"Reducing drug-related crime is one of the main objectives of the government's drug strategy. This recognises that good quality drug treatment can prevent high-volume acquisitive offending…"

ESTIMATING THE CRIME REDUCTION BENEFITS OF DRUG TREATMENT AND RECOVERY

Estimating the crime reduction benefits of drug treatment and recovery

EXECUTIVE SUMMARY
Background

The Home Office estimates that drug related crime costs £13.9bn per year[1] and that offenders who use heroin, cocaine or crack cocaine commit between a third and a half of all acquisitive crimes[2]. As a result, reducing drug-related crime is one of the main objectives of the government's drug strategy[3]. This recognises that the provision of good quality drug treatment, combined with stable housing and employment, can be very effective in preventing high volume acquisitive offending.

Drug addicted people often develop a tolerance through daily compulsive use, which can result in an expensive addiction. For instance, the estimated average value of drugs used in the four weeks prior to treatment among participants of the Drug Treatment Outcomes Research Study (DTORS) was £1,296[4]. With little income they may resort to crime to pay for their drug use. This might include acquisitive crimes such as shoplifting, burglary or robbery, or other financially motivated crimes such as soliciting and begging. Drug treatment is designed to reduce people's need for drugs, which in turn reduces the driving force behind their drug-related offending.

The National Treatment Agency for Substance Misuse (NTA) has worked closely with economists in the Home Office (HO) and the Department of Health (DH) to build a Value for Money (VFM) model in response to the National Audit Office recommendation to develop a framework for evaluating value for money in relation to the previous drug strategy[5]. The VFM model estimates the crime prevention and health improvement benefits of treatment and recovery. This is the first time such estimates have been made at a national level.

This report sets out a detailed explanation of how the estimates were calculated for the crime component of the VFM model and has been endorsed by HO. It will be followed by a publication later this year on the health improvement benefits of drug treatment, presenting our work with DH on the potential improvements to Quality Adjusted Life Years (QALYs) from drug treatment and recovery. Crime prevention and health improvement are not the only potential benefits of drug treatment. There are a variety of different harms associated with drug use and we hope to look at other potential benefits of treatment and recovery in relation to these in the future.

Findings

We estimate that drug treatment and recovery systems in England may have prevented approximately 4.9m crimes in 2010-11, with an estimated saving to society of £960m in costs to the public, businesses, the criminal justice system and National Health Service (NHS). We also estimate that approximately 19.6m crimes may be prevented over the course of the Spending Review 2010 period (SR10) (2011-12 to 2014-15), with an estimated saving to society of £3.6bn.

In addition we estimate that up to a further 4.1m offences may be prevented over a nine year period (from 2011-12 to 2019-2020), because we estimate that 13,702 people who left treatment in 2010-11 will go on to sustain long term recovery, with an estimated value of £700m. We also estimate that continued investment in drug treatment over the SR10 period could lead to up to an estimated 54,000 former clients sustaining long term recovery which may prevent up to 16.6m more offences with an estimated value of up to £2.6bn by 2023-24.

The model also helps us to estimate the potential impact of disinvestment in adult drug treatment. We estimate that, all else being equal, for every £1m taken out of the system there could be an increase of approximately 9,860 drug-related crimes per year at an estimated cost to society of over £1.8m.

These findings are based on an empirical analysis of data from the National Drug Treatment Monitoring System (NDTMS) linked to conviction records from the Police National Computer (PNC) and on self reported offences data from DTORS.

Qualifications

Many of the figures included in this report are estimates rather than observations and so these figures cannot be interpreted as direct, quantifiable measures of a causal effect of drug treatment and as such the findings are indicative and not definitive. We based our estimates on the best available evidence, but we are aware that there is not always as much evidence as we would like. These estimates can be improved over time as new evidence comes to light. Where evidence was not available we have had to rely on assumptions.

1. INTRODUCTION

There is a well established, but complex relationship between illicit drug use and crime[6]. This relationship differs between individuals and even for the same individual over time. For some, committing crime preceded drug use and for others drug use preceded criminality. Not everyone with a treatment need commits drug related crime, for instance roughly half of treatment clients do not[7]. Also some treatment clients will commit crime which is not drug related, this means that even if they stop taking drugs and recover from their addiction, they may continue to commit crime (Assumption 6, Appendix B).

The European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) has identified four key explanations for drug related crime which highlight this complexity: economic-compulsive; psychopharmacological, systemic and drug law offences[8]. This report focuses on the first of these, the economic-compulsive relationship.

The economic-compulsive relationship means that drug addicted people often develop a tolerance through daily compulsive use, which can result in an expensive addiction. For instance, the estimated average value of drugs used in the four weeks prior to treatment among participants of the Drug Treatment Outcomes Research Study (DTORS) was £1,296[9]. With little income they may resort to crime to pay for their drug use, such as shoplifting, burglary or robbery, or other crimes such as soliciting and begging.

This report describes the evidence, assumptions and methodology which have been used to produce the crime component of the VFM model. We plan to publish a suite of themed papers on the Value for Money of drug treatment and recovery. This is the first of such papers and will be followed by a publication later this year on the health improvement benefits of drug treatment, presenting our work with the Department of Health on Quality Adjusted Life Years (QALYs). Crime prevention and health improvement are not the only potential benefits of drug treatment. There are a variety of different harms associated with drug use and we hope to look at other potential benefits of treatment and recovery in relation to these in the future. We have included a taxonomy of drug related harms in Appendix C.

Section 2 of this report estimates the counterfactual volume of drug related crime for clients in effective treatment. Section 3 estimates the counterfactual cost of drug related crime for clients in effective treatment. Section 4 estimates the potential reduction in drug-related offending for clients who are in effective

treatment. Section 5 estimates the potential impact of disinvestment in drug treatment. Section 6 estimates the potential reduction in drug-related offending for former clients who leave treatment successfully and are predicted to go on to sustain long term recovery. Appendix E includes data on the estimated number of former clients who go on to sustain long term recovery from their addiction.

These findings are based on an empirical analysis of data from the National Drug Treatment Monitoring System (NDTMS) linked to conviction records from the Police National Computer (PNC)[10]and on self reported offences data from the Drug Treatment Outcomes Research Study (DTORS). Appendix D includes a table which shows how we linked DTORS offence categories with offences in legislation. A report detailing the NDTMS and PNC data matching results, The Impact of Treatment on Reconviction for Drug-Related Offences has recently been published to accompany this report.

The VFM model only includes clients who have remained in treatment for at least 12 weeks (or exited prior to this in a care-planned way), which is the NDTMS measure of effective treatment. While there might be significant benefits for those individuals who do not reach the 12-week point or leave in an unplanned way before then, they have not been included in the analysis. Where we do provide estimates of potentially prevented offences at an individual level, the findings are for an average client and so we do not distinguish between opioid and/or crack cocaine users (OCUs) and non-opioid and/or crack cocaine users (non-OCUs). We have provided a glossary of terms in Appendix A.

Many of the figures included in this report are estimates rather than observations and so these figures cannot be interpreted as direct, quantifiable measures of a causal effect of drug treatment and as such the findings are indicative and not definitive (Assumption 5, Appendix B). We have tried to base our estimates on the best available evidence, but we are aware that there is not always as much evidence as we would like. These estimates can be improved over time as new evidence comes to light. Where evidence was not available we have had to rely on assumptions. Appendix B provides a table of key assumptions.

2. ESTIMATING THE COUNTERFACTUAL VOLUME OF DRUG RELATED CRIME FOR CLIENTS IN EFFECTIVE TREATMENT

To assess the impact of drug treatment on drug-related crime, we first needed to estimate what would have happened in the absence of treatment. This is known as the counterfactual. We have calculated an upper estimate, lower estimate and mid-point estimate.

2.1 Calculating the upper estimate

Unfortunately, there is no data on the self-reported level of offending of drug users in the 12-month period prior to treatment, presumably because that length of recall is unlikely to be reliable or the study would be too costly and difficult. We therefore have to rely on estimates.

To do this, we used self-reported offence data from DTORS[11]. There were 1,796 drug users recruited to the study who were considered to be representative of the drug treatment population (Assumption 8, Appendix B). Of these, 1,698 participants were asked to report whether they had committed an offence in the 28-day period prior to being interviewed and if so the volume and type of offence that they had committed. A range of offences were reported, with the most common being shoplifting and the least common being house burglary. The mean number of self reported offences was 10.35 per person. As this report is focused on the economic-compulsive drug crime link, we have excluded 'other violent crime' from our analysis and so the average we use is 10.24 rather than the 10.35 reported in DTORS (Table 1).

If the offences committed in the 28 days prior to treatment were representative of the year prior to treatment, then we could assume that each drug user commits 133.5 drug related offences on average each year when not in treatment (10.24*13.04).

In 2010-11, there were 191,129 clients engaged in effective treatment. The NDTMS measure of treatment effectiveness refers to retaining clients in treatment for more than 12 weeks, or leaving the treatment system before then in a care-planned way. Only clients who meet these criteria are included in the VFM model.

If all of these clients were not in treatment, it is estimated that they would have committed a total of 25.5m offences in the 12 months preceding treatment (133.5*191,129) (Table 2). We refer to this as the upper estimate in the VFM model.

2.2 Calculating the lower estimate

It could be argued that the four-week period prior to drug treatment is not representative of the year prior to treatment, because the offence pattern of drug

T1. REPORTED OFFENCES IN THE FOUR WEEKS BEFORE TREATMENT (DTORS)

DTORS offence type	Mean number of offences
Shoplifting	3.71
Theft of a vehicle	0.05
Theft from a vehicle	0.15
House burglary	0.03
Business burglary	0.19
Violent theft (robbery)	0.06
Bag snatch	0.07
Cheque or credit card fraud	0.08
Begging	0.47
Buying and selling stolen goods	2.43
Drug dealing	2.13
Prostitution	0.49
Other stealing	0.38
Benefit Fraud	No mean
Other violent crime	0.11
DTORS Total	10.35
Total (excluding violent crime)	10.24 (10.35 – 0.11)

T2. UPPER ESTIMATE TOTAL AND PER PERSON COUNTERFACTUAL OFFENCES BY DTORS OFFENCE CATEGORY

DTORS offence type	Estimated counterfactual offences 2010-11	Estimated average counterfactual offences per person 2010-11
Shoplifting	9,243,331	48.4
Theft of a vehicle	124,573	0.7
Theft from a vehicle	373,720	2.0
House burglary	74,744	0.4
Business burglary	473,378	2.5
Violent theft (robbery)	149,488	0.8
Bag snatch	174,402	0.9
Cheque or credit card fraud	199,317	1.0
Begging	1,170,988	6.1
Buying and selling stolen goods	6,054,257	31.7
Drug dealing	5,306,818	27.8
Prostitution	1,220,817	6.4
Other stealing	946,756	5.0
Total (excluding violent crime)	25,512,591	133

using offenders can fluctuate, with peaks and troughs over the course of a year (and their drug taking 'career' more generally) owing to a variety of complex and interconnected issues.

Arguments could be made that the self-reported data is potentially an underestimate. For instance, in DTORS, respondents were asked whether their offending in the four weeks prior to interview was "More, less or the usual amount" and found that 43% of the participants said that they had offended less than usual. In addition, 40% of treatment seekers reported to use a lesser quantity of drugs[14]. However, it is not possible to determine from the data what the true extent of this underestimate might have been and so for the purposes of the VFM model we have not increased the upper estimate.

Conversely, it could also be argued that it is an escalation in drug use and therefore drug related offending which causes some individuals to come into contact with drug treatment either through self referral or criminal justice referral. Indeed, 24% of DTORS respondents reported to offend more than usual before starting treatment.

To address this issue we anonymously matched convictions data from the PNC with data from NDTMS for the cohort of 53,851 individuals starting treatment during the financial year 2006-07. This analysis enabled an observation of the conviction rates for 'trigger offences'[15] in the year prior to treatment. It is important to note however, that convictions will not necessarily reflect the pattern of actual offending, however for the purpose of the VFM model we have assumed that they do (Assumption 7, Appendix B).

As Figure 1 shows, the greatest number of convictions occurs in the four weeks immediately before clients engage with treatment, suggesting that there could be increased criminal behaviour during that time. The graph is divided into thirteen 28-day periods to mirror the 28-day period used in DTORS. The upper line shows the level of convictions if the four-week period before treatment was representative and the lower line shows the mean conviction rate for the year.

Assuming the convictions trend is a good proxy for offences, the findings support the argument that the four-week DTORS self-reported data is unrepresentative of the previous 12 months offending activity.

However, a case could be made that the observed pattern is biased towards a greater rate of convictions in the four weeks before treatment due to the close working relationship between the criminal justice and drug treatment systems. There is a direct referral route

F1. RATE OF CONVICTIONS IN THE YEAR PRIOR TO TREATMENT FOR 53,851 INDIVIDUALS STARTING TREATMENT IN 2006-07
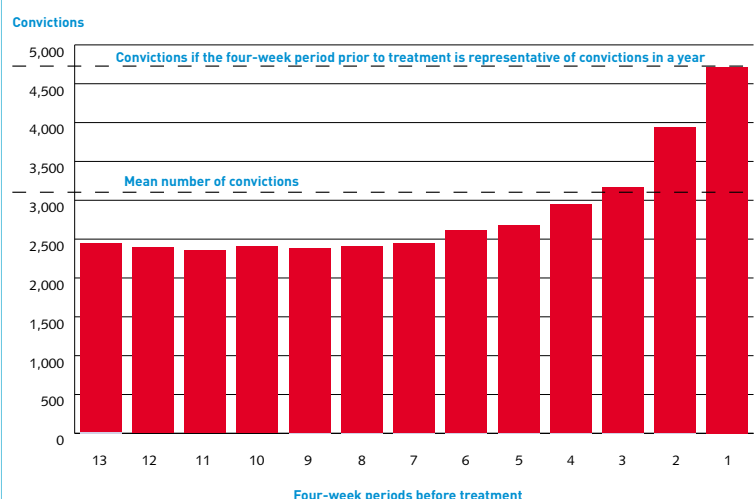
T3. CONVICTIONS IN THE 13x28-DAY PERIODS BEFORE DTORS INTERVIEW

Four-week period pre DTORS interview	Actual convictions	Proportion of convictions	Convictions if DTORS period was representative	Proportion if DTORS period was representative
13	2,429	6.6%	4,716	7.7%
12	2,382	6.5%	4,716	7.7%
11	2,352	6.4%	4,716	7.7%
10	2,401	6.5%	4,716	7.7%
9	2,371	6.4%	4,716	7.7%
8	2,396	6.5%	4,716	7.7%
7	2,435	6.6%	4,716	7.7%
6	2,608	7.1%	4,716	7.7%
5	2,675	7.3%	4,716	7.7%
4	2,937	8.0%	4,716	7.7%
3	3,162	8.6%	4,716	7.7%
2	3,932	10.7%	4,716	7.7%
1	4,716	12.8%	4,716	7.7%
Total	36,796	100%	61,303	100%

for individuals into treatment following arrest for a drug-related offence: an appearance in the PNC data of a trigger offence means there is a greater probability the same individual would then appear in NDTMS data.

This is supported by the convictions data itself which reveals that the mean convictions per offender in the two-year period prior to treatment was 1.30 compared to 1.35 in the 30-day period prior to treatment. What this data shows is that the increase in offences in the 30-day period prior to treatment is primarily a property of the increasing number of offenders being convicted just prior to treatment, rather than the number of convictions per person increasing.

A further complication is that DTORS did not always interview participants on the day that they engaged with treatment. In fact, the average time elapsed between the initial contact with the drug treatment service and the DTORS interview was 13 days. This means that on average, almost half of the 28 days within which each person was asked to recall their offending behaviour in the previous four weeks actually occurred after they had engaged with treatment, thereby potentially reducing the likelihood of offending or other harmful actions. To deal with this anomaly, we adjusted the 28-day window prior to a hypothetical DTORS interview date (i.e. to include convictions committed 13 days after starting a treatment intervention, as well as 15 days before) when modelling the annual rate of offending using the PNC data. This gives a figure of 4,716 offences occurring during the equivalent period of the DTORS interview (see period 1 in Table 3). Each other period in the table below represents a 28-day window counted back from this index period.

If all convictions happened equally during the previous year, the assumption which the upper estimate is based on, then each 28-day period would provide 7.7% (28/365) of the convictions. However, the proportion of convictions occurring in the relevant period versus the annual total is 12.8% (4,716/36,796).

Assuming that the number of convictions is proportionate to the volume of actual offences committed in a given period, a lower estimate of the annual cost of drug-related crime can be established by supposing that the criminal activity reported at the DTORS interview is taken to represent 12.8% of crimes committed during the whole year. This lower estimate of the annual number of drug-related offences is thus 60% of the upper estimate (36,796/61,308) (Table 4).

T4. LOWER ESTIMATE TOTAL AND PER PERSON COUNTERFACTUAL OFFENCES BY DTORS OFFENCE CATEGORY

DTORS offence type	Estimated counterfactual offences 2010-11	Estimated average counterfactual offences per person 2010-11
Shoplifting	5,547,687	29.0
Theft of a vehicle	74,767	0.4
Theft from a vehicle	224,300	1.2
House burglary	44,860	0.2
Business burglary	284,113	1.5
Violent theft (robbery)	89,720	0.5
Bag snatch	104,673	0.5
Cheque or credit card fraud	119,627	0.6
Begging	702,807	3.7
Buying and selling stolen goods	3,633,660	19.0
Drug dealing	3,185,060	16.7
Prostitution	732,713	3.8
Other stealing	568,227	3.0
Total (excluding violent crime)	15,312,215	80

T5. MID-POINT ESTIMATE TOTAL AND PER PERSON COUNTERFACTUAL OFFENCES BY DTORS OFFENCE CATEGORY

DTORS offence type	Estimated counterfactual offences 2010-11	Estimated average counterfactual offences per person 2010-11
Shoplifting	7,395,509	38.7
Theft of a vehicle	99,670	0.5
Theft from a vehicle	299,010	1.6
House burglary	59,802	0.3
Business burglary	378,746	2.0
Violent theft (robbery)	119,604	0.6
Bag snatch	139,538	0.7
Cheque or credit card fraud	159,472	0.8
Begging	936,897	4.9
Buying and selling stolen goods	4,843,959	25.3
Drug dealing	4,245,939	22.2
Prostitution	976,765	5.1
Other stealing	757,492	4.0
Total (excluding violent crime)	20,412,403	107

T6. ESTIMATES OF THE UPPER, MID-POINT AND LOWER ESTIMATES OF THE VOLUME OF COUNTERFACTUAL OFFENCES FOR CLIENTS IN EFFECTIVE TREATMENT 2010-11

	Estimated counterfactual crimes 2010-11 (per person)	Number of clients in effective treatment	Estimated counterfactual crimes 2010-11
Upper estimate	133	191,129	25.5m
Mid-point estimate	107	191,129	20.4m
Lower estimate	80	191,129	15.3m

2.3 Calculating the mid-point estimate

As there is not an overwhelming argument either way between using the lower or upper estimates, we decided to use the mid-point between them as our estimate of the counterfactual of drug-related crimes, or in other words the number of drug-related crimes which might have been committed if no drug users were in effective treatment in 2010-11 (Table 5).

The mid-point estimate is 20.4m and is the mean of the upper and lower estimates. This translates into 107 offences per person per year on average. As this is an average it is worth remembering that some clients will have committed no offences at all and others will have committed more than this.

Throughout the report we provide estimates based on the mid-point, but also a range using the upper and lower estimates. Table 6 provides a summary of the three estimates.

3. ESTIMATING THE COUNTERFACTUAL COST OF DRUG RELATED CRIME FOR CLIENTS IN EFFECTIVE TREATMENT

The Home Office (HO) has estimated the economic and social costs of crime against individuals and households. However, they have not estimated all of the crimes which are included in the DTORS offence categories. This means that our cost estimates will underestimate the counterfactual cost of drug related crime. Table 7 highlights which DTORS offence categories we have been able to cost and those we have excluded and why.

Table 8 sets out the unit costs we have used in the VFM model based on the most up to date estimates provided by the HO.[18] The HO was content for 'Theft – not vehicle' to be used as a proxy for 'bag snatch' and 'cheque or credit card fraud'. The unit costs of drug-related offences are made up of a range of elements that are incurred by different groups, such as the physical and emotional impact on victims and costs to individuals, businesses and public services[19].

These unit costs can then be multiplied by the estimated annual offences to estimate the counterfactual costs of offending in 2010-11. The mid-point estimate is £5bn with a range from £3.7bn to £6.2bn (Table 9). Note that these figures cannot be directly compared to the estimated social and economic cost of drug related crime in the HO Online Report 16/06. The latter's estimate of £13.9bn was based on National Treatment Outcomes Research Study (1998) offending data whereas the approach described in this paper is based on data from the more recent DTORS (2007). They also both use a different subset of crime types and the latter estimate was not

T7. DTORS OFFENCES EXCLUDED FROM OUR COST ESTIMATES

DTORS offence type	Costs included	Reason for exclusion
Shoplifting	**Yes**	
Theft of a vehicle	**Yes**	
Theft from a vehicle	**Yes**	
House burglary	**Yes**	
Business burglary	**Yes**	
Violent theft (robbery)	**Yes**	
Bag snatch	**Yes**	
Cheque or credit card fraud	**Yes**	
Buying and selling stolen goods	**No**	In calculating the unit cost of buying and selling stolen goods, the costs to the victim of the original theft have already been counted within other categories and the criminal justice system costs have not been calculated by the Home Office. It was also omitted from the estimated costs of drug-related crime in DTORS for these reasons.
Begging	**No**	The Home Office has not estimated the costs of these offences as its estimates are generally of crimes against individuals and households and begging, drug dealing and prostitution are classed as neither. They were also omitted from the estimated costs of drug-related crime in DTORS for this reason.
Drug dealing	**No**	
Prostitution	**No**	
Other stealing	**No**	There is no unit cost for this offence as it is not a statutory offence, but rather a term used in the DTORS questionnaire on offending.

T8. UNIT COST OF OFFENCES INCLUDED IN THE VFM MODEL

DTORS offence type	Unit cost 2010-11 prices
Shoplifting	£124
Theft of a vehicle	£4,970
Theft from a vehicle	£1,034
House burglary	£3,925
Business burglary	£4,608
Violent theft (robbery, personal)	£8,810
Bag snatch (theft, not vehicle)	£763
Cheque/credit card fraud (theft, not vehicle)	£763

T9. ESTIMATES OF THE TOTAL COUNTERFACTUAL COST OF OFFENDING IN 2010-11 (2010-11 PRICES)

DTORS offence type	Lower estimate	Mid-point estimate	Upper estimate
Shoplifting	£688m	£917m	£1,146m
Theft of a vehicle	£372m	£495m	£619m
Theft from a vehicle	£232m	£309m	£386m
House burglary	£176m	£235m	£293m
Business burglary	£1,309m	£1,745m	£2,181m
Violent theft (robbery)	£790m	£1,054m	£1,317m
Bag snatch	£80m	£106m	£133m
Cheque or credit card fraud	£91m	£122m	£152m
Begging	Unknown	Unknown	Unknown
Buying and selling stolen goods	Unknown	Unknown	Unknown
Drug dealing	Unknown	Unknown	Unknown
Prostitution	Unknown	Unknown	Unknown
Other stealing	Unknown	Unknown	Unknown
Total	£3.7bn	£5bn	£6.2bn

a counterfactual. Also this paper only estimates the counterfactual for clients in effective treatment and does not estimate the drug related crime cost for clients who are not in effective treatment.

These estimates can then be divided by the number of clients in effective treatment to estimate the counterfactual costs of offending per person in 2010-11. The estimated cost per person using the mid-point estimate is £26,074 with an estimated range of £19,559 to £32,589 (Table 10).

4. ESTIMATING THE POTENTIAL REDUCTION IN DRUG-RELATED OFFENDING FOR CLIENTS IN EFFECTIVE TREATMENT

The NTA study 'The Impact of Drug Treatment on Reconviction'[21] compared the differences in the conviction rates of known offenders in the two years before their initial assessment for drug treatment and the two years after. It presented the results of an analysis of data from NDTMS and conviction records from the PNC using the government's Drug Data Warehouse (DDW)[22].

The data is drawn from a cohort of people who started a new course of drug treatment in 2006-07 and who had at least one conviction during the two years prior to their start date. The study was limited to trigger offences and sex working. It found that the individuals retained in treatment for the entire two-years (4,677) showed an average 47% reduction in convictions.

The VFM model is also based on the data contained in the DDW, but a slightly different method has been used which is why the results differ. While the report described above focused on people with a previous conviction, the VFM model focuses on all clients, whether they had a conviction or not prior to starting treatment. It also only includes people who were in treatment continuously for two years from when they started treatment in 2006-07, whereas the previous report only specified that people had to have started treatment in 2006-07.

Two years of continuous treatment contact have been used to represent as closely as possible the average length of time a client spends in continuous treatment and also because the purpose of this analysis was to best estimate the protective factor treatment has on reducing offending during the time that clients are engaged in effective treatment. There were 13,819 individuals included in this category.

By anonymously matching the cohort of 13,819 individuals on NDTMS with PNC data, for two years before and two years after they started treatment in 2006-07, it was possible to determine the change in

T10. ESTIMATES OF THE TOTAL COUNTERFACTUAL COST OF OFFENDING PER PERSON IN 2010-11 (2010-11 PRICES)

DTORS offence type	Lower estimate	Mid-point estimate	Upper estimate
Shoplifting	£3,599	£4,798	£5,997
Theft of a vehicle	£1,944	£2,592	£3,239
Theft from a vehicle	£1,213	£1,618	£2,022
House burglary	£921	£1,228	£1,535
Business burglary	£6,850	£9,131	£11,413
Violent theft (robbery)	£4,136	£5,513	£6,891
Bag snatch	£418	£557	£696
Cheque or credit card fraud	£478	£637	£796
Begging	Unknown	Unknown	Unknown
Buying and selling stolen goods	Unknown	Unknown	Unknown
Drug dealing	Unknown	Unknown	Unknown
Prostitution	Unknown	Unknown	Unknown
Other stealing	Unknown	Unknown	Unknown
Total	£19,559	£26,074	£32,589

T11. THE REDUCTION IN CONVICTIONS BEFORE AND DURING TREATMENT FOR THE STUDIED COHORT

DTORS offence type	Convictions in the two years before treatment, less those from one month before	Convictions in the two years after treatment, less those from one month after	Percentage change	Reduction
Shoplifting	7,247	5,763	-20%	-1,484
Theft of a vehicle	315	230	-27%	-85
Theft from a vehicle	349	260	-26%	-89
House burglary	527	320	-39%	-207
Business burglary	521	426	-18%	-95
Violent theft (robbery)	100	60	-40%	-40
Bag snatch	175	132	-25%	-43
Cheque or credit card fraud	686	327	-52%	-359
Begging	247	181	-27%	-66
Buying/selling stolen goods	511	278	-46%	-233
Drug dealing	602	354	-41%	-248
Prostitution	221	111	-50%	-110
Other stealing	1,222	930	-24%	-292

rates of convictions pre- and post- starting treatment. The VFM model assumes that the change in convictions is representative of the change we would see in offences and that this relationship remains the same after conviction (Assumption 7, Appendix B).

To be able to estimate the change in offending in the VFM model notifiable offences in the PNC were matched to DTORS offence categories. A table showing which DTORS offence categories were matched to offences in legislation has been included in Appendix D.

To remove the potential systemic bias mentioned in section 3 of this report, where convictions increase prior to treatment, convictions from the 30 days prior to treatment start were removed in line with Home Office 'index offence' methodology[23].

There are different rates of reduction for different offences (Table 11). The three greatest percentage reductions in convictions were in cheque or credit card fraud, prostitution and buying and selling stolen goods (-52%, -50% and -46% respectively). The greatest reduction in the volume of convictions was in shoplifting (-1,484).

The VFM model only includes clients who have remained in treatment for at least 12 weeks (or exited prior to this in a care planned way) which is the NDTMS measure of effective treatment. While there might be significant benefits for those individuals that do not reach the 12-week point or leave in an unplanned way before then, they have not been included in the analysis (Assumption 9a, Appendix B).

The percentage changes in convictions from Table 11 were then applied to the counterfactual offences set out in Tables 2, 4 and 5 and adjusted to reflect the mean time that effective treatment clients spent in treatment in 2010-11, which is 73% of the year as, as we did not want to claim benefits when individuals were not in treatment.

For example, the mid-point estimate of the counterfactual number of shoplifting offences in 2010-11 was 7,395,625 (Table 5). This was multiplied by the 20% reduction calculated in Table 10 and then adjusted for the mean time in effective treatment (7,395,625*0.20*0.73) which comes to 1,101,148 shoplifting offences which may have been prevented by drug treatment in 2010-11 (Table 12).

We estimate that drug treatment may have prevented 4.9m offences in 2010-11, with a range from 3.7m to 6.1m (Table 12). This translates into an estimate that treatment may have prevented on average of 26

T12. ESTIMATED REDUCTION IN TOTAL OFFENCES 2010-11

DTORS offence type	Lower estimate	Mid-point estimate	Upper estimate
Shoplifting	826,018	1,101,148	1,376,277
Theft of a vehicle	14,670	19,556	24,442
Theft from a vehicle	41,591	55,444	69,297
House burglary	12,812	17,080	21,347
Business burglary	37,669	50,215	62,762
Violent theft (robbery)	26,095	34,786	43,478
Bag snatch	18,701	24,930	31,159
Cheque or credit card fraud	45,520	60,681	75,843
Begging	136,548	182,029	227,510
Buying and selling stolen goods	1,204,706	1,605,969	2,007,233
Drug dealing	954,058	1,271,835	1,589,612
Prostitution	265,177	353,502	441,828
Other stealing	98,727	131,611	164,495
Total	3,682,290	4,908,786	6,135,282

T13. ESTIMATED REDUCTION IN OFFENCES PER PERSON ON AVERAGE 2010-11

DTORS offence type	Lower estimate	Mid-point estimate	Upper estimate
Shoplifting	4.32	5.76	7.92
Theft of a vehicle	0.08	0.10	0.13
Theft from a vehicle	0.22	0.29	0.36
House burglary	0.07	0.09	0.11
Business burglary	0.20	0.26	0.33
Violent theft (robbery)	0.14	0.18	0.23
Bag snatch	0.10	0.13	0.16
Cheque or credit card fraud	0.24	0.32	0.40
Begging	0.71	0.95	1.19
Buying and selling stolen goods	6.30	8.40	10.50
Drug dealing	4.99	6.65	8.32
Prostitution	1.39	1.85	2.31
Other stealing	0.52	0.69	0.86
Total	19	26	33

T14. ESTIMATED REDUCTION IN TOTAL OFFENCES (SR10) USING THE MID-POINT

DTORS offence type	Spending Review 2010			
	2011-12	2012-13	2013-14	2014-15
Shoplifting	1,101,148	1,101,148	1,101,148	1,101,148
Theft of a vehicle	19,556	19,556	19,556	19,556
Theft from a vehicle	55,444	55,444	55,444	55,444
House burglary	17,080	17,080	17,080	17,080
Business burglary	50,215	50,215	50,215	50,215
Violent theft (robbery)	34,786	34,786	34,786	34,786
Bag snatch	24,930	24,930	24,930	24,930
Cheque or credit card fraud	60,681	60,681	60,681	60,681
Begging	182,029	182,029	182,029	182,029
Buying/selling stolen goods	1,605,969	1,605,969	1,605,969	1,605,969
Drug dealing	1,271,835	1,271,835	1,271,835	1,271,835
Prostitution	353,502	353,502	353,502	353,502
Other stealing	131,611	131,611	131,611	131,611
Total	4,908,786	4,908,786	4,908,786	4,908,786
SR10 Total	19,635,146			

offences per client in effective treatment in 2010-11(with a range from 19 to 33 offences) (Table 13).

Assuming that the same number of people will be treated in each of the four years of the SR10 period (2011-12 to 2014-15) and that all the other factors hold constant, such as mean time in effective treatment and the crime prevention rate, we estimate that 19.6 million offences may be prevented over the SR10 period (Table 14), with a range from 14.7m m to 24.5m (Assumptions 10-13, Appendix B).

Unit costs, where available, can be applied to the estimated number of offences which have may have been prevented. We were not able to cost 72% of the total number of offences and so we will have underestimated the value of the offences which may have been prevented. We estimate that the total benefit was £961m in 2010-11 ranging from £721m to £1,201m (Table 15).

These estimates can be divided by the number of clients in effective treatment to estimate the potential benefit per person, which is £5,030 on average in 2010-11 using the mid-point, with a range from £3,773 to £6,376 (Table 16).

We estimate that, all else being equal, the value of the total offences which may be prevented by treatment over the spending review period will be £3.6bn (Table 17), with a range of £2.7bn to £4.5bn. The benefits reduce each year because they have been discounted. For an explanation about discounting refer to the discounting definition in the glossary (Appendix A).

We have split the benefits in 2010-11 into cost savings (80%) and natural benefits (20%). Cost savings and natural benefits are terms used by DH. HO refers to cost savings as cashable benefits and natural benefits as non-cashable benefits. Cost savings are reductions to the costs to individuals, businesses and public services brought about by the investment in treatment. Natural benefits measure the reduction in the physical and emotional impact on direct victims of crime and they are encapsulated by DH and HO in a measurement known as 'quality adjusted life years' (QALYs). In line with HO unit costs, all of the offences in the VFM model are assumed to have a physical and emotional impact on victims except for shoplifting and business burglary.

Cost savings can be disaggregated into savings to individuals and businesses (50%), savings to the criminal justice system and victim services (28%), and savings to the NHS (2%) (Figure 2). The NHS cost savings relate to the reduced physical harm perpetrated on victims due to fewer robberies.

T15. ESTIMATED VALUE OF THE REDUCTION IN TOTAL OFFENCES 2010-11 PRICES

DTORS offence type	Lower estimate	Mid-point estimate	Upper estimate
Shoplifting	£102.4m	£136.5m	£170.7m
Theft of a vehicle	£72.9m	£97.2m	£121.5m
Theft from a vehicle	£43.0m	£57.3m	£71.7m
House burglary	£50.3m	£67.0m	£83.8m
Business burglary	£173.6m	£231.4m	£289.2m
Violent theft (robbery)	£230.0m	£306.5m	£383.0m
Bag snatch	£14.3m	£19.0m	£23.8m
Cheque or credit card fraud	£34.7m	£46.3m	£57.9m
Total	£721m	£961m	£1,201m

T16. ESTIMATED VALUE OF THE REDUCTION IN OFFENCES PER PERSON ON AVERAGE 2010-11 PRICES

DTORS offence type	Lower estimate	Mid-point estimate	Upper estimate
Shoplifting	£536	£714	£983
Theft of a vehicle	£381	£509	£636
Theft from a vehicle	£225	£300	£375
House burglary	£263	£351	£438
Business burglary	£908	£1,211	£1,513
Violent theft (robbery)	£1,203	£1,603	£2,004
Bag snatch	£75	£100	£124
Cheque or credit card fraud	£182	£242	£303
Total	£3,773	£5,030	£6,376

T17. ESTIMATED VALUE OF THE REDUCTION IN TOTAL OFFENCES (SR10) USING THE MID-POINT ESTIMATE (2010-11 PRICES)

| DTORS offence type | Spending Review 2010 | | | |
	2011-12	2012-13	2013-14	2014-15
Shoplifting	£131.9m	£127.5m	£123.2m	£119.0m
Theft of a vehicle	£94.3m	£91.4m	£88.7m	£86.0m
Theft from a vehicle	£55.7m	£54.2m	£52.7m	£51.2m
House burglary	£65.0m	£63.1m	£61.2m	£59.4m
Business burglary	£223.6m	£216.0m	£208.7m	£201.6m
Violent theft (robbery)	£298.5m	£290.9m	£283.4m	£276.1m
Bag snatch	£18.4m	£17.9m	£17.3m	£16.8m
Cheque or credit card fraud	£44.9m	£43.5m	£42.2m	£41.0m
Total	£932.4m	£904.4m	£877.4m	£851.2m
SR10 Total	£3.6bn			

5. ESTIMATING THE POTENTIAL IMPACT OF DISINVESTMENT IN DRUG TREATMENT

We have calculated that for every £1m disinvested in treatment there would be an increase of 9,800 crimes per year at an additional cost of over £1.8m. This scenario is based on the mid-point estimate and the assumptions listed in Appendix B. An example of a reduction of £1m in 2012-13 is provided below.

The budget for community drug treatment in 2012-13 is estimated to be £597.3m. For purposes of the VFM model we have only estimated the potential benefits from the estimated £497.7m spend on structured drug treatment for adults and have not estimated the benefits nor included the costs from unstructured treatment.
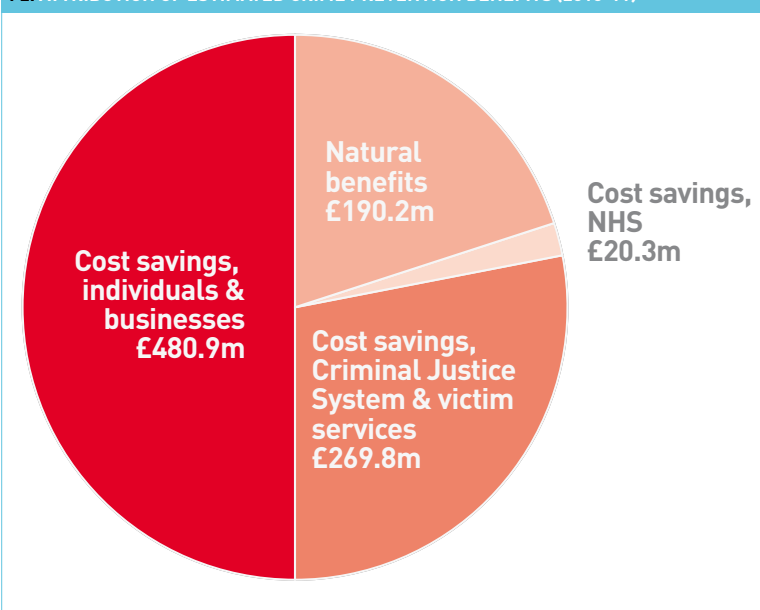
Assuming that the same number of clients will be engaged in effective treated in 2012-13 as in 2010-11 then the unit cost per person engaged in effective treatment will be £2,604 (£497.7m/191,129). So if £1m was taken out of the treatment system an estimated 384 fewer people would be engaged in effective treatment (£1m/£2,604) (Table 18).

Assuming that the estimated crime prevention rate from treatment remains the same, with 384 fewer clients in effective treatment we estimate that there would be an additional 9,863 offences committed each year and the increased cost of the offences we have been able to ascribe a value to would be £1.8m (Table 19). It is important to bear in mind that this is one possible scenario rather than an evaluated result and that we have assumed that the calculated effect is an average applicable to even a large change in investment. There are arguments that might expect the effect to diminish the greater the change.

With fewer clients in effective treatment there would also potentially be a knock on effect to the number of people successfully completing and going on to sustain long term recovery in future years, but this has not been modelled.

This scenario assumes that the disinvestment would fall equally across all treatment types. The number of people in effective treatment is the driver of cost savings. If the cuts fell heaviest on the most cost effective services, this would have a proportionately heavier impact on crime. Similarly, if the budget stays the same but is shifted towards more expensive modalities, this would imply a reduction in the numbers in treatment and an increase in crime (Assumption 14, Appendix B).

F2. ATTRIBUTION OF ESTIMATED CRIME PREVENTION BENEFITS (2010-11)

Natural benefits £190.2m

Cost savings, NHS £20.3m

Cost savings, individuals & businesses £480.9m

Cost savings, Criminal Justice System & victim services £269.8m

T18. ESTIMATED REDUCTION IN NUMBERS IN EFFECTIVE TREATMENT PER £1M DISINVESTED IN 2012-13 (2012-13 PRICES)

Estimated number in effective treatment	191,129
Estimated treatment expenditure (cash terms)	£497.7m
Unit cost per effective treatment client (annual)	£2,604
Estimated reduction of number in effective treament	384

T19. THE ESTIMATED INCREASE IN THE COST OF CRIME FOR EVERY £1M DISINVESTED IN TREATMENT

DTORS offence type	Increased crimes	Increased cost of crime
Shoplifting	2,213	£256,113
Theft of a vehicle	39	£183,706
Theft from a vehicle	111	£108,858
House burglary	34	£126,731
Business burglary	101	£434,022
Violent theft (robbery)	70	£584,415
Bag snatch	50	£35,943
Cheque or credit card fraud	122	£87,488
Begging	366	No cost data
Buying and selling stolen goods	3,227	No cost data
Drug dealing	2,555	No cost data
Prostitution	710	No cost data
Other stealing	264	No cost data
Total (excluding violent crime)	9,863	£1,817,277

6. ESTIMATING THE POTENTIAL REDUCTION IN DRUG-RELATED OFFENDING FOR FORMER CLIENTS WHO GO ON TO SUSTAIN LONG TERM RECOVERY

In addition to estimating the potential benefits of clients being in effective treatment, the VFM model also estimates the potential benefits for clients who leave and go on to sustain long term recovery from their addiction. This is a new piece of analysis which has not been attempted before in previous drug treatment cost-benefit work.

It is reasonably straightforward to report how many individuals leave treatment successfully each year as this is collected by NDTMS, but because of the chronic relapsing nature of drug addiction, it is not so easy to determine how many former clients would then go on to sustain long term recovery. It is harder still to determine whether treatment hastens this process and if so by what degree. There is very little research on recovery, with imprecise and inconsistent definitions across studies and significant uncertainty about the length of time users are dependent on drugs.

There are four elements that needed to be determined in order to estimate the potential benefits associated with former clients who sustain long term recovery. They are:

- Estimating the period of time by which treatment may hasten the recovery process
- Estimating the number of people who go on to sustain long term recovery
- How to allocate the potential crime reduction benefits of recovery over time
- Estimating and valuing the potential crime reduction of recovery.
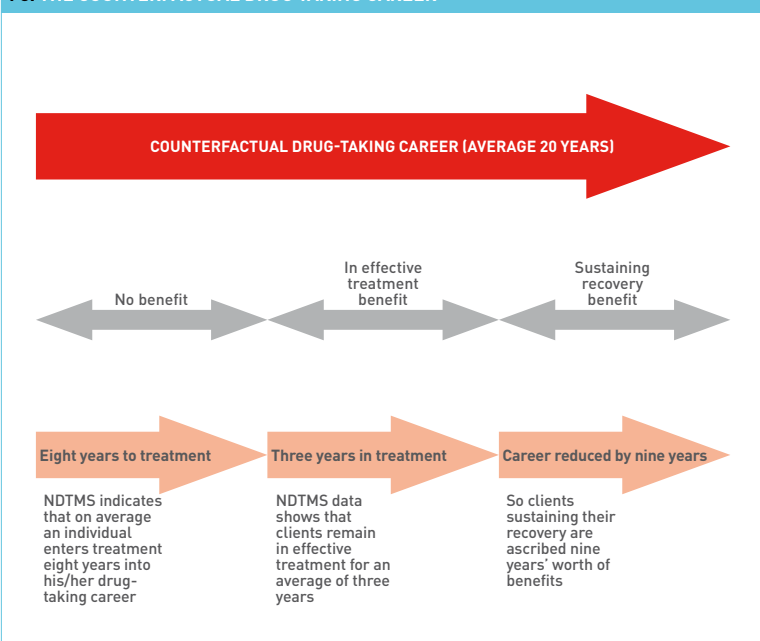
Each of these elements will be explained in turn.

6.1 Estimating the period of time by which treatment may hasten the recovery process

The available literature supported by expert opinion suggests the average drug taking 'career' of heroin users is 20 years[25] [26] (Assumption 1, Appendix B). In the absence of any evidence to the contrary we have assumed this is the average counterfactual 'career' length for all drug users who have a treatment need.

NDTMS data shows the median time from the start of a drug taking 'career' to the first treatment episode is eight years.[27] NDTMS data also shows that for clients who leave successfully, their treatment journeys span a median period of three years[28]. So it could be assumed that clients' drug taking 'career' has been reduced by nine years (20 years minus 3 + 8). Therefore, benefits for those assumed to be sustaining recovery could be allocated up to nine years from exit (Figure 3).

F3. THE COUNTERFACTUAL DRUG TAKING CAREER

COUNTERFACTUAL DRUG-TAKING CAREER (AVERAGE 20 YEARS)

No benefit

In effective treatment benefit

Sustaining recovery benefit

Eight years to treatment

NDTMS indicates that on average an individual enters treatment eight years into his/her drug-taking career

Three years in treatment

NDTMS data shows that clients remain in effective treatment for an average of three years

Career reduced by nine years

So clients sustaining their recovery are ascribed nine years' worth of benefits

The 20-year counterfactual drug taking 'career' is an average and could range considerably from under one year to many decades. Furthermore, it could be argued that clients who we assume to be sustaining recovery in the model had a lower counterfactual drug taking 'career' than those who do not recover. For example, if the average counterfactual drug taking 'career' was 19 years for those clients who sustain recovery, then it would only be appropriate to apply potential sustaining recovery benefits for 8 years rather than 9; if the counterfactual drug taking 'career' for those who go on to sustain long term recovery was 18 years, then it would only be appropriate to apply potential sustaining recovery benefits for seven years rather than eight, and so on (Table 20). Hence, we have provided a range of estimates between 0-9 years' worth of sustaining recovery benefits.

6.2 Estimating the number of people who go on to sustain long term recovery

As there are approximately 54,000 adults who leave structured treatment each year, it would not be practical or affordable to monitor their individual progress. However, it is possible to use the NDTMS and other databases that collect information about this client group to model how many do go on to lead lives free from drug dependency.

A Long-Term Study of the Outcomes of Drug Users Leaving Treatment selected the cohort of individuals that left drug treatment in 2005-06 and then used the NDTMS, the Drugs Intervention Record (DIR) in both prison and the community and Mandatory Drug Testing Data (MDT)29 to see if they re-presented to any of these datasets in the following four years30.

While it is possible that some of those identified as not re-presenting may have had another drug-related event which was not picked up in these data sets, such as an admission to a hospital, the established link between drug use and crime supports the use of the three datasets analysed in the study as the most common that a client will appear in if they had relapsed after leaving treatment. The study found a steep reduction in the numbers of clients re-presenting year-on-year (roughly halving for each additional year following discharge from treatment).

Building on this work a post hoc statistical analysis for the VFM model modelled future re-presentations based on the known trends of the observed data. This indicated that all clients who would ever re-establish contact with drug treatment or criminal justice agencies do so within ten years. This is consistent with previous studies, which suggest that beyond ten years the rate of relapse for opiate users, for example, is negligible[31] [32] (Assumption 3, Appendix B).

T20. COUNTERFACTUAL DRUG-TAKING CAREER LENGTH TRANSLATED INTO THE NUMBER OF YEARS BY WHICH RECOVERY IS BROUGHT FORWARD

Counterfactual length of drug taking 'career'	Number of years of recovery may have been brought forward
20 years	9 years
19 years	8 years
18 years	7 years
17 years	6 years
16 years	5 years
15 years	4 years
14 years	3 years
13 years	2 years
12 years	1 year
11 years	0 years

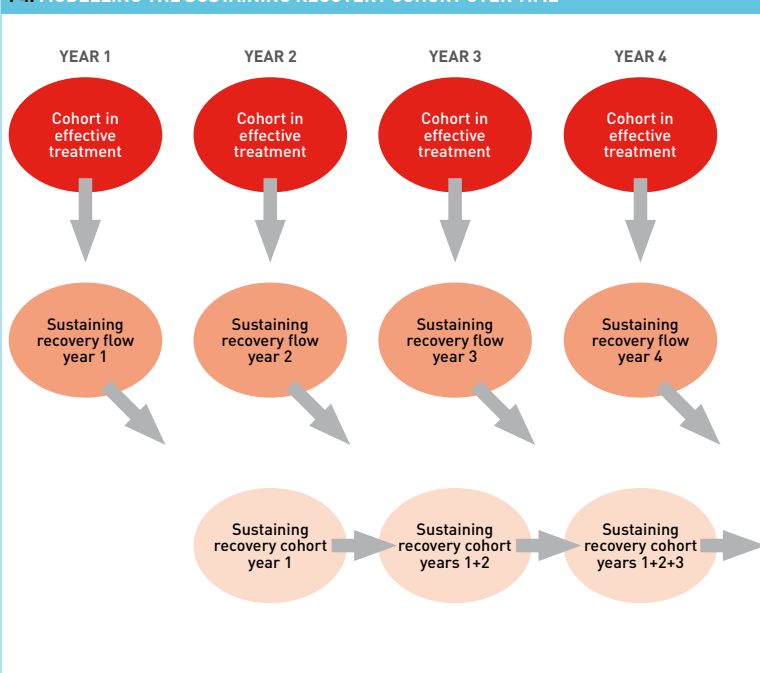**F4. MODELLING THE SUSTAINING RECOVERY COHORT OVER TIME**

Figure 4 presents the estimated sustaining recovery rate over a ten-year period. We estimate that 51% of people who left successfully will be recorded on one of the data sets again over a ten-year period, which means that 49% of people are assumed to be sustaining long term recovery in the VFM model. So of the 53,952 people who exited treatment in 2010-11, 27,969 of them left successfully and of these 13,702 (49%) are estimated to go on to sustain long term recovery.

It is also possible that some people die and so for every year of the model post-treatment exit a 0.503% mortality rate is applied. This is the mortality rate for clients in effective treatment, which is used as a proxy for those people who are sustaining long term recovery (Assumption 15, Appendix B). This was calculated by dividing the number of deaths for clients in effective treatment in 2009-10 by the number of people in effective treatment in 2009-10 (967/192,360).

Only clients who had been engaged in effective treatment before they left treatment successfully and did not re-present to either treatment or the criminal justice system are deemed to be sustaining long term recovery. Although there may be benefits from treatment for clients sustaining recovery who left treatment but were not engaged in effective treatment and also for clients who were engaged in effective treatment, but did not leave successfully, it is not possible to calculate how much of the benefit may have been treatment related, nor how long the benefit accrued and so these benefits have been excluded from the model (Assumption 4, Appendix B). Therefore the sustaining recovery benefits of drug treatment may have been underestimated as a result (Assumptions 9a. and 9b., Appendix B).

6.3 Allocating the crime reduction benefits of recovery over time

Before the estimates of the potential crime reduction benefits of recovery can be presented it is first necessary to demonstrate how the benefits are allocated over time in the VFM model.

Taking Year 1 in Figure 4 as an example, a cohort of clients is engaged in effective treatment. Of this group, some would leave treatment and go on to sustain long term recovery. We refer to this cohort as the sustaining recovery flow year 1. No sustaining recovery benefits are allocated to the sustaining recovery flow year 1 as effective treatment benefits have already been attributed to them in that year and we did not want to double count.

The sustaining recovery flow from Year 1 becomes the sustaining recovery cohort in Year 2. We then adjust

T21. MODELLING THE SUSTAINING RECOVERY COHORT FROM 2010-11 OVER FOUR YEARS AS AN EXAMPLE

	Year 1	Year 2	Year 3	Year 4
	2010-11	2011-12	2012-13	2013-14
Cohort in effective treatment	191,126	0	0	0
Sustaining recovery flow	13,702	0	0	0
Sustaining recovery stock	0	13,702	13,633	13,565
Sustaining recovery stock deaths	0	69	69	68
Sustaining recovery stock (mortality adjusted)	0	13,633	13,565	13,496

T22. MEAN CONVICTIONS IN THE EIGHT YEARS PRIOR TO TREATMENT JOURNEY START BROKEN DOWN BY RE-PRESENTATIONS AND NON RE-PRESENTATIONS

	Non re-presentations	Re-presentations	All
Number of clients	21,039	30,461	51,500
Convictions in the eight years prior to leaving treatment	25,880	220,512	246,391
Mean convictions per person in the eight years prior to leaving treatment	1.23	7.24	4.78

T23. ESTIMATED PERCENTAGE REDUCTION IN CONVICTIONS FOR PEOPLE SUSTAINING LONG-TERM RECOVERY

DTORS offence type	Estimated reduction in convictions
Shoplifting	20%
Theft of a vehicle	26%
Theft from a vehicle	25%
House burglary	38%
Business burglary	18%
Violent theft (robbery)	39%
Bag snatch	24%
Cheque or credit card fraud	51%
Begging	26%
Buying and selling stolen goods	45%
Drug dealing	40%
Prostitution	49%
Other stealing	23%
Total	25.7%

the number of people in the cohort using the mortality rate. Sustaining recovery benefits are only applied to clients in the sustaining recovery cohort. So for example in Year 2, benefits are applied to the clients in effective treatment in Year 2 and the sustaining cohort Year 1, but not the sustaining recovery flow Year 2. This process continues with the cohort of clients sustaining recovery growing each year (in scenarios where there are more than 1 sustaining recovery year). Table 21 shows this process over a four-year period as an example. Full tables showing the sustaining recovery cohorts for the different scenarios are included in Appendix E.

6.4 Estimating and valuing the potential crime reduction benefits of recovery

Finally we estimated and attached a value to the crime reduction benefits of recovery.

Because by definition, people who are sustaining recovery are not committing drug related crime one method would be to assume that the crime prevention benefit for these people each year is equal to the crime counterfactual mid-point estimate of £26,074, for each year that their recovery has been brought forward.

However, it could be argued that this might overestimate the benefits of recovery if the more entrenched and chaotic clients who are committing more offences are less likely to sustain their recovery after leaving treatment than the less prolific offenders or those who are not committing offences at all.

To test this assumption a bespoke piece of analysis was commissioned from the Home Office Drug Data Warehouse (DDW) and carried out by the National Drug Evidence Centre (NDEC) at the University of Manchester.

Clients who left treatment in 2005-06 were followed over three years, the longest period for which the data was available, to assess how many were not convicted of a drug-related crime and did not re-present to structured treatment/community DIP/prison DIP, or test positive for drugs at the custody suite. Clients who did not re-present to either the treatment or criminal justice datasets were deemed to be sustaining recovery and assumed to be committing no drug related offences[33].

The 51,500 treatment leavers in 2005-06 were then matched with PNC convictions data to see if those who re-presented to treatment were responsible for more convictions[34]. This was indeed found to be the case with a mean of 7.2 convictions in the eight years prior to starting treatment for those who re-presented compared to 1.2 for those who did not re-present

T24. ESTIMATED REDUCTION IN OFFENCES FOR PEOPLE SUSTAINING LONG TERM RECOVERY WHO LEFT TREATMENT SUCCESSFULLY IN 2010-11

Number of years drug taking career has potentially been shortened	Lower estimate	Mid-point estimate	Upper estimate
9 years	3.1m	4.1m	5.2m
8 years	2.8m	3.7m	4.6m
7 years	2.4m	3.2m	4.0m
6 years	2.1m	2.8m	3.5m
5 years	1.7m	2.3m	2.9m
4 years	1.4m	1.9m	2.3m
3 years	1.1m	1.4m	1.8m
2 years	0.7m	0.9m	1.1m
1 year	0.4m	0.5m	0.6m
0 years	0.0m	0.0m	0.0m

T25. ESTIMATED REDUCTION IN OFFENCES PER PERSON SUSTAINING LONG TERM RECOVERY ON AVERAGE (2010-11)

DTORS offence type	Lower estimate	Mid-point estimate	Upper estimate
Shoplifting	5.80	7.73	9.67
Theft of a vehicle	0.10	0.14	0.17
Theft from a vehicle	0.29	0.39	0.49
House burglary	0.09	0.12	0.15
Business burglary	0.26	0.35	0.44
Violent theft (robbery)	0.18	0.24	0.31
Bag snatch	0.13	0.18	0.22
Cheque or credit card fraud	0.32	0.43	0.53
Begging	0.96	1.28	1.60
Buying and selling stolen goods	8.46	11.28	14.10
Drug dealing	6.70	8.93	11.17
Prostitution	1.86	2.48	3.10
Other stealing	0.69	0.92	1.16
Total	26	34	43

T26. ESTIMATED REDUCTION IN OFFENCES FOR PEOPLE SUSTAINING LONG TERM RECOVERY WHO LEFT TREATMENT DURING SR10

Number of years drug taking career has potentially been shortened	Lower estimate	Mid-point estimate	Upper estimate
9 years	12.4m	16.6m	20.7m
8 years	11.1m	14.8m	18.4m
7 years	9.7m	12.9m	16.2m
6 years	8.3m	11.1m	13.9m
5 years	7.0m	9.3m	11.6m
4 years	5.6m	7.5m	9.3m
3 years	4.2m	5.6m	7.0m
2 years	2.8m	3.8m	4.7m
1 year	1.4m	1.9m	2.3m
0 years	0.0m	0.0m	0.0m

(Table 22).[35] The period of eight years prior to treatment was used to closely match the drug taking 'career' period prior to drug treatment (Figure 3).

With 4.8 convictions being the mean number, this means that non re-presenters, i.e. those who are assumed to be sustaining recovery have a counterfactual which is 25.7% of the mean for clients in effective treatment (1.23/4.78).

If we assume that the reduction in offences for those sustaining long term recovery was proportionate to the reduction in offences for those in effective treatment then we arrive at the following reductions (Table 23).

We can then apply the reductions to the counterfactual annual crime volume and using the mid-point estimate, we estimate that up to 4.1m crimes might be prevented over the next nine years as a consequence of the estimated 13,702 people who, having left treatment successfully in 2010-11, going on to sustain recovery in the long term (Table 24) (Assumption 2, Appendix B).

We can also estimate that 34 offences may be prevented per person per year on average with a range from 26 to 43 (Table 25).

The number of offences which may be prevented due to investment over the SR10 period is estimated to be between of 0-16.6m offences (0-9 years) which may be prevented using the mid-point estimate, with a range from 0-12.4m using the lower estimate to 0-20.7m using the upper estimate (Table 26). This assumes that investment remains the same over the SR10 period (Assumption 16, Appendix B).

Unit costs can then be applied to the number of offences where unit costs were available. We estimate that the total benefit in 2010-11 using the mid-point ranged from £0 for 0 sustaining recovery years, through to £700.6m for 9 sustaining recovery years (from clients who had left in 2009-10) with a range of £0-£525.5m to £0-£875.6m (Table 27).

We estimate that there was potentially a £6,752 benefit per person sustaining long term recovery on average in 2010-11 (from clients who had left in 2009-10), with a range from £5,065 to £8,439 (Table 28).

Using the mid-point, we estimate that all else being equal the value of the potential reduction in total offences for clients leaving treatment and sustaining long-term recovery due to investment over the spending review period will range from £0 for zero sustaining recovery years to £2.6bn for nine years, with a range of £0-£1.95bn to £0-£3.25bn (Table 29).

T27. ESTIMATED VALUE OF REDUCTION IN OFFENCES FOR PEOPLE SUSTAINING LONG TERM RECOVERY WHO LEFT TREATMENT IN 2010-11 (2010-11 PRICES)

Number of years drug taking career has potentially been shortened	Lower estimate	Mid-point estimate	Upper estimate
9 years	£525.5m	£700.6m	£875.6m
8 years	£475.0m	£633.2m	£791.4m
7 years	£422.7m	£563.5m	£704.3m
6 years	£368.5m	£491.3m	£614.0m
5 years	£312.4m	£416.4m	£520.5m
4 years	£254.3m	£338.9m	£423.6m
3 years	£194.0m	£258.6m	£323.3m
2 years	£131.6m	£175.5m	£219.3m
1 year	£67.0m	£89.3m	£111.6m
0 years	£0m	£0m	£0m

T28. ESTIMATED VALUE OF REDUCTION IN OFFENCES PER PERSON SUSTAINING LONG TERM RECOVERY ON AVERAGE (2010-11) (2010-11 PRICES)

DTORS offence type	Lower estimate	Mid-point estimate	Upper estimate
Shoplifting	£719	£959	£1,199
Theft of a vehicle	£512	£683	£853
Theft from a vehicle	£302	£403	£503
House burglary	£353	£471	£589
Business burglary	£1,219	£1,625	£2,031
Violent theft (robbery)	£1,615	£2,153	£2,691
Bag snatch	£100	£134	£167
Cheque or credit card fraud	£244	£325	£406
Total	£5,065	£6,752	£8,439

T29. ESTIMATED VALUE OF THE REDUCTION IN TOTAL OFFENCES FOR PEOPLE SUSTAINING LONG-TERM RECOVERY WHO LEFT TREATMENT IN SR10 (2010-11 PRICES)

Number of years drug taking career has potentially been shortened	Lower estimate	Mid-point estimate	Upper estimate
9 years	£1.95bn	£2.60bn	£3.25bn
8 years	£1.76bn	£2.35bn	£2.94bn
7 years	£1.56bn	£2.09bn	£2.61bn
6 years	£1.36bn	£1.82bn	£2.27bn
5 years	£1.16bn	£1.54bn	£1.93bn
4 years	£0.94bn	£1.26bn	£1.57bn
3 years	£0.72bn	£0.96bn	£1.20bn
2 years	£0.49bn	£0.65bn	£0.81bn
1 year	£0.25bn	£0.33bn	£0.41bn
0 years	£0	£0	£0

CONCLUSION

In its report on the previous drug strategy the National Audit Office recommended that "Departments responsible for delivering the Strategy should develop a framework for evaluating value for money".[36] The aim of this report is to contribute to the drug treatment and recovery element of that framework.

The NTA has worked closely with economists at the Home Office and the Department of Health to develop the first cross-government model which estimates the gross benefits from adult drug treatment and recovery in England. It is hoped that this value for money model can help to raise hypotheses, provide theoretical frameworks and guide future work.

We estimate that drug treatment and recovery systems in England may have prevented approximately 4.9m crimes in 2010-11, with an estimated saving to society of £960m in costs to the public, businesses, the criminal justice system and National Health Service (NHS). We also estimate that approximately 19.6m crimes may be prevented over the course of the Spending Review 2010 period (SR10) (2011-12 to 2014-15), with an estimated saving to society of £3.6bn.

In addition we estimate that up to a further 4.1m offences may be prevented over a nine-year period (from 2011-12 to 2019-2020), because we estimate that 13,702 people who left treatment in 2010-11 will go on to sustain long term recovery, with an estimated value of £700m. We also estimate that continued investment in drug treatment at current levels over the SR10 period could lead to up to an estimated 54,000 former clients sustaining long term recovery which may prevent up to 16.6m more offences over a nine-year period with an estimated value of up to £2.6bn by 2023-24.

The model also helps us to estimate the potential impact of disinvestment in adult drug treatment. We estimate that, all else being equal, for every £1m taken out of the system there could be an increase of approximately 9,860 drug-related crimes per year at an estimated cost to society of over £1.8m.

It is important to remind the reader that many of the figures included in this report are estimates rather than observations and so these figures cannot be interpreted as direct, quantifiable measures of a causal effect of drug treatment and as such the findings are indicative and not definitive. We have tried to base our estimates on the best available evidence, but we are aware that there is not always as much evidence as we would like. These estimates can be improved over time as new evidence comes to light. ■

APPENDIX A: GLOSSARY

TERMINOLOGY	DEFINITION
Benefits	This is a collective term to describe the positive gains made to an individual drug user, their community, businesses and public services from drug treatment and recovery. It includes cost savings and natural benefits.
Cost savings	Reductions to the costs to individuals, businesses and public services brought about by investment in drug treatment.
Cash releasing savings	Benefits which can be redeployed according to local or national priorities.
Cash (or nominal) terms	A 'cash', or 'nominal', value refers to a value in a given year, or series of years, affected by inflation.
Cost	This is the cost of structured drug treatment in the model. The model includes costs from the Adult Pooled Treatment Budget (PTB), local spending on drug treatment.
Counterfactual	A hypothetical outcome in the absence of an intervention. In this case, an estimate of what would have happened to clients had they not entered drug treatment.
DIR	Drug Intervention Records, owned by the Home Office, of drug-related offending and individuals engaged by specialist criminal justice drug teams.
Discounting	A technique for comparing cost and benefits that occur in different time periods. It is based on the economic principle that individuals prefer to receive goods and services now rather than later ('time preference'). As a whole, it is suggested that society also prefers to receive benefits sooner and defer costs to future generations ('social time preference'). In the VFM model, the social time preference rate is used as the standard real discount rate, as recommended by the Treasury[37]. This rate comprises two components. First, the preference for consumption now with an unchanging level of consumption per capita over time ('pure time preference'). Second, an additional element is added reflecting that if per capita consumption does grow over time, these circumstances imply future consumption will be plentiful relative to today and thus have lower marginal utility.

The social time preference rate is used to convert all costs and benefits to 'present values' to enable comparisons to be made. The Treasury recommended discount rate for both costs and cost savings is 3.5% up to year 30. The Department of Health use 1.5% for natural benefits as we have done in the VFM model. |
Effective treatment	The NTA measure of effectiveness refers to the retention of clients for more than 12 weeks, or leaving the treatment system before then in a care planned way. Only clients who meet these criteria are included in the model.
National Drug Treatment Monitoring System (NDTMS)	Database owned by the NTA holding data on individual journeys through the treatment system.
Natural benefits	Intangible benefits, such as Quality Adjusted Life Years, which can be given a monetary value, but cannot be exchanged for money, for instance to reduce public spending.
Non-Opioid and/or crack cocaine User (Non-OCU)	Clients not citing opiates, crack cocaine, or both, as any of their presenting substances.
Opioid and/or crack cocaine User (OCU)	Clients citing opiates, crack cocaine, or both, as any of their presenting substances.
Police National Computer (PNC)	Arrest, charge and conviction data on drug-related (and other) offenders.
Pooled Treatment Budget (PTB)	A budget for drug treatment which is funded by the Department of Health and is allocated to local areas using an NTA funding formula based on the number of individuals effectively engaged in treatment. From April 2012, a proportion of the PTB will be allocated according to how successful a local area is in helping people to recover from their dependence.
QALY	Quality Adjusted Life Years: the estimated additional quality and quantity of life due to an intervention.
Real terms	Adjusts cash values to remove the effects of price changes over time, relative to one chosen base period. Converting into real terms makes cost-benefit comparisons fairer, as they reflect changes in outputs and outcomes rather than changes in inflation.
Re-presentation	Refers to a client who after exiting treatment in 2005-06 has re-presented to either drug treatment or the criminal justice system in the subsequent four year period.
Spending Review 10 (SR10)	The period covering the four financial years from 2011-12 to 2014-15, for which HM Treasury has set public sector budgets.
Structured treatment	Treatment where the client has a care plan.
Successful completions	Successful completions were made up of two categorioes: treatment completed - drug free; treatment completed - occasional user.

Treatment completed – Drug free Data item definition: The client no longer requires structured drug treatment interventions and is judged by the clinician not to be using heroin (or any other opioids) or crack cocaine or any other illicit drug.

Treatment Completed - Occasional user (not heroin and crack) Data item definition: The client no longer requires structured drug treatment interventions and is judged by the clinician not to be using heroin (or any other opioids) or crack cocaine. There is evidence of use of other illicit drug use but this is not judged to be problematic or to require treatment. |

Sustaining long-term recovery	Used in reference to clients who were in effective treatment, have exited treatment successfully and do not re-present to treatment services, have contact with the criminal justice system, or die up to ten years after they exit treatment.
Value for Money	Value for Money (VFM) can be absolute or relative. If an organisation obtains a net benefit from the investment they make it can be regarded as VFM. If they improve the benefits in relation to the costs then they have increased VFM. The goal is to maximise VFM by achieving the maximum benefits in relation to costs. Achieving value for money may be described in terms of economy, efficiency, effectiveness and equity.

APPENDIX B: KEY ASSUMPTIONS

ASSUMPTIONS	NOTES
The mean drug taking 'career' in the absence of treatment is 20 years for all clients (the drug taking 'career' counterfactual).	While there may be different average 'career' durations for different drugs and different combinations of drugs, we assume the 20 year counterfactual applies to all clients as a proxy. The 20 year counterfactual is an average figure and so might include some people who have taken drugs throughout their lives and others who have used drugs only once. Also, this will include some people who have been in treatment at some point in their lives. There is also a possibility that drug treatment extends the 'career' for some and reduces it for others[38]. This would have implications on 'career' length and the number of sustaining recovery years to which a benefit can be ascribed. Our analysis of treatment leavers in 2005-06 suggests that 27% sustain recovery, but it's not clear from the analysis whether the other 73% never recover. The 20 year counterfactual 'career' is a very difficult figure to improve on due to the limited evidence and lack of a control trial. We have shared this with academics and government departments and this has been unanimously accepted as a reasonable estimate. References Degenhardt, L., Mattick, R., and Gibson, A. (2009) Pharmacotherapies for the treatment of opioid dependence: Efficacy, Cost-Effectiveness, and Implementation Guidelines. Mattick, R., Ali, R., and Lintzeris, N. Eds. New York: Informa Healthcare USA. Best, D., Day, E. and Morgan, B. (2006). Average Length of an Opiate Using 'Career'. London: NTA. Expert group opinion. (Meeting in May 2010)
Counterfactual costs are spread equally over the 20 year counterfactual drug taking 'career' period.	
All re-presentation matches based on attributers in the NDTMS and CJS datasets relate to an individual.	False positive matching in re-presentation calculations would affect the sustaining recovery rate. The National Drug Evidence Centre at the University of Manchester looked into false positive matching of criminal justice and treatment datasets and found that very few matches were made for different people, giving an undercount of 3%. Without doing a case audit, we do not know what the incidence of false negatives might be, but for the purposes of the report, we assume that it is the same incidence as false positives and so they both cancel each other out. References Millar, T. (2011, pers. comm., 5 April).
No sustaining recovery benefits attributed to clients who re-present to drug treatment or the criminal justice system.	Former clients who re-present to drug treatment or the criminal justice system are likely to accrue sustaining recovery benefits before they relapse, however because we don't know when they relapse it is not possible to estimate what the benefits might be.
The outcome improvements are due to drug treatment and not other confounding variables, i.e. there is no deadweight.	It would be both unethical and illegal to withhold NICE endorsed treatment for individuals with a treatment need. As a result it is not possible to conduct a randomised control trial to verify the degree to which drug treatment impacted on outcomes rather than other factors. The absence of a control group who sought treatment but were refused it means that it is not possible to ascribe with a high degree of confidence any observed changes in outcomes to structured treatment specifically. However, evidence shows that as new people engage with treatment and become abstinent they experience positive benefits, which may not be wholly attributed to treatment, but where treatment is likely to play a critical role.
The offending committed by drug treatment clients is drug-related.	The crimes that have been included are trigger offences known to be strongly associated with drug use. References See: http://www.homeoffice.gov.uk/about-us/corporate-publications-strategy/home-office-circulars/circulars-2004/042-2004/621142?view=Binary

The change in convictions is representative of the change we would see in offences and that this relationship remains the same after conviction.	
That the DTORS cohort is representative of the whole treatment population.	We have assumed that the DTORS cohort is representative of the whole treatment population as DTORS stated that its "...sample of 1,796 adults...were broadly representative of the population of Tier 3 and Tier 4 treatment-seekers in England." See: http://www.dtors.org.uk/reports/DTORS_Key_Summary.pdf (page ii)
Benefits are only ascribed (a) to clients in effective treatment, i.e. the retention of clients in treatment for more than 12 weeks, or leaving the treatment system before then in a care planned way and (b) clients who have had a successful completion and go on to sustain long term recovery.	While there might be significant benefits for those individuals that do not reach the 12 week point or leave in an unplanned way before then, they have not been included in the analysis. There are also likely to be treatment benefits for clients who do not leave treatment successfully but go on to sustain long term recovery as a result of treatment, as a proportion of those in treatment simply walk away once it has met their clinical needs without engaging with the formal administrative discharge process required by NDTMS. However, we do not count them to avoid the risk of overestimating the potential benefits of treatment. See: http://www.nta.nhs.uk/uploads/outcomes_of_drug_users_leaving_treatment2010.pdf For all these reasons we may have underestimated the benefits of treatment.
Drug related crime rates remain at 2010-11 levels over the SR10 period.	
That the number of people engaged in effective treatment will remain the same each year of the SR10 period.	
The estimated potential benefits of drug treatment remain the same each year of SR10.	
That the mean time in effective treatment remains the same each year of SR10.	
That the disinvestment in the disinvestment scenario falls equally across all treatment types.	
The in treatment mortality rate (0.503%) is the same for former clients sustaining long term recovery.	
Investment over the SR10 period will remain the same.	

APPENDIX C: A TAXONOMY OF DRUG-RELATED HARMS

BEARER OF COSTS/HARMS	EXAMPLES OF COSTS	COMMENT
DRUG USERS	Premature death	Systematic reviews on the mortality of opiate users estimate annual death rates of about 1%, which is more than 10 times that of the general population[39]. The rate of 0.503% has been applied in the VFM model as the observed mortality rate taken based on NDTMS data.
	Loss of quality of life: mental and physical health.	Prolonged use of cocaine can lead to mental health problems, with different routes of administration associated with different negative consequences: crack cocaine users have high levels of anxiety, depression and paranoid ideation. Other symptoms, such as aggression and violence, are also associated more with crack cocaine than with cocaine powder[40]. Along with poor mortality and its relationship with blood borne viruses, heroin injection is associated with poor psychosocial functioning[41]. Prolonged cannabis use has been linked to psychosis, and studies have shown a link between use of marijuana and depression[42]. The quality of life of drugs before, during and after treatment are reflected in the VFM model as Quality Adjusted Life Years (QALYs) and will be published in a second report later in the year.
	Contracting HIV/other diseases	Injecting drug users are vulnerable to a wide range of infections, including those which are transmittable. According to the Health Protection Agency, around a half of injecting drug users have been infected with hepatitis C and about one in 100 with HIV. Around one in six injectors have had hepatitis B (2011)[43].
	Impact on educational achievement, training opportunities	People not in employment, education or training at age 16-18 are more likely to have had long-term health problems, mental illness and be involved in drug abuse. Taking drugs can negatively impact on the educational attainment and motivation of young people, thereby impeding their future employability[44]. The monetary value of this impact is unknown and therefore has not been included in the VFM model.

	Excess unem-ployment and loss of lifetime earnings	Systematic reviews on the mortality of opiate users estimate annual death rates of about 1%, which is more than 10 times that of the general population. The rate of 0.503% has been applied in the VFM model as the observed mortality rate taken based on NDTMS data.
	Increased vulnerability	A sizable proportion of OCUs tend to be vulnerable with multiple support needs, such as homelessness, sex working and mental health problems. Homelessness There are multiple harms associated with homelessness. Between a third and two-thirds of rough sleepers have a drug addiction[45][46]. Homeless clients are 47 times more likely to be the victim of theft and 13 times more likely to be the victim of violence than the general population[47]. Also, homeless people are nearly five times more likely to die younger than their equivalent age group of the general population[48]. Treatment Outcomes Profile (TOP)[49] data shows that the housing situation for drug treatment clients improves while clients are engaged in effective treatment (e.g. 64.2% of clients recorded as No Fixed Abode (NFA) at the start of treatment were no longer NFA at the TOP review stage roughly 6 months later and 71.4% who had an exit TOP were no longer NFA.) Moving a homeless client into stable accommodation plays an important part in reducing harms, beyond supporting their engagement in treatment[50]. However, owing to lack of quantitative data, further work needs to be done before these benefits can be factored into the VFM model. Sex working While the relationship between sex and srug markets is not demonstrably causal, women involved in street prostitution typically spend over 75% of their income on drugs, drug addiction is often reported as a reason for entry into sex working[51]. Unfortunately it is unclear from the treatment data how many service users are sex working and therefore it is not currently possible to measure the likely benefits from being in treatment and recovering from addiction. Mental health Many studies have highlighted a link between mental health problems and drug addiction, e.g. the DTORS study found that many drug users in treatment had experience of mental health services, with 37% of the cohort having previously been referred to a psychiatrist of other mental health professional[52]. Prolonged periods of abstinence are known to generally reduce psychiatric disorders and improve mental well-being[53]. Improvements in mental well-being have been included in the model as part of the QALY measure. Reductions in access to mental health services and individual benefits of reductions specific to psychiatric episodes have not been included owing to the lack of data.
FAMILIES/ CARERS	Impact on foetuses/ babies	Cocaine use during pregnancy is linked to, miscarriage, intrauterine growth retardation, premature delivery and acute distress, among others. Newborns can be born addicted to drugs such as heroin and cocaine. They can enter the withdrawal stages from cocaine within 48 hours of birth[54], as well as suffer poor nutritional health, possible heart disease risk and emotional developmental impairment.
	Impaired parenting	Parental drug and alcohol use is often mentioned as an issue for children who are counselled by ChildLine[55]. NDTMS data showed that in 2008-09, 3.5% of OCUs and 1.6% of non-OCUs in treatment had a child being looked after by a local authority, compared to 0.58% in the general population[56]. It is felt that the actual number in contact with social care for this group of drug users may be higher still. It is unclear how many children were in contact with social care as a direct result of parental problem drug use We are hoping to do further work , possibly by anonymously matching local authority children and social care data to NDTMS data, to see whether the demands placed on children and social care budgets fall when parents are engaged in effective treatment.
	Domestic violence	There is a strong, albeit not causal, link between drug addiction and domestic violence. The British Crime Survey revealed that 12% of domestic violence perpetrators were affected by drugs when they committed acts of physical violence[57]. In a study of inner London drug treatment agencies in 2000, 30% of women reported physical violence from their current partner[58]. Furthermore, in one study of service users of domestic violence agencies, over half of respondents (51%) claimed that either themselves or their partners had used drugs, alcohol and/or prescribed medication in 'problematic ways' in the last 5 years; and almost two-thirds began their problematic use following their experience of domestic violence[59]. These figures are estimated to be higher due to the fear and difficulty in disclosing experiences of abuse. Given the chronic underreporting of domestic violence and the fact that reducing substance use may not lead to a reduction in the occurrences of domestic violence, it is not possible to estimate the benefits of drug treatment in alleviating the problem.

	Victim of crime	Adult family members and/or carers of drug users can experience the theft of money and personal property committed by their drug dependent relative[60]. While it is unlikely that the majority of these crimes would be reported to the police or would be included in self-reported crimes, we have not included these costs in the crime component of the VFM model to avoid any possibility of double-counting with the other drug related crime data we have included.
	Reduced performance at school	This cost is likely to be significant, but is not reflected in the model because the VFM model only considers the benefits and costs of adult drug treatment[61].
	Transmission of infections	This cost is likely to be significant, but is not reflected in the model owing to lack of data.
	Intergenerational impact of drug use	This cost is likely to be significant, but is not reflected in the model owing to lack of data.
	Financial problems	Families are often a major source of financial support for drug users. Moreover, adult family members/ carers may need to put aside their usual activities to help their relative or because of stress-related problems. This could result in lost employment opportunities or reduced productivity. These costs are estimated to amount to approx. £6,000 annually[62]. This saving has not been included in the model because we do not know the impact drug treatment has on this problem.
	Concern/worry for users	There is currently no measure on the effects of worrying for drug dependent loved ones.
	Increased health service needs for family members	The UKDPC estimates that the additional healthcare costs to families from living with family members with a drug treatment need is approximately £450 per family member per year[63].
	Caring for drug users or drug users' dependants	Family members and carers often provide informal care which might otherwise be picked up by the NHS or local authority (LA), e.g. nursing and home care, over and above the time that would be committed to taking care of any other family member. Family members taking care of drug using OCU relatives is estimated to save the NHS and LA approx. £4,000 per annum per person[64].
	Victims of drug driving	These harms are not reflected in the VFM model owing to lack of data.
	Drug-related violence	The violence associated with drug markets is significant and well-documented. The violence can vary from gang-related violence to robbery offences committed to fund addiction. The benefits of reducing robbery offences are included in the VFM model.
OTHER INDIVIDUALS DIRECTLY AFFECTED	Drug-related crime	The cost to society in England and Wales of drug related problem Class A drug use has been estimated by the Home Office to be approximately £13.9bn a year[65 66]. The types of offences vary from the possession and supply of illegal drugs to acquisitive crimes committed to fund addiction. There are a wide range of studies which suggest that drug treatment reduces drug-related crime. These costs and benefits have been included in the VFM model and are outlined in this report.
	Transmissions of infections from drug users to others	This cost is likely to be significant, but is not reflected in the VFM model owing to lack of data.
WIDER COMMUNITY EFFECTS	Drug litter	Litter related to drug use can cover a range of materials, e.g. syringes, foils, spoons, plastic bottles. It could also include other detritus such as bodily waste often found in areas that have been used for drug use. The health risks to the public from drug litter are often thought to be small – there are still no recorded incidents of a member of the public contracting a blood-borne disease from a discarded needle or syringe[67]. There are costs to local areas in disposing of drug litter in a safe and timely manner. However, there are no available national figures and so these have not been included in the VFM model.
	Fear of crime	This cost is likely to be significant, but is not reflected in the VFM model owing to lack of data.
	Reduced property values near drug markets	This cost is likely to be significant, but is not reflected in the VFM model owing to lack of data.
INDUSTRY	Sickness absence	This cost is likely to be significant, but is not reflected in the VFM model owing to lack of data.
	Theft in the workplace	This cost is likely to be significant, but is not reflected in the VFM model owing to lack of data.
	Security expenditure to prevent drug-related crime	This cost is reflected in the drug related crime estimates.

	Productivity losses	This cost is likely to be significant, but is not included in the VFM model owing to a lack of data.
	Impact of illicit markets on legitimate markets	Business will be less likely to invest in areas with high concentrations of drug-related crime and visible drug markets. This cost is likely to be significant, but is not reflected in the VFM model owing to lack of data.
PUBLIC SECTOR	Health care expenditure	These are NHS costs incurred by drug users because of their drug use. Some of the drug-related health risks have been mentioned in the harms to drug users section.
	Criminal justice expenditure	The largest component of the criminal justice costs of drug-related crime is made up of the cost of the police response to crime, followed by costs of custody and enforcing community sentences. These costs have been included in the VFM model.
	Social services	Not currently included in the VFM model due to lack of data.
	Social security benefits	Research has suggested that 1 in 15 of all Department of Work and Pensions benefit claimants are OCUs[68], or put another way 80.3% of OCUs are estimated to be benefit claimants at significant cost to the Exchequer.

APPENDIX D: MATCHING DTORS OFFENCE CATEGORIES WITH OFFENCES IN LEGISLATION

TERMINOLOGY		DEFINITION
SHOPLIFTING	4600	Theft Act 1968 Sec.1 Stealing from shops and stalls (shoplifting).
THEFT OF A VEHICLE	13001	Theft Act 1968 S.12 (1) as amended by Criminal Justice Act 1988 S.37 Unauthorised taking of a motor vehicle.
	13002	Theft Act 1968 S.12 (1) as amended by CJA 1988 S.37. Unauthorised taking of conveyance other than a motor vehicle or pedal cycle.
	13003	Theft Act 1968 S.12 (1) as amended by Criminal Justice Act 1988 S.37 Being carried knowing vehicle to have been taken.
	13101	Theft Act 1968 S.12A as added by the Aggravated Vehicle Taking Act 1992 S.2 – Aggravated vehicle taking where the only aggravating factor is criminal damage of £5000 or under.
	13718	Theft Act 1968 Sec.12 (5) or Bylaw. Take or ride a pedal cycle without consent etc.
	3702	Theft Act 1968 S.12A - aggravated taking where the vehicle was driven dangerously on a road or other public place.
	4400	Theft Act 1968 Sec.1 Theft of a pedal cycle.
	4801	Theft Act 1968 Sec.1 Theft of motor vehicle.
	4912	Theft Act 1968 Sec.1 Stealing conveyance other than motor vehicle or cycle.
THEFT FROM A VEHICLE	4510	Theft Act 1968 Sec.1 Stealing from motor vehicles.
	4511	Theft Act 1968 Sec.1 Stealing from other vehicles.
HOUSE BURGLARY	2801	Theft Act 1968 Sec.9 Burglary in a dwelling with intent to commit or commits an offence triable only on indictment.
	2802	Theft Act 1968 Sec.9 Burglary in a dwelling with violence or the threat of violence.
	2803	Theft Act 1968 Sec.9 Other burglary in a dwelling.
	2900	Theft Act 1968 Sec.10 Aggravated burglary in a dwelling (including attempts).
BUSINESS BURGLARY	3001	Theft Act 1968 Sec.9 Burglary in a building other than a dwelling with intent to commit or the commission of an offence.
	3002	Theft Act 1968 Sec.9 Other burglary in a building other than a dwelling.
	3100	Theft Act 1968 Sec.10 Aggravated burglary in a building other than a dwelling (including attempts).
VIOLENT THEFT (ROBBERY)	3401	Theft Act 1968 Sec.8 Robbery.
	3402	Theft Act 1968 Sec.8 Assault with intent to rob.
BAG SNATCH	3900	Theft Act 1968 Sec.1 Stealing from the person of another.
CHEQUE OR CREDIT CARD FRAUD	5301	Theft Act 1968 Sec.15 Obtaining property by deception.
	5331	Theft Act 1968 s.15a as added by Theft (Amendment) Act 1996 s.1 - obtaining a money transfer by deception.
	5340	Fraud Act 2006 s.2. Fraud by deception.
	5341	Fraud Act 2006 s.3. Fraud by failing to disclose information.
	5342	Fraud Act 2006 s.4. Fraud by abuse of position.
	5343	Possession etc. of articles for use in frauds; Fraud Act 2006 S.6

BEGGING	10431	Vagrancy Act 1824 Sec.4 and 5. Resisting or obstructing constables in execution of duty.
	18200	Begging - Vagrancy Act 1824.
	18501	Vagrancy Act 1824 Sec.4 Being on enclosed premises for an unlawful purpose.
BUYING AND SELLING STOLEN GOODS	5401	Theft Act 1968 Sec.22 Receiving stolen goods.
	5402	Theft Act 1968 Sec.22 Undertaking or assisting in the retention, removal disposal or realisation of stolen goods or arranging to do so.
DRUG DEALING	9211	Production or being concerned in the production of class A drug Heroin. Misuse of Drugs Act 1971 Sec .4 (2).
	9210	Supplying offering to supply or being concerned in class A controlled drug Cocaine. Misuse of Drugs Act 1971 sec 4 (3).
	9231	Supplying offering to supply or being concerned in class A controlled drug Heroin. Misuse of Drugs Act 1971 sec 4 (3).
	9233	Supplying offering to supply or being concerned in class A controlled drug MDMA. Misuse of Drugs Act 1971 sec 4 (3).
	9234	Supplying or offering to supply a controlled drug Class A 'Crack'. Misuse of drugs Act 1971 Sec 4(3).
	9235	Misuse of Drugs Act 1971 - Supplying or offering to supply a controlled Class A Drug - Methadone.
	9239	Supplying offering to supply or being concerned in other class A controlled drug. Misuse of Drugs Act 1971 sec 4 (3)
	9254	Having possession of a controlled drug with intent to supply. Class A ' Crack'. Misuse of drugs Act 1971 Sec 4(2).
	9255	Misuse of Drugs Act 1971 - Sec 5 (2) Having possession of a Controlled Drug with intention to supply - Class A Methadone. Misuse of drugs Act 1971 Sec 4(2).
	9259	Possession with intent to supply other class A controlled drug. Misuse of Drugs Act 1971 Sec 5 (3).
	9295	Producing controlled drug - Class A; Misuse of Drugs Act 1971 S.4(2)(a)
	9315	Misuse of Drugs Act 1971 - Sec 8 - Permitting premises to be used for unlawful purposes - Class A drug – Methadone
PROSTITUTION	16604	Street Offences Act 1959 Sec.1 Common prostitute loitering or soliciting for the purpose of prostitution.
OTHER STEALING	3300	Theft Act 1968 Sec.25 Going equipped for stealing etc.
	4000	Theft Act 1968 Sec.1 Stealing in a dwelling other than from automatic machines and meters.
	4100	Theft Act 1968 Sec.1 Stealing by an employee.
	4200	Post Office Act 1953 Sec.53 Unlawfully taking away or opening mail bag.
	4700	Theft Act 1968 Sec.1 Stealing from automatic machines and meters.
	4910	Theft Act 1968 Sec.1 Stealing not classified elsewhere.

APPENDIX E: SUSTAINING LONG TERM RECOVERY DATA

T30. CALCULATING THE SUSTAINING LONG TERM RECOVERY COHORT FROM NUMBERS IN EFFECTIVE TREATMENT IN 2010-11 (ASSUMING THAT DRUG TAKING 'CAREERS' HAVE BEEN SHORTENED BY 9 YEARS)										
2010-11 cohort	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Sustaining long term recovery flow	13,702	0	0	0	0	0	0	0	0	0
Sustaining long term recovery stock	0	13,702	13,633	13,565	13,496	13,429	13,361	13,294	13,227	13,161
Sustaining long term recovery stock deaths	0	69	69	68	68	68	67	67	66	66
Sustaining long term recovery stock (mortality adjusted)	0	13,633	13,565	13,496	13,429	13,361	13,294	13,227	13,161	13,094
	0	0.00503	0.00503	0.00503	0.00503	0.00503	0.00503	0.00503	0.00503	0.00503

T31. CALCULATING THE SUSTAINING LONG TERM RECOVERY COHORT FROM NUMBERS IN EFFECTIVE TREATMENT IN 2010-11 (WITH THE NUMBERS OF YEARS BY WHICH THE DRUG TAKING 'CAREER' HAS POTENTIALLY BEEN SHORTENED BY RANGING FROM 0 TO 9 YEARS)										
Number of years drug taking 'career' has potentially been shortened	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
9 years	0	13,633	13,565	13,496	13,429	13,361	13,294	13,227	13,161	13,094
8 years	0	13,633	13,565	13,496	13,429	13,361	13,294	13,227	13,161	0
7 years	0	13,633	13,565	13,496	13,429	13,361	13,294	13,227	0	0
6 years	0	13,633	13,565	13,496	13,429	13,361	13,294	0	0	0
5 years	0	13,633	13,565	13,496	13,429	13,361	0	0	0	0
4 years	0	13,633	13,565	13,496	13,429	0	0	0	0	0
3 years	0	13,633	13,565	13,496	0	0	0	0	0	0
2 years	0	13,633	13,565	0	0	0	0	0	0	0
1 year	0	13,633	0	0	0	0	0	0	0	0
0 years	0	0	0	0	0	0	0	0	0	0

T32. CALCULATING THE SUSTAINING LONG TERM RECOVERY COHORT FROM NUMBERS IN EFFECTIVE TREATMENT IN 2010-11 (WITH THE NUMBERS OF YEARS BY WHICH THE DRUG TAKING 'CAREER' HAS POTENTIALLY BEEN SHORTENED BY RANGING FROM 0 TO 9 YEARS)													
Number of years drug taking 'career' has potentially been shortened	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
9 years	0	13,633	27,198	40,694	54,123	53,851	53,580	53,311	53,043	52,776	39,482	26,255	13,094
8 years	0	13,624	27,180	40,668	54,088	53,807	53,528	53,250	52,974	39,682	26,388	13,161	0
7 years	0	13,624	27,171	40,641	54,034	53,728	53,422	53,119	39,726	26,408	13,166	0	0
6 years	0	13,624	27,171	40,641	54,034	53,728	53,422	39,952	26,559	13,242	0	0	0
5 years	0	13,624	27,171	40,641	54,034	53,728	40,181	26,711	13,317	0	0	0	0
4 years	0	13,624	27,171	40,641	54,034	40,410	26,863	13,393	0	0	0	0	0
3 years	0	13,624	27,171	40,641	40,641	27,017	13,470	0	0	0	0	0	0
2 years	0	13,624	27,171	27,171	27,171	13,547	0	0	0	0	0	0	0
1 year	0	13,624	13,624	13,624	13,624	0	0		0	0	0	0	0
0 years	0	0	0	0	0	0	0	0	0	0	0	0	0

ENDNOTES

1. Singleton, N., Murray, R. and Tinsley, L. (2006).Measuring Different Aspects of Problem Drug use: Methodological developments. Home Office Online Report 16/06. London: Home Office. Available from: http://www.drugslibrary.stir. ac.uk/documents/rdsolr1606.pdf [Accessed 6th March 2012].

2. MacDonald, Z. Tinsley, L., Collingwood, J., Jamieson, P. and Pudney, S. (2005). Measuring the Harm from Illegal Drugs Using the Drug Harm Index. Home Office Online Report 24/05.

3. HM Government (2010). Drug Strategy 2010. Reducing Demand, Restricting Supply, Building Recovery: Supporting People to Live a Drug Free Life. London: Home Office.

4. Table 1 in Jones, A., Weston, S., Moody, A., Millar, T., Dollin, L., Anderson, T. and Donmall, M. (2007). The Drug Treatment Outcomes Research Study (DTORS): Baseline report. Home Office Research Report 3. London: Home Office.

5. NAO (2010) Tackling problem drug use. Available from: http://www.nao.org.uk/publications/0910/problem_drug_ use.aspx [Accessed 9th June 2011].

6. These reports, among others, explore the topic in more detail:

a) Prime Minister's Strategy Unit (2003) Phase 1 Report: Understanding the issues. Available from: http://www.tdpf. org.uk/strategy_unit_drugs_report.pdf [Accessed 6th March 2012].
b) Godfrey, C., Eaton, G., McDougall, C. And Culyer, A. (2002).The Economic and Social Costs of Class A Drug Misuse in England and Wales, 2000. London: Home Office.
c) Jones, A., Weston, S., Moody, A., Millar, T., Dollin, L., Anderson, T. and Donmall, M. (2007). The Drug Treatment Outcomes Research Study (DTORS): Baseline report. Home Office Research Report 3. London: Home Office;
d) Singleton, N., Murray, R. and Tinsley, L. (2006).Measuring Different Aspects of Problem Drug use: Methodological developments. Home Office Online Report 16/06. London: Home Office. Available from: http://www.drugslibrary.stir. ac.uk/documents/rdsolr1606.pdf [Accessed 6th March 2012].

7. This is based on our analysis which matched NDTMS to PNC data, 2 years before and after treatment start and found that 53% of clients had no conviction before and after. This of course assumes that convictions data is a good proxy for offending.

8. EMCDDA (2007) Drugs in Focus Briefing 2nd Issue. http://www.emcdda.europa.eu/attachements.cfm/ att_44774_EN_Dif16EN.pdf [Accessed 6th March 2012].

9. Table 1 in Jones, A., Weston, S., Moody, A., Millar, T., Dollin, L., Anderson, T. and Donmall, M. (2007). The Drug Treatment Outcomes Research Study (DTORS): Baseline report. Home Office Research Report 3. London: Home Office.

10. For more information on the Police National Computer: http://www.npia.police.uk/en/10508.htm

11. Davies, L., Jones, A., Vamvakas, G., Duborg, R. and Donmall, M. (2009). Drug Treatment Outcomes Research Study (DTORS): Cost-effectiveness analysis. Home Office Research Report 25. London: Home Office.

12. These offence types are not necessarily statutory offences, e.g. "bag snatch", they are categories used in the DTORS report.

13. These offence types are not necessarily statutory offences, e.g. "bag snatch", they are categories used in the DTORS report.

14. Jones, A., Weston, S., Moody, A., Millar, T., Dollin, L., Anderson, T. and Donmall, M. (2007). The Drug Treatment Outcomes Research Study (DTORS). Baseline Report. Research Report 3. Key Implications. London: Home Office. Available from: http://www.dtors.org.uk/reports/ BaselineMain.pdf

15. More detail on trigger offences can be found here: http://www.cps.gov.uk/legal/d_to_g/drug_intervention_ programme/#a30

16. These offence types are not necessarily statutory offences, e.g. "bag snatch", they are categories used in the DTORS report.

17. The question asked was "Apart from anything you have already mentioned, have you stolen anything since your last interview?" See page 47 of the DTORS final outcomes report http://www.dtors.org.uk/reports/DTORS_Final_Main. pdf

18. The unit costs used in the VFM model can be found in the Table A2 on page 9 of the Home Office note: Revisions made to the multipliers and unit costs of crime in the Integrated Offender management Value for Money Toolkit. http://www.homeoffice.gov.uk/publications/crime/reducing-reoffending/IOM-phase2-costs-multipliers?view=Binary

19. Duborg, R. and Hamed, J. (2005). Estimates of the Economic and Social Costs of Crime in England and Wales: Costs of crime against individuals and households, 2003/04. London: Home Office. HO online report 30/05.

20. It is important to note that some of the cost components of the unit costs are weighted by the probability that they will be incurred, which depends on the probability that an offence is reported, recorded and investigated. For example, the victim service cost of a sexual offence is £32. This does not mean that this is the cost of the service given to a victim who requests it, but rather it is the cost of those services weighted by the probability that they are requested, which is very low (see page 5 of HO online report 30/05 for more details). In other words, these are the estimated costs of the offences, whether they are convicted or not and not the cost of the convicted offences. The actual costs of convicted offences would be much higher on average.

21. The report can be accessed here: http://www.nta.nhs.uk/ uploads/theimpactoftreatmentonreconviction.pdf

22. Further information about the Drug Data Warehouse can be found on the Home Office website here: http://www. homeoffice.gov.uk/publications/science-research-statistics/ research-statistics/crime-research/horr63/

23. One key issue in looking at offending before and after interventions that take place in response to and at the time of (suspected) offending behaviour is that there is a risk of finding a reduction regardless of the nature of the intervention, as the sample will often have the shared characteristic of a recent conviction. This may result in an overestimate of differences, as they would probably regress to the mean following the intervention. In order to compensate, therefore, the Home Office recommend that one conviction is removed per person who has a conviction in the 30 day period prior to the intervention. It is argued that this equates to the index offence that prompted

entry into the cohort. This method compensates for potential selection bias in the design and gives a more realistic indication of whether behaviour changes. This analysis was not done at an individual level, but by offence type at the cohort level, as a result it is not obvious which conviction should be removed in the 30 days prior to treatment and so all of the convictions were removed in the 30-day period prior to treatment. As a result, our method will underestimate the counterfactual volume of crime.

24. The drug treatment expenditure is the Adult Pooled Treatment Budget expenditure and local mainstream investment by Primary Care Trusts, Police, Probation and other partners for structured treatment only and is the based on the local drug treatment plans for 2010-11. It does not include Drugs Intervention Programme expenditure. We assume that the 2012-13 expenditure would be the same in cash terms as the 2010-11 budget (See Appendix E).

25. Best, D., Day, E. and Morgan, B. (2006). Addiction Careers and the Natural History of Change. London: NTA.

26. An NTA organised two day seminar was held in May 2010 to discuss the assumptions and methodologies used in the model, during which experts from academia and central government agreed to 20 years (on average) as an appropriate counterfactual.

27. The median is used due to some extreme outliers which could have given a misleading result.

28. Not all of this period will be spent in treatment as many clients leave and then come back if they need help. So the mean time spent in treatment is less than 3 years.

29. MDT refers to the database of individuals tested for opiates/cocaine following an offence for a trigger offence.

30. NTA (2010). A Long-term Study of the Outcomes of Drug Users Leaving Treatment. London: NTA.

31. Nordt, C. and Stohler, R. (2006). 'Incidence of Heroin Use in Zurich, Switzerland: A treatment case register analysis' in The Lancet (367): 1830-34.

32. Ward, J., Hall, W. and Mattick, R.P. (2009). 'Methadone Maintenance Treatment' in Mattick, R.P., Ali, R. and Litzeris, W. (Eds.) Pharmacotherapies for Opioid Dependence: Efficacy cost-effectiveness and implementation guidelines. New York: Informa Health Care.

33. This is an artificial construct to keep the model simple. In reality offending clients who are sustaining their recovery may continue to commit crime, even trigger offences, but it will not be drug-related. This could be termed 'residual crime'.

34. This is a lower figure than the published annual statistics figure of 54,064 because some records had to be excluded as they could not be matched effectively. The exclusions criteria are contained in the Home Office report on the Drug Data Warehouse which can be found here: http://www.homeoffice.gov.uk/publications/science-research-statistics/research-statistics/crime-research/horr63/

35. The 8-year period was selected as this is the mean time from first drug use to first treatment admission as measured by the National Drug Treatment Monitoring System. See Annex 1 for more details on the methodology. This analysis by definition excludes individuals who may have offended, but were not convicted as there is no record of their offences. Actual offences for those convicted are likely to be greater as not every offence is detected or leads to a conviction.

36. NAO (2010) Tackling problem drug use. Available from: http://www.nao.org.uk/publications/0910/problem_drug_use.aspx [Accessed 9th June 2011].

37. HM Treasury (2003). The Green Book: Appraisal and evaluation in central government. London: TSO.

38. However, it has been asserted that "There is no scientific evidence that MAT [Medication Assisted Treatment] lengthens addiction careers." (White, W. and Mojer-Torres, L. (2010) Recovery-Oriented Methadone Maintenance, page 135. Chicago: Great Lakes Addiction Technology Transfer Center, the Philadelphia Department of BehavioralHealth and Mental Retardation Services, and the Northeast Addiction Technology Transfer Center). In another paper opiate substitution treatment (OST) was associated with an increased duration of injecting measured by the time to long term cessation. However, the paper also found that OST "conferred health benefits irrespective of whether injecting drug users continued injecting". Kimber, J., Copeland, L., Hickman, M., Macleod, J., McKenzie, J., De Angelis, D., Robertson, J. (2010) Survival and cessation in injecting drug users: prospective observational study of outcomes and effect of opiate substitution treatment. British Medical Journal 2010;340:c3172.

39. Cornish, R., Macleod, J., Strang, J., Vickerman, P. and Hickman, M. (2010). 'Risk of Death During and After Opiate Substitution Treatment in Primary Care: Prospective observational study in UK General Practice Research Database' in British Medical Journal;341:c5475.

40. Haasen, C., Prinzleve, M., Gossop, M., Fischer, G., Casas, M. and the Cocaine EU Team (2005). 'Relationship Between Cocaine Use and Mental Health Problems in a Sample of European Cocaine Powder or Crack Users' in World Psychiatry 4(3): 173-176.

41. Gossop M, Marsden J, Stewart D, Lehmann P, Edwards C, Wilson A, Segar G (1998). 'Substance use, health and social problems of service users at 54 drug treatment agencies. Intake data from the National Treatment Outcome Research Study' in British Journal of Psychiatry, 173:166-171.

42. McKay D.R. and Tennant, C.C. (2000). 'Is the Grass Greener? The link between cannabis and psychosis' in The Medical Journal of Australia 172: 284–286.

43. Health Protection Agency (2011). Shooting Up: Infections among Injecting Drug Users in the UK 2010. An update: November 2011. London: HPA.

44. Coles, B., Hutton, S., Bradshaw, J., Craig, G., Godfrey, C. and Johnson, J. (2002). Literature Review of the Costs of Being 'Not in Education, Employment Or Training' at Age 16-18. Research Report No 347. London: Department for Education and Skills.

45. Reeve,K. and Batty, E. (2011). The Hidden Truth about Homelessness: Experiences of single homelessness in England. London: Crisis.

46. http://www.mungos.org/homelessness/facts/homelessness_statistics

47. Crisis (2004). Living in Fear: Violence and victimisation in the lives of single homeless people. London: Crisis.

48. PHRU (2009). Mental Ill Health in the Adult Single Homeless Population. A review of the literature. London: Crisis.

49. The Treatment Outcomes Profile (TOP) has been developed by the NTA and, since 2007, implemented throughout the drug treatment system in England. The tool was developed with three aims in mind: to provide a tool that is clinically useful, that can add value to the important work that is done between the client and the keyworker; to enable the NTA to monitor and assess the effectiveness of the national drug treatment system; and to support commissioners and treatment providers in making improvements, where necessary in the local treatment system.

More information about TOP is available here: http://www.nta.nhs.uk/who-healthcare-top.aspx

50. Those with accommodation are reported to be nearly twice more likely to have positive outcomes from their treatment than those who have no fixed abode. Homeless Link (2007). Clean Break: Development of Integrated housing and care pathways for drug users. London: Housing Link.

51. Hunter, G., May, M. and the Drug Strategy Directorate (2004). Solutions and Strategies: Drug problems and street sex markets Guidance for partnerships and providers. London: Home Office

52. Jones, A., Donmall, M., Millar, T., Moody, A., Weston, S., Anderson, T., Gittins, M., Abeywardana, V. and D'Souza, J. (2009). The Drug Treatment Outcomes Research Study (DTORS): Final outcomes report. Home Office Research Report 24. London: Home Office.

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61. The Department for Education commissioned a report into the costs and benefits of young people's treatment: Frontier Economics (2011). Specialist Drug and Alcohol Services for Young People – a cost benefit analysis. London: Department for Education.

62. Ibid.

63. Ibid.

64. Ibid.

65. The figure is based on 2003-04 priced estimates.

66. Gordon, L., Tinsley, L., Godfrey, C. and Parrot, S. (2006). 'The Economic and Social Costs of Class A Drug Use in England and Wales, 2003/04' in Singelton, N., Murray, R. and Tinsley, L. (eds.) Measuring Different Aspects of Problem Drug Use: Methodological Developments. 2nd edition. Home Office Online Report 16/06. London: Home Office.

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