6.9	5.6	**-65.6%**
London (overall)	Burglary	22.5	23.2	24.0	21.2	19.5	19.8	19.3	19.3	18.3	**-18.7%**
	Robbery	5.6	7.3	5.9	5.5	5.3	6.1	6.1	4.9	4.3	**-23.2%**
	Theft from a vehicle	14.5	15.2	16.0	14.1	11.9	12.7	12.2	11.4	10.4	**-28.3%**
	Theft of a vehicle	8.6	8.5	8.2	7.5	6.5	5.9	5.0	4.5	3.8	**-55.8%**

Table A2: Trends in recorded theft from shop offences (2000/01 – 2008/09)

		2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
Area A	% change (2000/01 is base)	100	**+13.8%**	**+12.6%**	**+2.9%**	**-14.5%**	**-17.6%**	**-27.9%**	**-19.6%**	**-25.6%**
Area B	% change (2000/01 is base)	100	**+12.4%**	**-9.8%**	**-13.5%**	**-22.3%**	**-4.3%**	**+2.4%**	**+2.1%**	**-5.7%**
Area C	% change (2000/01 is base)	100	**-21.3%**	**+3.5%**	**-2.9%**	**-5.0%**	**-0.4%**	**-16.3%**	**-2.6%**	**+5.8%**
Other London boroughs	Number of recorded offences	38,997	39,833	39,203	37,503	37,392	38,514	34,639	31,891	37,590
	% change (2000/01 is base)	100	**+2.1%**	**+0.5%**	**-3.8%**	**-4.1%**	**-1.2%**	**-11.2%**	**-18.2%**	**-3.6%**
London (overall)	Number of recorded offences	41,713	42,522	41,999	40,116	39,764	41,040	36,944	34,420	40,104
	% change (2000/01 is base)	100	**+1.9%**	**+0.7%**	**-3.8%**	**-4.7%**	**-1.6%**	**-11.4%**	**-17.5%**	**-3.9%**

Table A3: Trends in recorded handling stolen goods offences (2000/01 – 2008/09)

		2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
Area A	% change (2000/01 is base)	100	**+6.7%**	**+18.7%**	**+22.7%**	**+13.3%**	**-9.3%**	**+61.3%**	**+34.7%**	**+37.3%**
Area B	% change (2000/01 is base)	100	**-5.3%**	**+52.0%**	**+125%**	**+50.7%**	**+50.7%**	**+64.0%**	**+62.7%**	**+57.3%**
Area C	% change (2000/01 is base)	100	**+48.0%**	**+76.0%**	**+128%**	**+68.0%**	**-38.7%**	**+37.3%**	**+26.7%**	**+58.7%**
Other London boroughs	Number of recorded offences	2,229	2,675	3,141	3,131	1,956	1,769	1,951	2,435	2,290
	% change (2000/01 is base)	100	**+20.0%**	**+40.9%**	**+40.5%**	**-12.2%**	**-20.6%**	**-12.5%**	**+9.2%**	**+2.7%**
London (overall)	Number of recorded offences	2,454	2,937	3,476	3,563	2,280	1,996	2,298	2,753	2,630
	% change (2000/01 is base)	100	**+19.7%**	**+41.6%**	**+45.2%**	**-7.1%**	**-18.7%**	**-6.4%**	**+12.2%**	**+7.2%**

Table A4: Trends in recorded drug possession offences (2000/01 – 2008/09)

		2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
Area A	% change (2000/01 is base)	100	**+13.0%**	**+37.1%**	**+32.5%**	**+20.2%**	**+58.0%**	**+147%**	**+249%**	**+261%**
Area B	% change (2000/01 is base)	100	**+1.2%**	**+41.6%**	**+85.4%**	**+137%**	**+137%**	**+189%**	**+465%**	**+484%**
Area C	% change (2000/01 is base)	100	**+57.1%**	**+74.3%**	**+83.0%**	**+61.0%**	**+180%**	**+145%**	**+288**	**+343%**
Other London boroughs	Number of recorded offences	17,465	18,940	24,936	23,807	24,113	32,574	43,464	57,359	61,425
	% change (2000/01 is base)	100	**+8.4%**	**+42.8%**	**+36.3%**	**+38.1%**	**+86.5%**	**+149%**	**+228%**	**+252%**
London (overall)	Number of recorded offences	19,619	21,543	28,142	27,361	27,828	37,296	49,087	66,759	71,383
	% change (2000/01 is base)	100	**+9.8%**	**+43.4%**	**+39.5%**	**+41.8%**	**+90.1%**	**+150%**	**+240%**	**+264%**

Table A5: Trends in recorded violence against the person offences (2000/01 – 2008/09)

		2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
Area A	% change (2000/01 is base)	100	**+7.1%**	**+26.4%**	**+29.5%**	**+32.4%**	**+25.0%**	**+29.5%**	**+12.3%**	**+1.8%**
Area B	% change (2000/01 is base)	100	**+6.0%**	**+7.8%**	**+13.0%**	**+15.3%**	**+18.2%**	**+13.1%**	**+11.6%**	**+2.3%**
Area C	% change (2000/01 is base)	100	**+2.8%**	**+10.2%**	**+11.8%**	**+8.6%**	**+14.7%**	**+3.2%**	**+5.0%**	**-2.5%**
Other London boroughs	Number of recorded offences	135,647	140,717	156,358	163,113	178,765	173,916	159,902	151,277	154,718
	% change (2000/01 is base)	100	**+3.7%**	**+15.3%**	**+20.2%**	**+31.8%**	**+28.2%**	**+17.9%**	**+11.5%**	**+14.1%**
London (overall)	Number of recorded offences	155,276	161,359	178,802	186,188	201,926	197,264	182,355	172,743	174,414
	% change (2000/01 is base)	100	**+3.9%**	**+15.2%**	**+19.9%**	**+30.0%**	**+27.0%**	**+17.4%**	**+11.2%**	**+12.3%**