Public Health England

Protecting and improving the nation's health

An evidence review of the outcomes that can be expected of drug misuse treatment in England

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Contents

List of figures

Executive summary

In March 2015, the Department of Health commissioned Public Health England (PHE) to “review the evidence on: what can be expected of the drug treatment and recovery system and provide advice to inform future policy”.

PHE used a mixed methods approach to review the evidence, drawing on statistical information, engagement with stakeholders including experts by experience, and commissioning external reviews by academic experts.

The review begins with a brief summary of the current nature and prevalence of drug misuse, the history of drug treatment in England, and the outcomes it achieves. The international research literature on treatment effectiveness is then summarised, with comparisons made to effectiveness in England. Comparisons to treatment data from other countries are made where possible. The impact of housing problems, unemployment and social deprivation on treatment engagement and outcomes is reviewed. Finally, the review uses modelling to consider the likely size, characteristics and needs of the drug treatment population in the next four years, and reflects on the challenges for local treatment systems and recommends how treatment outcomes might be measured, maintained and improved.

What can be expected of drug treatment?

Drug treatment has been evaluated by researchers on a wide range of measures, including drug use, abstinence from drug use, drug injecting, overdose, health and mortality, crime, social functioning including employment, housing, family relations, and the perceptions of service users about their recovery status. The breadth of these measures reflects the broad range of benefits anticipated from drug treatment.

England has a well-established network of locally commissioned and run public systems and services that provide this treatment. There is extensive international research evidence on the interventions provided by these services and how people can be helped to tackle drug misuse and recover. This evidence forms the basis of guidance for local treatment systems.

There is consistent evidence that community-based needle and syringe programmes are associated with reduced rates of HIV and hepatitis C infection in the target population. Opioid substitution treatment (typically using methadone or buprenorphine) is the most widely studied medical intervention for heroin dependence, with consistent reports of reduced drug use, injecting and mortality. Several types of psychosocial intervention have also been evaluated, with mixed results. Specialist drug treatment

services are associated with reductions in offending. The evidence points to opioid substitution treatment as an important driver of crime reduction, with reduced offending proportionate to the time people spend in treatment.

Taken together, the research literature suggests that investment in drug treatment is likely to substantially reduce social costs associated with drug misuse and dependence. Current estimates suggest that the net benefit-cost ratio is approximately 2.5 to 1.

Social factors are important influences on treatment effectiveness. Drug use and misuse tend to be clustered; for example, areas of relatively high social deprivation have a higher prevalence of illicit opiate and crack cocaine use and larger numbers of people in treatment. Unemployment and housing problems have a marked negative impact on treatment outcomes and exacerbate the risk that someone will relapse after treatment. Alongside other benefits, employment support and achieving good employment may lead to improvements in treatment outcomes and reduced relapse.

How well do the English drug treatment systems perform?

The question of how well local drug treatment systems in England perform compared to the research literature and to treatment systems in other countries is difficult to answer.

The National Drug Treatment Monitoring System (NDTMS) collects regular activity and performance data from all public drug treatment services in England, which can then be used to report a wide range of outcomes and indicators, nationally and locally. Data collection on this scale and with such breadth of coverage is rare in other countries, which makes the availability of any international comparisons very limited.

Alongside this, treatment interventions evaluated by researchers are often tightly controlled and may relate to populations and contexts that make comparisons difficult. There has also been relatively limited data published on the effectiveness of treatment systems in other countries.

The review found that treatment outcomes in England are comparable with or better than other countries and in comparison to the scientific literature, as follows:

- the treatment penetration rate (60%) is among the highest reported
- access to treatment (97% within three weeks) is comparable to other countries
- the rate of drug injecting among all 15-64 year olds (0.25%) is relatively low
- the rate of drop out from treatment before three and six months (18% and 34%, respectively) is comparable to the literature (28% on average)
- England has a very low rate of HIV infection among the injecting drug user population (1%), which compares favourably internationally

- the rate of HCV infection (50%) is lower than several other countries with available data
- the rate of stopping injecting (52% after three months; 58% after six months; 61% after one year) is comparable with, or better than, the scientific literature
- treatment in England is associated with a marked reduction in convictions (47% among those retained in treatment for two years or successfully completed treatment)
- successful completion of treatment rates for non-opiate drug users, who only receive psychosocial interventions, have increased from 14% in 2005/6 to 37% in 2014/15 for non-opiate drug and alcohol users, and from 13% in 2005/6 to 42% in 2014/15 for users of non-opiate drugs alone

While several key treatment indicators are comparable or better in England, there are opportunities for further reductions in the use of illicit opiates during treatment and drug-related mortality:

- the rate of illicit opiate abstinence after three and also six months of treatment in England (46% and 48%, respectively) points to relatively poorer performance in comparison with the literature (56% on average)
- the drug-related death rate in England (34 per million in 2013) is substantially lower than in the USA but considerably higher than elsewhere in Europe

The changing treatment population and its impact on outcomes

Around 75% of people in drug treatment in England are receiving help for problems related to the use of opiates, mainly heroin. PHE estimates that the proportion of people in treatment with entrenched dependence and complex needs will increase and the proportion who successfully complete treatment will therefore continue to fall.

The proportion of older heroin users, aged 40 and over, in treatment with poor health has been increasing in recent years and is likely to continue to rise. An ageing cohort of heroin users (many of whom started to use heroin in the 1980s and 1990s) is now experiencing cumulative physical and mental health conditions. Older heroin users are also more susceptible to overdose. It is important to help these people access appropriate general healthcare services. All indications suggest that it is challenging to help people with complex needs and a long treatment history to achieve recovery.

The number of drug misuse deaths has increased over the past 20 years, with a significant rise in the last three years, to the highest number on record. In the next four years, PHE estimates that there will be an increase in the proportion of people in treatment for opiate dependence who die from long-term health conditions and overdose.

There are reports of increasing problems of misuse and dependence associated with some prescription and over-the-counter medicines. The use of new psychoactive substances (NPS) is also increasing, and is a particular problem in prisons. New patterns of drug use and health risk behaviour are also becoming established including NPS used by injection, and drugs used alongside high-risk sexual behaviour ('chemsex').

Advice to inform policy and practice for national and local government

- Ensure drug treatment continues to address a broad range of outcomes, including harm reduction, social integration and recovery, through integrated treatment and recovery support systems.
- Expand the use of drug treatment outcomes to better reflect the breadth of the benefits of drug misuse interventions. The current primary outcome measure (successful treatment completion and no return to treatment, used as the proxy measure of success) should be augmented to better reflect progress made by individuals, through the national and local monitoring of:
  - the proportion of people in need who are in treatment
  - good treatment access
  - incident rates of bloodborne viral infections
  - cessation of illicit opiate use while in treatment
  - longer-term rates of treatment re-presentation
  - treatment entry rates following prison release
  - access to employment and housing support services
- Separate drug treatment outcome indicators for both opiate users new into treatment and for existing cohorts, to allow tracking of the progress of those for who evidence tells us we can expect higher recovery rates.
- Maintain a realistic recovery ambition for the ageing cohort of heroin users with complex needs, accepting that the proportion of people who successfully complete treatment is likely to continue to fall.
- Provide longer-term employment and housing support, including in-work support, to help people gain & maintain employment and appropriate housing.
- Develop strategies to address the recent increases in drug-related deaths, including integrating healthcare with drug treatment for people who use drug and improving local processes for reviewing incidents.

Advice for commissioners and providers of local drug treatment and recovery systems

- Ensure there are arrangements to meet the physical and mental health needs of people who use drugs, particularly for older people in treatment.

- Implement evidence-based interventions to reduce the use of illicit opiates at the start of and throughout treatment.
- Implement evidence-based treatment interventions recommended by NICE.
- A policy of limiting the time that people are able to spend in treatment is not supported by scientific evidence and can be counterproductive.
- Ensure there are robust and integrated pathways between drug treatment and all points of the criminal justice system, including pathways between prison and community-based treatment.
- Closely monitor changing patterns of drug use, including NPS use and problematic use of medicines, and use multi-faceted responses, including managing prescribing practice, developing workforce skills and developing new service pathways for specific sub-populations.

Conclusion

Good progress has been made in reducing drug-related harm and promoting recovery through the widespread implementation of evidence-based drug treatment, and national and local government should build on these benefits.

It is vital that drug treatment systems continue to address a broad range of outcomes, including harm reduction, reduced drug use and social integration and recovery. The assessment of drug treatment outcomes should be expanded to better reflect the breadth of the benefits of drug misuse interventions.

Social factors, including housing, employment and deprivation, are associated with substance misuse and these social factors moderate drug treatment outcomes. It is therefore important to provide longer-term employment support, including in-work support to help people maintain employment, along with housing support that is aligned with drug treatment.

Finally, outcome expectations need to be cognisant of the fact that the proportion of older heroin users in treatment with poor health has been increasing in recent years and is likely to continue to rise. It may be challenging to help people with complex needs and a long treatment history to achieve recovery, but it is vital to help them access appropriate healthcare services as a vital step in the process.

Introduction

Drug misuse and dependence can cause substantial health, social and economic harm to individuals, their families and the wider community. Drug treatment can reduce this harm and help individuals to recover.

In March 2015, Jane Ellison, Parliamentary Under Secretary of State for Public Health, commissioned Public Health England (PHE) to "review the evidence on: what can be expected of the drug treatment and recovery system and provide advice to inform future policy". The commission was part of a letter setting out the priorities of PHE, and noted that "PHE has an important role in developing and publishing the evidence base to allow faster progress on improving the public's health".

England has a well-established network of locally commissioned and run public drug misuse treatment systems (drug treatment, herein). These local systems provide harm reduction and structured intervention services provided in the community and in prison.

There is extensive international research evidence on drug treatment and how people can be helped to tackle drug misuse and recover. This evidence forms the basis of guidance for local treatment systems. How well does the English drug treatment system compare to the scientific evidence, and to the treatment systems in other countries? The answer to this question has important implications for the operation of treatment systems and the expectations for effectiveness.

This review aims to:

- give policy makers and local areas an objective assessment of the research evidence on what drug treatment outcomes are achievable
- contrast outcomes in England to the evidence and other drug treatment systems
- review the impact of housing problems, unemployment and social deprivation on treatment engagement and outcomes
- consider how drug treatment will need to be configured to meet future need and recommend an appropriate set of measures or indicators for treatment evaluation

Scope of this review

The review asked the following seven questions:

1. What is the history of drug misuse and drug treatment in England?
2. What is the prevalence of drug misuse and the profile of the treatment population, and how are they changing?

3. What harms does drug treatment reduce?
4. Does drug treatment England achieve the outcomes we should expect?
5. What is the impact of housing, employment and social deprivation on treatment outcomes and what are the interdependencies between drug treatment and other services?
6. How should treatment be configured and resourced to meet the needs of an ageing heroin using population and respond to new patterns of drug use?
7. What are the appropriate outcomes to evaluate treatment effectiveness?

A brief summary of the social and economic costs associated with drug use and the value for money of drug treatment is presented in the closing section of Chapter 1 as part of the framing of the review. The question of the cost-effectiveness of specific types of treatment for drug use, such as opioid substitution therapy, was not in the scope of the review. These have been comprehensively addressed by the National Institute for Health and Care Excellence (NICE).

It should be noted that PHE provides local areas with value for money tools and resources to assist them in assessing the social return on investment and the cost-effectiveness of the interventions and treatment systems they commission (see the Value for Money website for more information).

Methods and procedure

A mixed methods design was selected and an expert reference group convened. The reference group included a range of stakeholders, including academics, service commissioners and providers, and experts by experience. They were drawn from community and residential treatment services and from the criminal justice system. A list of members is shown in Annexe A. The group advised on the development and implementation of the review and provided expert reflection on the review process, PHE's synthesis of the material, and a wider view of the strengths, limitations and future challenges for the treatment system.

PHE's alcohol and drug service user engagement lead facilitated 14 focus group discussions on drug treatment with a range of service user networks and groups. This included those who identified themselves as being in abstinent recovery, in medically assisted recovery, those using new psychoactive substances, people from LGBT and BME communities, and used existing peer-led groups. In total, 116 experts by experience participated. Most were familiar with being consulted on service design and local policy, and the review process extended this opportunity to the national level. This aspect of the review was guided by a confidentiality protocol and supported by research ethical approval. The sessions were audio recorded and transcribed. Thematic summaries of the main findings are presented in the chapters that follow.

Analysis of the National Drug Treatment Monitoring System (NDTMS) was done to characterise the treatment population, evaluate local drug treatment system effectiveness, estimate the size and characteristics of the drug treatment population in England in the next four years and, where possible, compare the effectiveness of drug treatment in England to treatment systems overseas and the research evidence. Independent academics from the UK and overseas provided expert peer commentaries on the analysis and interpretation.

Reviews of the evidence for treatment effectiveness (and international comparators), and unemployment and housing as moderators of recovery outcomes and effective models of support, were commissioned from independent academics. A rapid evidence assessment (REA) methodology was used for these reviews. An REA is used by government departments, allied agencies and academics to quickly review and critically appraise a topic to inform policy decisions. Each REA emphasised systematic reviews and drew on single studies as required. Each REA was independently peer reviewed and updated in the light of these commentaries. The full REA reports are available as companion publications to this report, available here. A summary of the main findings from the reviews are presented in the relevant chapters in this report.

The evidence review was subject to an extensive peer review process involving UK and international academics to ensure accuracy and academic rigour. An academic technical sub group of the external expert advisory group also advised the review team on the methods used.

A table outlining how the review's aims, questions, methods, rapid evidence assessments and other methods fit together is included at Annexe B.

Chapter one: A brief history of drug misuse and treatment in England

This opening chapter aims to contextualise the review by offering a brief history of drug misuse treatment, tracing the origins and development of treatment in England, and summarising the economic and social costs of illicit drug misuse.

Early 20th century to the 1970s

The roots of drug misuse lie partly in the global trade in opium, and partly in the distribution, control and consumption of psychoactive drugs. Although heroin injecting and dependence did exist in England in the early decades of the 20th century (with some provision of prescribed injectable morphine), it was confined to a small population from affluent sections of society and was not considered to be a significant social problem.

The distribution and use of morphine, cocaine, and later cannabis, were criminalised, but these drugs could be prescribed by doctors. This arrangement became known as the ‘British system’ and was set out in the report of the Departmental Committee on Morphine and Heroin Addiction (Rolleston Committee) in 1926.[1] Until the 1960s the medical profession regulated the distribution of licit opioid supplies and the provisions of the Dangerous Drugs Acts of 1920[2] and 1923[3] controlled illicit supplies. The medical treatment of dependent drug misusers was separated from the punishment of unregulated use and supply.

During the 1960s and 1970s there was a significant increase in drug use. Some sections of youth subculture became associated with the use of cannabis and stimulant amphetamine drugs.[4] In 1961, the international Single Convention on Narcotic Drugs[5] sought to control global drug trading and use, and banned countries from treating addicts by prescribing illegal substances, allowing only scientific and medical uses of drugs. Partly in response to international pressure, the UK implemented the Drugs (Prevention of Misuse) Act in 1964.[6] This introduced criminal penalties for individual possession of small amounts of drugs, as well as possession with intent to supply.

In 1971, the Misuse of Drugs Act[7] introduced a tiered system of drug control and the 1967 Dangerous Drugs Act[8] prevented non-specialist doctors from prescribing diamorphine and cocaine for the treatment of dependence. With restrictions on prescribing, a small network of specialist clinics was opened across the country. In 1975, it was estimated that there were around 5,000 people in England using heroin.[9]

The 1980s and 1990s

In the early 1980s, smokeable heroin entered the illicit drug market. This coincided with the deindustrialisation of the North and the Midlands. Home Office notifications pointed to a dramatic increase in the prevalence of heroin use, with cocaine also becoming significant in the drugs market by the end of the decade.

In 1982, the Treatment and Rehabilitation report of the Advisory Council on the Misuse of Drugs (ACMD)[10] was the stimulus for treatment service expansion and non-specialist substitute prescribing. The ACMD envisaged a range of community-based services, and a central government initiative distributed funds to health authorities and voluntary agencies. Several residential rehabilitation services were also established at this time.

By 1998, there were 85,000 heroin users in treatment, with concentrations in Liverpool, Manchester and London.[11] Roughly, there were another 100,000 heroin users who were not in treatment. Community treatment clinics based their prescribing treatment around oral doses of the synthetic opioid methadone, and also offered psychosocial support in the form of general counselling.

Although these new heroin users started by smoking heroin, many rapidly progressed to injecting. This practice risked bloodborne viral transmission through shared needles and syringes. In 1988, the ACMD published its first report on AIDS and Drug Misuse.[12] This concluded that HIV was a more significant threat to public health than drug misuse and clinical practice should be realigned. Following this, the Department of Health supported the introduction of a network of needle and syringe exchanges across the country. In this pragmatic, harm reduction context, the focus of methadone prescribing practice moved from helping people abstain from heroin to maintaining people in treatment and reducing risk and harm. In support of this harm reduction orientation, research evidence showed rates of HIV and other bloodborne viral infections could be kept low.[13] Norman Fowler, as Secretary of State for Health, was a significant advocate of needle and syringe programmes and this public health approach.

In 1994, Health Minister Brian Mawhinney established a ‘Task Force’ to determine the clinical benefit of the harm reduction approach. To inform this process, the National Treatment Outcome Research Study (NTORS) was established – the largest study into the effectiveness of treatment yet conducted in the UK. In 1996, the Task Force report[14] reviewed the international evidence and early findings from NTORS[15] and endorsed the prevailing harm reduction and maintenance prescribing approach.

The 1995 Drug Strategy[16] established local Drug Action Teams (DATs) in every top tier local authority, to take strategic control of local efforts to prevent supply, promote prevention, and provide treatment. Commentators characterised this strategy as the end of the phase of health driven policy and the beginning of policy emphasis on tackling

drug-related crime.[17] Subsequently, the central premise of drug strategies until 2008 was that the most problematic users were responsible for the majority of criminality in society and that if they could be treated (either voluntarily or through coercive measures) then crime rates would decline.

For the remainder of the 1990s overall drug use and drug-related crime continued to increase, as did overdose deaths. ‘Crack’, a smokeable form of cocaine, became embedded in UK drug culture giving rise to concerns that this would create a new epidemic, with an impact on social cohesion and crime. John Major’s Conservative government also began the development of dedicated referral routes into treatment for offenders. Through the creation of DATs, a local structure was established that would see a blend of local ownership and national resources for the following 17 years.

From 1997 the Labour government built on this approach, with a principle of not being seen as “soft on drugs”, and continued to tackle the link between drugs and crime. In the following year, Counselling, Assessment, Referral, Advice and Throughcare (CARAT) schemes were introduced to improve continuity of care between prisons and community-based treatment services, and Arrest Referral Schemes were expanded to improve pathways from police custody into treatment. However, the rapid expansion of heroin and crack addiction was not matched by increased funding.

From 2000 to the present

Jointly accountable to the Department of Health and Home Office ministers, the National Treatment Agency for Substance Misuse (NTA) was formed in 2001. The NTA was given responsibility for overseeing spending of the pooled treatment budget (a centrally allocated budget distributed though the Department of Health to supplement local spending on drugs). Originally £50m per year at its inception, the pooled treatment budget increased to an overall level of £466.7m by 2012-13.[18] In addition, in 2012/13 the NTA estimated an additional £200 million was budgeted locally from health and council mainstream funding for drug treatment and support services. The view that drug treatment was making a significant impact on reducing drug-related offending was the main impetus for increased Government investment in drug treatment.

The Integrated Drug Treatment System (IDTS) was rolled out from 2006 to 2010 to ensure evidence-based, prescribing and individually-focused treatment in all prisons in England. Funding for the IDTS moved from the Ministry of Justice to the Department of Health in 2011, and at that time totalled £108m.[19]

The Drug Interventions Programme (DIP) was established in 2002 to provide rapid routes into treatment for all offenders, and joint targets were agreed with the Youth Justice Board. The number of adults in treatment more than doubled to over 200,000 and waiting times fell from an average 12 weeks to five days.[18]

From around 2005, there was a critique of the national approach to maintenance prescribing by some commentators who saw this as a barrier to “full recovery” for people in treatment. Parts of the treatment sector, some academics and some groups of service users saw harm reduction and an emphasis on treatment retention as leading to a failure to support people to make meaningful and sustained changes in their lives and recover from their dependency. In response, there was an increasing emphasis on treatment quality, and financial incentives for successful completions were included in the pooled treatment budget allocation formula.

The 2010 Government Drug Strategy[20] put recovery at the centre of policy. It placed less emphasis on tackling the link between drugs and crime, and focused on helping people attain wider social and personal resources which would promote recovery. The 2012 Health and Social Care Act[21] moved treatment funding into a public health grant, making local authorities responsible for commissioning drug treatment and devolving decision making on the level of funding and the configuration of services to local authorities. The protection previously afforded to the majority of the funding for drug treatment through the separate funding mechanisms was significantly diminished and local authority decision making on treatment is now made in the context of competing priorities. With responsibility for commissioning drug treatment now with local authorities, the approach to partnership with other stakeholders and commissioners is determined locally, however the Health and Social Care Act gave the NHS and local health and wellbeing boards the role of strategically aligning local partners. The Act also moved some of the NTA’s functions into Public Health England, with a focus on supporting local areas to execute their duties and promoting access to effective evidence based interventions.

The various policy drivers for drug treatment, including crime reduction, public health and recovery, have had different degrees of influence at various points in recent history, but commentators have argued that all are active at any particular time and treatment is influenced by their dynamic interplay.[22]

Current social and economic costs of drug misuse

Today, drug misuse and dependency is associated with a range of harms including poor physical[23] and mental health,[24] unemployment,[25] homelessness,[26] family breakdown[27] and criminal activity.[28] The health and wellbeing of family members and carers can also be affected.[29] Heroin and cocaine are associated with the majority of social costs associated with drug misuse[30] and heroin dependence continues to be the most common problem treated in England. People with heroin dependence usually develop a tolerance through daily use, which can result in an expensive addiction and a motivation to commit crime. For example, Jones et al[31] estimated in 2009 that adult drug users not in treatment typically spent £94/£231 (median/mean) a week in current prices on drugs.

The costs to society are significant. Latest estimates by the Home Office[32] suggest that the cost of illicit drug use in the UK is £10.7bn (or £11.4bn in 2015/16 prices). This figure includes drug-

related crime, enforcement, health service use and deaths linked to eight illicit substances: amphetamines, cannabis, crack, ecstasy, heroin, LSD, 'magic mushrooms' and powder cocaine (see Figure 1).

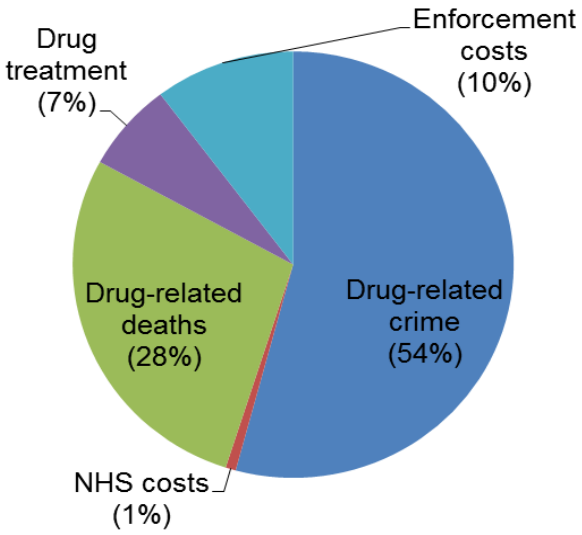

Figure 1: Breakdown of the estimated social and economic costs of illicit drug use, 2011/12

Source: Home Office, 2013 [32]

Given that drug-related harm is more extensive than the costs captured,[33] it is highly probable that the current figure is an underestimate.

Copello at al[34] for the UK Drug Policy Commission (UKDPC) estimated the annual cost to the family members and carers of heroin and/or crack cocaine users to be £2bn.[i] The researchers considered the costs of being a victim of crime, lost employment opportunities and health service use, as well as financial support given to relatives.

In 2008, Hay and Bauld [35] estimated that 80% of heroin and/or crack cocaine users in treatment in England accessed welfare benefits[ii] in 2006. Approximately 267,000 benefit claimants (6.6% of all working age claimants) were heroin/crack cocaine users. According to HM Government (2010),[20] drug and/or alcohol misusers generate welfare benefit expenditure costs of approximately £1.6bn per annum, or £1.7bn in today's prices.

[i] £1.8bn in 2008 prices; unit cost = £9,497; 95% CI [£7,918, £11,076]
[ii] The benefits which the study focused on were: Disability Living Allowance, Incapacity Benefit, Income Support and Jobseeker's Allowance. These were replaced by the Universal Credit from 2013.

The value for money of drug treatment

Investment in drug treatment can substantially reduce the economic and social costs of drug-related harm. The most recent evidence on the value for money of drug treatment comes from the Drug Treatment Outcomes Study (DTORS).[36] DTORS was an observational, cohort follow-up study with 1,800 people enrolled in treatment. Participants were asked to report their use of accommodation, health and social care services, as well as their offending behaviour. Quality-adjusted life years (QALYs)[iii] were also estimated using the utility scores derived from the SF12 health status survey instrument.

Data collected at baseline, at 3-5 months' follow-up, and again after one year, was used to model cost-benefit and cost-effectiveness. While there are limitations to this research due to the lack of a control group, the findings suggested that there are net benefits from drug treatment, with an overall benefit-cost ratio of approximately 2.5:1. This suggests that every £1 invested in drug treatment results in a £2.50 benefit to society.

For many drug users, especially the most entrenched, engaging in treatment is the catalyst for getting the medical help they need to address their physical and mental health problems. Quickly identifying and treating a variety of medical conditions caused by or related to drug use can save the NHS money. From the DTORS study, Davies et al [36] estimated that the cost of healthcare alone for adult drug users not in structured treatment is £5,380 per annum.[iv] There were 206,117 people engaged in treatment in 2014/2015; if they had not been in treatment, they may have cost the NHS over £1.1bn, using these estimates. According to the same study, healthcare costs fall by 31% when drug users are in treatment.

Drug treatment reduces people's need for drugs, which in turn reduces their drug-related offending. As such, treatment is associated with substantial crime reduction benefits. The NTA (2012)[33] using data from DTORS, as well as matching the national drug treatment monitoring system (NDTMS) and police national computer databases, estimated offending behaviour before, during and after treatment. The authors estimated that structured treatment prevented 4.9 million crimes in 2010/2011, with an estimated saving to society worth £1bn in today's prices and a further £749m saved from former drug users sustaining their recovery.

Main points:

[iii] A Quality Adjusted Life Year (QALY) is a health outcome measure, commonly used in health economic modelling, comprising life expectancy and quality of life.

[iv] The cost of healthcare for adult drug users not in structured treatment is reported as £4,543 (2006/07 prices) over a 51-week period in the report.

- the main policy objectives influencing the focus and resourcing of drug treatment have evolved over time, and include public health, crime reduction and recovery. The interactions between these are complex and dynamic
- drug misuse and dependency is associated with a range of harms including poor physical and mental health, unemployment, homelessness, family breakdown and criminal activity. Heroin and cocaine have been associated with the majority of social costs associated with drug misuse
- investment in drug treatment can substantially reduce the economic and social costs of drug-related harm. Many studies have shown that the benefits of treatment far outweigh the costs, with the most recent evidence estimating a benefit-cost ratio of 2.5:1[36]

Chapter two: The prevalence of drug misuse and the profile of people in treatment

This chapter summarises the current prevalence of drug use and related harms in England and change in the profile of people in treatment during the past decade. Recent trends in England's drug treatment measures or indicators are also presented.

Prevalence of drug use in England (and Wales)

There are currently two sources of prevalence information: the Crime Survey for England and Wales commissioned by the Home Office,[37] and estimates of problematic opiate use (mainly heroin and non-medical use of opioid painkillers) and crack cocaine use for England, produced by Manchester University (National Drug Evidence Centre) and Liverpool John Moores University (Centre for Public Health).[38, 39, 40, 41, 42, 43]

Figure 2 shows the Crime Survey estimate of the percentage of people aged 16–59 who declared illicit drug use in the past year from 1996 to 2015.[37] There was a sustained reduction in the proportion of people using any drug from 2004 to 2008 and then a levelling off.[44] This overall fall is due to the reduction in the use of cannabis, with the use of class A drugs remaining relatively stable.

Drug consumption is not evenly distributed across age groups. Figure 3 shows the prevalence of drug use in the younger age group, aged 16–24, of the cohort shown in Figure 2. The proportion of young people reporting any drug use in the last year is double that estimated for adults. Young people's use over the past decade shows a very similar trend to that of adults. The use of any class A drugs has remained relatively stable.

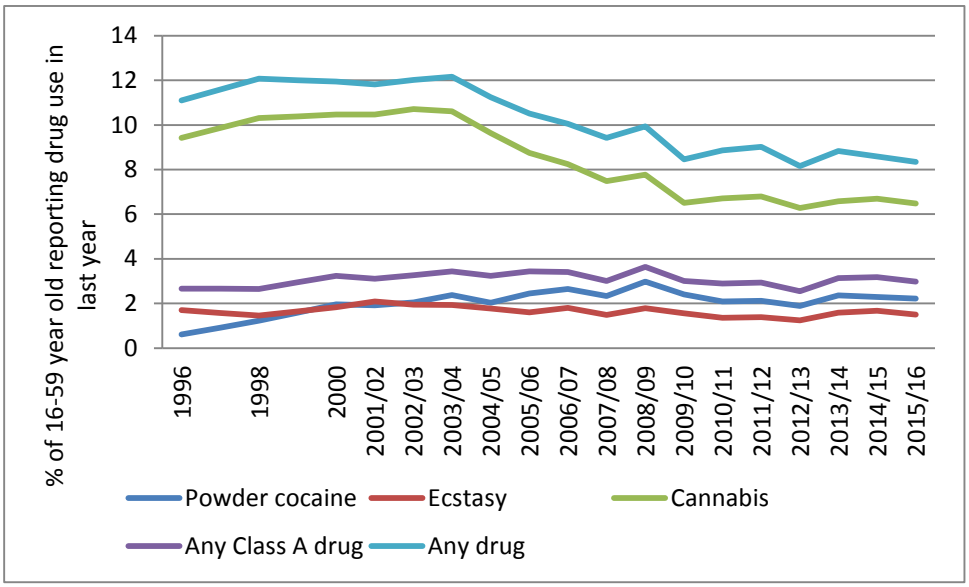

Figure 2: Percentage of individuals aged 16-59 reporting use of illicit drugs in the last year (England and Wales)

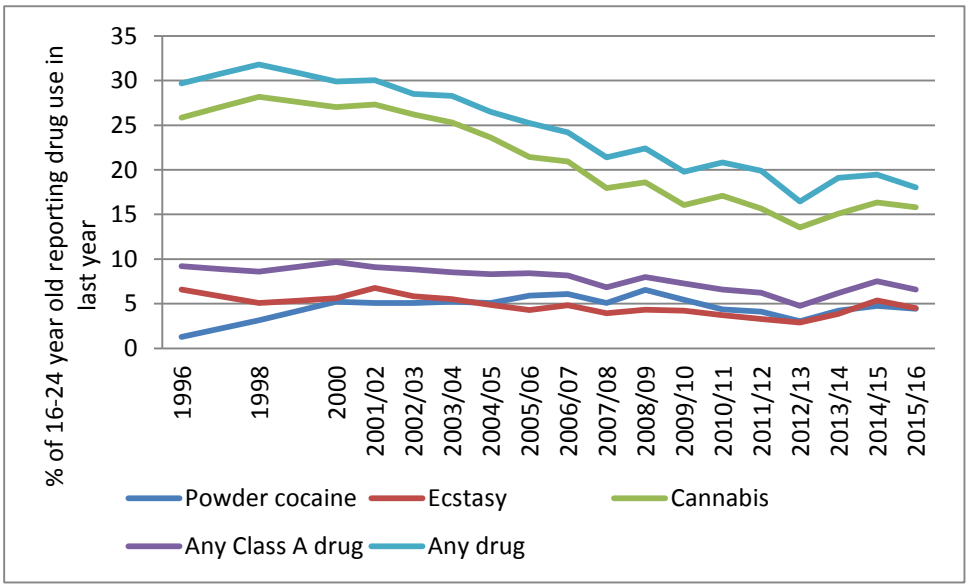

Figure 3: Percentage of individuals aged 16-24 reporting use of illicit drugs in the last year; (England and Wales)

Figure 4 shows that the estimated number of individuals using opiates and or crack cocaine (OCUs) has fallen significantly from a peak in 2005–2006 of about 333,000 to just fewer than 295,000 in 2011-2012.[45] The estimate of the numbers using opiates has fallen from around 285,000 to 255,500 over the same period, with those estimated to be using crack falling at a similar rate.

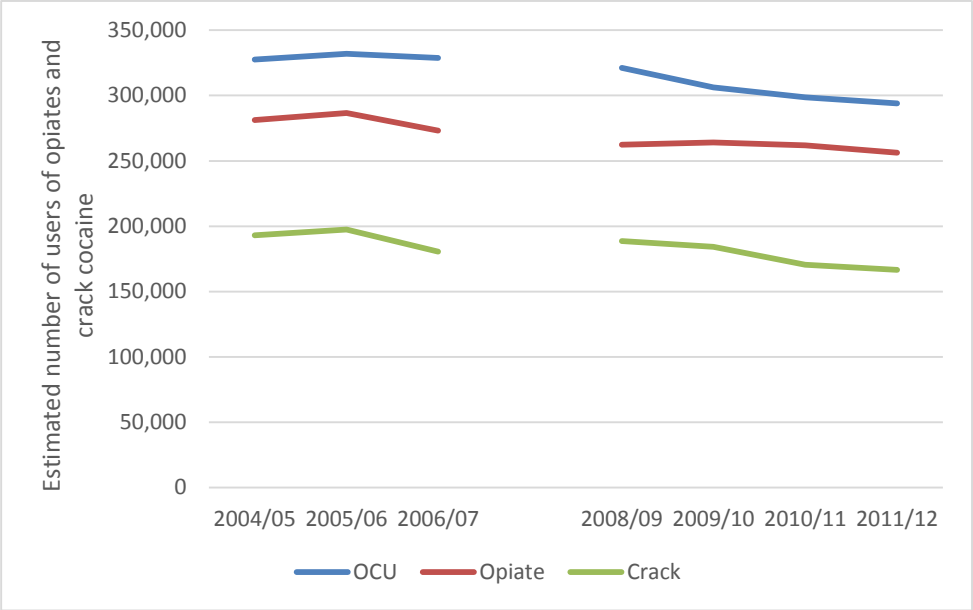

Figure 4: Indirect estimates of the number of opiate and / or crack cocaine users aged 15-64 in England (2005-2012)

Figure 5 shows a substantial fall in the estimated number of opiate and crack users who are under 25 years of age (with the number dropping by over half from 73,000 to 33,000 between 2004–2005 and 2011-2012).[46] The reduction in prevalence has been less marked among the 25–34 age group. However, there has been a consistent and steady increase in the estimated number of opiate and/or crack users over the age of 35. The rise in this older age group is due to increasing age among the sub-population who started using heroin in the 1980s and early 1990s.

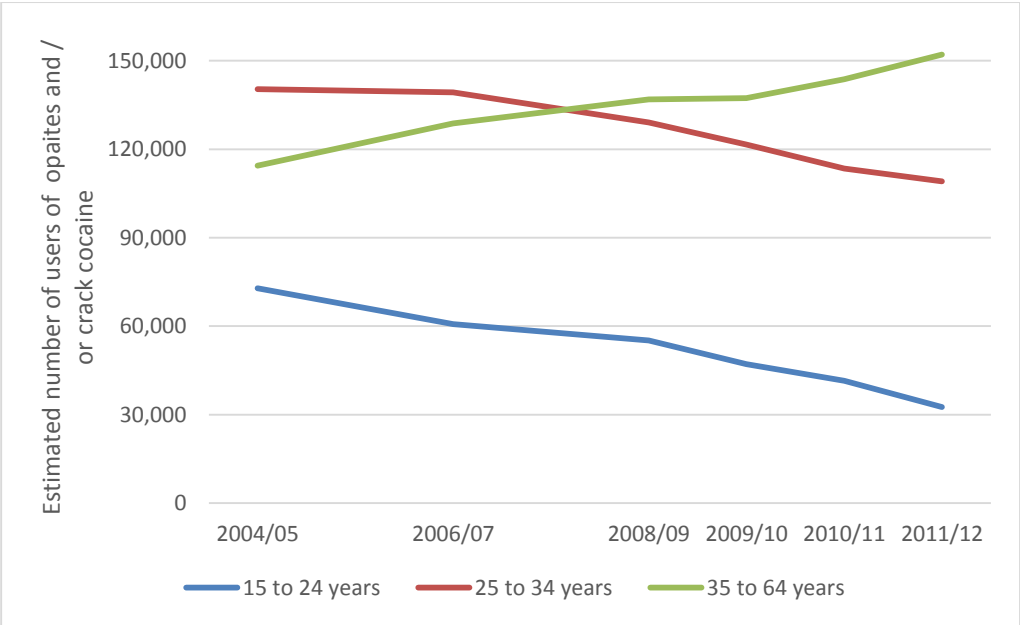

Figure 5: indirect estimates of the number of opiate and / or crack users in England by age group (2005-2012)

The estimated number of people who inject illicit opiates in England has fallen from around 130,000 in 2004-2005 to around 90,000 in 2010-2011.[38]

This fall is also reflected in the number of opiate users that are recorded as currently injecting when they start drug treatment. Figure 6 below shows the number of individuals presenting to treatment with problematic opiate use and who are injecting. The number of current injectors presenting to treatment has fallen considerably and is now just over half the number in 2005–2006.

Figure 6 also shows the numbers using other drugs who are injecting at presentation. This number has also fallen over the past decade, albeit from a much lower baseline and not as markedly. Other substances that are injected tend to be the amphetamines, though an increase in the injecting of the long-acting, cathinone-type stimulant mephedrone has also been reported over the last few years.

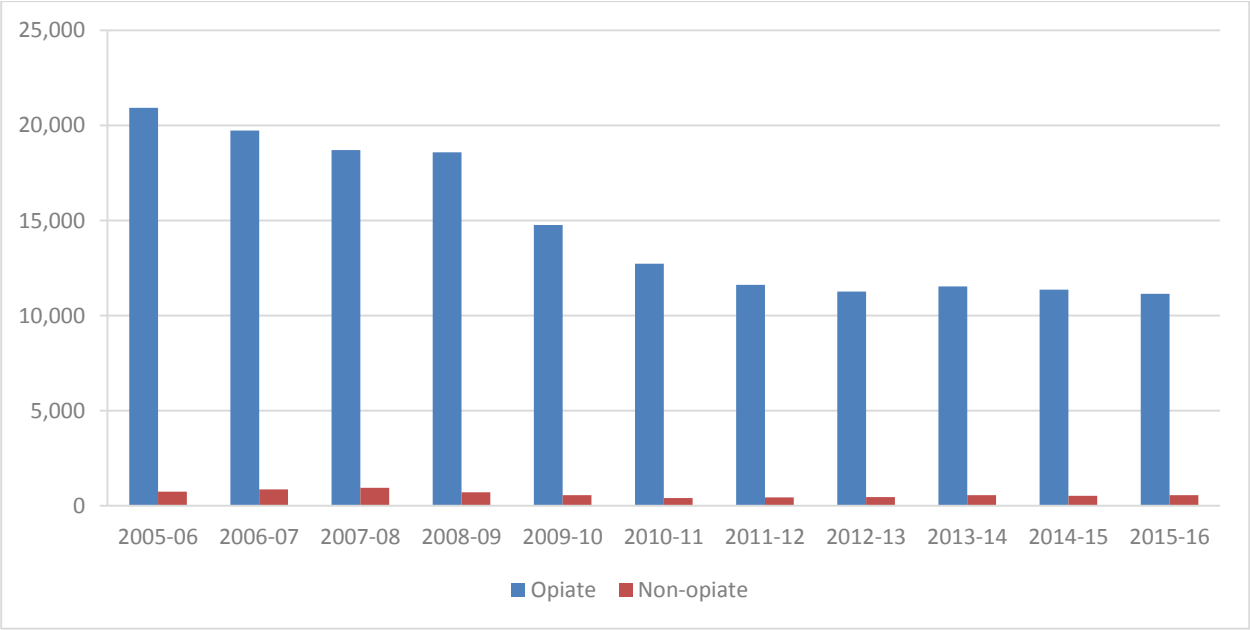

Figure 6: Number of individuals (aged 18 and over) reporting injecting at the start of treatment by substance (2005-2016)

Profile of the population in drug treatment

In England, the National Drug Treatment Monitoring System (NDTMS) collects information on the provision of alcohol and drug treatment. NDTMS is a national reporting requirement and is used locally to help plan services, ensure need is being met and improve outcomes. Approximately 1,000 treatment services report information each month to NDTMS. These services provide OST and psychosocial interventions in the community, in inpatient and residential settings, and in prison.

NDTMS was established in 2004. Data presented in this section reports trends from 2005–2006, which was the first full year that the data collection was reliable enough to produce accurate annual statistics (for further information see: www.nta.nhs.uk/facts.aspx).

Data on needle and syringe programme (NSP) provision is reported by local areas via the national Needle Exchange Monitoring System (NEXMS). However, unlike NDTMS, this has never been a national requirement and many areas choose to report only to local monitoring systems. A national analysis of NSP provision has not been feasible for the present review.

Figure 7 shows the number of people (aged 18 and over) who presented for treatment since 2005–2006 with a dependency, or problematic drug use and are classified into the following groups:

- opiates: this includes people with illicit opiate problems (in practice this is primarily illicit heroin). They may also have problems relating to other drugs and/or alcohol
- non-opiates: this includes people who do not have an opiate problem, but have problems with another class of drug, but not with alcohol. These 'non-opiate' drugs include cannabis, cocaine, benzodiazepines, amphetamines, hallucinogens, other prescription drugs (including antidepressants), solvents, and new psychoactive substances (NPS)[v]
- non-opiates and alcohol: this includes people who have a non-opiate problem profile which includes alcohol

The overall numbers in drug treatment peaked in 2008–2009 and have fallen since then. This decrease is mainly due to the decline in the number of opiate users presenting to treatment (although this has levelled off in the past few years). The total number of non-opiate users in treatment has remained relatively stable since 2007–2008.

[v] NPS are psychoactive drugs, newly available in the UK, which are not currently prohibited by the United Nations Drug Conventions but which may pose a public health threat comparable to that posed by listed substances. The recently enacted Psychoactive Substances Act 2016 changed their legal status in the UK, making supply and possession with intent to supply an offence.[47] Many of these drugs were previously (and often misleadingly) referred to as 'legal highs'.

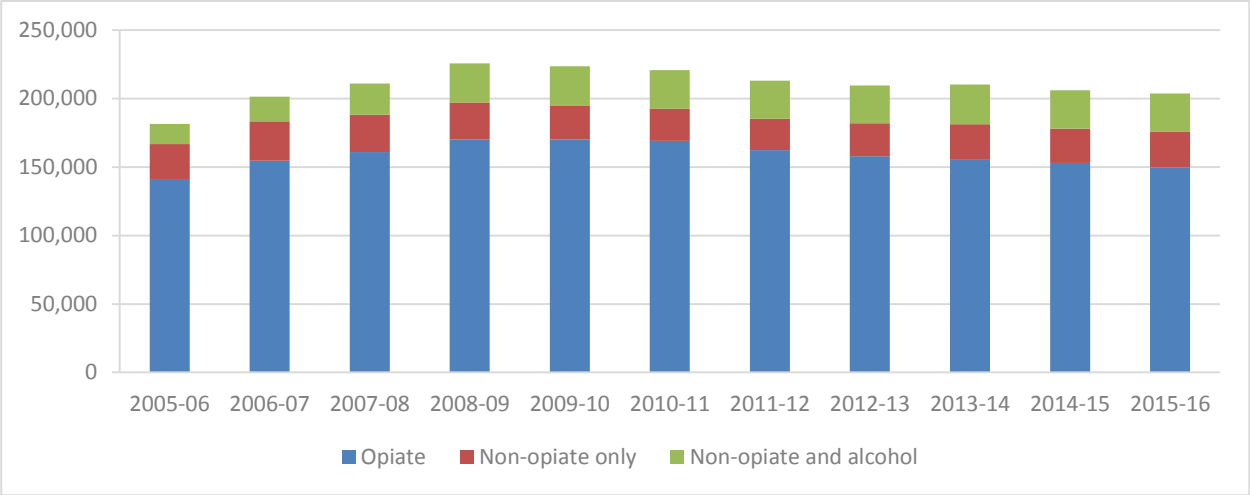

Figure 7: Overall number of individuals (aged 18 and over) in drug treatment in England by substance (2005-2016)

Trends in treatment presentations

Figure 8 shows the annual number of people presenting to treatment by age group since 2005–2006. These figures will include people who start treatment for the first time as well as those previously treated. There has been a significant and steady fall in the number of under 25s presenting for treatment, as well as a decline in the number of people aged 25–29. Conversely, the proportion of those aged 40 years and over has continued to rise in the past decade.

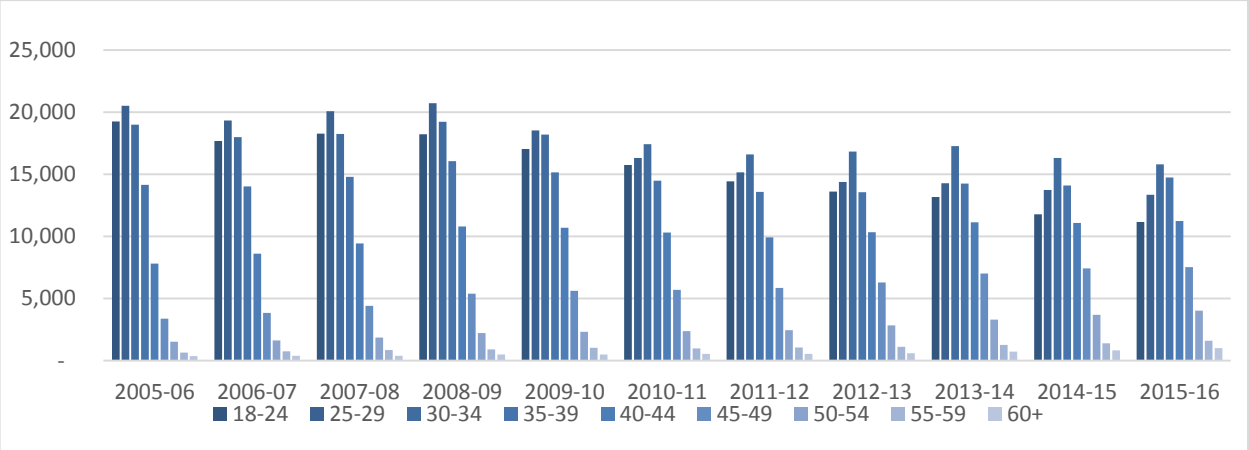

Figure 8: Trend in the number of individuals (aged 18 and over) starting treatment by age group (2005-2016)

The fall in treatment presentations among the under 25s has been primarily due to a decrease in the number of presentations for opiates and cocaine powder (since 2008–2009) and to a lesser extent crack cocaine. The number of opiate presentations fell by over three-quarters between 2005–2006 and 2015–2016 and is now less than 2,500 annually. This mirrors the trend seen in the opiate and crack prevalence estimates, where the use of these substances by the younger age groups has fallen significantly. Presentations for cannabis and amphetamine – related problems have also fallen, but not as sharply. The numbers presenting for other drug misuse have remained relatively stable.

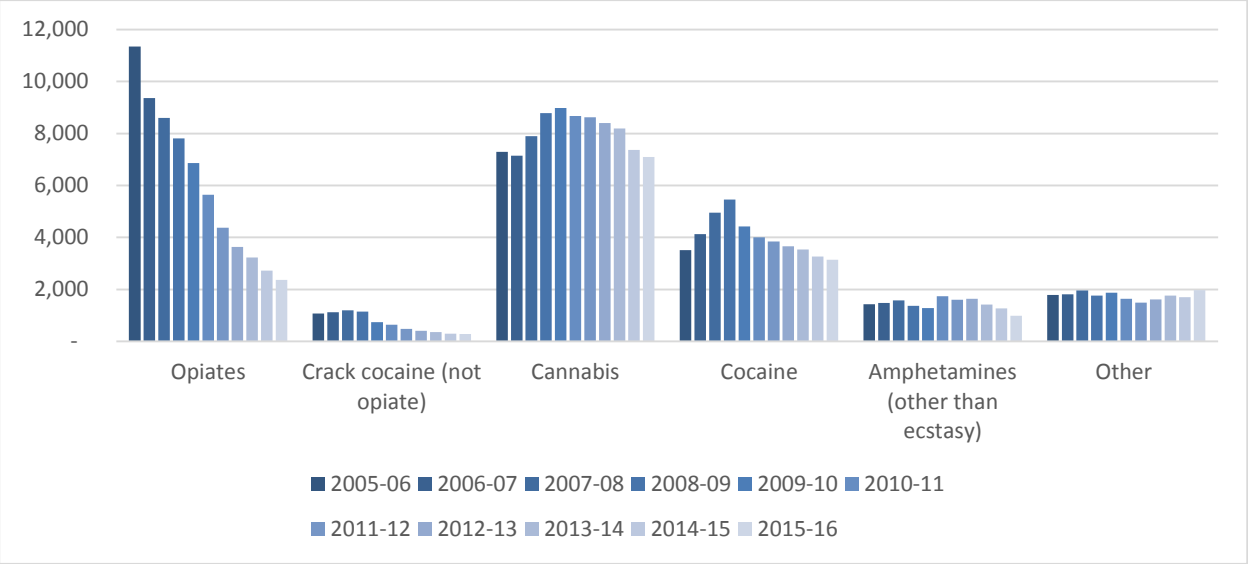

Figure 9: Trend in the number of individuals under 25 years presenting to treatment by substance (2005-2016)

In contrast, new opiate presentations in the over 40 age group have increased since 2005-2006 and now number slightly over 16,000. Opiates are by far the largest substance group that most people aged 40 and over report using at presentation to treatment. This mirrors the trend seen in prevalence data.

In 2015-2016, those aged 40 and over who presented to treatment were likely to have been in treatment previously, or presented to treatment for the first time after many years of drug use, as opposed to having recently started to use opiates. Presentations for other drugs in the over 40 age group have been relatively stable with only cannabis showing a significant and sustained increase over the period.

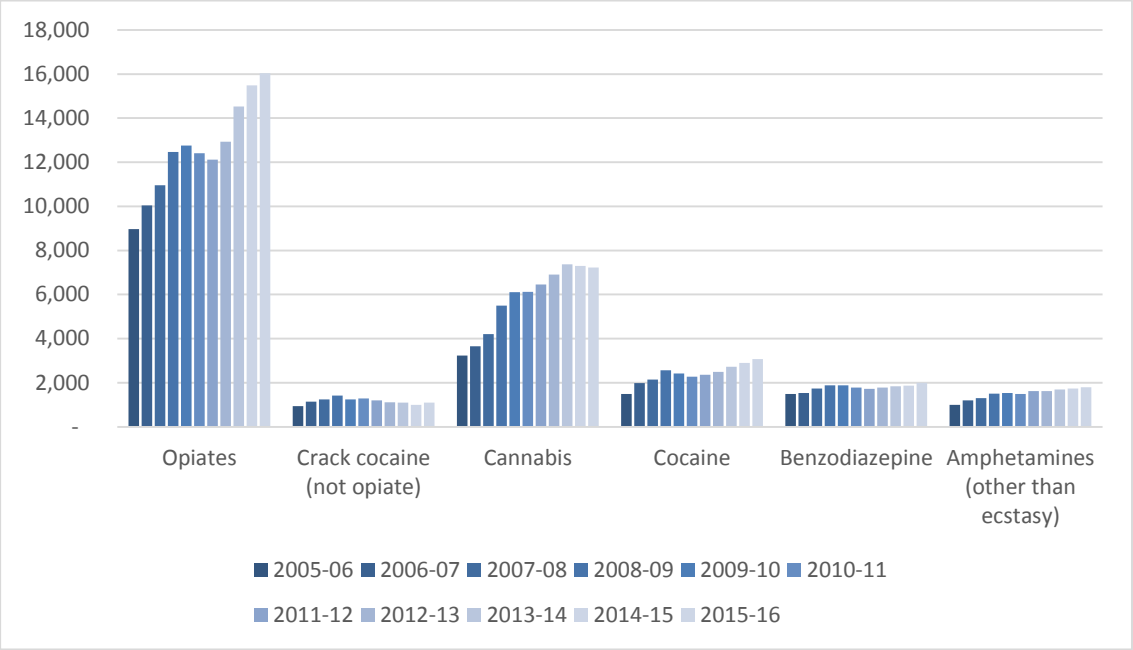

Figure 10: Trend in the number of individuals aged 40 and over starting treatment by substance (2005-2016

New psychoactive substances

Figure 11 shows the number of individuals presenting with problematic use of NPS or a so-called 'club drug'.[vi] Robust data on the prevalence of NPS use in England is limited, as is evidence on long-term harms. There is increasing evidence that NPS are being used by increasingly diverse groups, many of who are from vulnerable groups, including the homeless and people with coexisting mental health problems. NPS have also been identified as a significant issue in some prisons and attributed to significant mental health and behavioural reactions among users.[48] The consensus on optimal clinical management is developing (see guidance from on the Novel Psychoactive Treatment UK Network's [NEPTUNE] guidance on clinical management).[49]

Synthetic cannabinoids (which mimic the effects of cannabis) are increasingly prevalent in England, with widespread reports of severe mental and physical health problems associated with its use. There is evidence that they are increasingly used by vulnerable groups, particularly the homeless and prison populations. Prison staff consistently express concern about high rates of synthetic cannabinoid use, including by prisoners without a prior history of drug misuse. Controlling the availability of NPS in prisons is a significant challenge.

[vi] Club drugs are a grouping of mainly stimulant and hallucinogenic drugs typically used by people in bars and nightclubs, at concerts and parties, and often before, during and after a night out.

The number of people recorded by NDTMS who have reported problems with NPS increased significantly in 2015-2016. Mephedrone is the mostly widely used NPS among those presenting for drug treatment.[vii] The number of presentations for treatment for ecstasy-related problems has been falling since 2009-2010Though this partly reflects an increase in use of these substances, it is also because new reporting codes for NPS were introduced in the previous year. An accurate analysis of trends in NPS treatment presentations will therefore only be possible in the future.

There are also concerns that some NPS are injected. This appears to be linked to members of three distinct populations: those who only use NPS but do so frequently; older drug users who appear to be supplementing or switching from established drugs that are prepared for injection; and those engaging in chemsex. A frequent pattern of NPS injecting among all these groups represents a significant concern for BBV transmission and health damage.

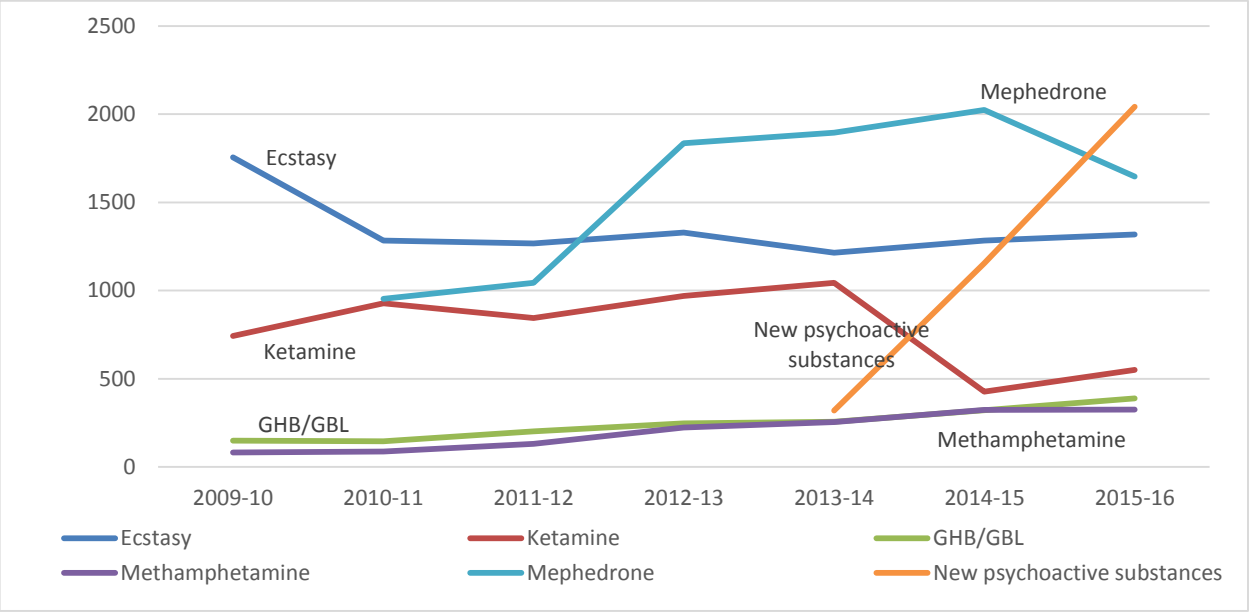

Figure 11 Trend in the number of people (aged 18 and over) presenting to treatment for new psychoactive substances and club drugs (2009-2016)

[vii] A code for mephedrone was added to the NDTMS core dataset in 2010-2011. Any clients reporting mephedrone prior to this are counted in the total but no separate total is given for mephedrone. Codes for NPS were added to NDTMS core dataset in 2013-14. Any clients reporting NPS prior to this are counted in the total but no separate figure is given for NPS

Prescription and over-the-counter medicines

Problems of misuse and dependency of some prescribed medicines (principally benzodiazepines), have been reported in England since at least the 1980s. Drug treatment services and primary healthcare have developed interventions to meet local need but self-help and patient-led groups have also provided specialist support.

More recently, increasing problems of misuse and dependence have been reported with some medicines available over-the-counter and with other prescription medicines, especially opioid painkillers, and gabapentinoid medications (pregabalin and gabapentin) which are typically indicated for neuropathic pain.

The USA has seen a very substantial rise in the misuse of opioid analgesic medication and heroin use. Opioid medication and heroin use and related harms appear to be linked. One analysis estimated that four in five heroin users in the USA began using opioid analgesic medication.[50] The relatively lower retail price of heroin appears to motivate the switch.[51] While there is no evidence of gateway into heroin and other illicit substance use in England, it is important that prescribing levels are monitored, that they remain proportionate to need and effectiveness, and that there are measures in place to prevent and treat dependence.

The number of individuals in drug treatment for problems with prescribed, or over-the-counter, medicines alone increased between 2009-2010 and 2015-2016 (Figure 12). The proportion of those in treatment who use these substances has also increased, though they only make up a small percentage of the total number of people in treatment (Figure 13), however it is accepted that not all people with problems with medicines are currently accessing treatment.

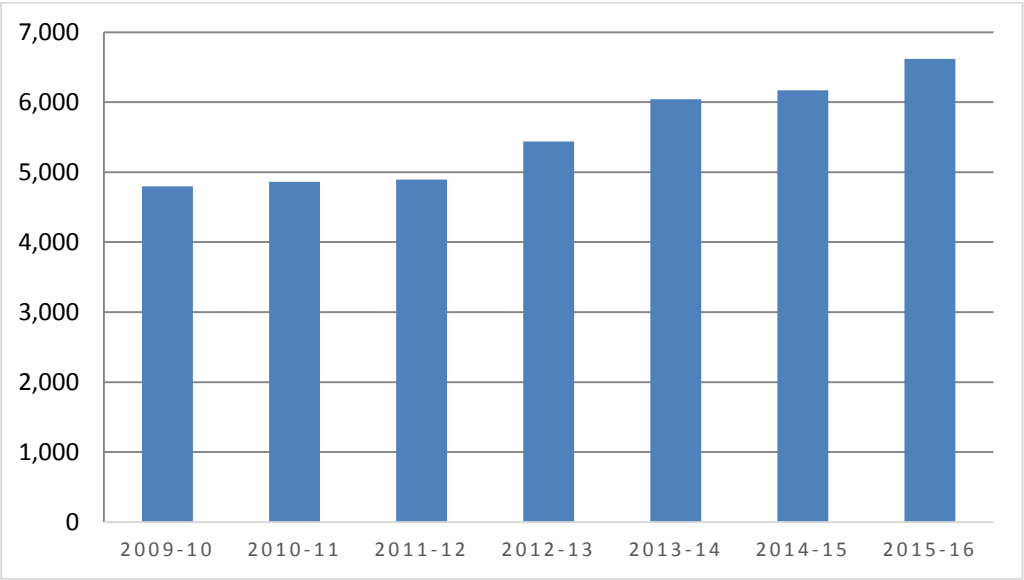

Figure 12: Trend in the number of individuals (aged 18 and over) in treatment for over the counter prescription medicines (2009-2016)

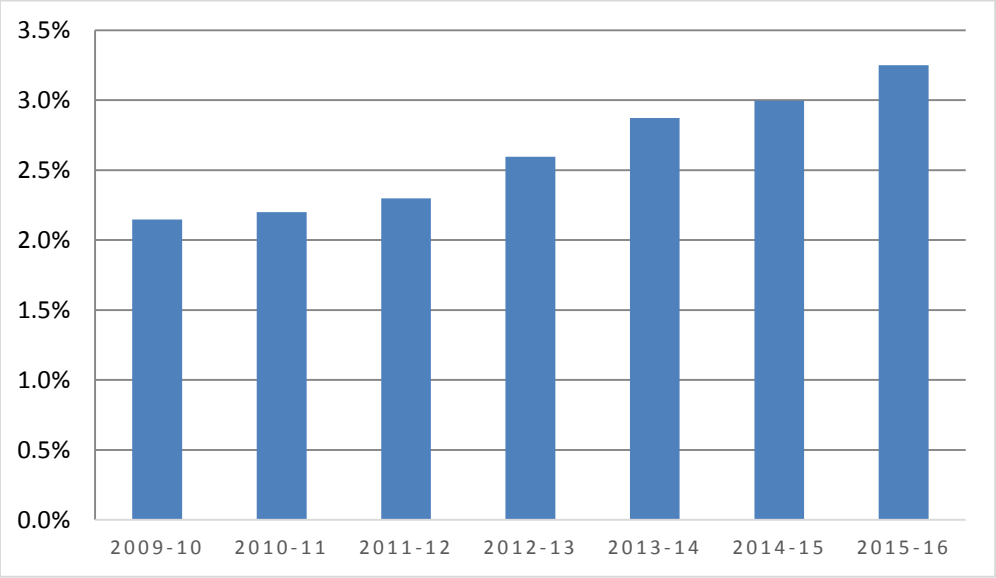

Figure 13: Proportion of all individuals in treatment (aged 18 and over) that were receiving help for over the counter prescription medicines (2009-2016)

Figure 14 shows the different substances that are included in NDTMS data as prescription and over-the-counter medicines for those in treatment in 2015-16. The largest group are prescribed opioids, followed by benzodiazepines and then over-the-counter opiates.

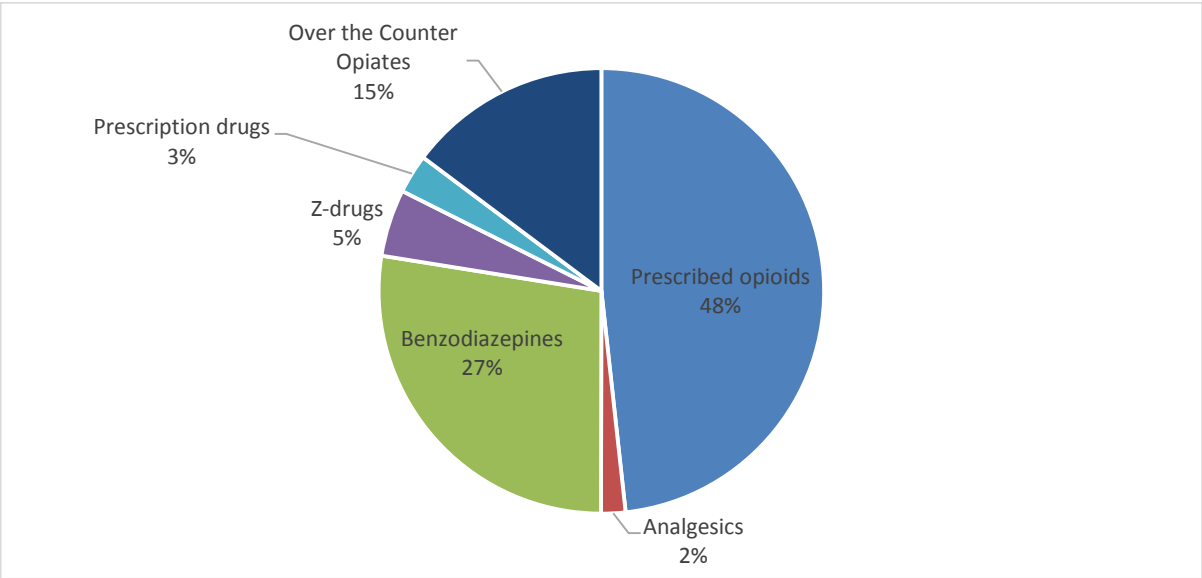

Figure 14: Breakdown of different over-the-counter and prescription medicine substances for individuals in treatment, 2015-16

Access to treatment and the prevention of early drop out

Figure 15 shows progressive reductions in waiting times since 2007. It is now rare for anyone to wait more than three weeks to start drug treatment in England.

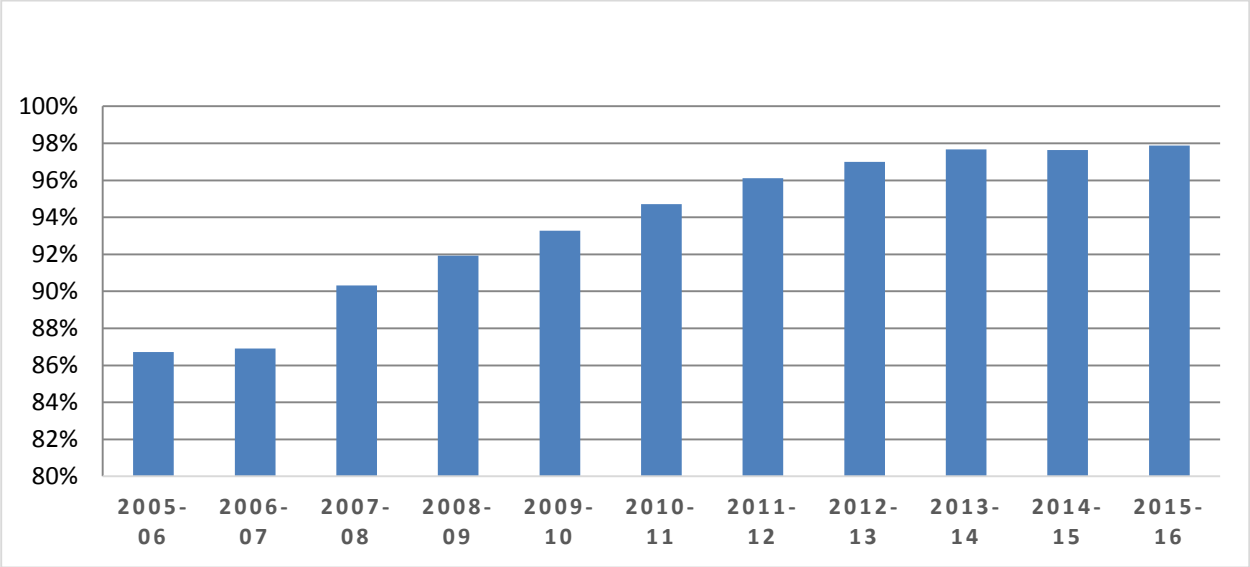

Figure 15: Trend in proportion of individuals (aged 18 and over) starting treatment within three weeks (2005-2016)

As the number of people in drug treatment increased significantly from 2001, it became evident that many people were leaving treatment early, before they were likely to derive optimum benefit. For example, in 2005–2006 approximately 25% of people who used opiates, and almost 40% of those who used non-opiates, left treatment in an 'unplanned' way within 12 weeks (ie before completing their care and without clinical advice). Studies of treatment systems have consistently found that if people drop out of treatment early they are less likely to benefit from treatment and that the highest risk of dropping out of treatment is during the first 12 weeks.[40]

With national programme support, local treatment systems areas across the country developed strategies to address this issue. As a result, there was a reduction in the rate of early drop-outs (particularly for non-opiate users), with around 84% from all three substance groups not dropping out of treatment early by 2015–2016. Today, approximately 10,000 fewer people drop out of treatment before 12 weeks than in 2005–2006.

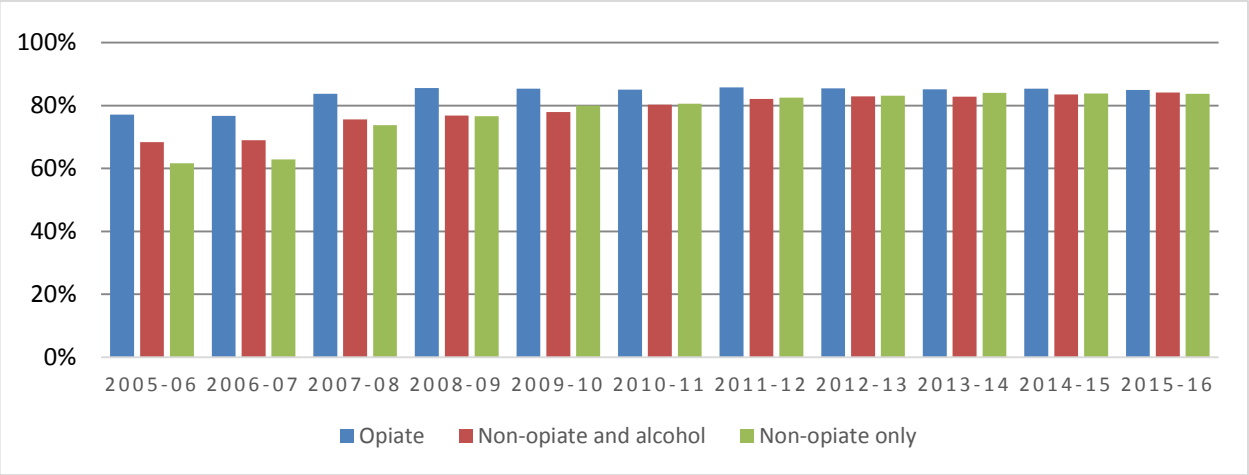

Figure 16: Trend in proportion of individuals (aged 18 and over) retained in treatment at 12 weeks or who completed successfully before this time, by substance (2005-2016)

Successfully completing treatment

The primary recovery outcome measure currently used by drug treatment systems in England is the successful completion of drug treatment. To successfully complete treatment, an individual must be:

- assessed as no longer requiring structured drug treatment interventions (which does not include post treatment recovery support)
- abstinent from: heroin, other non-medical opioids; opioid substation therapy (such as methadone), and crack cocaine
- assessed as not being dependent on any other substances, including alcohol

This measure is reported as a proportion, rather than the total number of people so that any changes in the number of people in treatment do not affect the measure.

Figure 17 shows the completion rates by the three substance groups since 2005–2006. There were significant increases in the proportion of individuals (aged 18 and over) leaving successfully for all substance groups between 2007–2008 and 2011–2012. Since then the rates have levelled off, with a decline in the proportion of opiate users completing treatment. This decline is likely to be in part because many of those who now remain in treatment for opiate use are older, often have health and mental health problems and entrenched lifestyles and drug dependence.

People using drugs other than opiates have much higher successful completion rates as their use tends to be less entrenched and they frequently have better access to employment, housing and the support of family and friends. It is well established that heroin dependence is often complex and entrenched.[52]

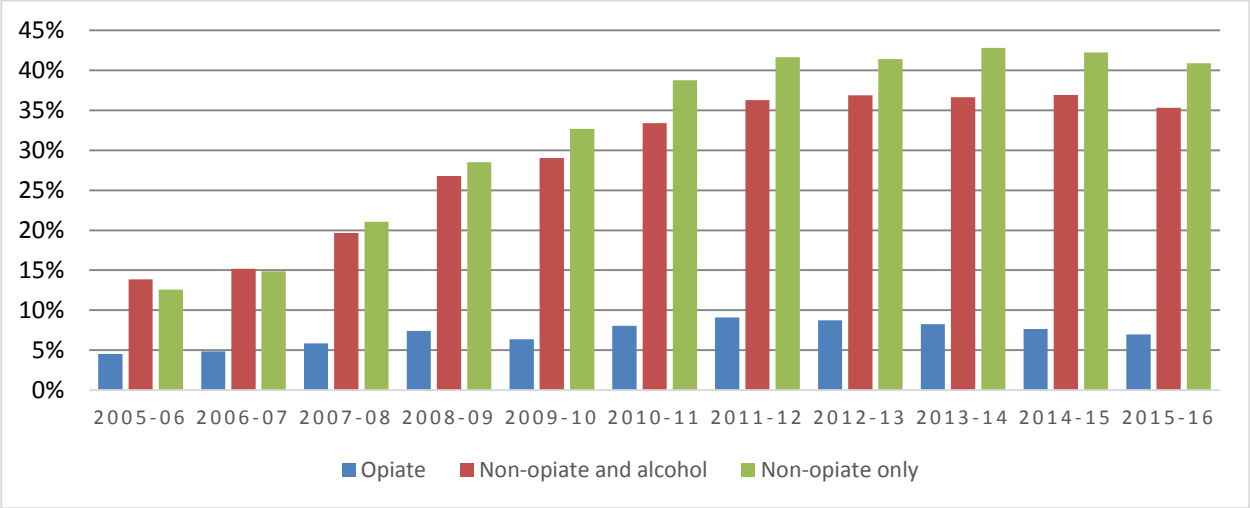

Figure 17: Trend in proportion of individuals (aged 18 and over) successfully completing treatment by substance

Drug misuse and treatment in prisons

Drug treatment provision in English prisons was transformed with the phased implementation of the Integrated Drug Treatment System (IDTS) from 2006 to 2010. This ensured that evidence-based clinical and psychosocial interventions are now consistently available to all drug-misusing prisoners. A recent thematic report by HM Inspectorate of Prisons, *Changing patterns of substance misuse in adult prisons and service responses*[48] observed that "prison-based drug treatment services have improved dramatically in England over the past 10 years".

There are approximately 85,000 people in prisons at any one time. Eighty-one per cent of adult prisoners report using illicit drugs at some point prior to entering prison, including almost two-thirds (64%) within the month before entering prison. Rates of heroin and crack cocaine are 49% (female) and 44% (male).[53]

NHS England assumed responsibility for commissioning healthcare services across the prison estate in England in April 2013.This includes the provision of specialist substance misuse treatment services. NHS England commissions a range of treatment services for adults with substance misuse including clinical services such as opioid detoxification, OST, psychosocial interventions, case management and counselling.

The service specification framework for substance misuse commissioned by NHS England emphasises the need for provision to be based on the recommendations contained in Lord Patel's Report "Reducing Drug-Related Crime and Rehabilitating Offenders.[54]

This report draws on the evidence base and describes a balanced treatment system with a focus on recovery that ensures that individuals get access to the types of treatments that

are appropriate to their changing needs and circumstances and which will meet recovery-focused outcomes.

A care pathway, described by a series of negotiated and agreed protocols, will necessitate integrated working between this service, mental health team, primary health team, the resettlement team, and community services including community-based services and mutual aid services operating in prison and the community.

The interface between custody and the community is critical in the effective management of substance-misusing prisoners. In addition to the high risk of relapse and reoffending, they are particularly vulnerable to drug-related death in the first few weeks following release and greater emphasis is being placed on developing effective 'through the gate' arrangements. The newly-created community rehabilitation companies (CRCs) play an important role in this regard because they are now responsible for the supervision of all low/medium risk prisoners who are released on licence conditions.

NDTMS was introduced in prisons in 2013 in part to enable more consistent treatment monitoring between custodial and community settings. The system has been in development and some initial data is now available, however, comparable information from previous years is not available.

In all, around 51,703 people received drug treatment in prison in 2015-2016, with the vast majority being male (90%) and over half (56%) receiving treatment for opiates. Nearly one third (30%) had also received drug treatment in the community in 2015-2016 following release from prison.

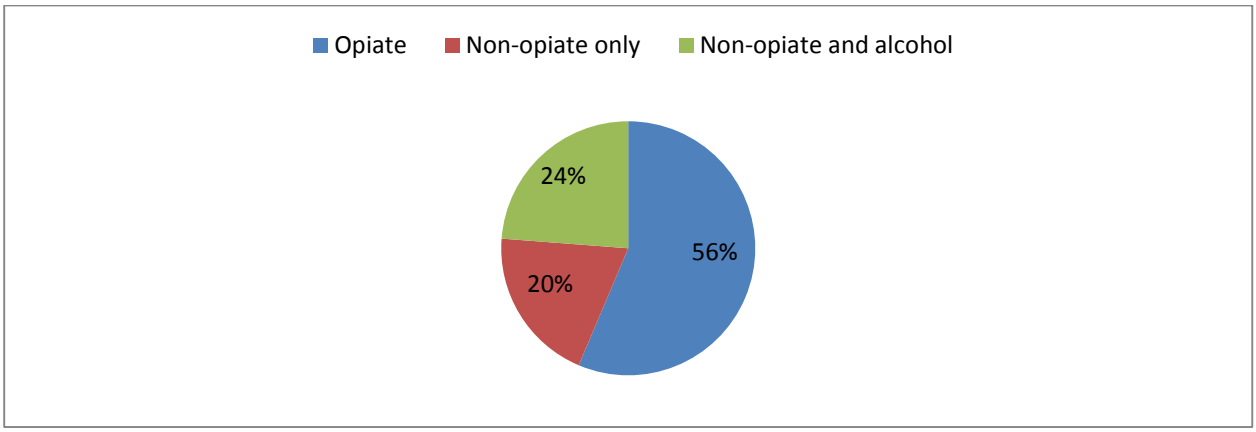

Figure 18: Profile of the presenting substances of individuals (aged 18 and over) receiving treatment in prison (2015-2016)

Opiate users tend to be much older than those in treatment for other drug problems in prison-based drug treatment. A comparatively low number of under 25s received treatment for opiate problems and a relatively low number of people aged 40 and over received treatment for problems with non-opiates in prison-based treatment in 2015-2016. As discussed earlier, the use of synthetic cannabinoids is becoming an increasing

problem in prisons and analysis of prison-based treatment data in the future will reveal if this phenomenon has resulted in treatment presentations.

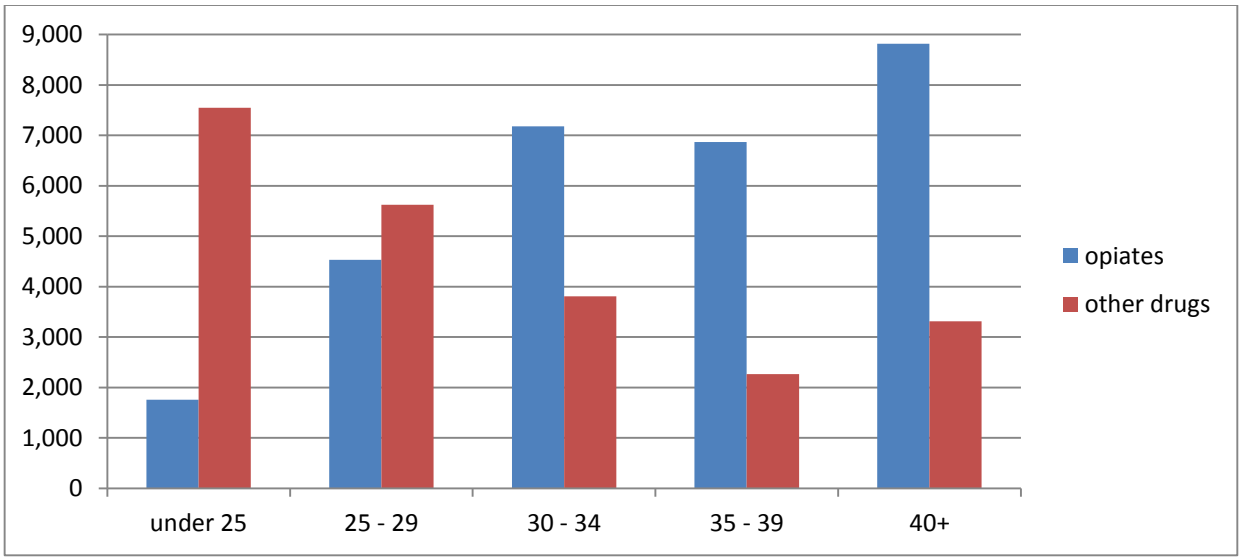

Figure 19: Age profile of individuals receiving treatment in prison by opiates and other drugs (2015-16)

Key trends in the health harms caused by drug misuse

To understand the risks of and harm caused by drug misuse, personal, health, social, economic and legal consequences should be considered. Specific health harms experienced by drug users range from minor adverse physical or psychological problems, to acute problems such as overdose and long-term health conditions.

Non-medical heroin use is associated with a substantial risk of premature death. Other drugs also carry risks, but people who inject drugs and share needles and other injecting equipment place themselves at increased risk of bloodborne infections. The most common cause of drug misuse death is acute opioid-related poisoning following accidental overdose, which induces respiratory depression and hypoxia.[55] Research shows that about one per cent of the illicit opioid-using population dies each year, a rate 10 times higher than the general population.[56,57]

Figure 20 below shows the total number of drug-related deaths registered in England (1993-2015) and the number of heroin and/or morphine poisoning deaths in England and Wales.[58] These illicit opiate deaths account for the majority of deaths and they are the main driver of changes in drug-related deaths. In contrast to the gradual upward trend in the past 20 years and year-on-year variability, the last two years have seen a significant increase since 2012. This could be in part because rates were returning to a level they were gradually increasing to, before there was a shortage in the supply of heroin in England during 2010 and 2011. This may have been part of the cause of a lower rate during that period.

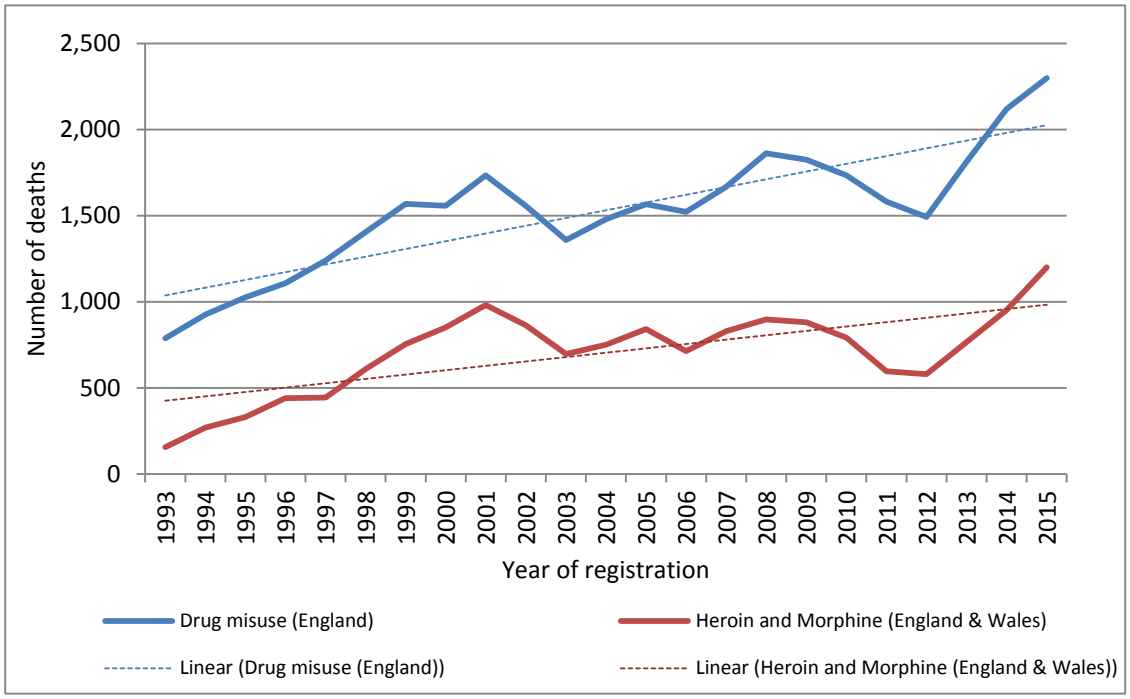

Figure 20: Trend in the number of drug misuse deaths (all ages) in England and Wales, by year of registration for all drugs and for heroin/morphine

The overall increase in drug-related deaths is largely made up of the increase in deaths among older drug users, with significant rises seen in those aged 30-70. It is likely that many of these deaths occurred in people who were long-term users of heroin and are more susceptible to the risk of a drug overdose because of their poor health. PHE recently published the findings of an inquiry into the recent increases in drug-related death and concluded that the factors responsible are multiple and complex. The most notable factor was the ageing cohort of heroin users experiencing cumulative physical and mental health conditions that make them more susceptible to overdose. Other factors included increasing suicides, increasing deaths among women, improved reporting, an increase in poly-drug and alcohol use, and an increase in the prescribing of some medicines.[59]

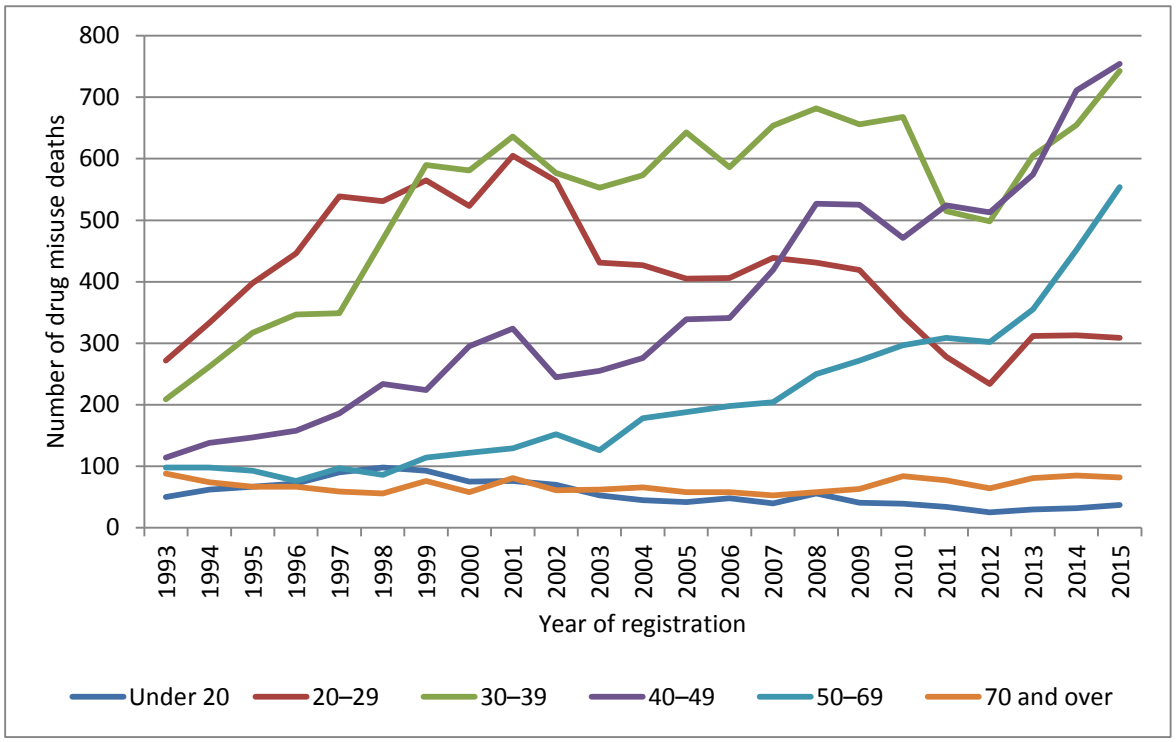

Figure 21: Trend in the number of drug misuse deaths in England and Wales by substance and age (1993-2014)

Although accidental poisonings of older men by heroin are so numerous that they drive the pattern of drug-related deaths, it is also the case that suicide, deaths in women, and deaths caused by new psychoactive substances are all increasing, in some cases at greater rates. It is also likely that NPS deaths may be under-reported because they may not be tested for during post-mortems as widely or comprehensively as other drugs.

Figure 22 below shows the trend in hospital admissions related to drug use over the last 10 years. Two categories are reported: one where drug use is determined to be the cause of mental health issues or other behavioural conditions and the other where a poisoning due to drugs is the cause of the admission.

Mental health and behavioural admissions have remained relatively stable over the past decade, though they have fallen and then risen again during this time. Drug-related poisonings have been steadily increasing. Generally, this is a result of an increase in opioid poisonings, many of which are believed to be prescribed opioid medications, since these are included in the figures alongside illicit drugs.

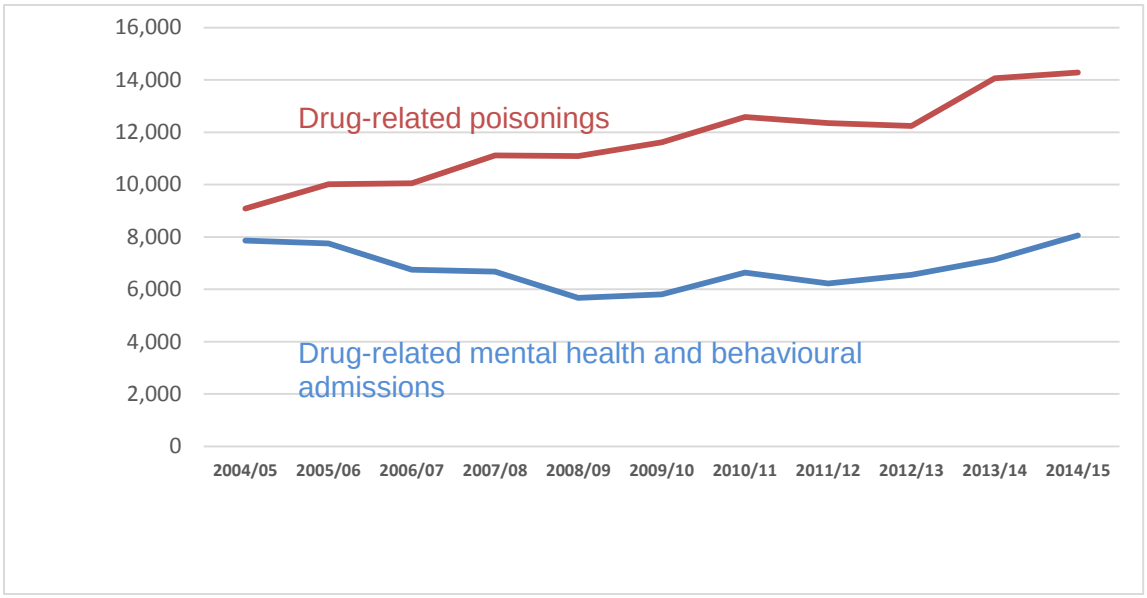

Figure 22: Trend in the number of drug related hospital admissions (all ages) in England (2004-2015)

Figure 23 shows the trend in bloodborne virus prevalence among people who inject drugs, the rate of vaccinations for hepatitis B and the rate of sharing of injecting equipment.[60] The rate of HIV infection has remained very low – evidence shows that this is in part a result of the widespread provision of clean injecting equipment and opioid substitution therapy.[13,62] Rates of hepatitis B infection are higher but have fallen since 2006, following increases in vaccination rates and a reduction in the rate of sharing needles and syringes for injection. Hepatitis C prevalence has remained at around 50% of injecting drug users over the last 10 years. The virus is highly infectious and some people continue to indirectly share injecting paraphernalia like injection mixing vessels.

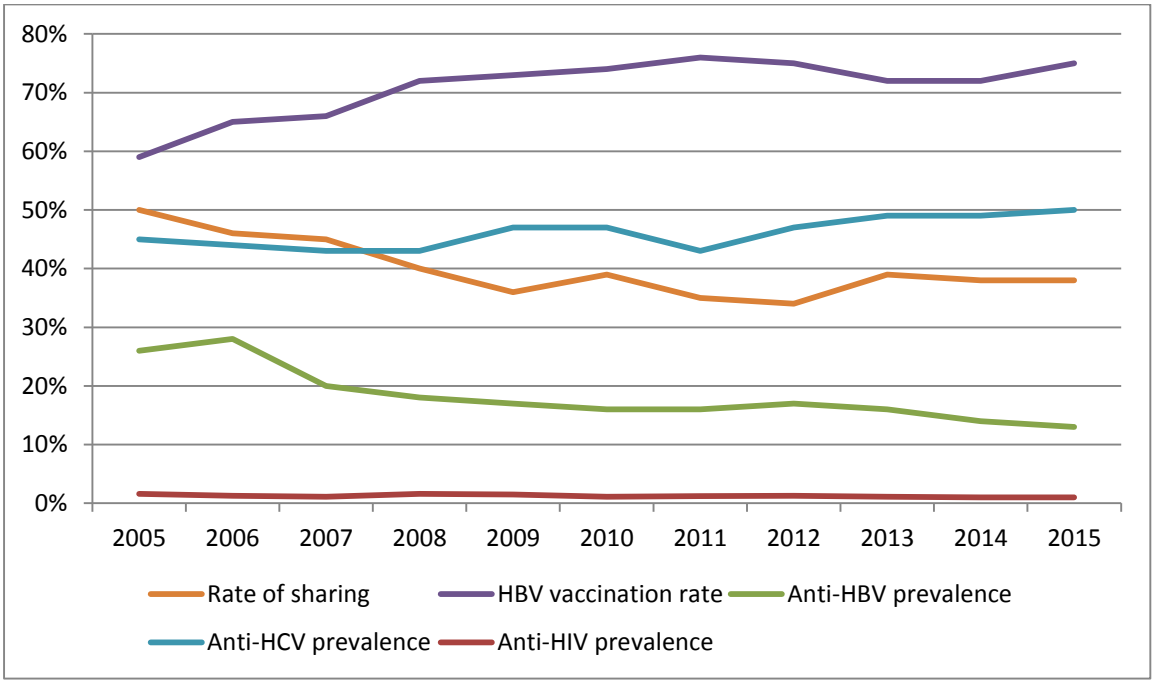

Figure 23: Trend in bloodborne virus rates in England, Wales and Northern Ireland among individuals who inject drugs

Main points:

- prevalence of opiate and crack cocaine use has declined over the past 10 years, primarily among younger people
- the reported use of other drugs has also fallen, but this has mainly been due to decreases in cannabis use
- increasing problems of misuse and dependence have been reported with some medicines available over the counter and with other prescription medicines, especially opioid painkillers and gabapentinoid medication. Use of NPS and club drugs is also increasing, particularly in prisons. New patterns of use are also emerging, such as people engaging in chemsex and injecting NPS. All of these developments require close monitoring in the future
- the number of people accessing treatment increased significantly from 2005–2006 to 2008–2009, and has steadily fallen since. This is mainly because the number of people under the age of 30 presenting to treatment, particularly for opiate use problems, has decreased
- only a small proportion of people have to wait more than three weeks to start treatment
- following local initiatives, supported by national programmes, fewer people drop out of treatment early and a much higher proportion leave successfully than in 2005–2006
- successful completion of treatment rates has slowed in the last couple of years. This is likely, in part, to be because a high proportion of those in treatment are entrenched opiate users
- drug-related deaths have increased over the past 20 years, with significant increases in the number registered in the last three of years among older heroin users, many of who may have been in poor health after long periods of using the drug
- the number of poisonings related to heroin use is also increasing, notably among older heroin users

Chapter three: What harms does drug treatment reduce and what outcomes can be achieved?

What outcomes can we expect from drug misuse treatment? Answers to this question can be found in the body of international academic research published in scientific journals. This chapter aims to frame expectations about what can be achieved by drug treatment and sets the stage for a comparison of outcomes that are achieved by treatment in England. Evidence summarised here is used for comparisons in chapter four and to lay the foundations for PHE's recommendations on outcome measures to evaluate the effectiveness of drug treatment.

Domains for assessing drug treatment

The European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) conducted a recent review[62] of the measures of effectiveness used by major longitudinal, observational outcome studies of opioid dependence. The EMCDDA selected nine prospective, observational cohort studies undertaken in five countries and reviewed the research batteries used to assess harms.[viii] The measures used were taken from the following domains:

- drug use
- abstinence
- harms, including non-medical drug injecting and overdose
- health, including mental and physical health
- mortality
- treatment / study aspects (including retention and care planning)
- crime
- social functioning (including employment, accommodation, family relations, and participant's perceptions of their recovery)

Not all the nine studies included measures from all these domains, and there was substantial variation in the way outcome measures were defined.

What is important to note here is the breadth of scope of these measures. Their breadth reflects the harms addressed by treatment and the expectations for effectiveness.

[viii] The studies included were: ALIVE; ATOS; DATOS; DORIS; DTORS; NDTMS; NTORS; ROSIE; VEDETTE.[62]

Overview on drug treatment interventions and effectiveness research

Much of the evidence for drug treatment effectiveness has been produced from research conducted in North America over the past 40 years. Evidence has also steadily accumulated in other parts of the world, notably Europe and Australia. It is a formidable challenge to synthesise this body of research – not least because of differences in the time and place of each study, the populations sampled, the design and quality of the research conducted, the treatment interventions evaluated, and outcomes studied and interpreted.

Some classification can help to organise the literature, as follows:

- specific disorder treated (eg opioid dependence)
- population and setting under study (eg adult, outpatient)
- treatment type (pharmacological, psychosocial)
- goal(s) of the intervention(s)
- study design (controlled experiment or observational; type of comparison)
- primary (and any) secondary outcome measures of effectiveness (and how these are collected and defined)
- type of analysis conducted

Many systematic reviews of drug treatment have been conducted. These reviews represent thorough stocktakes of the published literature, with statistical techniques employed to bring together and combine the data on effectiveness from individual trials, so that an overall estimate of the impact of a particular intervention can be made.

PHE commissioned Liverpool John Moores University (LJMU), Centre for Public Health, to undertake an REA of the recent treatment effectiveness literature. LJMU's REA was essentially a review-of-reviews, with priority given to high-quality systematic reviews (and meta-analysis), and evidence-based guidelines containing quantitative estimates. A pragmatic decision was made to limit inclusion of systematic reviews to those published since 2006 because this postdates the date of the searches conducted for the 2007 suite of NICE guidelines on drug misuse. The summary presented in this chapter combines the main findings of LJMU's REA and cross-references to the NICE evaluation in 2006.

The following sections summarise the evidence for the effectiveness of pharmacological interventions; psychosocial interventions; residential rehabilitation, continuing care and recovery support; crime reduction, and needle and syringe programmes.

Pharmacological interventions

Opioid medication can be used to substitute for heroin or other drugs of this type, to help people withdraw, and for relapse prevention. At present, there are no approved medications for other substance use disorders.

Opioid substitution treatment (OST), involving flexible, patient-tailored prescribing of oral methadone or buprenorphine, is the frontline NICE recommended community-setting pharmacological therapy for people with heroin or other non-medical opioid dependence. An appropriate dose of opioid medication is able to maintain the patient's tolerance for opioids and prevent the onset of withdrawal symptoms for approximately 24 hours. In this way, treatment stabilises and manages physiological dependence on opioids and craving for heroin may be suppressed. Importantly, OST establishes a platform for people to receive psychosocial interventions, other medical care and social support. In most cases, the prescribing physician maintains the patient on a stable daily dose for as long as is clinically indicated. According to indication and preference, a gradual withdrawal of medication may follow.

OST is undoubtedly the most widely evaluated of all treatments for drug misuse, with systematic review evidence amassing since the 1990s.[56] In 2007, the NICE Appraisal Committee reviewed evidence from 31 systematic reviews of randomised controlled trials (RCTs) and other designs.[57] LJMU included consideration of eight reviews in their REA, also including the latest review evidence for injectable diamorphine.

Use of illicit opioids (heroin, unless otherwise stated) and retention in treatment are the two main outcomes reported in the available literature. These two outcomes can be regarded as the essential indicators of OST effectiveness. Several secondary outcome measures have also been evaluated, notably drug injecting and sharing of injecting equipment and measures of overdose, mortality and bloodborne infection.

There is strong and consistent evidence that OST is effective at suppressing heroin use.[65] OST is associated with statistically significant decreases in illicit drug injecting and sharing of injecting equipment.[13] Supervised diamorphine maintenance therapy has also been evaluated in several countries (including England) for patients who have not responded to conventional OST, with positive effects reported on heroin use and injecting.[66] OST is very effective at retaining patients in treatment. A Cochrane review[65] of four RCTs (with 750 participants) estimated that 73% of patients enrolled in methadone maintenance were retained in treatment, compared to 16% of those receiving therapies with no medication component. NICE[23] has also highlighted systematic reviews of patients receiving methadone (dose range: 20-97mg/day) showing patients are between three and four times more likely to stay in treatment than those receiving placebo or no treatment (and concluding that methadone doses of 60mg/d or more are more effective that doses of less than 50mg/day). For RCTs of buprenorphine (versus placebo or no treatment), NICE

concludes that increasing dose is associated with better retention, but there is no evidence of differential effectiveness for flexible dosing which favours methadone over buprenorphine.[67]

A systematic review of observational studies from several countries shows at least a halving of the risk of fatal overdose while clients are in treatment.[68] A recent study in England estimated that while in OST there was a much reduced risk of overdose, although this protective effect was not associated with psychosocial interventions where there was no pharmacotherapy component.[69] Randomised controlled trials have not been designed for adequate statistical power to detect the impact of drug treatment on mortality risk reduction in the opioid dependent population. Observational data-linkage studies (which typically link treatment registry and national mortality data) have consistently shown that the opioid-related death rate is substantially lower in treatment.[70,71]

OST is associated with a strong preventive effect for acquisition of bloodborne infections. Studies point to a 54% reduced risk of HIV and a 64% reduction in the risk of hepatitis C infection among patients who have a recent history of illicit drug injecting.[72,73]

Expert by experience consultation: Views on OST

There was a strong endorsement that methadone is an effective means of bringing people into contact with the treatment system. Methadone maintenance was often seen as bringing stability to lives that had previously been centred on an unwanted daily routine of obtaining and using heroin.

In terms of improving the practice some participants had experienced, the following suggestions were made:

- some drug treatment services could work more with the patients to ensure the dose and the prescribing/dispensing arrangements were right for them
- clinical reviews could be strengthened to focus on the patients' experience of and response to OST medication, and also check that patients were progressing through treatment in their recovery
- some local treatment systems are too focused on methadone and alternative pharmacological therapies to methadone (eg buprenorphine) should be more available, based on past experiences, preference and clinical assessment

"The services I used are changing. I think they have recognised that just giving scripts wasn't working and it is becoming much more individual. What works for you might not work for someone else." Female, Yorkshire & Humberside

Turning to interventions to help people withdraw from opioids, LJMU's REA identified four high-quality systematic reviews which included methadone, buprenorphine and opioid antagonists.[74–77] There is a consistent finding that methadone and buprenorphine are effective medications to help patients withdraw from opioids safely and comfortably (with no evidence of differential effectiveness between types of medication) and few studies that have contrasted the community and inpatient setting.

Finally, the *μ*-opioid antagonist medication naltrexone (while there are extended-release formulations, almost all treatment in England is by oral tablet) has been studied as part of a relapse prevention programme for formerly opioid dependent persons who are seeking to maintain abstinence. For around 24 hours, a 50mg dose of naltrexone will block the pharmacologic effects of any heroin consumed. Naltrexone does not appear to directly reduce craving for heroin, but clinical studies of maintenance therapy suggest that craving gradually reduces, probably through extinction of learned associations.[78] However, LJMU concludes that there is insufficient research evidence from RCTs to support oral naltrexone as an effective heroin relapse prevention therapy.[79] This lack of effect reflects poor patient compliance with their prescription, and early drop-out from treatment. However, if patient motivation and support can be assured, NICE does recommend oral tablet naltrexone[80] and the Department of Health has suggested that this be made available in prison settings as clinically indicated to help prevent relapse.[81]

Psychosocial interventions

A defining symptom of drug dependence is a difficulty controlling drug use. Users of illicit opioids, stimulants and cannabis can experience intrusive urges (cravings) which strongly influence drug seeking and drug use. Many different types of psychosocial treatment have been developed and evaluated in the international literature. Taken together, the goal of psychosocial interventions is to help people build and sustain motivation for behaviour change and recovery, to recognise and cope with drug-conditioned urges and emotions, and to engage or develop family and community recovery supports. While interventions for a wide variety of psychoactive substances have been studied, opioids, stimulants and cannabis are the focus of this section. Psychosocial interventions remain the frontline response to help people with cocaine, amphetamine and cannabis problems – not least because there are no approved pharmacological interventions.

For people with opioid dependence, the LJMU review summarises high-quality review evidence that combining a structured psychosocial intervention with OST is not associated with greater retention in treatment or abstinence as compared to OST and standard care.[82] However, there is some evidence reviewed by NICE that contingency management during methadone maintenance (but not buprenorphine) treatment is strongly and consistently associated with abstinence during treatment and follow-up. During opioid detoxification LJMU identifies moderate-quality evidence showing that

psychosocial interventions delivered during medically supervised detoxification increase rates of completion and abstinence.[83]

Brief interventions (defined by NICE as one or two sessions of one hour or less) are based on an empathic discussion with the person with the aim of creating self-sustained change motivation. These interventions have been studied with people not in formal treatment or seeking structured care, and have usually been compared to self-help information or no treatment. People who are not in formal treatment appear to benefit from a brief intervention. For example, 42% of people with stimulant or opioid dependence who received a brief intervention were abstinent from stimulants at six-month follow-up (three RCTs, 1,268 participants).[84] However, mixed outcomes have been reported for cannabis.

Contingency management (CM) is a behavioural intervention that uses principles of positive reinforcement to shape behaviour (eg abstinence). NICE judges that CM is effective at helping people with cocaine and/or opioid dependence achieve abstinence (at least for the duration of the intervention).

Cognitive behavioural therapy (CBT) aims to help people cope with urges to use drugs and provide skills to contend with high-risk drug using situations. CBT has been studied in the literature in both individual and group formats, and variously compared to brief interventions, interpersonal or psychodynamic psychotherapies, CM, and standard care comparators.

There is evidence for CBT's effectiveness when compared to no treatment (eg Carroll, 1996).[85] LJMU judges there is high-quality, but mixed evidence, for the effectiveness of CBT on cannabis use and related outcomes among regular users and concurs with NICE that CBT is no more effective than standard care for cocaine misuse and dependence.[ix] NICE recommends that CBT should be offered "for people with cannabis and stimulant dependence who have comorbid depression and for those who have achieved abstinence or are stabilised on opioid maintenance treatment".

Couples-based interventions, which include the drug user's abstinent partner to support change and recovery, are effective at achieving abstinence from cocaine and heroin. NICE concludes that people with cocaine and/or opioid dependence who have a non-drug-misusing partner are likely to benefit from this intervention. Couples-based interventions have been evaluated as more effective than relapse-prevention CBT in three RCTs (with 193 participants; outcome measure: days abstinent in past three months at one year follow-up).[84]

[ix] LJMU concludes that there is moderate-quality review evidence showing that CM for people with cocaine stimulant dependence is superior to relapse-prevention cognitive behavioural therapy.[86]

LJMU includes three systematic reviews since 2006, which have assessed the effectiveness of mindfulness meditation and stress reduction. Mixed and low quality evidence was identified for the effectiveness of mindfulness-based therapies.[87,88] However, acceptance and commitment therapy, which is based on mindfulness techniques, has been found to be effective at reducing drug use when compared to CBT and other active treatments.[89]

NICE has shown that attendance at 12-step programmes in the community (eg Narcotics Anonymous) is associated with abstinence from illicit drugs and fewer drug-related problems.

Taken together, there is a mixed evaluation picture for the effectiveness of psychosocial interventions. There has been disappointing conclusions drawn from systematic reviews for some approaches, but there are several modalities and approaches that have been found to be effective. It should be noted that many psychosocial interventions evaluated in the literature are therapist manual-guided therapies, developed and evaluated under efficacy conditions in the USA. At least in their development form, few of these interventions have made their way into routine practice in treatment systems overseas or in England. In England, all patients who are enrolled in OST receive clinical support and a basic psychosocial intervention. This is a clinical ‘keyworker’ approach for assessment, treatment planning, review and continuing care support,[90] and NICE considers psychosocial interventions to be an “important element of the overall treatment package”.[90]

Residential rehabilitation, continuing care and recovery support

Residential rehabilitation is a 24-hour setting for providing intensive, structured psychosocial interventions for people who have an abstinence goal in the main. Residential programmes in England vary in duration and intensity of care, but common elements include communal living with other people in recovery; addressing cognitive and emotional symptoms of dependence; improved skills for activities of daily living, and referral for continuing/aftercare support.

Two systematic reviews have examined the effects of therapeutic community (TC) programmes following the NICE review.[91,92] Within-treatment comparisons suggest that longer TC programmes may have better rates of completion than shorter TC programmes. However, LJMU considers that the evidence quality for the effectiveness of residential rehabilitation is low due to the lack of comparison groups in the evaluation designs. Nevertheless, NICE endorses residential treatment for people seeking abstinence who have significant comorbid physical, mental health or social problems, and particularly emphasises this setting of treatment for people who have not benefited from previous community-based interventions.

Given the persistence and relapsing nature of drug dependence, there is a clear logic to provide some form of lower intensity continuing care after a period of more intensive treatment.[93–95] LJMU identifies moderate-quality review evidence that continuing care (in the form of counselling, brief check-ups, and attendance at self-help meetings) is associated with a small, but statistically significant, positive effect on substance use at the end of treatment and at follow-up.[96]

Drug treatment and crime reduction

Heroin and cocaine (in particular) are costly illicit drugs and a significant minority of people resort to crime to support their dependence. Many people with illicit drug dependence come into contact with the criminal justice system. There has been substantial investment in developing treatment in the criminal justice system and links to treatment the community, but few randomised controlled trials have been conducted.

Court or other initiatives that divert people from incarceration to drug treatment have been evaluated in four systematic reviews. LJMU concludes that there is moderate-quality, review-level evidence that diversion interventions are superior to no intervention in terms of reducing drug use,[97] but there is mixed evidence for reductions in offending.[98]

In prison, two systematic reviews examined the effects of psychosocial treatment. Rated low-moderate quality evidence, these studies suggest that TC work release programmes are associated with reductions in relapse to drug use; prison-setting TC work is associated with reductions in incarceration, criminal activity and reoffending; and counselling is generally associated with statistically significant reductions in reoffending.[99]

While drug treatment has a clinical focus on helping people recover from dependence, crime reduction is an important secondary outcome and is a specific focus in certain cases. The question of whether drug treatment is associated with crime reduction has been extensively studied by observational studies with consistent reports of reductions in crime involvement following community and residential drug treatment (eg Hubbard, 1989).[100] For example, the National Treatment Outcome Research Study of community prescribing and residential treatment in England matched clinical data on 799 participants to the Home Office Offenders' Index and reported on changes in criminal convictions in the year before treatment admission and at one, two and five-year follow-up.[101] In the year before treatment, 34% of the sample had been convicted of one or more offences. Then, in the year of each follow-up, the percentage of the sample with one or more convictions was as follows: one year (28%), two years (26%) and at five years, the conviction rate was approximately half that of the pre-treatment level (18%).

In Australia, a follow-up of 615 people recruited from drug treatment (55% involved in crime in the month before admission) observed that this rate fell to 15% at three-year follow-up.[102] In the USA, researchers reported on crime patterns among 12,962 people

who received drug treatment in Washington State during 1993–2001.[103] There was a 25% reduced risk of arrest among those who completed a treatment episode than those never treated and up to a 40% reduction in risk of arrest associated with community psychosocial interventions.

Opioid substitution treatment has been the particular focus of assessments of crime reduction in studies conducted in North America, Australia and Europe. Treatment has been consistently associated with crime reduction (for example, a study of six programmes observed that crime was reduced to around a fifth of pre-treatment levels[104]) and a strong reduced risk of imprisonment.[105] Retention on OST appears to be an important driver of this outcome.

By way of further example, a major cohort study from Norway linked OST clinical data to official convictions records for 3,221 patients from 1997–2003. Prior to admission, the incidence rate (IR) was 1.57 convictions per person year.[106] During treatment, this rate was reduced by half (IR = 0.63). Patients who were retained in treatment for more than two years had 28% fewer convictions during treatment than those in treatment for less than a year. A small-scale study of 90 participants in England reported that for every month spent in methadone maintenance therapy, criminal convictions and cautions reduced by 1.7% (with expected reduction in convictions and cautions over five years of about 10% for every six months spent in treatment).[107]

Needle and syringe programmes

There is long standing recognition of the importance of encouraging people who inject illicit drugs to inject more safely and to use clean injecting equipment. Harm reduction policies have been instituted to provide needle and syringe programmes (NSP) to assist users in reducing the risk of acquiring and transmitting bloodborne viruses. Specialist agencies and community pharmacists are seen as serving an important role in helping people to reduce the extent of drug injecting-related harm, by promoting improved hygiene during intravenous drug use and encouraging the use of new needles and syringes and the safe disposal of used equipment. Some services also provide additional sterile injection equipment for users, including swabs, filters and water ampoules.

LJMU concludes that there is moderate-quality, review-level evidence suggesting that exposure to NSP is associated with a reduction in HIV transmission among people who inject drugs,[108] but there is a lack of clear evidence for a reduction in hepatitis V virus (HCV) prevalence and incidence. Moderate-quality, review-level evidence suggests that large community coverage needle and syringe programmes can reduce population-level HIV and HCV infections.[109]

In England, indirect measures of NSP availability and use suggest that the vast majority of people who inject drugs are accessing NSP. In 2014, the vast majority (85%,

1,510/1,786) of participants in PHE's UAM Survey who injected in the preceding year, reported using an NSP during that time, while only 5% (89/1,786) had never used an NSP.[110] NSP coverage is defined by NICE as the percentage of injections of illicit drugs for which a new or sterile needle and syringe is available to use. One recommendation of NICE's 2014 NSP guidance is to increase the number and percentage of people who have more sterile needles and syringes than they need (more than 100% coverage), that is, the number who have more than one sterile needle and syringe available for every injection. Although formal research evidence is lacking, NSP are also known to play a crucial role when people begin their recovery journey. NSP staff can guide responsible actions for self-protection and the safety of others in relation to the risks and consequences of drug use, as well as opening doors to drug treatment and peer support, to assist recovery.

Longitudinal, observational cohort studies

Relatively large-scale, longitudinal, cohort follow-up studies can offer additional insight into the impact of treatment that is delivered in routine conditions. Relatively few studies have been conducted due to the time and considerable resources required. Five studies are summarised here, and while this list is not exhaustive it is but broadly representative of this aspect of the effectiveness literature.

It should be borne in mind that there are significant differences in the countries where these studies have been carried out, as well as differences in the follow-up periods, recall time frames, and recruitment methodologies. Furthermore, most of the studies collect follow-up information on people during times spent in and out of treatment.

Drug Abuse Reporting Programme (DARP – USA)

The six-year follow up of clients recruited to DARP in 1972-1973 focused on a sub-sample who were daily opiate users in the two months prior to admission to treatment (n=990).[111] On average, these clients were aged 25 at admission, 38% were white and 58% were male. More than half (53%) also used marijuana in the same pre-admission period and 57% used at least one other of the following substances: cocaine, barbiturates, amphetamines, hallucinogens and other drugs (not cannabis). At the six-year follow up, 61% had achieved opiate abstinence while a further 21% continued to exhibit a heavy and sustained use of opiates over the follow-up period.

Drug Abuse Treatment Outcome Study (DATOS – USA)

Of the 10,010 clients recruited to DATOS, 1,393 were followed up at both the one-year and five-year follow-up period.[112] As there were less than 20% using heroin in the year before admission for long-term residential treatment, and less than 10% reported heroin

use in the year prior to both outpatient drug free and short-term inpatient admission, the focus here is on those accessing outpatient methadone treatment (n=432).

Of those who received outpatient methadone treatment, 58% were male, 50% were African American or Hispanic and the majority (84%) were aged over 30. Most (77.6%) had been in treatment before and a small proportion (3%) ware referred to treatment from the criminal justice system. The majority (93%) received more than three months of treatment.

At the one-year follow up, 76% did not report heroin use in the preceding year. By the five-year period, however, there was a reduction in the abstinence rate, with 69% reporting abstinence in the year preceding the follow up. Full-time employment rose from a baseline of 15% to 19% at one year and 25% at five years.

Australian Treatment Outcome Study (ATOS)

The ATOS study, conducted in three major cities in Australia, recruited 615 people entering treatment in 2001-2002 for heroin dependence.[113] Two-thirds were male and the average age was 29.3, 7% were homeless, and a further 7% lived in a boarding house, hostel, shelter or refuge. Two in five (41%) had previously been incarcerated and 89% had previously accessed drug treatment.

In the month preceding admission, 99% reported heroin use with other illicit substances also prevalent, including cannabis (68%), benzodiazepines (48%), cocaine (40%), amphetamines (30%) and other opiates (29%).

By year three, 74% had received some form of opiate substitution therapy, 51% had an received detoxification, and 38% received residential treatment.[102] Past-month abstinence from heroin increased dramatically by the three-month follow up, with 49% no longer reporting use. There was a steady, but slower, increase in abstinence rates over the rest of the follow-up periods with 59% reporting abstinence by 12 months, 65% by 24 months, 66% by 36 months. At 11 years, 75% reported abstinence, daily use fell from 80% at intake to 4%, and 47% were still enrolled in treatment. [114]

Research Outcome Study in Ireland (ROSIE)

In Ireland, 404 individuals were recruited in 2003-2004 to ROSIE.[115] Three quarters were male, 99% were white, and the average age was 28. One in six (16%) were employed at intake and 8% were homeless. Most (87%) had accessed drug treatment previously. The most prevalent illicit substance used was heroin (77%), followed by cannabis (64%), benzodiazepines (44%), cocaine (44%), crack cocaine (15%) and

ecstasy (12%). Alcohol was used by 54%. The average age of first using heroin was 20, and 77% had a history of injecting by admission to the study.

At the one-year follow up, 52% reported no recent heroin use (compared to 23% at intake) and at three years, 54% reported no heroin use. Other drugs reported as being used at three years were cannabis (49%), benzodiazepines (32%), cocaine (20%), non-prescribed methadone (14%) and crack cocaine (7%).

Drug Outcome Research in Scotland (DORIS)

In Scotland, 1,007 drug users were recruited in 2001-2002, and 668 individuals were followed up at 33 months.[116] Sixty-nine per cent were male, 11% were employed and 26% were homeless. Of the cohort, 45% was receiving drug treatment in prison. The most prevalent reported drugs were heroin (87%), cannabis (74%), benzodiazepines (73%), other opiates (39%), crack cocaine (28%), powder cocaine (27%), ecstasy (22%) and amphetamines (12%).

Abstinence over the past three months increased from 13% at intake to 35% at eight months, 37% at 16 months and 47% at 33 months. The proportion of clients reported as entirely drug free was 18% at eight months and 17% at both 16- and 33-month follow up.

Main points:

- drug treatment affects a broad range of outcome domains, as demonstrated by the breath of outcomes measured by major international treatment outcome studies of opioid dependence. These outcome domains include drug use, abstinence, crime, harm, health, mortality, and social functioning, including employment, accommodation, family relations, and recovery self-perceptions
- opioid substitution treatment (OST) is the most widely studied intervention. OST is associated with a marked reduction in heroin use (66% abstinent), with the majority of patients retained in treatment (77% retention). Flexible (usually higher dose) treatment is associated with longer time spent in treatment and greater heroin abstinence. OST is associated with a marked reduction in illicit drug injecting and sharing of injection equipment and substantially reduces the risk of fatal opioid poisoning (overdose) and reduces the risk of bloodborne viral infection
- psychosocial interventions are an important element of drug treatment, but there is a mixed evaluation literature on their effectiveness. Opportunistic brief motivational interventions for people with stimulant and opioid dependence are associated with reductions in drug use. CM is effective at reducing illicit drug use and CM during methadone maintenance is associated with abstinence. CBT is an effective treatment for drug dependence (compared to no treatment), but

when compared to other psychosocial interventions CBT is only effective for stimulant and cannabis dependence with co-morbid depression and as an adjunctive therapy for those who are abstinent from heroin during OST. Family and couples-based interventions are effective at achieving abstinence from cocaine and heroin. Mindfulness-based therapies (specifically acceptance and commitment therapy) may be an effective treatment for drug dependence. Self-help support groups and mutual aid are associated with abstinence from illicit drugs and fewer drug-related problems

- residential care is recommended for people who have significant comorbid physical, mental health or social problems and NICE recommends particularly for people who have not benefited from previous community-based psychosocial treatment
- continuing (after) care is associated with a positive effect on substance use
- in the criminal justice system, prison diversion initiatives are effective at reducing drug use
- therapeutic community work release programmes in prison are associated with reductions in relapse to drug use and reductions in post-release criminal activity and reoffending (review evidence is low-moderate quality)
- specialist drug treatment is associated with reductions in offending
- retention in OST is an important driver of crime reduction outcomes and crime reduction outcomes improve proportionate to time in treatment
- community-based needle and syringe programmes, with extensive coverage, can reduce population-level HIV and HCV infections
- longitudinal outcome studies of heroin, cannabis, cocaine, amphetamines, alcohol and benzodiazepine misuse indicate that treatment interventions are associated with marked reductions in illicit opiate use; however, a significant proportion of people continue to use heroin and other drugs and the proportion that achieved complete abstinence was relatively low. The longest follow-up study (ATOS) reported daily opiate use falling from 80% to 4% after 11 years, however, nearly half (47%) of heroin users were still in contact with drug treatment just over a decade after entering the study
- many of the experts by experience who were consulted said that OST was an effective means of bringing people into contact with treatment and bringing stability to lives. However, some said that services could do more to ensure prescribing/dispensing arrangements were right for them

Chapter four: How does drug treatment in England compare to the effectiveness literature and other treatment systems?

The aim of this chapter is to contrast the effectiveness of drug treatment in England to the academic literature and to national treatment systems overseas. Material for this chapter includes the REA from LJMU and an analysis of NDTMS data by PHE. A technical expert group provided guidance on the approach.

It is challenging to make a fair comparison between experimental (randomised controlled) trial data and routinely delivered treatment data. Most efficacy trials are implemented under highly controlled conditions in which participants are often directly recruited via local media, and subject to strict selection. Interventions are usually well resourced and are delivered according to a pre-defined protocol. The measures of effectiveness are also subject to much study-to-study variation in definition and verification. Where contrasts have been made to systematic reviews in this chapter, it has not been done on the basis of whether the English treatment system compared favourably or unfavourably, but where it was technically possible to make some comparisons.

It is also important that care is taken when interpreting indicators from international treatment systems because treatment populations, treatment interventions and outcome measures may vary quite widely. There may be important differences in the prevailing socio-economic context, the drugs under study, the characteristics of the participants, as well as local environmental factors which may moderate treatment engagement and outcome. There may also be wide ranging differences in the provision of healthcare, housing, employment and education across national systems.

LJMU searched for comparable data on drug treatment provision and effectiveness relating to systems overseas (available here). It might be expected that this would be straightforward; however, few indicators could be identified from comparable systems. Where potentially suitable indicators were identified, variation in measurement and definition challenged this exercise. Although NDTMS is not unique, LJMU concluded that few if any national treatment systems overseas monitor in-treatment outcomes, treatment completion status, or rates of representation.

Comparisons to systematic reviews of treatment effectiveness

The review's technical expert group advised that only systematic reviews that contained a sufficient number of studies and participants should be used, to avoid making comparisons with estimates that have a high level of uncertainty. This unfortunately meant that comparisons of outcomes for non-opiates users and prison-based treatment were not possible, as the reviews identified did not meet these standards, and were therefore excluded from the review.

As noted in the previous chapter, systematic reviews are essentially compilations of two or more independent research studies in which measures of effectiveness are pooled. While giving a very good overview of each expected outcome, the produced estimate may not summarise or provide sufficient detail to enable a direct comparison to the performance of drug treatment in England. Therefore, it was judged necessary to access the source reports that were included in the systematic reviews to extract additional information. Once the source reports and studies were identified, information was taken from each and recorded on a summary template (an example is included below). These templates were then used to design the comparison groups that would be generated from data held in the National Drug Treatment Monitoring System (NDTMS).

A worked example of a comparison to one of the systematic reviews

An example is given for the impact of treatment on illicit drug injecting to describe the process of identifying comparisons between NDTMS and the effectiveness literature. The REA included a systematic review reporting that OST had a significant effect on injecting behaviour.

Table 1 Example of table used to determine injecting cessation comparisons

Study (year)	City/Country	OST medication (dose)	Recall period at baseline	Follow up period	Number in study	Number of injectors at baseline	Number of injectors at follow up
Dolan (2003)	Sydney, Australia	Methadone (61mg/day)	Prior 30 days	4 months	129	83	44
Chatham (1999)	Texas, USA	Methadone (~41mg/day)	Prior 6 months	12 months	435	435	313

Table 1 summarises two of 11 studies[117–127] included in the systematic review that examined change in injecting behaviour.[128]

The studies were conducted in the USA and Australia, published around the same time and in both, participants were prescribed methadone. However, they used different time frames in which the pre-treatment (baseline) measure of injecting was recorded and they gathered follow-up information at different points. NDTMS uses a 28-day time frame in which injecting behaviour is measured, therefore by using NDTMS data on injecting after 12 weeks of OST, a fair comparison can be made to the Dolan study.

However, because the Chatham study uses a six-month time frame, using NDTMS data on injecting changes at 12 months only allows an approximate comparison and significant caveats would apply. For each of the outcomes presented in the following sections, the findings or effects from the systematic reviews are presented alongside data from NDTMS. A brief description has been provided for both sets of data, as well as any caveats that need to be considered.

Treatment outcomes in England contrasted to the effectiveness literature and other treatment systems

Opiate users presenting to treatment

When looking at treatment effectiveness, it is important to take into account the proportion of those in need of drug treatment who are receiving it. The outcomes of treatment may be good, but if only a small proportion of the most problematic drugs users are accessing services, then the overall public health impact is limited.

Some countries conduct estimates of the number of opiate users in their general population. This can be used to estimate the level of ‘treatment penetration’ or access rate (ie the proportion of people users of a specific drug who access treatment).

In Figure 24 below, the European average for the proportion of opiate users in treatment is around 50%.[129] Canada[130] and the US[131] have the lowest treatment access rates (approximately 28%). France reports the highest rate at 76%.[129] The proportion of opiate users in treatment in England is 60%.[132]

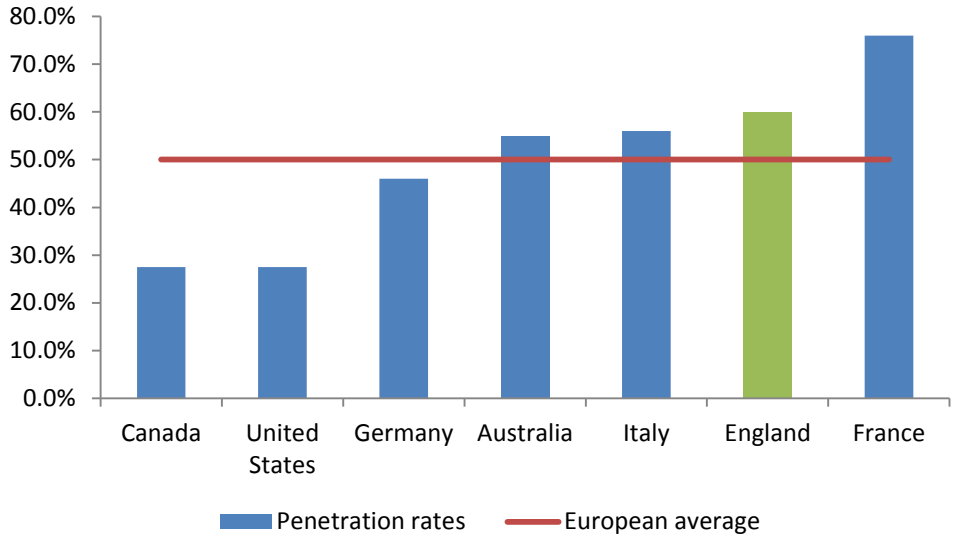

Figure 24: Proportion of opiate users that are in contact with drug treatment services by country and European Average (which includes England)

Time to access treatment

Very few countries record and publish waiting times to access drug treatment in a consistent way. Below are data from England, Wales, Scotland and the US. In England, 97% of people were seen within three weeks of referral.[132] This is similar to Scotland (96%)[133] and the United States (94%).[134] In Wales, 87% of clients were seen within this time.[135]

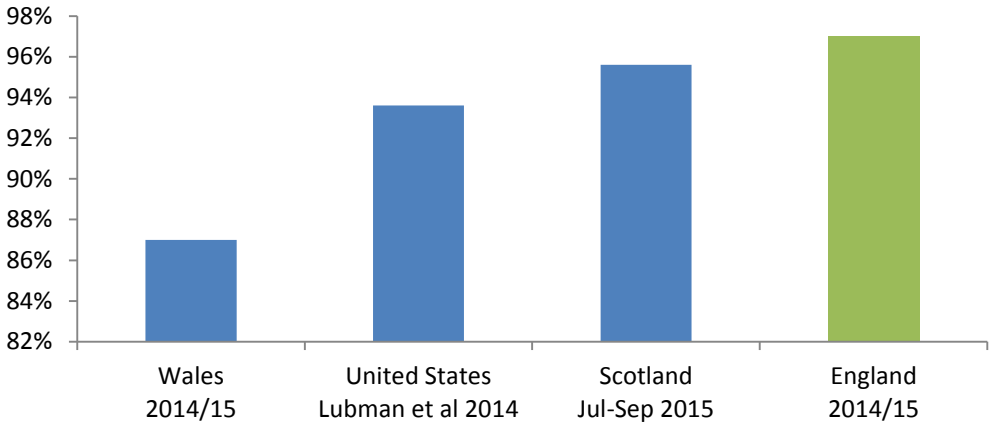

Figure 25: Proportion of individuals waiting three weeks and under to start treatment by country

Preventing early dropout

Given the association with engagement and retention in treatment, preventing early dropout is an important objective for treatment systems. LJMU was not able to identify an indicator of treatment retention for other treatment systems.

In contrast to the effectiveness literature, Figure 26 shows that the dropout rate at three months and six months in England (18% and 34%, respectively) as comparable to the

average from the literature[136–140] including the systematic review (28%; shown as the average intervention effect).[141]

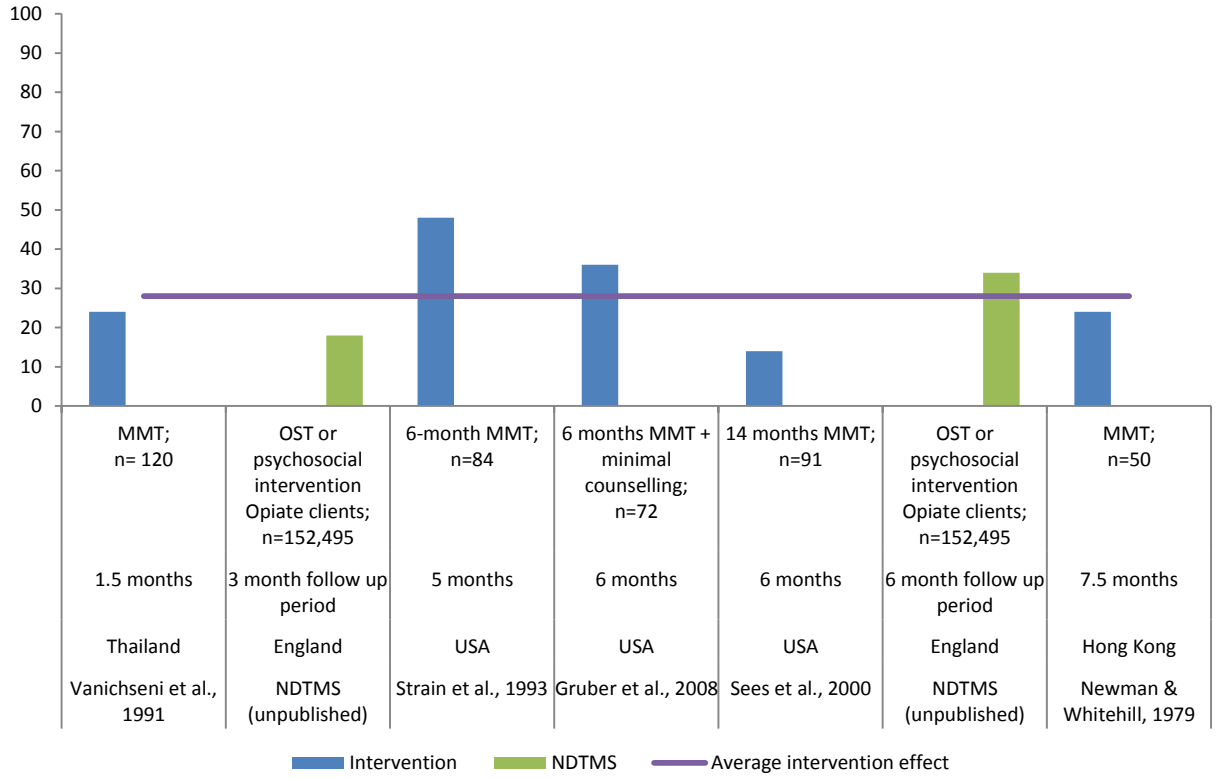

Figure 26: Proportion of individuals dropping out of treatment before 12 weeks by study compared to drop out rates in England taken from the NDTMS

Drug-related deaths

Comparing data on drug-related deaths is difficult because there are differences in definitions, toxicology and coroner processes, under-reporting and delays in reporting. In England, there were 34 deaths per million of the population in 2013,[142] which is considerably higher than the continental European average of 17.3 per million.[143] The United States has the highest rate of drug-related deaths, at 146 per million in 2013.[144]

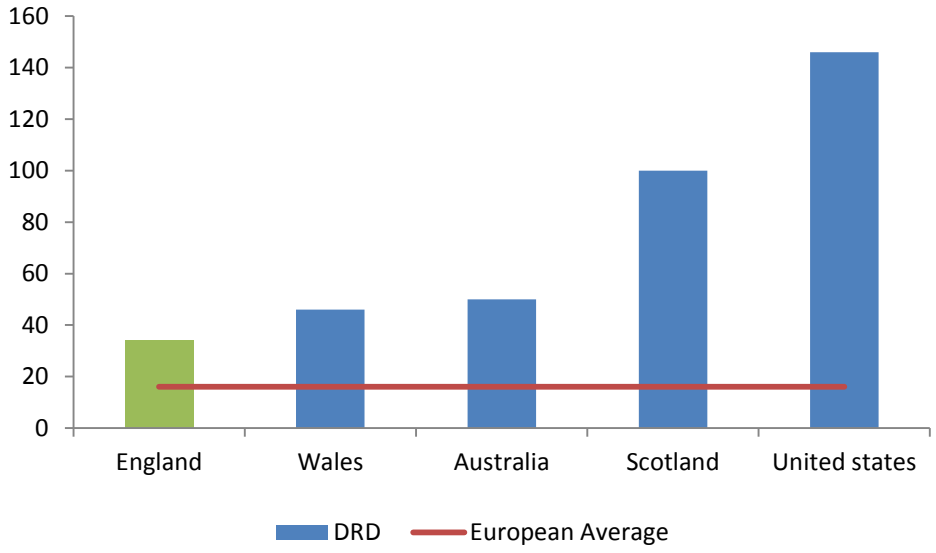

Figure 27: Rate of drug related deaths per million population, by country and European average (which includes England)

Risk of drug-related death and the protective effect of treatment

There is strong and consistent research literature indicating that fatal drug-related poisoning (mainly heroin overdose) is approximately halved during time people spent in treatment compared to time outside treatment.[145,146] The four studies[147–150] included in a recent systematic review[151] are shown in Figure 28, below.

For comparison, a recent study using a large sample from NDTMS linked to mortality data from the Office for National Statistics is shown alongside these estimates.[71] The relative risk ratio of mortality is the comparable estimate across these five studies.[x] For example, in the study conducted in Austria,[147] five times more people died outside of treatment than inside during the period of the study.

[x] The ratio of the number of persons who died outside of treatment relative to the number dying during treatment.

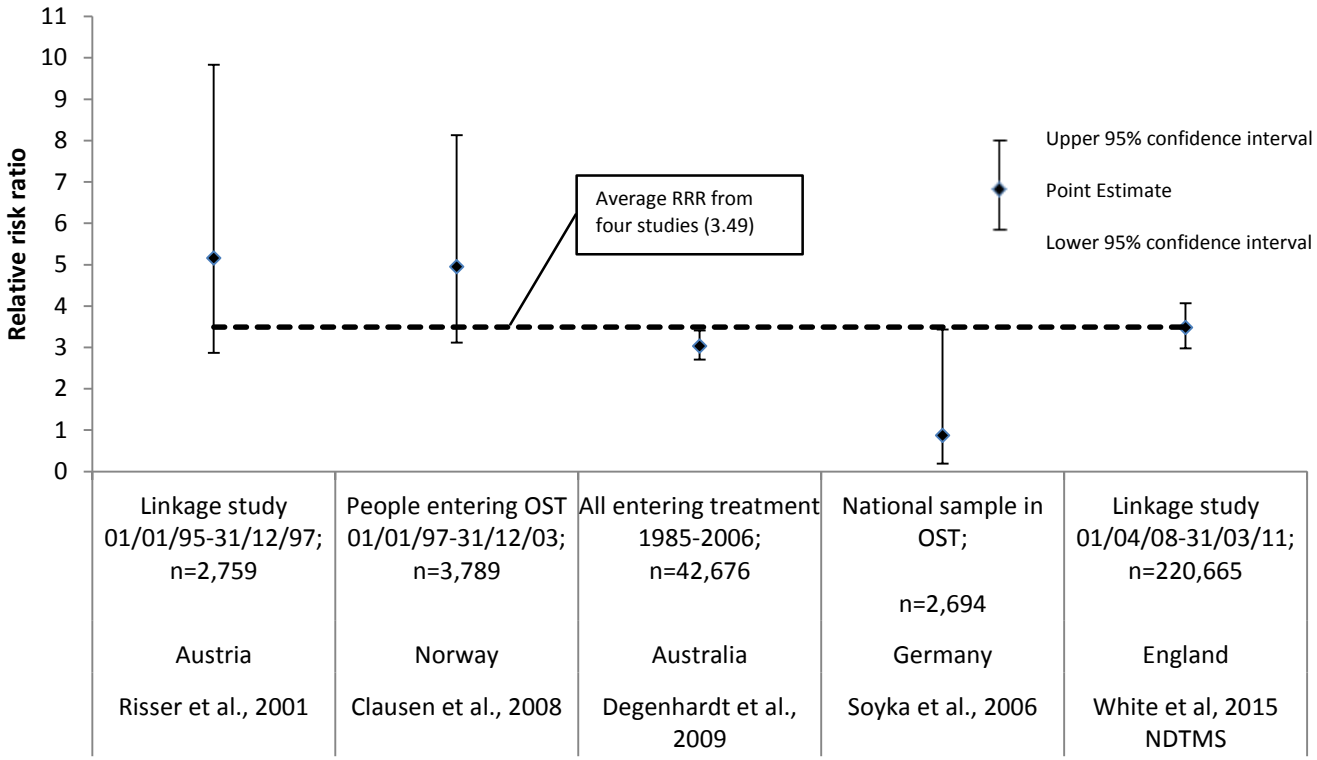

Figure 28: Risk of overdose mortality in opioid users outside treatment, relative to opiates users that are in contact with drug treatment, by study

In the majority of studies included in the systematic review identified by LMJU, the mortality rates out of treatment were significantly higher than those seen while an individual was receiving drug treatment for their opiate use. The exception to this was the German study[150] where there was no protective effect observed.

The results from the English data linkage study[71] also demonstrate the significant protective factor of treatment against drug-use-related premature mortality, with a ratio of around 3.5 of those dying out of treatment compared to individuals that died during treatment. This ratio was comparable to the average in the systematic review.

Reductions in opiate use during treatment

There is a large body of evidence on the changes in opiate use associated with treatment. For this comparison, a Cochrane review[141] of six randomised control trials (RCTs)[119,136,138,152–154] of OST was used. This brings together studies conducted in Australia, Thailand and the USA, where the outcome measure used was the percentage of people abstinent from illicit opiates after varying times spent in treatment.

Results from these six trials are shown in blue in Figure 29 below.[xi] As can be seen, these studies can be grouped into two groups of three trials. The first group reported on opiate abstinence after 30-45 days and the second after 4-6 months in treatment.

Overall, the average abstinence rate across these studies was 56%. The dotted horizontal lines show the average rate of opiate abstinence that was seen in the six trials. This was calculated by pooling the results of the studies and using a weighted average of the intervention effects from the individual studies. A 95% confidence interval is then generated to produce the dotted lines. As can be seen from the chart, the level of opiate abstinence in the RCTs is quite variable across the six studies.

Data from NDTMS in 2014-2015 is shown in the green bars. Two different time periods are presented, the level of abstinence after three months of starting treatment (n=7,094) and after six months (n=10,013). It shows that the rate of opiate abstinence at both three and six months is slightly lower than is seen the studies included from this review, at 46% and 48%, respectively.

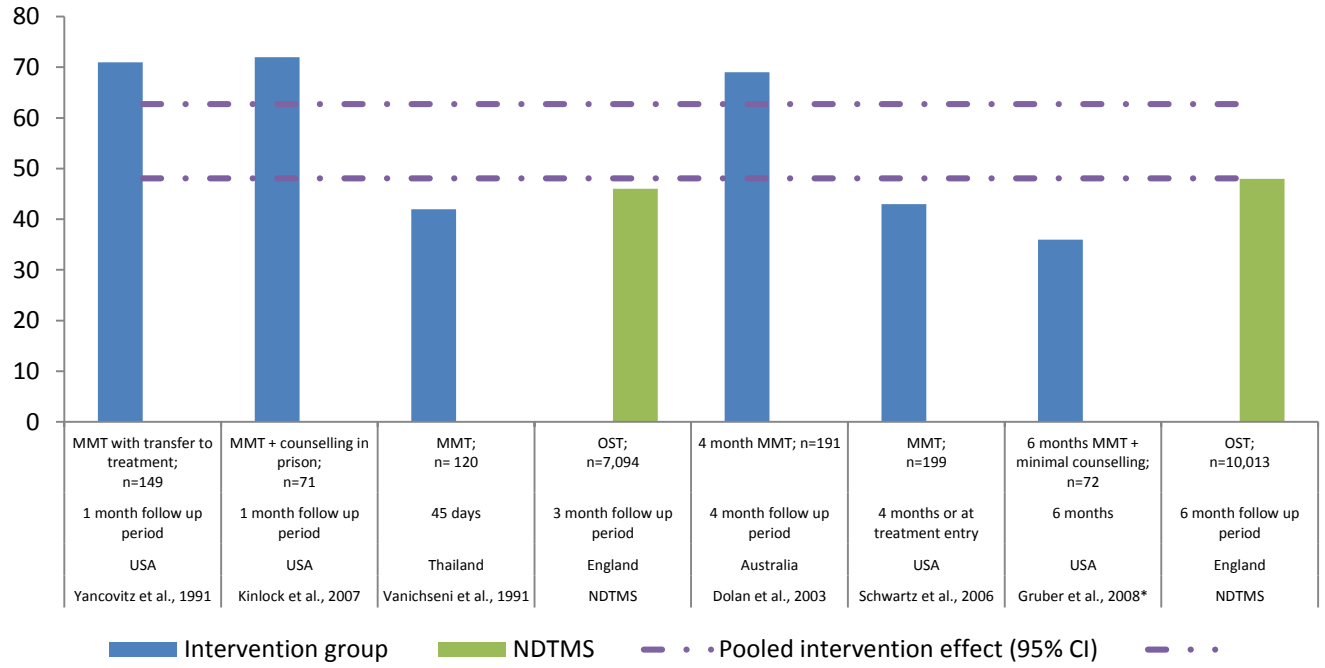

Figure 29: Proportion of opiate users who have stopped using illicit opiates at different follow up period by study and compared to rates in England using NDTMS data

In most research studies there are attempts to follow up participants that have remained in drug treatment as well as those that have left since the start of the study. While it is possible to obtain follow-up information in NDTMS using the treatment outcome profile

[xi] Clients who were on the 'control' arm of the RCT are not shown, as these individuals received no or limited treatment and were in the trial for comparative purposes.

(TOP)[155] for patients still in treatment, it is not collected from those that have left treatment. Therefore, there will be patients who started treatment with an opiate use problem, but have no information gathered on their use at either three or six months. These people have not been included in the above chart, but are described below.

- 31% of patients did not have follow-up information, of those:
  - 52% dropped out of treatment
  - 21% had completed treatment successfully
  - 17% were referred to another agency or for treatment in prison
  - 10% were still in treatment

Because of the missing TOP information for these patients it is not possible to report their use of illicit opiates at either six or twelve months. Those that left treatment successfully had stopped using illicit opiates and those still in treatment would be likely use at similar rates to those reported in Figure 29

Bloodborne viruses

There are studies available that examine the rate at which a given bloodborne virus (BBV) is detected in blood samples, and this is of particular relevance to injecting drug users as the sharing of injecting equipment is the route of transmission.

Of all the studies that were identified, England has the second lowest rates of HIV in the injecting drug user population, with 1% being affected, with very similar rates to Northern Ireland (0.7%) and Wales (1.1%).[156] Australia[157] and Germany[158] have 5% or less of injecting users who are HIV positive, the United States,[159] Canada[160] and Italy have similar rates (11-12%). Spain has the highest HIV prevalence (33%).[161]

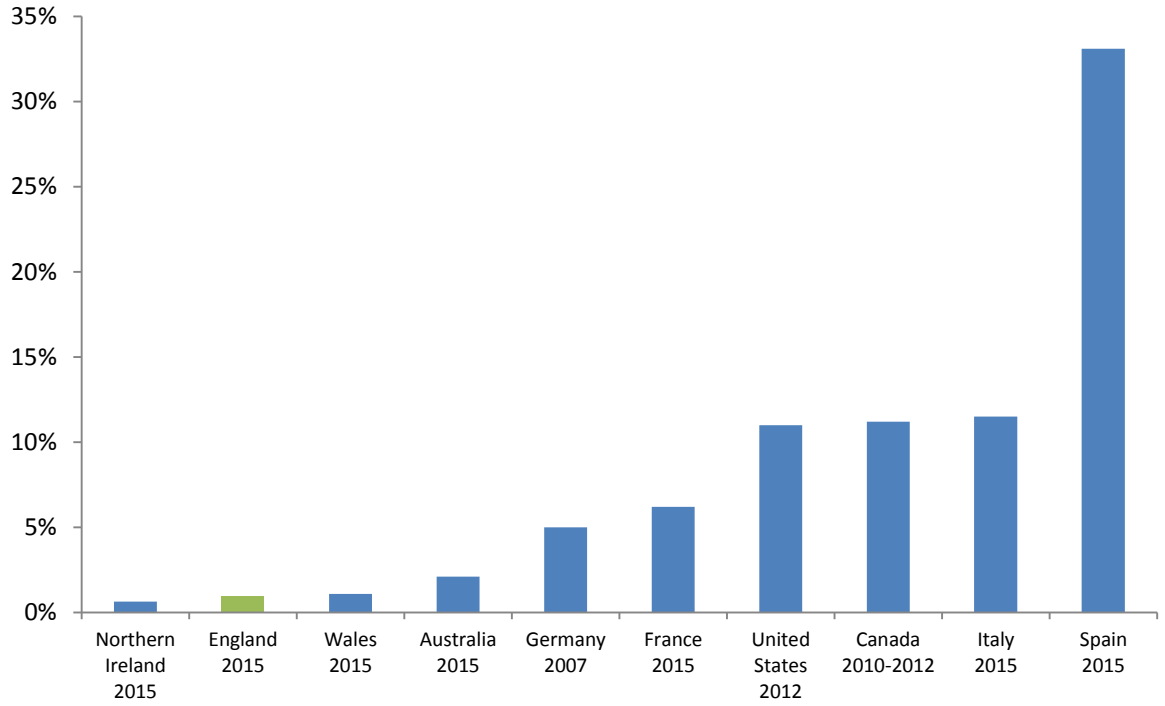

Figure 30: Rates of HIV prevalence among the injecting drug using population by country

Hepatitis C (HCV) is much more prevalent in injecting drug users. Apart from Northern Ireland at 23%,[156] most countries report that at least 50% of their injecting drug user population have been infected. Canada[160] and the United States[159] have the highest levels, at 68% and 73%, respectively. The rate for England (50%) is towards the lower end when compared to other countries with data is available.

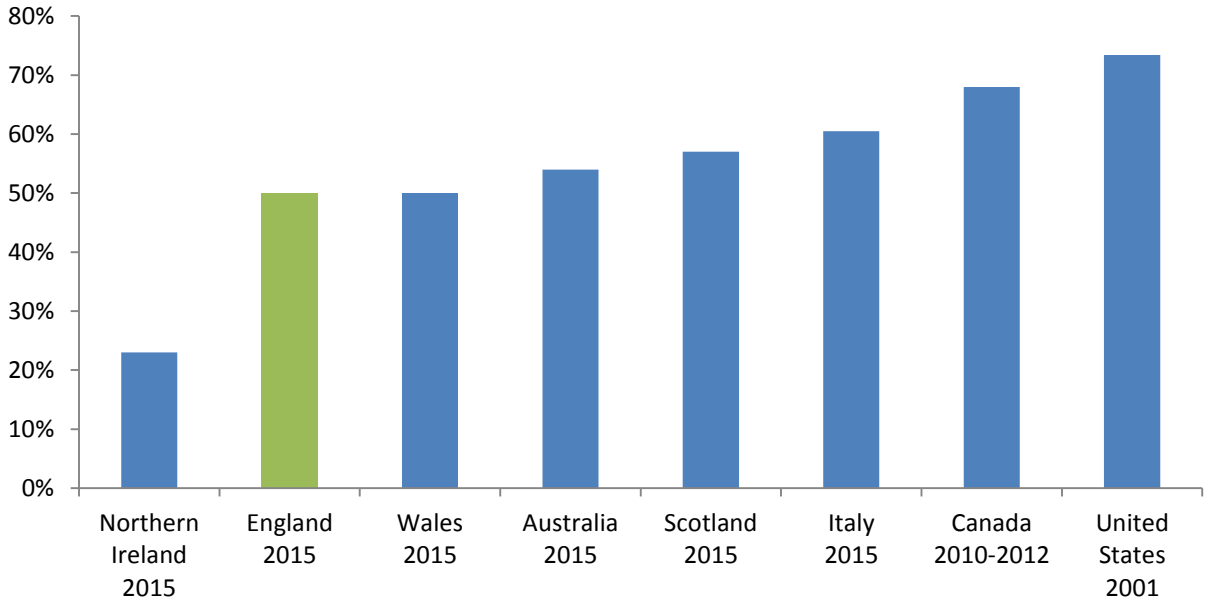

Figure 31: Rates of HCV prevalence among the injecting drug using population by country

Injecting drug use

Figure 32 shows the rates of illicit drug injecting in the general population. The rate in England is 0.25%[46,162] of those aged 15-64 injecting illicit drugs, which is lower than both Australia[163] and the United States.[164]

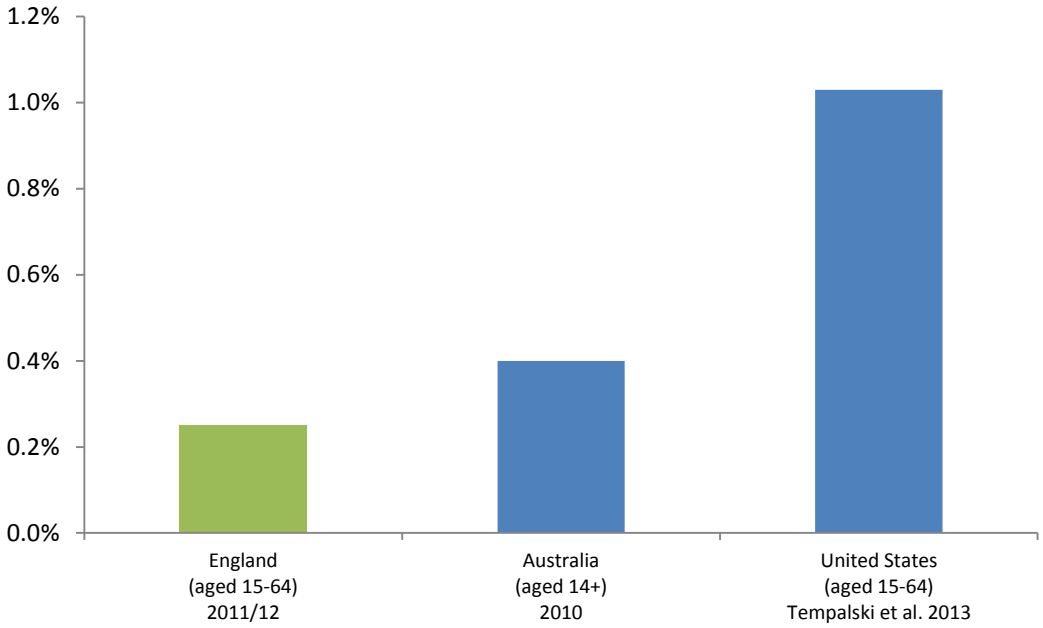

Figure 32: Proportion of injecting drug users among the general population, by country

Figure 33 shows the percentage of all those who entered treatment who were current injectors in 2012. In England this was 18%, which is comparable with the rest of Europe, with the European average being 15%.[165] In England, the percentage has fallen to 15.5% in 2014/15.

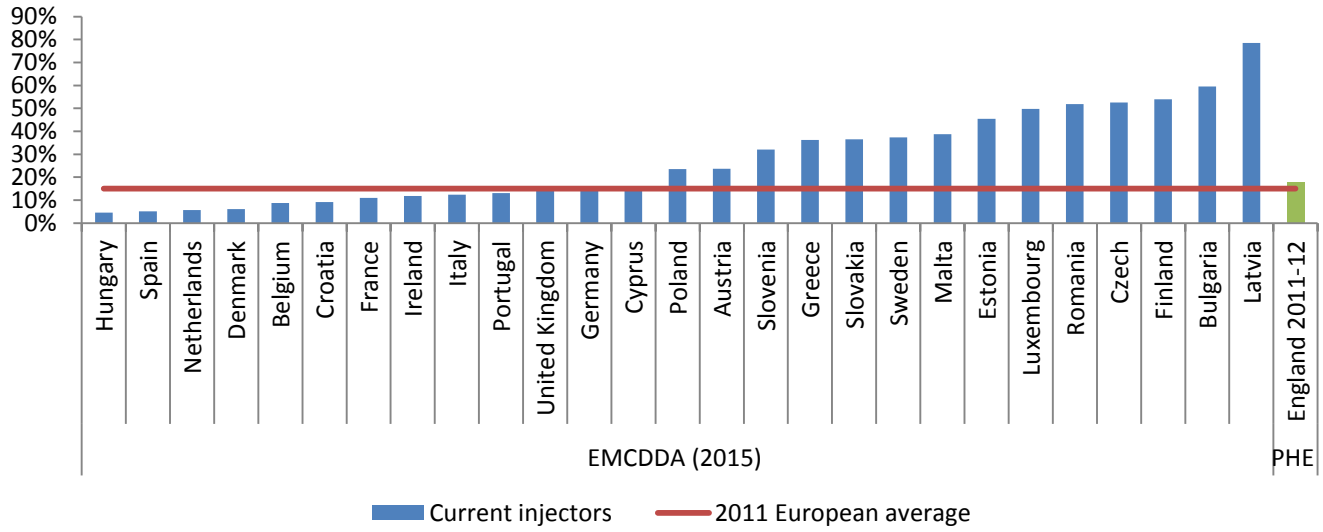

Figure 33: Rates of injecting drug users entering treatment by country and European Average (which includes England)

Reductions in illicit drug injecting during treatment

There were 11 injecting studies[117–127] included in the systematic review[128] identified by LJMU's Rapid Evidence Assessment. One of these studies[125] is not included here because the outcome measure was daily injecting and is therefore not comparable.

The data in Figure 34 is presented in the same way as for opiate use, with the blue bars reporting the levels of injecting from the 10 studies and the green bars using data from NDTMS to show the levels of injecting in 2014-2015 at different time periods following the start of treatment. The horizontal line is an average rate of injection cessation from the studies for each time period that NDTMS data covers.

Again, there is significant variation across the 10 studies that have been included in the systematic review, ranging from about 20% of individuals stopping injecting to just over 60%. Data from NDTMS indicates that for all three time periods the English treatment system performs favourably when compared to the average level of cessation of injecting seen in the studies, increasing from 52% for those in treatment for three months, to 58% and 61% for those in treatment for six months and one year, respectively.

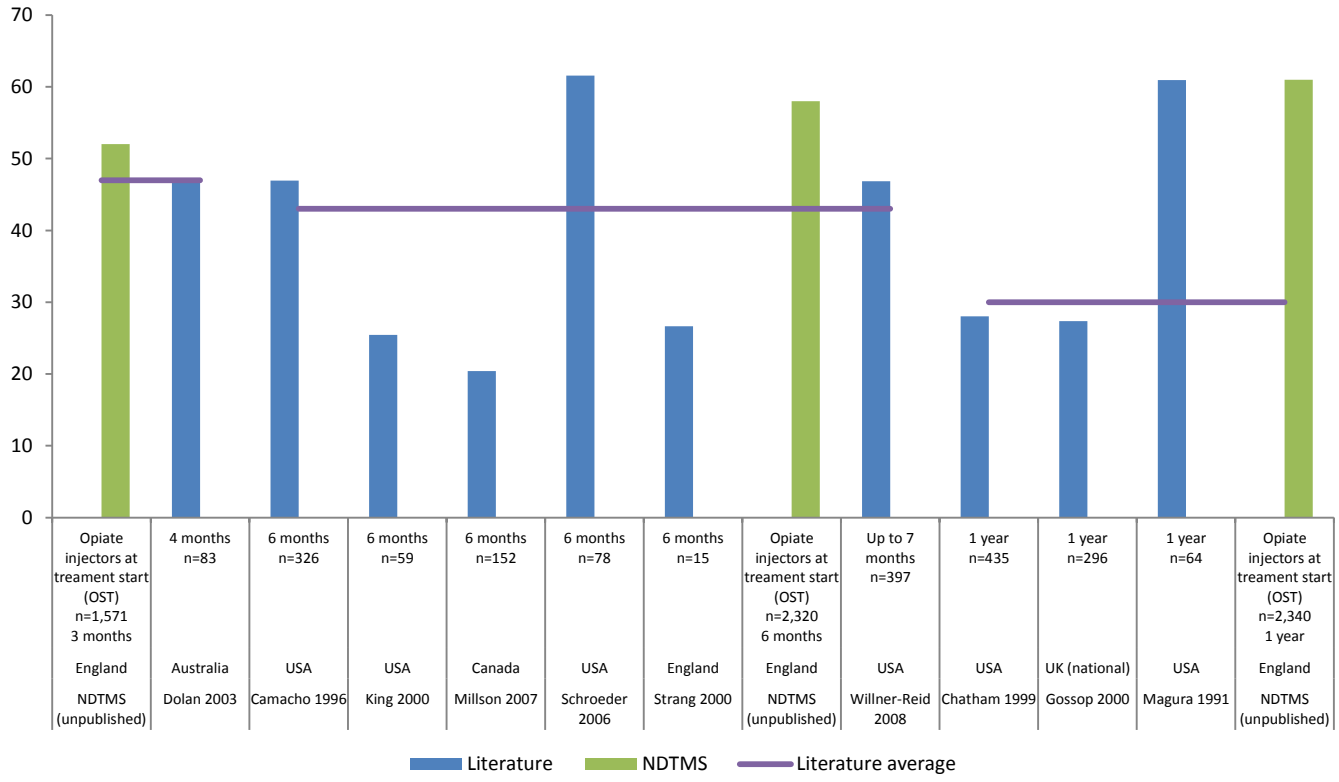

Figure 34: Proportion of individuals that were injecting at start of treatment, who have stopped injecting at follow up, by study

There was no TOP follow up data available for 15% of patients. These have not been included in the above chart, but are described below. Of the 15% who did not have follow up information:

- 63% dropped out of treatment
- 16% had completed treatment successfully
- 16% were referred to another agency or for treatment in prison
- 5% were still in treatment

Drug-related offending

There are strong associations between the use of heroin and crack cocaine and offending. Offending related to drug use tends to be mainly acquisitive crime (eg shoplifting, robbery and burglary).

Some studies conducted in England have examined how treatment affects offending and re-convictions. These results cannot be interpreted as direct, quantifiable measures of a causal effect of drug treatment but strongly suggest that exposure to treatment reduces acquisitive and other crimes, particularly as it would seem that there is a relationship between treatment effectiveness and greater reductions in offending. LJMU's REA was unable to identify any comparable systematic reviews or international data, so the results of the English offending studies are reported.

National Treatment Outcome Research Study

In England, the National Treatment Outcome Research Study of community prescribing and residential treatment matched clinical data on 799 participants to the Home Office Offenders' Index and reported on changes in criminal convictions in the year before treatment admission, and at one, two and five-year follow-up.[166] In the year before treatment, 34% of the sample group were convicted of one or more offences. Then at the time of each follow up, the percentage of the sample with one or more convictions was: one year (28%), two years (26%) and at five years, the conviction rate was approximately half that of the pre-treatment level (18%).

Drug Treatment Outcomes Research Study

The Drug Treatment Outcome Research Study[167] conducted baseline interviews with 1,796 adults in 342 treatment services in England. Follow-up interviews were then conducted between three and 13 months after initial interview. A total of 1,131 initial follow-up and 504 secondary follow-up interviews were undertaken. The results identified in relation to offending are described below:

- the proportion who reported committing any acquisitive offences in the four weeks prior to interview fell from 40 per cent at baseline, to 21 per cent at first follow up and 16 per cent at the second follow up

- the proportion who reported committing any high-cost offences fell from nine per cent at baseline to three per cent and four per cent at follow up
- sixty-one per cent of those reporting some offending in the baseline interviews reported no offending in the four weeks prior to first follow up, rising to 69 per cent at second follow up
- recorded offences, except shoplifting, selling stolen goods and selling drugs, were reported by less than five per cent of the sample at either follow up
- the proportion who reported committing any crime specifically in order to fund their drug use fell from 22 per cent at baseline, to eight per cent at first and seven per cent at second follow-up

The impact of treatment on reconviction

A study produced by the National Treatment Agency[168] used anonymously matched NDTMS and Police National Computer data to compare for known offenders, comparing the level of convictions in a two-year period prior to starting treatment, to convictions in the two years following treatment commencement. Almost 20,000 people were included in the study. The main findings were:

- among those retained in treatment for the two-year period (4,677), there was an 47% average reduction in convictions
- those who completed treatment successfully after being retained in treatment for six months or more show virtually the same average reduction (48%) as those retained in treatment for the full two-year period
- those who are retained for the full period reduce convictions by more than three times that observed in those who drop out of treatment (15%)
- 41% were not convicted in the two-year period following initial assessment for treatment
- for all those who both completed treatment successfully and did not return during the period, the observed reduction in convictions was 61%

The heroin epidemics of the 1980s and 1990s and the impact on crime

An analytical research paper from the Home Office[169] has modelled how the change in prevalence of heroin use over time may have affected crime levels in England. It considers a wide range of drug use and offending data sources and indicators, with the aim of trying to identify any correlation between changes in patterns of use and offending over time. While the paper stresses that due to limited data sources available, all results should be treated cautiously, it says that:

- numerous sources of evidence agree that the number of heroin users increased markedly in the 1980s and early 1990s and that many also used crack as their

drug-using career developed. This ‘epidemic’ spread from area to area but the national peak probably occurred between 1993 and 2000. Crime peaked between 1993 and 1995

- current data, particularly from treatment services, show that heroin/crack use has declined in recent years and that – as with offending – the decline has been most marked among younger people. This means those who began using these drugs during the epidemic still represent the majority of the heroin/crack-using population today
- studies agree that, on aggregate, heroin/crack users commit a large number of offences – large enough, this paper asserts, to be an important driver of overall crime trends

Main points:

- contrasting the effectiveness of the drug treatment system in England is challenging because of limited sources of information and difficulties with interpretation. Information on the completion of treatment, offending and long-term outcomes are probably the largest and most significant gaps in the literature and comparable international data. The majority of comparisons show that the English treatment system achieves outcomes comparable with the effectiveness literature
- the treatment penetration rate in England (60% of the estimate of opiate users in the general population) is among the highest reported and is substantially better than North America
- treatment access in England is good (97% seen within three weeks) and comparable to other treatment systems
- the drug-related death rate in England is 34 per million. This is considerably higher than the average in continental Europe, but substantially less than in the USA. Treatment in England protects against drug-related death (relative risk ratio: 3.5) and this protective effect is comparable to the effectiveness literature
- on average, the effectiveness literature shows that 66% of patients are abstaining from illicit opiate use after a period of treatment (although there is some variability on this measure)
- although absolutely direct comparison of time in treatment is not possible, the rate of illicit opiate abstinence after three and also six months of treatment in England (46% and 48%, respectively) points to relatively poorer performance
- the proportion of patients who drop out of drug treatment before 3 and 6 months in England (18% and 34%, respectively) is comparable to the effectiveness literature (average of 28%)
- England has a very low rate of HIV infection among the injecting drug user population (1%), which is comparable to other countries with some exceptions. The rate of HCV infection is substantially higher in England (50%) but this is lower than several other countries with available data

- the estimated rate of drug injecting in England (0.25%) is low when compared to other countries. The proportion of the drug-using population presenting for treatment who are currently injecting (9%) is markedly lower that in continental Europe
- the effectiveness literature reveals wide variation in the proportion of patients who stop illicit drug injecting during treatment (from 20% to 60%). In contrast, drug treatment in England performs well on this measure: 52% after three months, increasing to 58% after six months and 61% after one year
- although it is difficult to make comparisons, drug treatment in England is associated with a marked reduction in convictions (47% among those retained in treatment for two years or successfully completed treatment)
- as should be expected, there is room for some improvement and the review suggests two initial areas of focus where outcomes could potentially be improved. They are to reduce the use of illicit opiates at the start of and throughout treatment, and to reduce drug-related death rates for people enrolled in treatment and those not in treatment

Chapter five: The impact of housing problems, unemployment and deprivation on treatment outcomes

This chapter explores the impact of housing, employment and deprivation on outcomes and consequently how outcomes may be reliant on interdependencies with services outside drug treatment.

Using data from NDTMS, the chapter characterises the level of social disadvantage in the drug treatment population and summarises material from the three commissioned REAs on the impacts of deprivation, housing problems and unemployment on treatment. An analysis of housing and employment data is also presented along with an exploration of factors associated with employment and stable housing in the drug treatment population.

Social factors and health

A person's health status is strongly influenced by socio-economic factors.[xii] Evidence of social determinants on health and wellbeing is longstanding.[170] There is strong evidence that deprivation, homelessness, poor housing conditions, unemployment, poor working conditions and job insecurity, are all negatively associated with health status.[171] When compared to the most deprived areas of the UK, people who live in areas of least deprivation benefit from a significantly longer life and more years spent without a limiting illness or disability.[172] There is a complex and reciprocal association between social factors and illicit drug use. Drug misuse can cause social disadvantage, and socio-economic disadvantage may lead to drug use and dependence.[173]

Public policy emphasises the importance of stable, secure housing and employment for the wellbeing of individuals, families and communities. While the UK employment rate has improved in recent years,[174] housing availability and affordability has worsened in some parts of the country.[175] There have also been recent increases in the number of people rough sleeping, the number of statutory homeless applications accepted and the number of households in temporary accommodation.[176]

[xii] Other social determinants of health include diet and nutrition, social support, income deprivation and the distributive effects of government policy.

Social disadvantage among the drug treatment population

Deprivation

Although people from all socio-economic backgrounds use substances, there is a clear association between estimates of opiate and crack cocaine use (OCU) at local authority level[43] and indices of multiple deprivation.[177] This association is shown in Figure 35 below, where higher rates of opiate and crack use occur in local authorities with higher levels of deprivation.

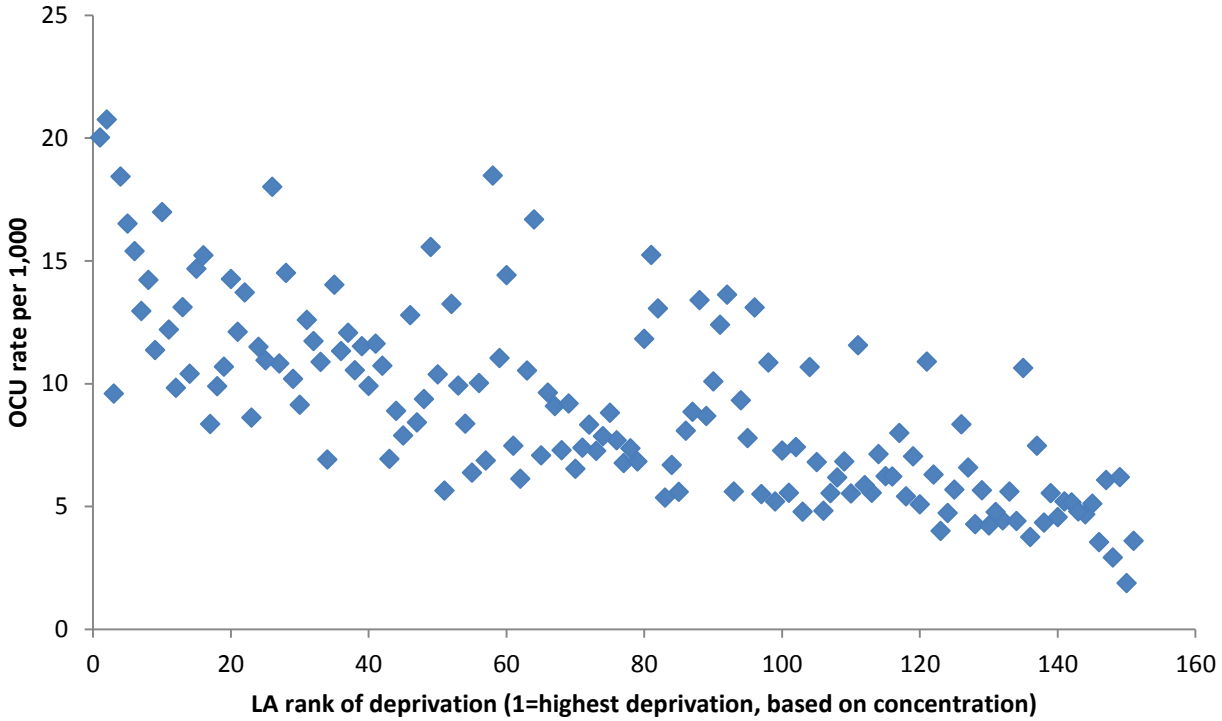

Figure 35: Prevalence of opiate and crack cocaine use reported alongside local authority deprivation levels

The same associations are evident in the NDTMS treatment data, with almost twice the proportion of those in treatment living in the most deprived local authorities compared to the least deprived (Figure 36). In the least deprived local authorities, users of opiates tend to cluster in the more deprived and/or urban areas. This link between areas of deprivation and the high prevalence of opiate and crack cocaine use indicates that addressing issues to do with health inequality and social exclusion are fundamental to improving treatment outcomes.

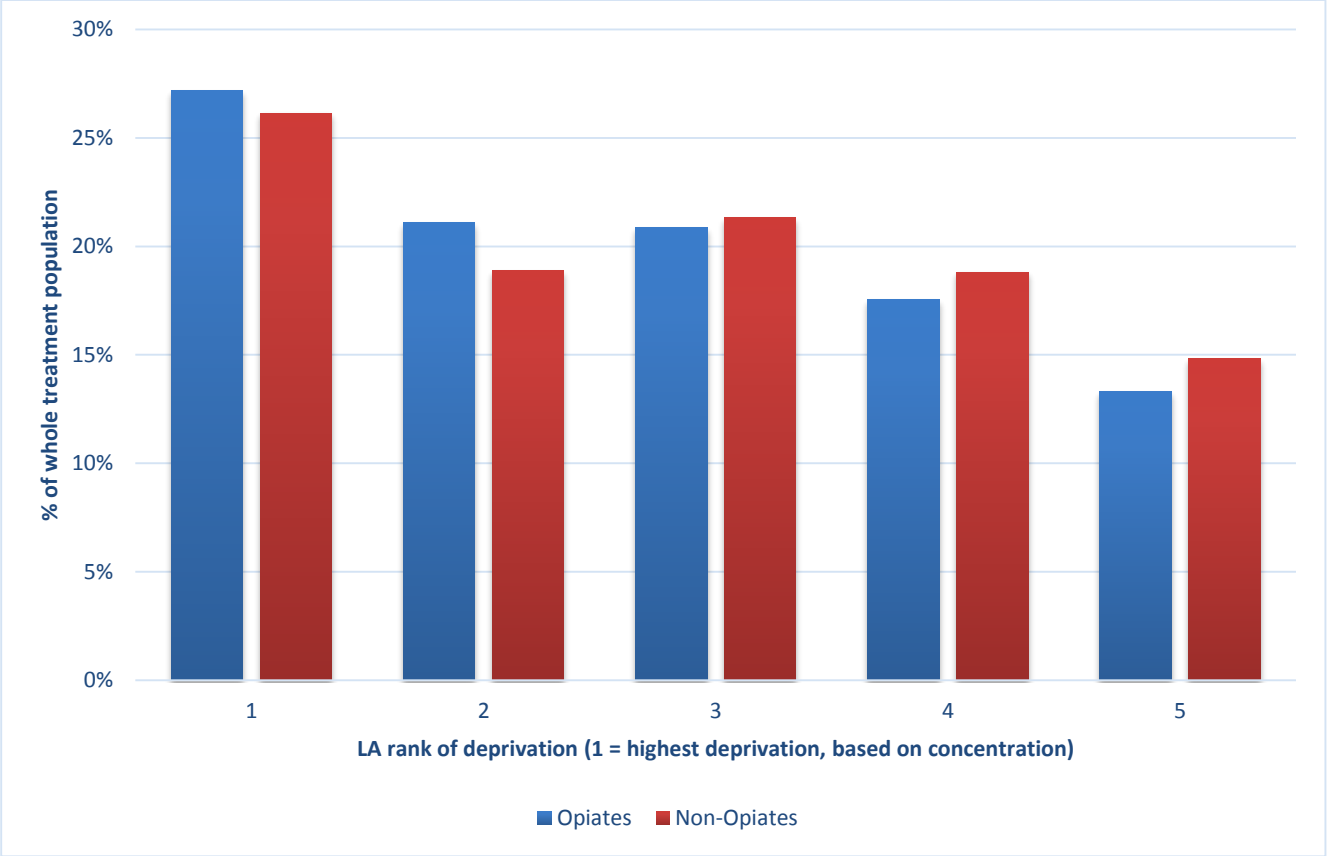

Figure 36: Proportion of individuals (aged 18 and over) in treatment by local authority deprivation quintile and substance

The LJMU REA found that the evidence on impact of social determinants on drug misuse is less well developed. However, in a US study by Galea and colleagues,[178] social norms, neighbourhood disadvantage, social capital, health and social resources and the physical environment were identified as factors influencing individual drug use risk. Social support and social networks were positively mediating factors.

Analysis of available data from the treatment system in England, presented later in this section, shows some associations between social determinants and other characteristics and treatment outcomes. While evidence showed treatment works better for some groups, the LJMU REA found little high-quality evidence on how social factors impact on treatment outcomes.

Housing

Urgent housing problems and housing instability (ie having no fixed abode, homeless or at risk of being homeless) are prevalent in the treatment population. For opiate users, NDTMS data shows that 12% are homeless at admission to treatment start (for non-opiates this proportion is around 5%). There are no directly comparable population-level

data; however, between July and September 2015 the rate of households that were officially defined as homeless was 0.64 per 1,000 in England.[179]

The prevalence of housing problems varies by drug type and region, with a significantly larger proportion of opiate users experiencing both urgent and wider housing problems. The proportion of people experiencing any housing problem is highest among opiate users in treatment in London (24% at admission), and lowest among opiate users in treatment in the North East (14% at admission).

Figure 37 shows how the proportion of people presenting to treatment with housing problems has changed over time. For non-opiate users the proportion presenting with housing issues has remained relatively stable over the last six years. However, for opiate users the proportion of people that have started treatment that present with an urgent housing issue has increased since 2009-2010.

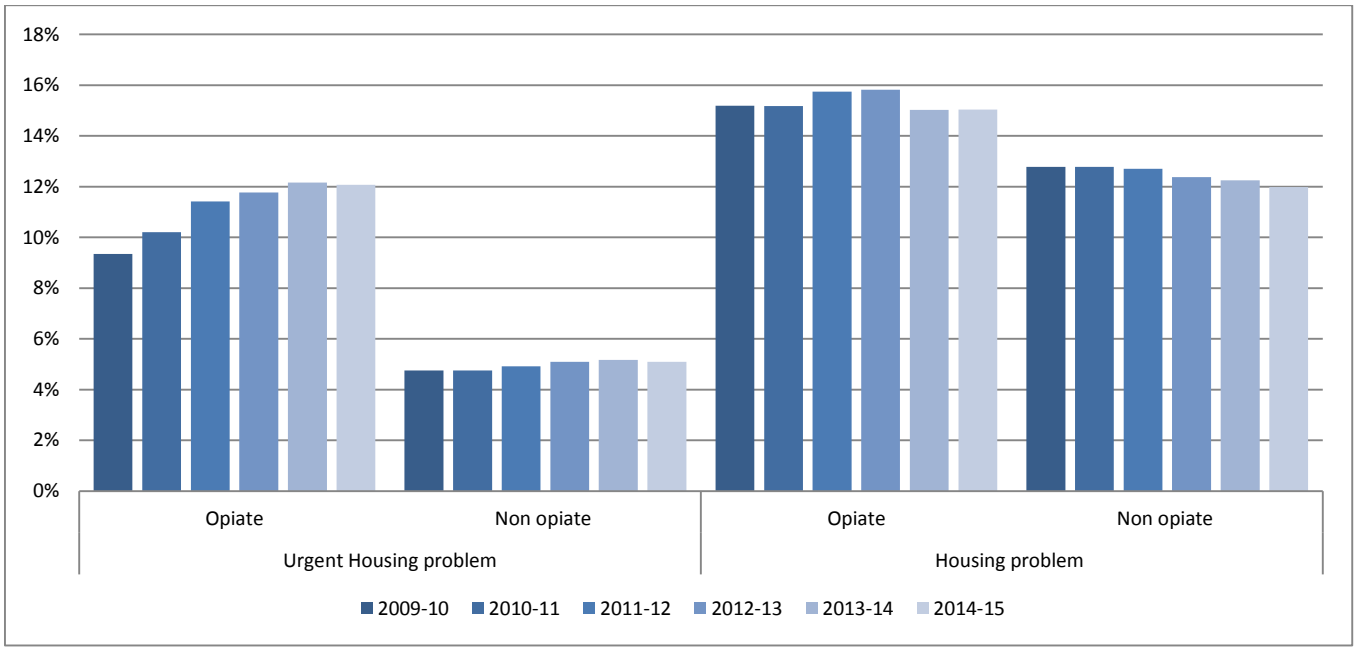

Figure 37: Trend in the proportion of individuals (aged 18 and over) starting treatment with an urgent housing problem or other housing issues by substance (2009-2015)

Employment

Most people are not in paid employment at admission to drug treatment. The employment rate of individuals entering treatment varies by primary substance and region, with 11% of opiate clients in the North East being in paid work compared to 20% of clients in the South East and East of England. This compares to an overall working age employment rate of 74.1%.[180]

The treatment population in areas of higher rates of unemployment have lower levels of housing problems, and vice versa. This mirrors patterns generally seen across the

country, where there is a tendency for areas with high relative levels of unemployment to also have more available housing and/or lower housing costs.

Housing and homelessness

The REA of housing and homelessness commissioned from Gill Leng Housing Services Ltd, identified 57 significant studies published after 1995 (available here). There were five systematic reviews identified (four of which were narrative reviews), and ten randomised studies. In much of this research, drug misuse and drug treatment was not the primary focus and many studies followed participants only in the short term.

The research evidence points to wider housing related effects, such as better outcomes for people who live in a neighbourhood located away from 'temptations' to engage in drug use or crime and that enabling a move away from a poor neighbourhood environment may have other less positive consequences, such as increasing physical and social isolation.[181–185] In one study, homeless drug users reported that even though they were housed in hostels and night shelters, the social environment prevented sleep. Noise and other factors, such as the behaviour of other residents, meant that some people chose to sleep rough.[26]

Two studies suggest that living further away from drug treatment, aftercare and other services is predictive of poorer treatment retention,[186,187] while another reported that distance did not appear to be a barrier to successful treatment and those living further away achieved better outcomes.[188] Access to good transport links is consistently rated important by drug users and is associated with positive treatment outcomes.[19 21]

Much of the evidence is oriented towards homelessness rather than the study of secure and stable housing and housing quality. The homelessness-focused research suggests that:

- homelessness can prompt people to start using drugs, or worsen an existing problem[184,185,190–193]
- homelessness can lessen the motivation for change and willingness to engage with treatment, including if a person is focusing on housing as the priority
- access to housing can have a positive impact on motivation to change[194,195]
- access to treatment can be impaired by not having a fixed address, not being registered with a GP, being unable to claim welfare, or having no access to transport[183,185,196,197]
- it is more difficult for treatment providers to maintain contact with service users if they move between accommodation or are offered emergency housing and this can have an impact on treatment engagement and retention[185]
- the breakdown of family support may negatively affect drug use and outcomes[198]

- homelessness can increase the use of hospital because drug users may seek hospital admission as a means to temporarily avoid rough sleeping[199]
- the risk of relapse is increased if no housing is available on completion of inpatient or residential treatment[185,191,197,200–202]
- the risk of premature mortality is elevated among substance misusers who experience 'persistent homelessness'[203]
- rough sleeping is associated with higher levels of injecting drug use[204]
- a long history of homelessness, which is likely to include periods of rough sleeping, is a predictor of withdrawal from treatment and/or relapse following treatment[205–207]

Although there is considerable evidence of the negative impacts on health and wellbeing of poor and unhealthy housing for the general population, the effects on drug treatment outcomes have rarely been studied. In the studies identified in this review it is suggested that a healthy home is important to people on a recovery journey, that unhealthy housing may be a contributory factor to initiating problematic drug use and that it may affect sleep and subsequent choices (eg whether to sleep rough or use drugs). Further research is on the impact of unstable or inadequate quality housing (such as over-crowding or poor living conditions) on drug treatment outcomes.

A healthy home is defined as a home that is free from a variety of hazards to health and wellbeing, drawing primarily on the evidence that underpins English housing legislation. 'Hazards to health' are categorised by the Housing Health and Safety Rating System (HHSRS), introduced in the Housing Act 2004 as: 'physiological requirements', 'psychological requirements', 'protection against infection', and 'protection against accidents'.

Given the limitations of the intervention studies, common aspects of housing-related interventions that appear to be associated with the identified improved outcomes (not just drug outcomes) are described here. Studies suggest that essential components of a homelessness response for drug users are as follows:

- suitable housing should be available at important points in an individual's pathway, particularly where it is known that failure to provide this is likely to result in homelessness, withdrawal from treatment, greater drug use or relapse[208]
- the pathway should be defined by the individual's needs and choice and should be personalised rather than prescribed by policy, programmes or processes[185,209–212]
- assistance is likely to be needed to access and sustain appropriate housing along the recovery journey, including provision for those who continue to use drugs. Integrated approaches to meeting housing and other needs are more likely to enable navigation through an often complex system of housing,

treatment, health care, social care and other support to achieve better outcomes[196,210,213]

- housing stability, associated with improvements in quality of life, is a positive outcome for some – even if their drug use continues it is less likely to increase and people are more likely to access services[195,214–216]
- housing stability is a particularly important outcome for people who have a long history of homelessness including rough sleeping, and for people with multiple and complex needs[209,217]
- achieving housing outcomes necessitates consideration of income, including addressing debt, and enabling access to, and support to sustain, employment. Bearing this in mind, housing must be affordable[182,211,218,219]

Employment

The Learning and Work Institute conducted an REA on the relationship between drug treatment outcomes and employment (available here). The Learning and Work Institute searched for literature between 1995 and 2015 and focused on the following three questions: (1) the extent to which drug treatment influences employment outcomes; (2) the impact of employment on drug treatment outcomes; and (3) the identification of what works in terms of supporting drug users to achieve employment outcomes. In total, 83 academic papers were identified.

This REA points to a strong relationship between being in work and positive drug treatment outcomes, including reduced drug use and delaying relapse. Studies have found that where welfare recipients work more hours their drug use reduces.[220] Successful drug treatment can also improve the likelihood of entering into employment[221–223] and, subsequently, being in employment after drug treatment was a significant predictor of longer periods of abstinence.[221]

Employment has a role in improving engagement with, and adherence to, drug treatment. For many people, offering employment support as part of, or alongside, drug treatment can improve treatment engagement and outcomes and improve post-treatment employment prospects. Drug treatment combined with a suitable form of employment support can dramatically improve an individual's chances of entering employment.

Findings from The Learning and Work Institute REA include:

- people with drug problems require support to prepare them for work and this support is beneficial
- motivated patients who engage with treatment and employment support have better outcomes
- personalised support is most effective in helping drug users into work

- longer-term or extended support and participants who completed their treatment lead to improvements in both drug treatment and employment outcomes
- after treatment has been completed, continued support when in work is beneficial

The review identified a variety of programmes which have tested integrated drug treatment interventions and employment support. For example:

- a therapeutic workplace approach[xiii] uses work in a 'sheltered' environment to strengthen therapy
- vocational rehabilitation, a broad term for a process to help people with a broad range of needs or vulnerabilities to access, maintain or return to employment
- the individual placement and support (IPS) model[xiv] supports people in their efforts to achieve steady employment in mainstream, competitive jobs
- case management approaches, a broad model of support that involves working with individuals to identify their strengths, needs and aspirations and developing a tailored approach to achieve these aspirations. This type of model is often highly personalised and can be resource intensive but has been shown to increase in the number of drug users going into work and an increase in abstinence
- employment support within a residential rehabilitation setting. The addition of employment related support to a residential drug rehabilitation facility has been shown to increase the likelihood of employment post-treatment

Analysis of drug treatment data on the impact of social determinants

PHE analysed housing and employment data from NDTMS to explore how these social factors are associated with outcomes, and also what factors are associated with employment and stable housing.

NDTMS records information for monitoring aspects of treatment delivery, but does not necessarily include all the potential social factors that could influence drug treatment outcomes and broader health and wellbeing. For any associations seen in the data, it is not possible to imply a causal relationship. This caveat should be borne in mind when interpreting the following analysis.

[xiii] The Therapeutic Workplace is a novel long-term, employment-based intervention designed to address the chronic nature of drug addiction by using a contingency management intervention that arranges abstinence-contingent access to paid employment to reinforce long-term drug abstinence: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4176507/

[xiv] https://www.centreformentalhealth.org.uk/individual-placement-and-support

Deprivation and other social factors

Treatment admission information can be used to predict whether a patient successfully completes treatment using a statistical technique called multivariable logistic regression. Figure 38 shows a logistic regression model of successful treatment completion, for 98,828 opiate users in treatment. A range of predictors are included and the analysis shows the unique association with the likelihood of successfully completing treatment. The left side of the chart, with bars above the horizontal central line, shows positive associations with the outcome. Individuals who are in education or employment, or are older and with better physical health, are more likely to complete treatment successfully. In contrast, clients are less likely to complete if they: use opiates every day in the month before treatment start, are referred to treatment from the criminal justice system, inject, have a housing problem, and come from the most deprived areas of the country.

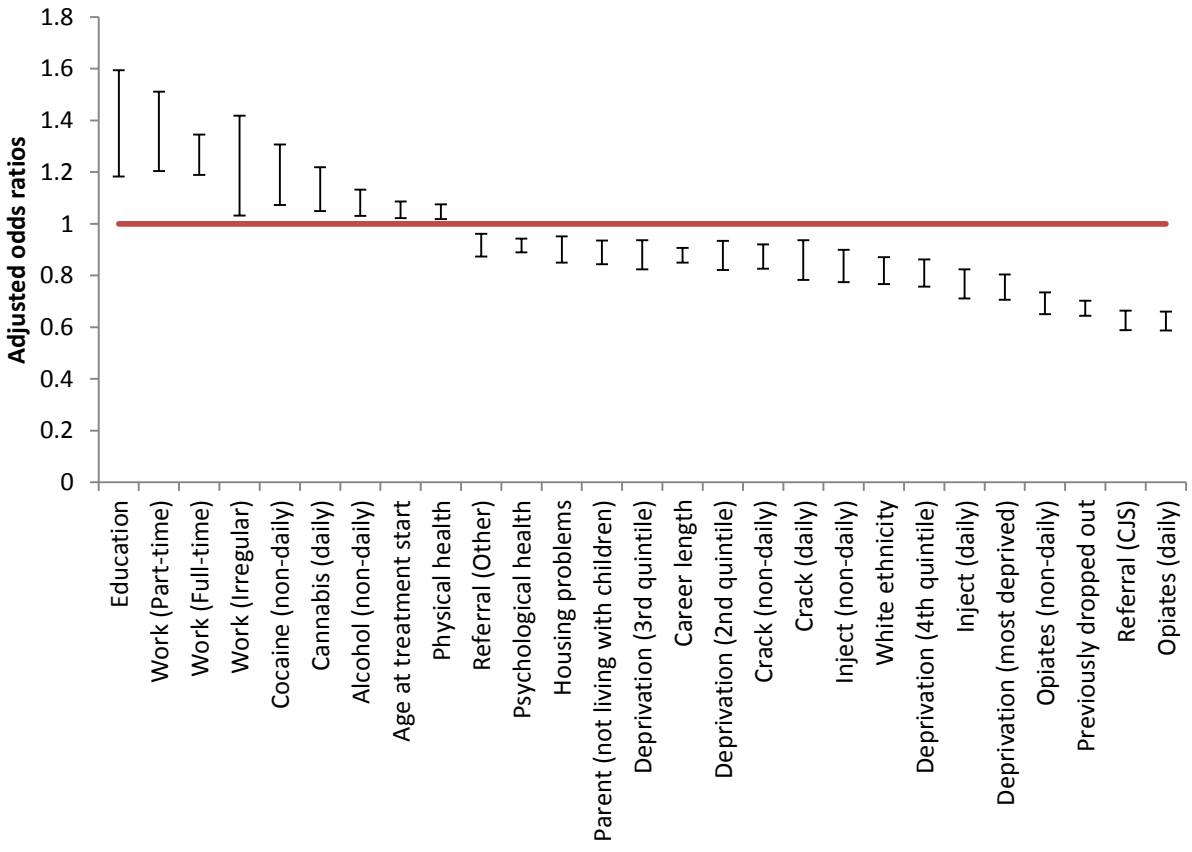

Figure 38: Factors associated with the successful completion of treatment for opiate clients in 2014-15 and their associated odds ratios

Housing and homelessness

There are substantial regional differences in the proportion of people in drug treatment who have a housing problem. The proportion of people with housing problems tends to reflect areas where housing is particularly scarce and/or more unaffordable (Figure 39).

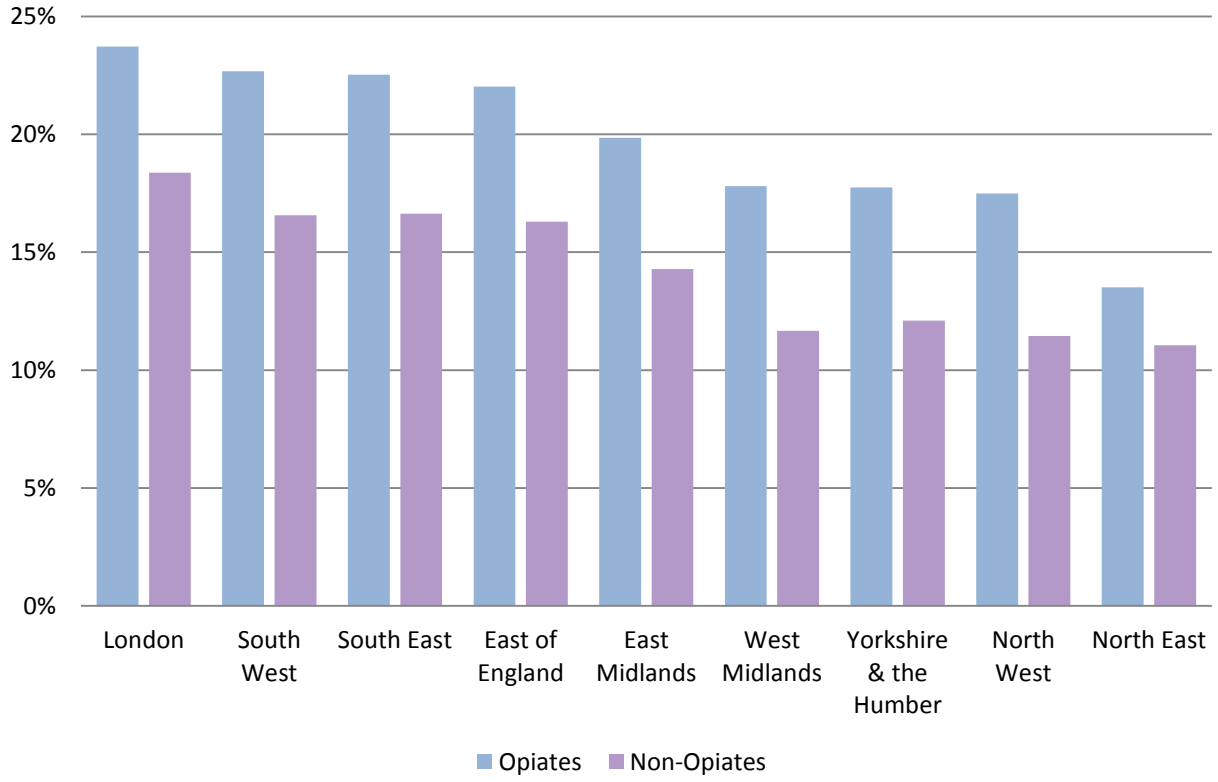

Figure 39: Proportion of individuals (aged 18 and over) starting treatment with any housings issues by region and substance (2014-15)

Figure 40 presents the results from a statistical analysis of opiate user characteristics associated with having a housing problem when first starting treatment. Full and part time employment, better self-reported quality of life and being a parent living with one's own child or children, are some of the variables associated with a reduced likelihood of having a housing problem.

While daily crack use, injecting, being referred from the criminal justice system and being a parent not living with one's own child or children are some of the variables associated with an increased likelihood of having a housing problem.

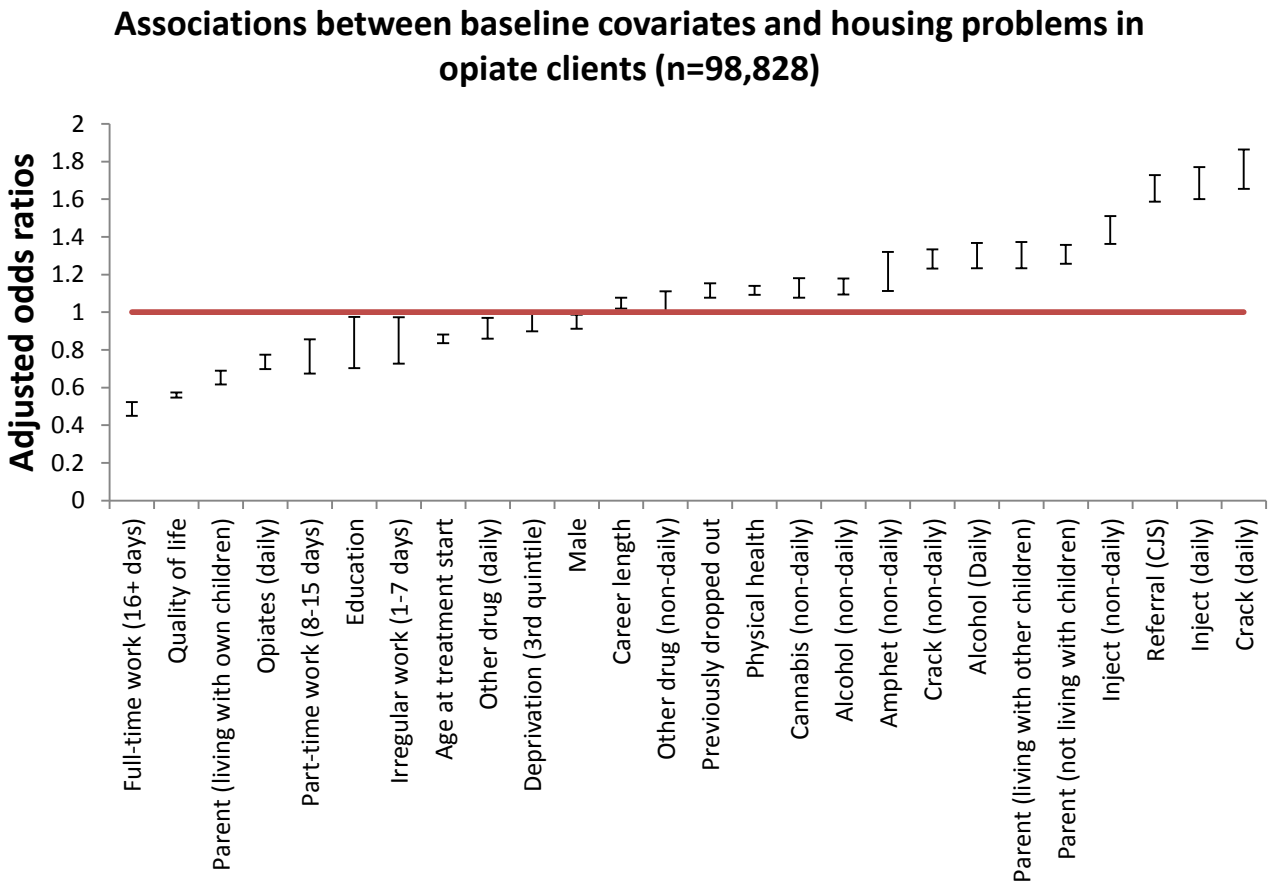

Figure 40: Factors associated with opiate clients having a housing problem at the start of treatment and the associated odds ratios (2014-15)

NDTMS data can also report how housing problems change over time. Figure 41 below shows that for opiate users there is a sharp reduction in the overall proportion of people with a housing problem between treatment start and the six-month review. A similar fall is seen in the non-opiate treatment population, although housing problems are generally less prevalent within this group.

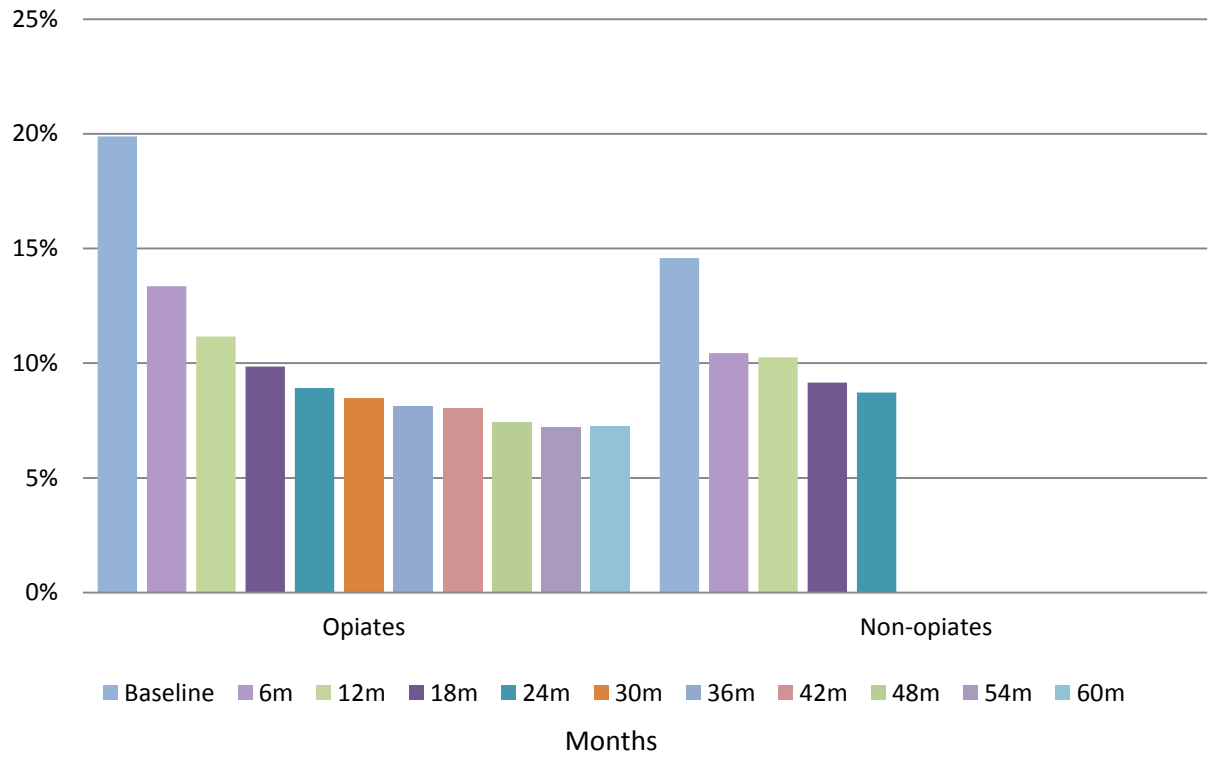

Figure 41: Change in the proportion of individuals (aged 18 and over) reporting a housing problem at six monthly time periods during treatment (2014-15)

Employment

Employment at treatment start is subject to substantial variation both by region and by primary substance, with far fewer people using opiates reporting any paid work in the previous 28 days compared to non-opiate users.

The levels of employment among people entering treatment are broadly aligned with regional employment rates (Figure 42). In other words, in areas with higher employment rates more people enter treatment who are also in employment.

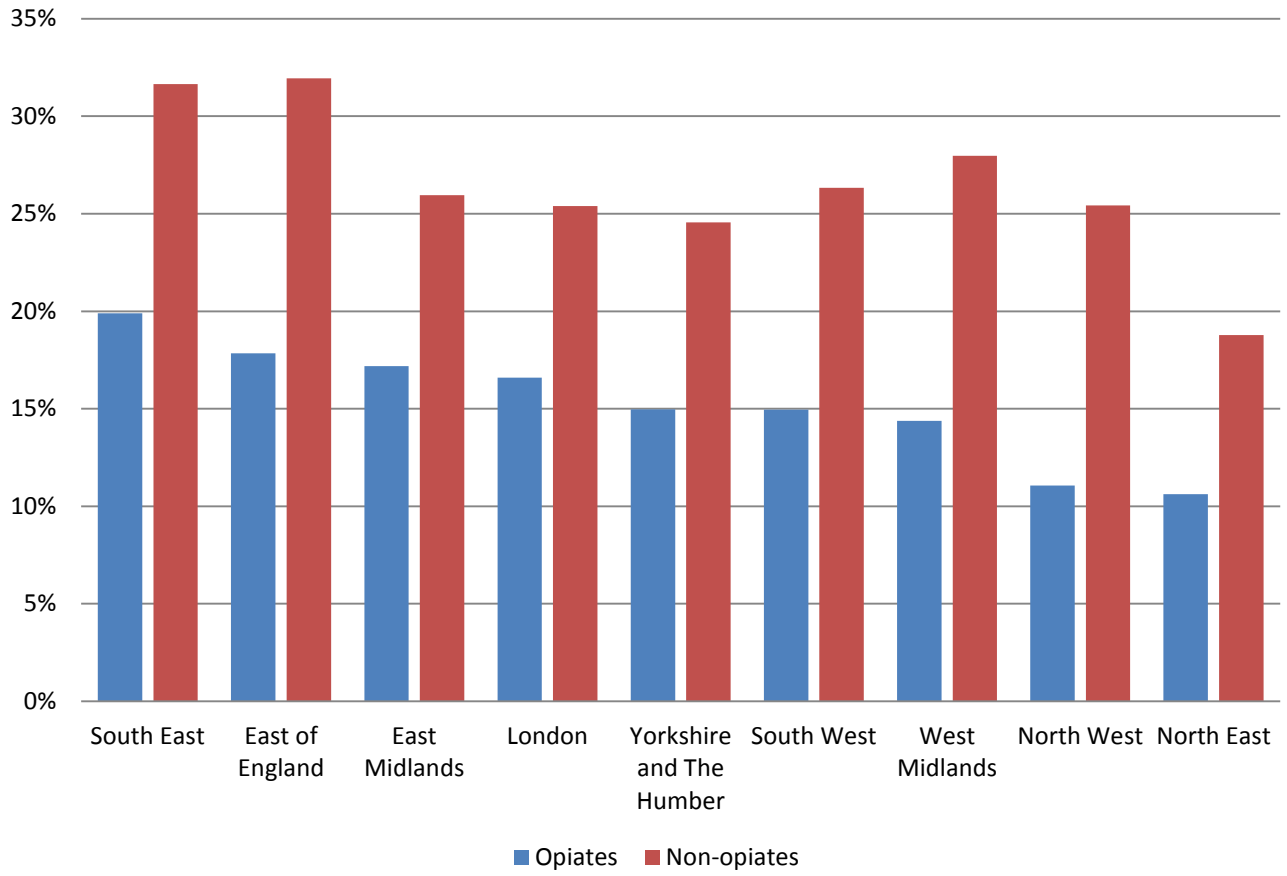

Figure 42: Proportion of individuals (aged 18 and over) reporting any paid work at the start of treatment by region and substance (2014-15)

Figure 43 shows how different characteristics impact on the likelihood of an individual being in any paid work at the start of treatment. The factors that are positively associated with being in employment at the start of treatment are being male, being in better physical and psychological health and reporting a better quality of life.

The characteristics that are negatively associated with being in employment are living in a more deprived area of the country, having a housing problem and coming into treatment via the criminal justice system.

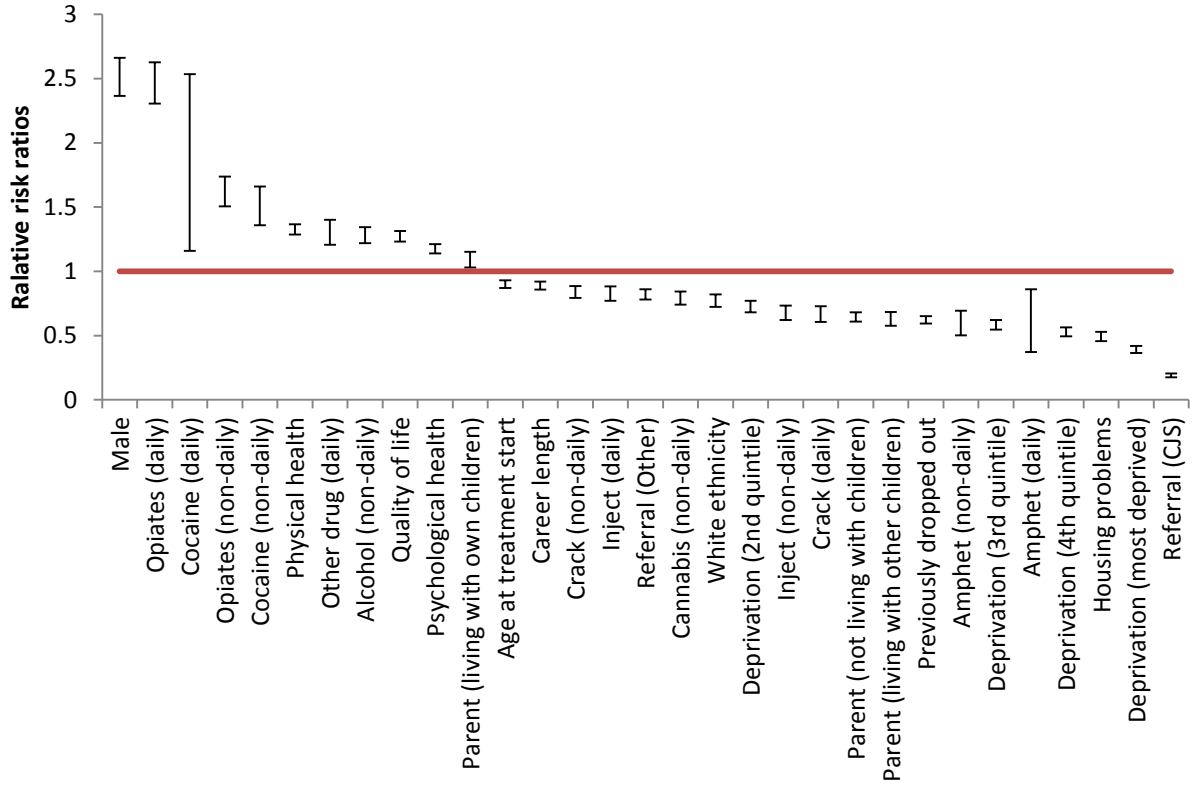

Figure 43: Factors associated with full-time paid work at the start of treatment and the associated risk ratios, relative to those reporting no paid work (2014-15)

The table below presents the proportion of individuals that were in any paid employment at the start of treatment and the proportion of the same cohort that were in paid employment:

- six months after treatment start
- 12 months after treatment start

For both groups there is little change in employment during the first year of treatment, with small gains in employment for opiate users and relatively no change for non-opiate users.

Opiate users who exited treatment in an unplanned way showed a small increase in paid work. The largest gains in the levels of employment were evident in people who exited treatment successfully, with increases seen for both opiate and non-opiate users.

	Substance Group	Number of individuals	Number (%) working at treatment start	Number (%) working post-treatment start
Treatment start to six months	Opiates	78,181	12,122 (15.5%)	14,798 (18.9%)
	Non-Opiates	20,327	4,704 (23.1%)	4,870 (24%)
Treatment start to twelve months	Opiates	61,892	9,622 (15.5%)	12,500 (20.2%)
	Non-Opiates	7,631	1,354 (17.7%)	1,434 (18.8%)
Treatment start to unplanned discharge	Opiates	3,430	384 (11.2%)	453 (13.2%)
	Non-Opiates	1,756	341 (19.4%)	319 (18.2%)
Treatment start to successful completion of treatment	Opiates	8,260	1,704 (20.6%)	2,142 (25.9%)
	Non-Opiates	17,133	5,381 (31.4%)	6,184 (36.1%)

Table 2: the proportion of individuals that were in any paid employment at the start of treatment and in paid employment post treatment start

Figure 44 uses a statistical technique called latent class analysis to look at changes in employment over time for opiate clients. The approach takes opiate users that have been in treatment over a five-year period and groups them together based on similar patterns of employment during this time.

Four distinct groups have been identified. The largest group is where no employment at all was reported in the five-year period. The next largest group is those who remained in employment for the duration of their time in treatment. In the two smaller groups, individuals either gained or lost employment.

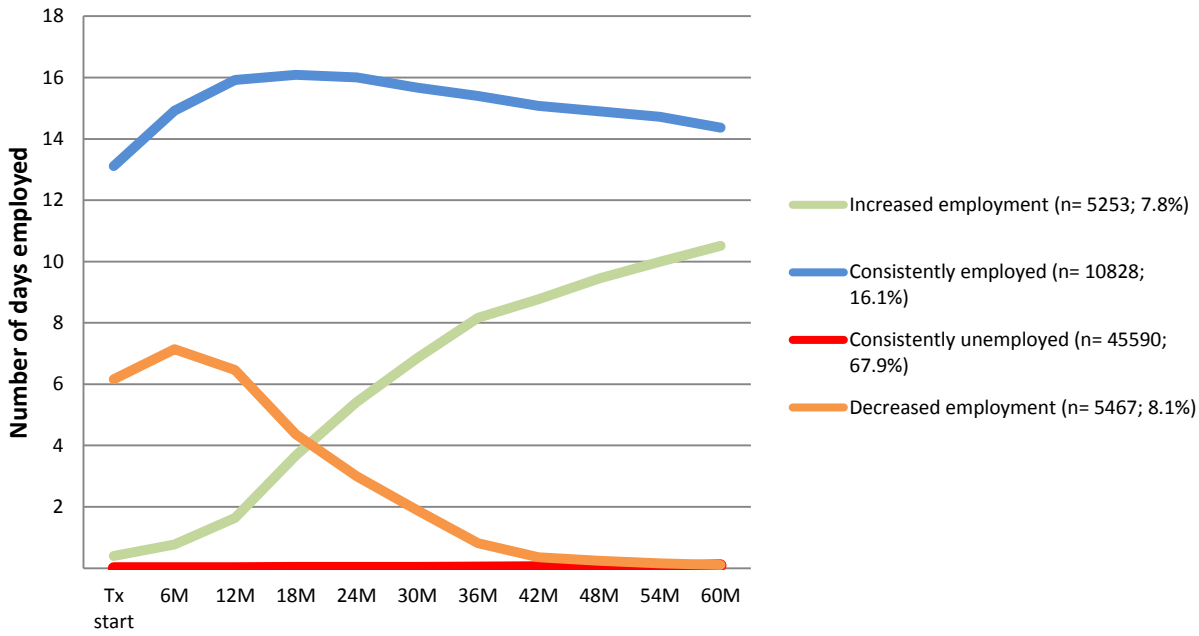

Figure 44: Change in levels of paid work for opiate clients (aged 18 and over) over five years in treatment, by four latent class groups

The employment rate for individuals that successfully complete treatment is about twice that when compared to those that leave treatment in an unplanned way (Figure 45). This ratio remains consistent for both opiate and non-opiate clients.

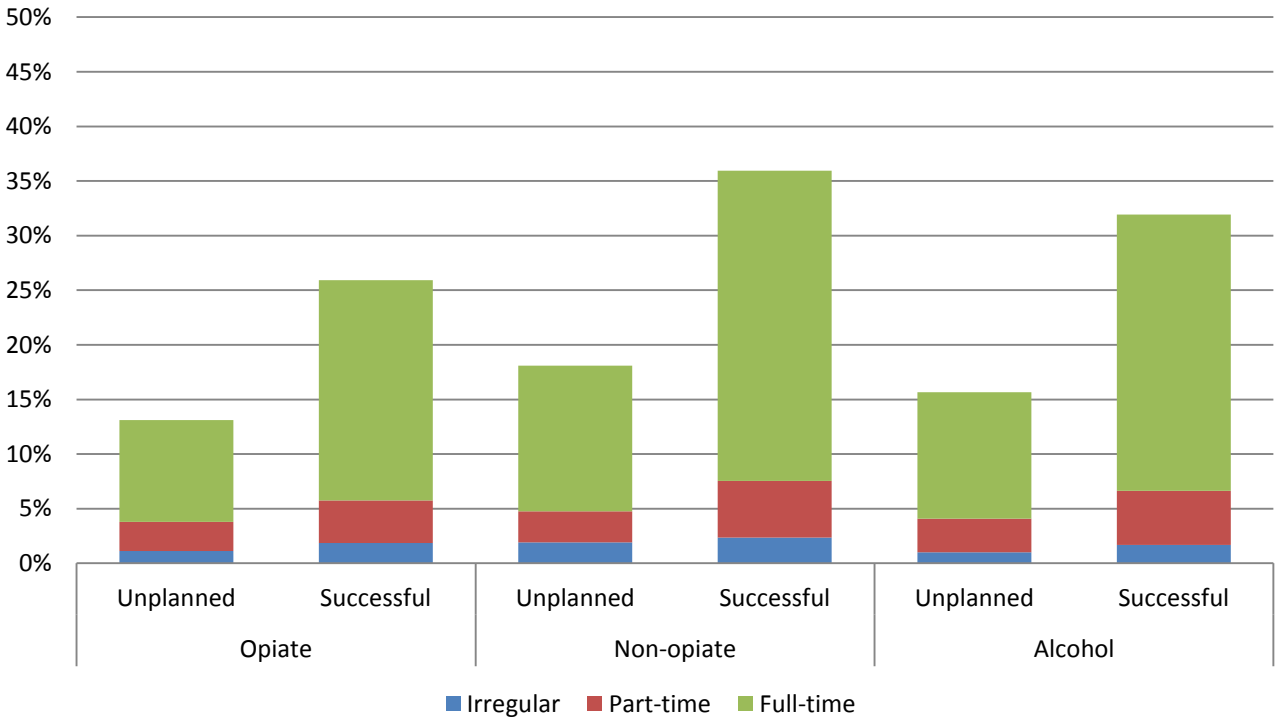

Figure 45: Proportion of individuals (aged 18 and over) in irregular, part time or full time work by the reason for their exit from treatment and substance group

Expert by experience consultation

Housing

Maintaining, or obtaining, secure, stable and suitable accommodation was a priority for participants. While participants were unanimous in stating the importance of housing, there were differences in how problematic housing and access to housing was, with more difficulty experienced in areas of high housing cost and housing demand.

The importance of access to accommodation after prison release and after residential rehabilitation was emphasised by participants, and the stress of housing problems and insecurity were identified as having the potential to undermine recovery.

"*Stressing about accommodation makes you relapse, and if you are in rehab and you don't know where you are going to live, it means you can't concentrate on your recovery.*" Male, West Midlands

Participants with histories of custodial sentences were aware of 'through the gates' initiatives, although there was limited experience of it – possibly reflecting the fact many had not been in custody recently. Those with experience of prison were critical of the lack of support on release, including the frequent lack of access to accommodation.

"I had enough money to get off my face [from the prison discharge grant], but not enough to do anything useful when I left prison." Male, West Midlands

This was contrasted with the care participants said residential rehabilitation services had taken, in their experience, to support them to access accommodation on discharge.

Employment

For participants who were employed, including those employed within the drug treatment sector, employment was seen as a sign of recovery. It was also valued for the wide range of benefits that paid work can bring, including increased financial independence, new social networks, routine and improved self-esteem.

Employment was consistently endorsed as a high, but often not immediate priority. Participants talked about the importance of intermediate steps toward employment, such as volunteering, but they were also keen to address immediate health and social needs, particularly housing needs.

While participants were aware of and in many cases engaged with Jobcentre Plus and the Work Programme, experiences were rarely positive, with unfriendly staff and unwelcoming attitudes, often showing few signs of knowledge or awareness about

drug use and recovery.

Other than when participants were involved in a programme provided by the treatment service or user group where the consultation was taking place, participants were generally not aware of any specialist employment support.

Welfare reform and the post-2012 benefit sanction regime had shaped unemployed participants' engagement with employment support, and some people stated that much of their focus was on avoiding a sanction (a suspension of benefit payments) rather than on improving their employability through, for example, accredited training or work experience.

However, at some consultation sites, Jobcentre Plus work coaches were co-located within the user group or treatment service. Where this was the case, their presence was seen as positive and valuable, although the need to maintain benefit claims and avoid a penalty was still seen as the priority.

Participants with criminal records felt that it effectively excluded them from the job market, regardless of the provisions of the Rehabilitation of Offenders Act.

Main points:

- social determinants, including housing, employment and deprivation, are associated with substance misuse. Findings from the evidence review and NDTMS analysis suggest that some of these social determinants act as moderators of drug treatment outcomes, with clear negative associations between outcomes and neighbourhood deprivation, housing problems and unemployment
- drug use tends to be clustered in deprived areas of the country, with both the estimated use of opiates and crack cocaine and the rates of those in treatment being higher in the more deprived local authorities
- early findings from this review were endorsed by groups of experts by experience, who had personal experience of treatment for substance misuse, worklessness and housing problems. Participants emphasised that achieving stability in their lives, improving their health and being in stable, secure and suitable housing, were all important parts of progressing to employment
- integrated approaches to meeting housing and other needs are more likely to enable navigation through an often complex system of housing, treatment, health care and social care
- there is evidence that housing insecurity may contribute to an increased risk of relapse
- there is evidence that alongside other benefits, employment support and achieving good employment may lead to improvements in treatment, including

improved engagement, retention in treatment and reduced severity and frequency of relapse

- evidence also supports coordinated approaches to employment support. Many people affected by drug misuse will face multiple barriers and the process of securing paid work may not be quick or straightforward. The value of longer-term support, including in-work support, was emphasised by the reviewers
- employment rates at the start of treatment are generally low, with nearly twice the proportion of non-opiate and alcohol users in employment compared to opiate uses
- the main factors associated with employment at treatment start are being male, having better physical and mental health, using drugs for less time and living in areas that are more affluent
- employment rates in the main remains static during treatment, but individuals who successfully complete treatment have the highest rate of employment
- most opiate users (68%) remain unemployed while in treatment, reflecting the difficulty these individuals have in obtaining paid work and the challenge that Jobcentre Plus, the Work Programme (and its successor, the Work and Health Programme) and treatment providers face in working together to help them to do so.

Chapter six: The drug treatment population in the next four years

This chapter estimates the size and characteristics of the drug treatment population in England in the next four years (to the end of 2020). These estimates are made using trend data from the National Drug Treatment Monitoring System (NDTMS) alongside other data sources, including prevalence estimates. Even though they are approximate, these projections should be useful when judging the required treatment capacity in England, in identifying the harms that treatment will need to address, and in informing future expectations for treatment effectiveness.

Limitations, caveats and assumptions

The modelling presented does not attempt to produce exact predictions, but rather offers a general picture of what should be seen, if current trends continue and other conditions remain relatively stable. The analysis is based on the following assumptions:

- current trends in prevalence and incidence are maintained
- English treatment systems continue to be accessible (ie everyone that needs drug treatment continues to be able to do so with minimal or no delay)
- there are no significant external ‘shocks’ to illicit drug supply that could influence treatment numbers (for example, no heroin shortage or new or more established drugs becoming more available than currently seen)
- seasonal variations even out over time (we believe this is a reasonable assumption as the presented projections cover four years)

Due to time and resource constraints inherent in this REA, it has not been possible to take into account every eventuality that might influence treatment demand. It is important that this is borne in mind when using the projections presented.

Projection methodology

A summary is presented below that provides a brief overview of the approach taken in the projection modelling. A detailed technical description of the methodology is also available here.

The general approach was to model the numbers and profile of those likely to be presenting to community drug treatment over the next four years in the context of the number of people leaving treatment and not re-admitted. All available NDTMS data was used for the estimation from 2005 to 2020.

The numbers entering and exiting treatment have been modelled based on estimating the size of six groups:

- people who present to treatment for the first time ('treatment naïve')
- people who leave treatment successfully
- people who leave treatment successfully and ever re-present for further treatment
- people who leave treatment in an unplanned way (ie those who drop out or are incarcerated)
- people leave treatment in an unplanned way and represent
- people number who die while in treatment

Estimates are presented separately for opiate and non-opiate users because these are distinct populations with significant variations in demographics, clinical characteristics, mortality risk and the likelihood of achieving successful treatment outcomes.

An example – people who present to treatment for opiate misuse

Figure 46 below presents the historic number of individuals presenting to community treatment for the first time with opiate misuse, month-by-month since 2005. As can be seen, the number has fallen steadily over time but has now levelled off, so that there is a much slower decline in recent years than previously. The circle indicates where, it is widely accepted, there was a period of reduced availability of heroin.

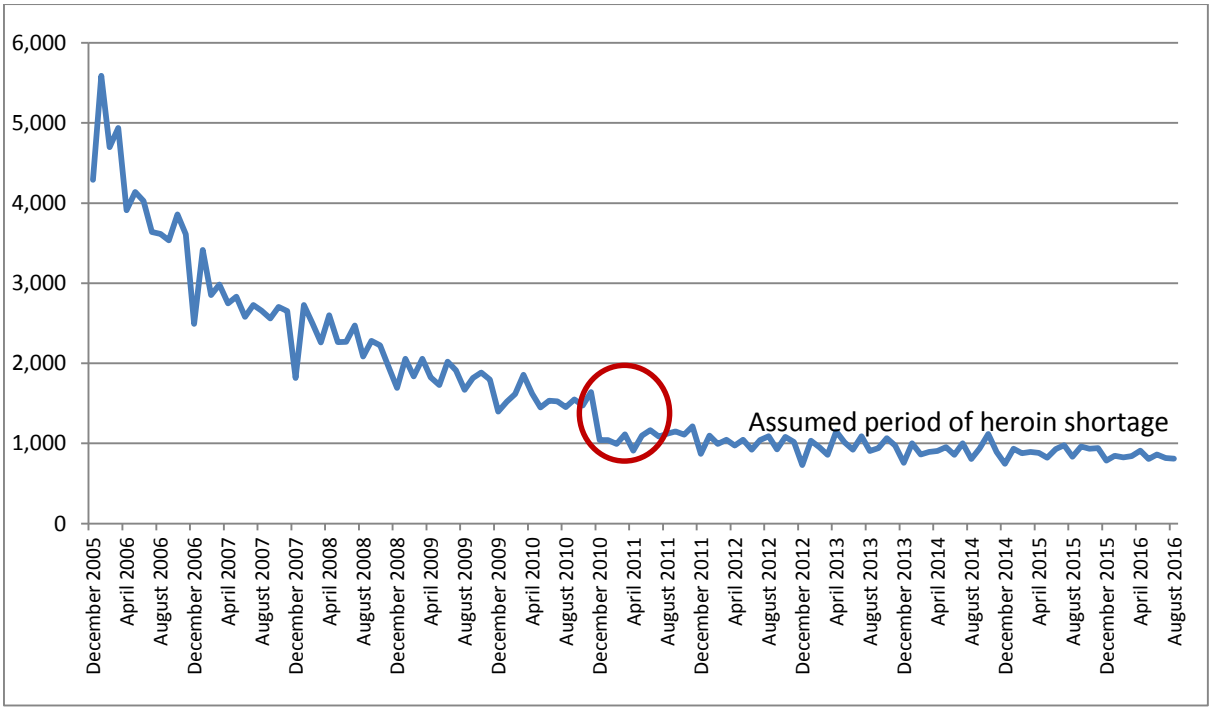

Figure 46: Individuals presenting to treatment for the first time with opiate misuse (all ages), by month (December 2005-August 2016)

The steep decline seen in the number of individuals starting treatment on the left side of the chart is in part caused by the fact that NDTMS started collecting data at this time. A proportion of individuals starting in 2006 may have been known to treatment services but they would not have been previously included in NDTMS and therefore would appear as if they were starting treatment for the first time.

As there was such a marked change in the trend at the time of the heroin shortage, a decision was taken to only use the historic data from that point on (assumed to be around January 2011). Data for non-opiate users was restricted to the same time period for consistency.

Figure 47 presents the actual data of opiate treatment naïve presentations going back to the start of 2011 and up until November 2016. The red line is the best fit model for the historic data, then projected forward until December 2020. The green and purple lines are the upper and lower bounds of the 95% confidence interval. It is estimated that the monthly number of individuals presenting for the first time with opiate problems will fall slowly from around 860 a month currently to about 680 a month, so there will be an overall reduction in the population starting treatment each year.

This fall is considered alongside trends in treatment exits, representations and mortality to provide an estimation of the overall change in make-up of those in treatment for opiates in 2020. An estimate is also made of the likely profile of those in treatment for 2020 based on trends in treatment numbers by age, sex, length of time in treatment and number of previous attempts at treatment.

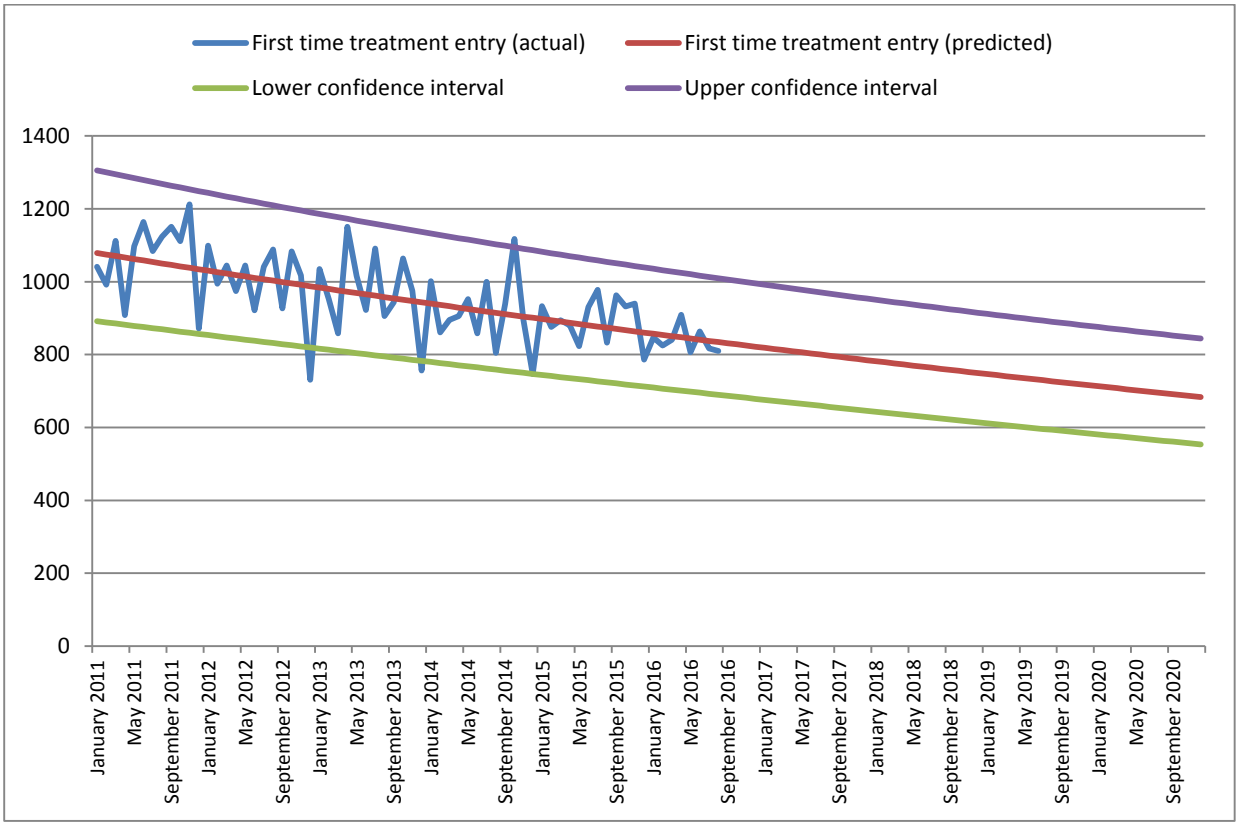

Figure 47: Projection of the number of individuals presenting to presenting to treatment for the first time with opiate misuse (all ages), projected and actual activity (January 2011-September 2020)

Projecting the size of the opiate misuse treatment population

This section presents the results of the model to estimate the likely characteristics of the opiate treatment population in four years' time.

Figure 48 shows the size of the six groups between September 2014 and August 2016 inclusive. It provides an indication of the relative numbers involved in each of the scenarios, with the number of deaths currently around 140 a month, and the number of unplanned exits around 3,000 a month. Most of the new treatment starts during this period are for individuals that have been in treatment before.

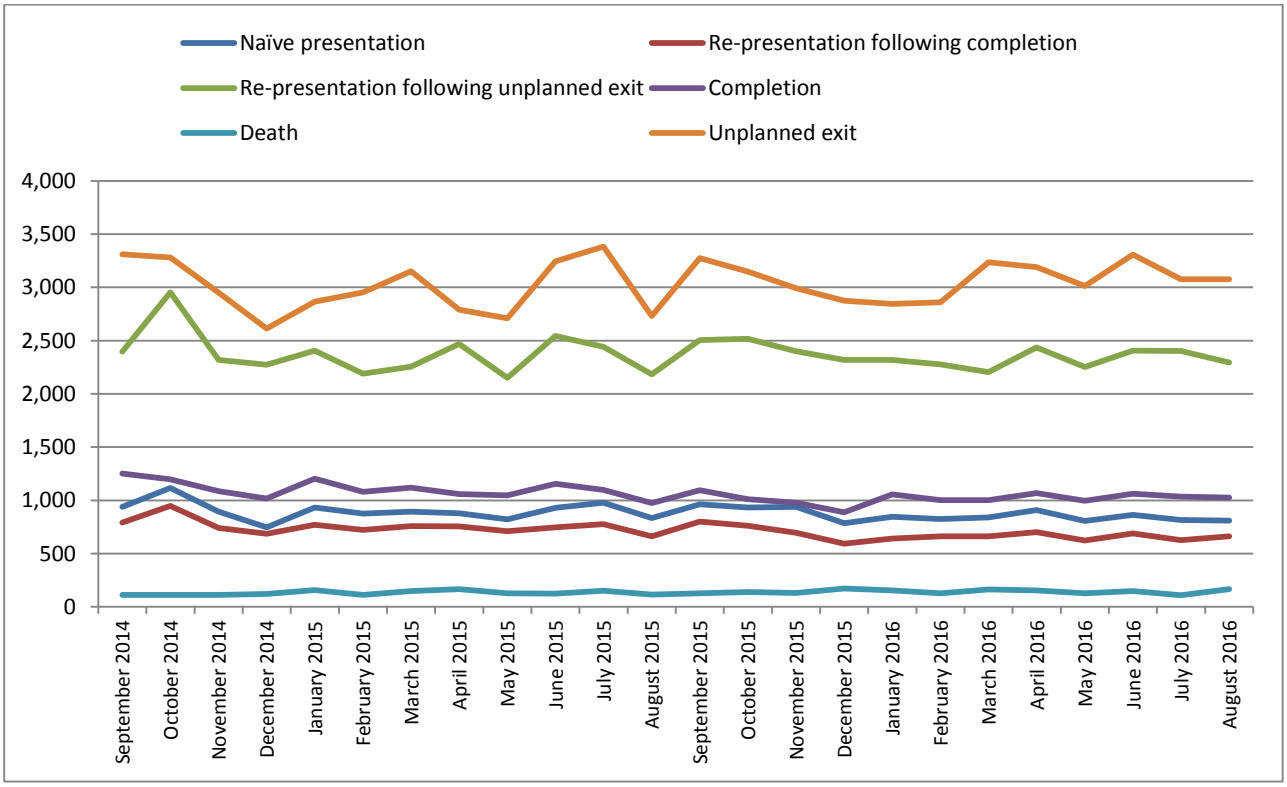

Figure 48: Number of individuals with opiate misuse starting and exiting treatment (all ages), by reason and by month (September 2014 to August 2016)

Treatment re-presentations

Figure 49 shows the estimate of the number of people who re-present to treatment after successful completion and after exiting in an unplanned way. The 'noisy' purple and green lines are the observed actual monthly data as reported in NDTMS and the dotted red and blue lines are the projected estimates based on the numbers of prior completions and unplanned exits and assuming consistent re-presentation rates.

It is predicted that the number of clients re-presenting to treatment after previously completing treatment will fall by the end of 2020. While it is estimated the numbers starting, after previously leaving treatment in an unplanned way, will remain broadly similar over this period.

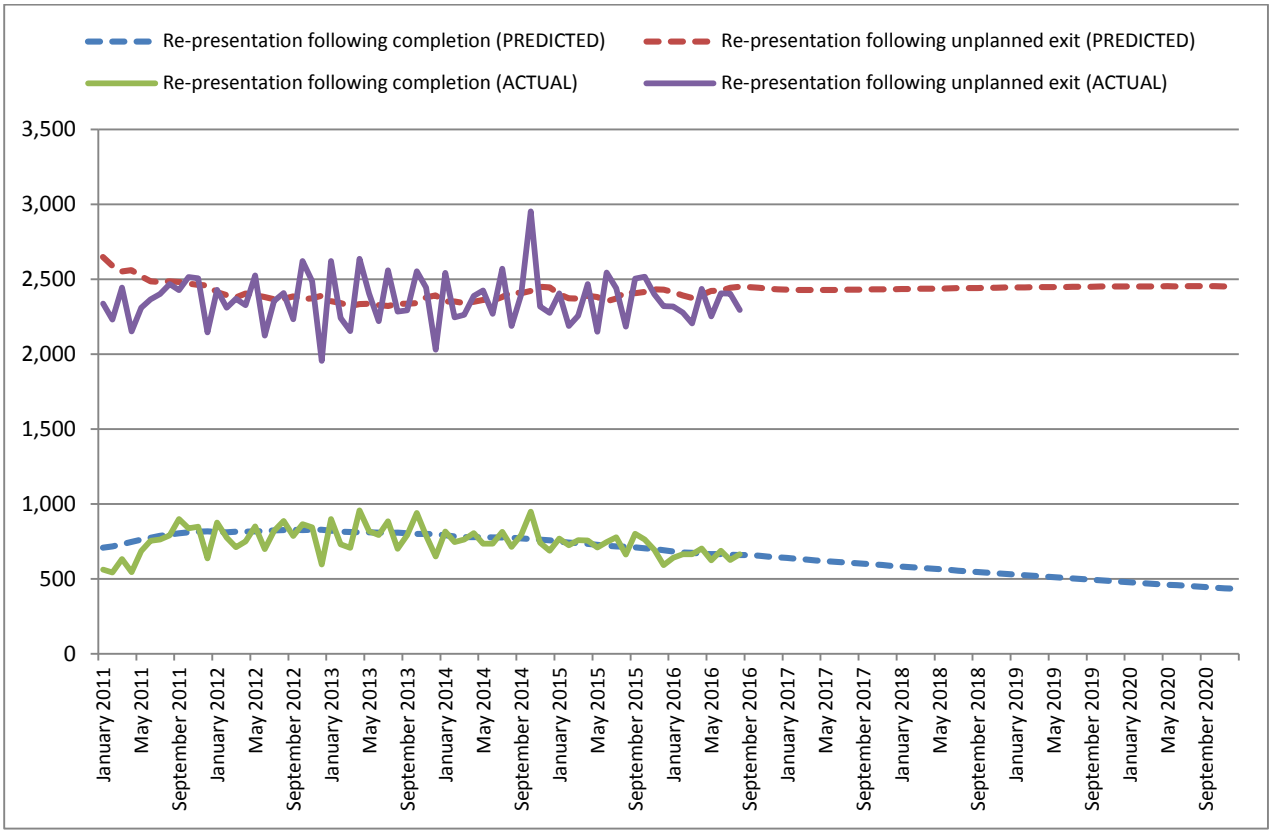

Figure 49: Number of individuals with opiate misuse (all ages) who have returned to treatment following a previous planned or unplanned exit from treatment (January 2011-December 2020)

Leaving treatment

The modelled estimates of those exiting the treatment are presented here as rates rather than counts. These rates will also differ substantially from the successful completion rates reported elsewhere because they were calculated on an annual basis, while the estimates here were calculated on a monthly basis.

Unplanned exits

Figure 50 shows the projected trend of the proportion of individuals who leave treatment unsuccessfully (from all opiate misuse patients in treatment each month). This rate has been increasing slightly since the start of 2011. It is estimated to continue to increase to the end of 2020.

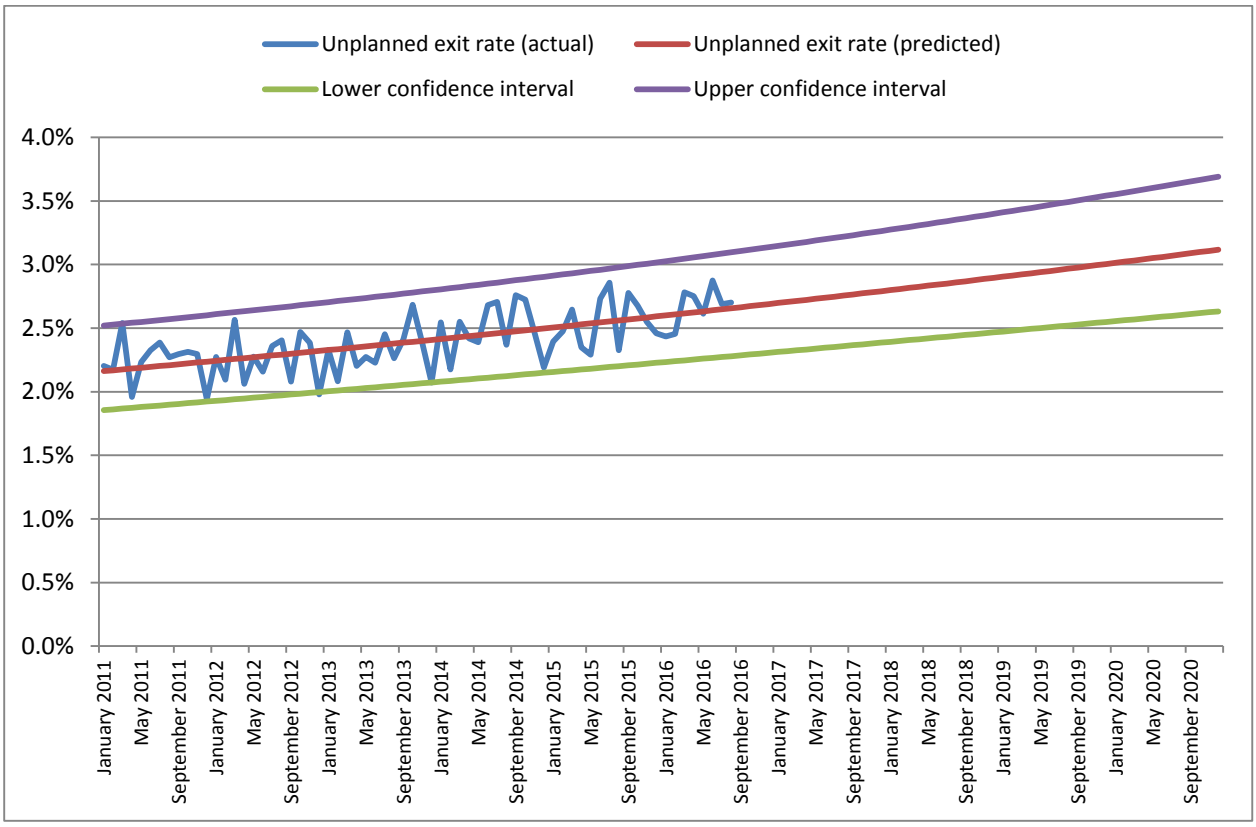

Figure 50: Proportion of all individuals treated for opiate misuse who leave treatment in an unplanned way each month (all ages), projected and actual activity (January 2011-December 2020)

Mortality during treatment

Overall, drug treatment in England is protective against premature mortality (see chapter three). However, those who are older and those with significant health problems, have a higher risk of premature mortality than the general population. As the opiate using population is ageing this elevated risk has been increasing year-on-year. It is expected that the proportion of opiate users who die while in drug treatment will increase over the next four years at an accelerating rate (Figure 51).

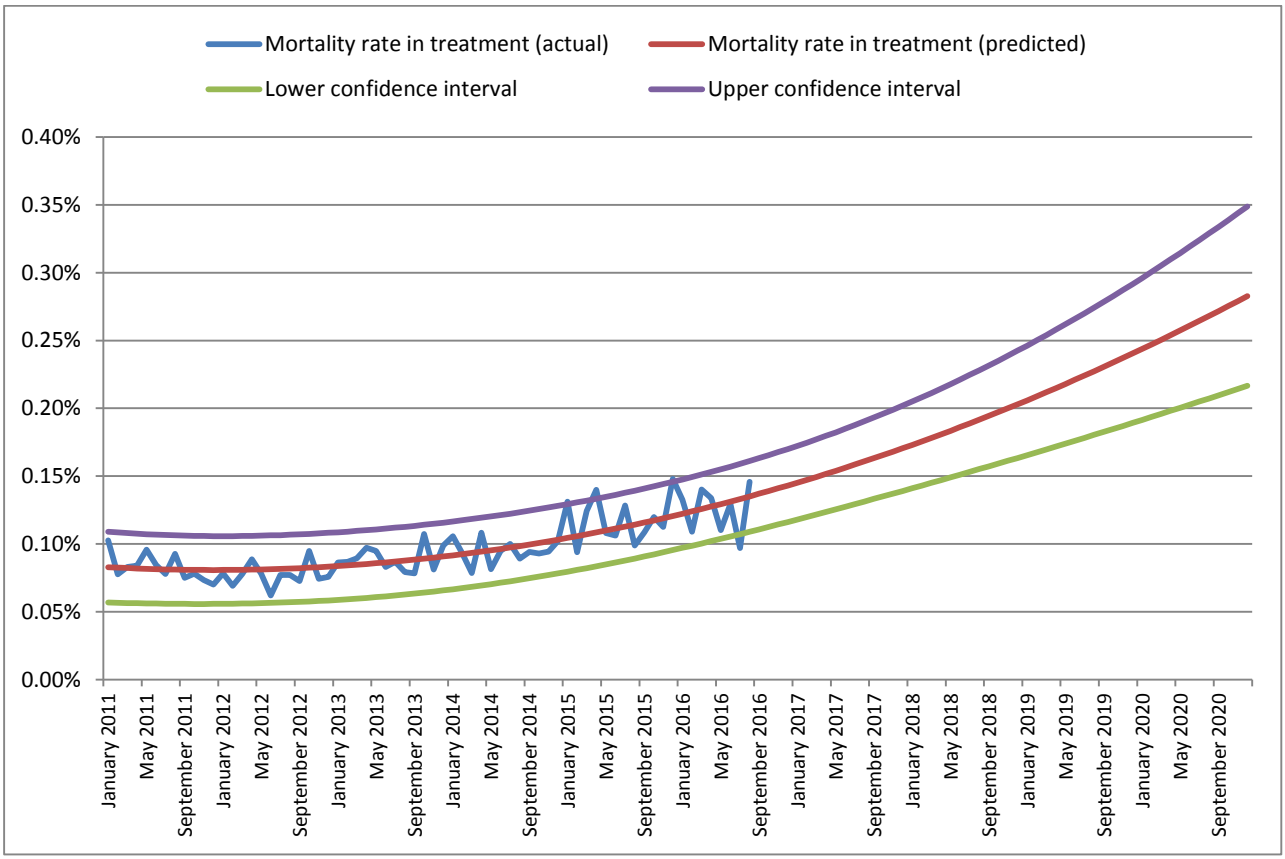

Figure 51: Monthly mortality rates among all individuals in treatment for opiate misuse (all ages), predicted and actual activity (January 2011-December 2020)

Successful completion of treatment

The third scenario in which a client can exit the treatment system is by successfully completing their treatment. As noted in chapter two, the proportion of people with opiate misuse problems who successfully completed treatment increased significantly since 2005-2006, but has fallen over the last few years. It is projected that if all other external factors remain constant, this fall is likely to continue.

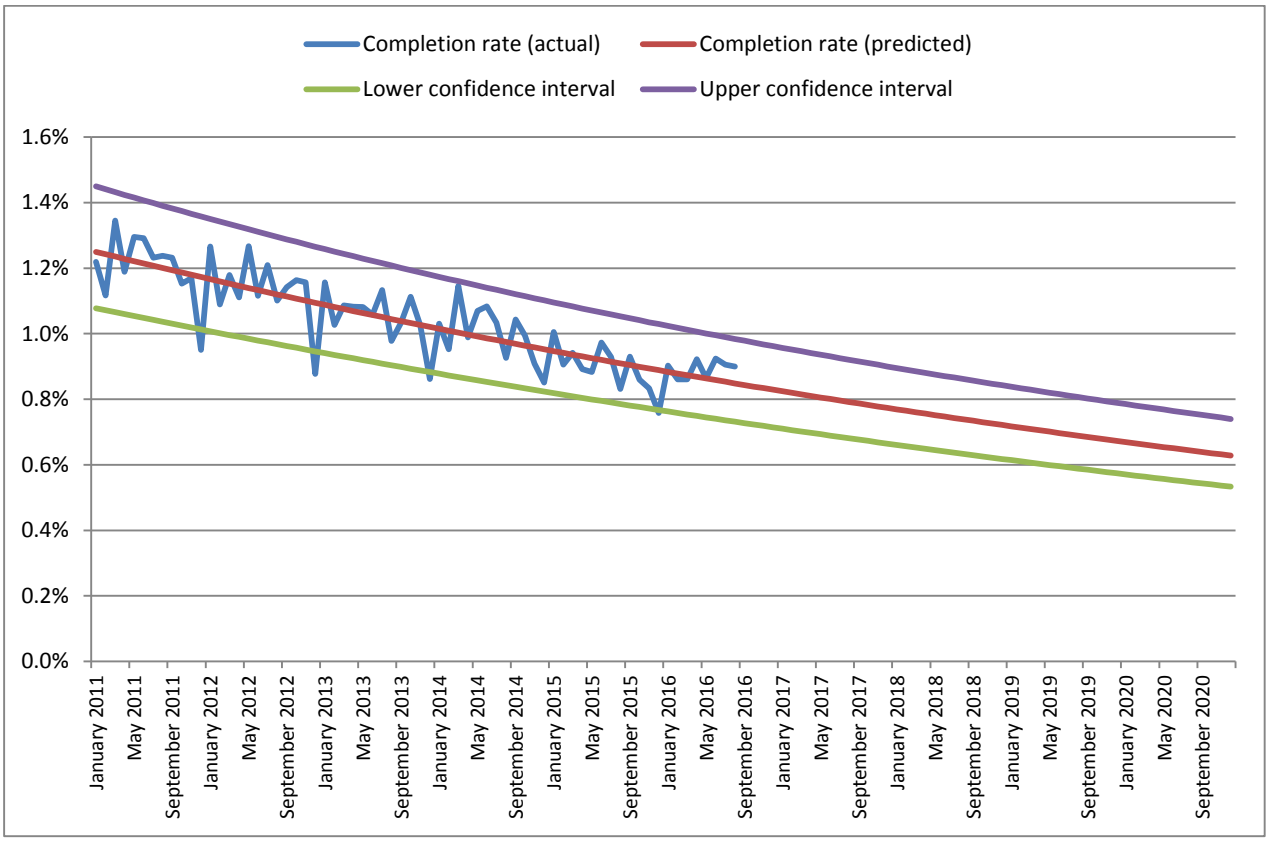

Figure 52: Proportion of all individuals that are being treated for opiate misuse that successfully complete treatment each month (all ages), projected and actual activity (January 2011-December 2020)

Taking all these projections together, the general direction of travel over the next four years is that more people leaving drug treatment than entering. It is therefore expected that the overall numbers in treatment will decrease.

Profile of people in treatment for opiate misuse in 2020

The profile of the population in treatment for opiate misuse during the next four years will be a significant contributory factor in the projected trends described in the previous section. It is also important in helping to understand the treatment needs of opiate users in the future. This section describes the likely characteristics of those in treatment in 2020.

Age projections

As discussed earlier in the report, the opiate treatment population is getting older. Illicit drug injecting is a significant premature mortality risk factor, but the ageing treatment population also face age-related, long-term health conditions, notably cardiorespiratory, musculoskeletal and oncological disorders. The high prevalence of tobacco smoking and

comorbid crack cocaine use is also likely to increase the specific disease risk profile of this population.

Figure 53 projects what the age profile of clients (all people in treatment on the end of the year) is expected to look like in four years' time. The proportion aged under 30 is predicted to continue to fall considerably and, conversely, the proportion aged 40 and over is estimated to make up almost three-quarters of all those in treatment for opiate use. The 40–49 age group is projected to become the largest by the end of 2020, while the 30–39 age group is projected to decrease, and the 50–59 age group is projected to increase to a similar size to the 30–39 age group.

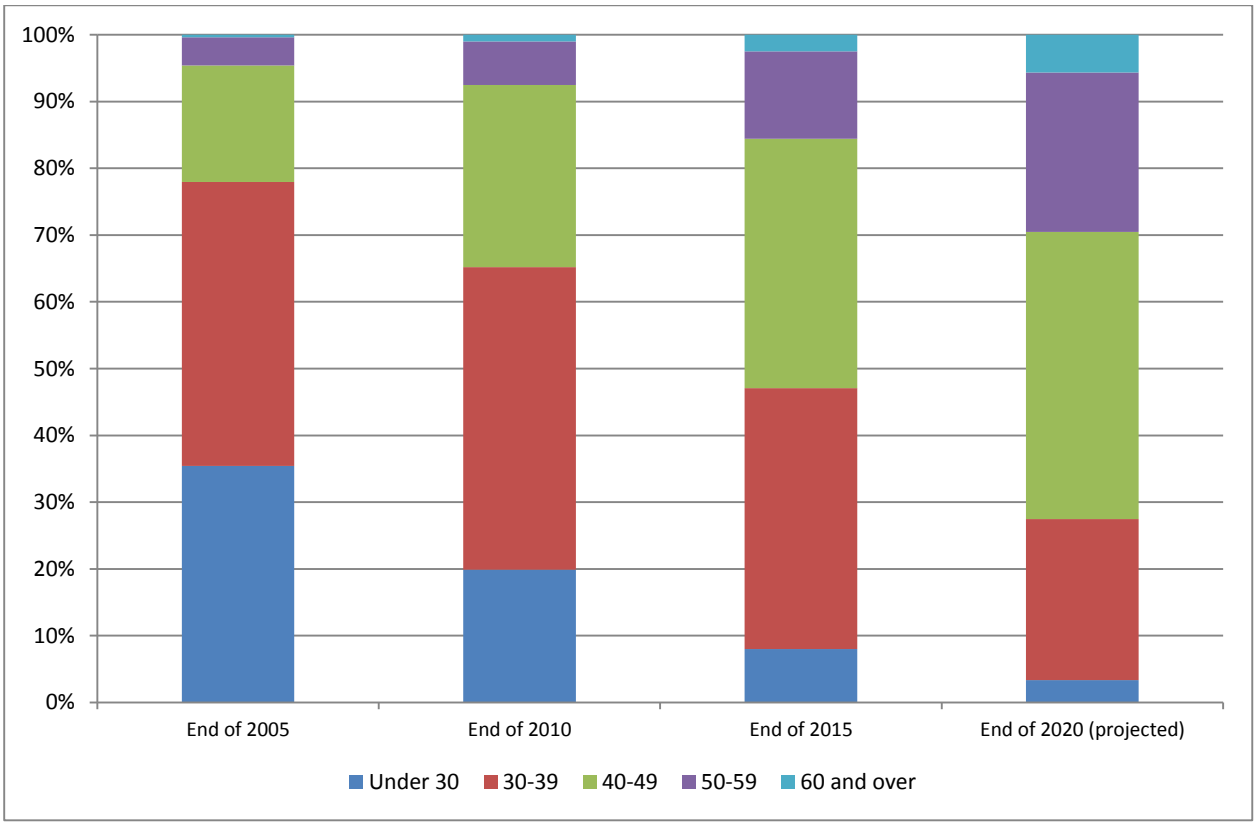

Figure 53: Age profile of opiate users in treatment by the end of 2020 (all ages). Actual breakdown for 2005, 2010 and 2015 and projected breakdown for 2020

Length of time using opiates

Alongside age, the length of time a person has been using opiates will be a significant factor in the likelihood of successfully completing treatment. Essentially, the longer someone has been using opiates for, the less their likelihood of achieving a successful completion from treatment, as shown below.

Over the last 10 years, the proportion using opiates for longer periods has increased significantly, with two-fifths of those in treatment at the end of 2015 having been using

for 20 years and over. As there are relatively few individuals taking up the illicit use of these substances, it is projected that the proportion who have been using for 20 years and over will increase in the next four years to around three-fifths with, conversely, the proportion using for shorter times decreasing.

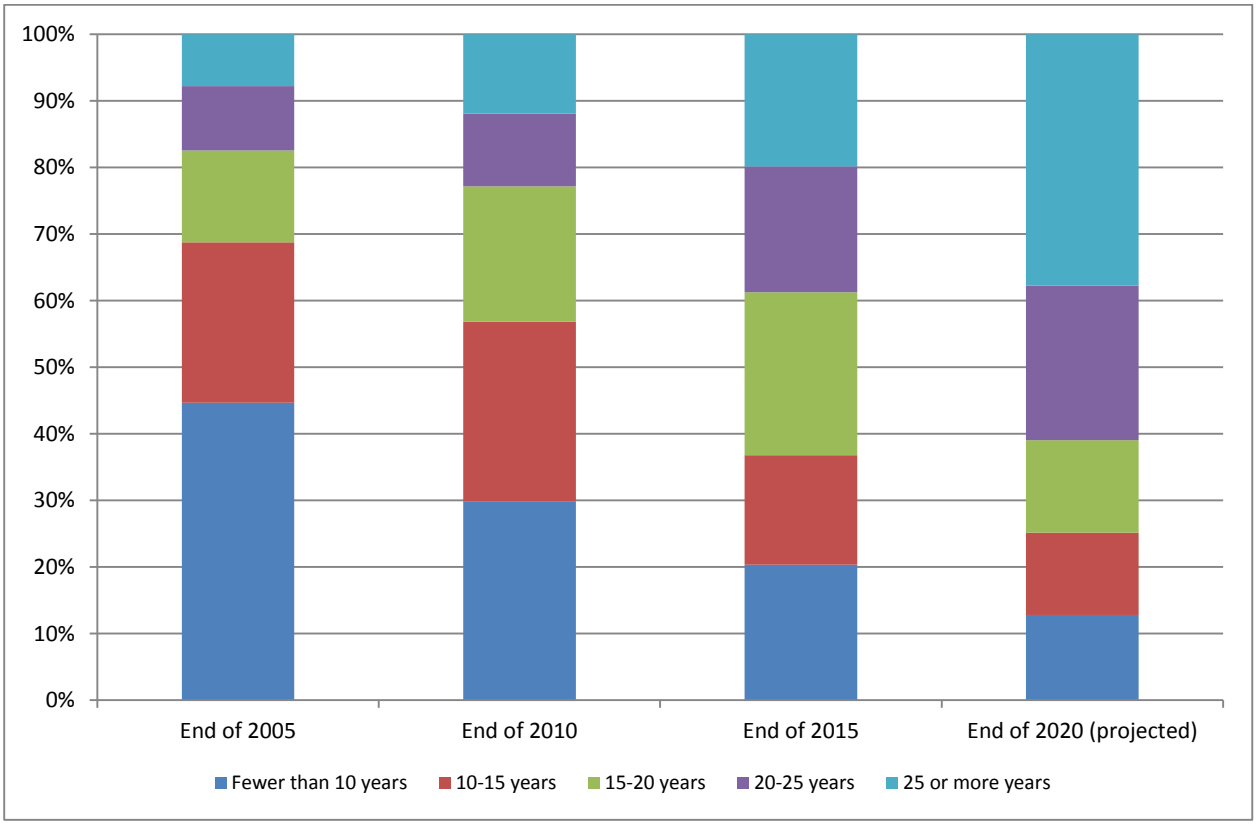

Figure 54: Length of use of opiates for individuals in treatment in 2020 (all ages). Actual breakdown for 2005, 2010 and 2015 and projected breakdown for 2020

Figure 55 shows how the likelihood of achieving a successful completion annually changes by the length of time using opiates. As length of use goes up, the likelihood of a successful completion falls.

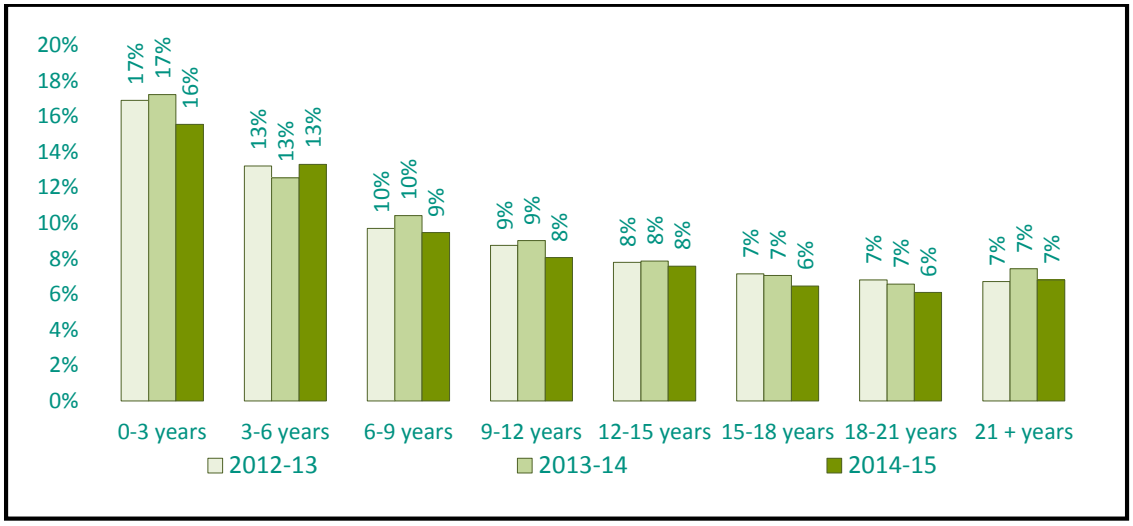

Figure 55: Length of time using opiates and annual successful completion rates out of all opiate users in treatment (aged 18 and over)

Previous attempts at treatment

The number of previous treatment admissions is another factor that influences the chances that a patient will successfully complete treatment. As demonstrated in Figure 56 below, the proportion of individuals who have had multiple, previous treatment episodes has been increasing since 2005, and this trend is projected to continue over the next four years. Around seven in ten individuals in treatment are predicted to have had one or more previous treatment episodes in 2020.

It is harder to effect behaviour change with people who have very entrenched patterns of use and their likelihood of achieving positive outcomes are greatly diminished when compared to opiate users who engage after a shorter period of use. Local areas should take this into account when considering setting any performance targets.

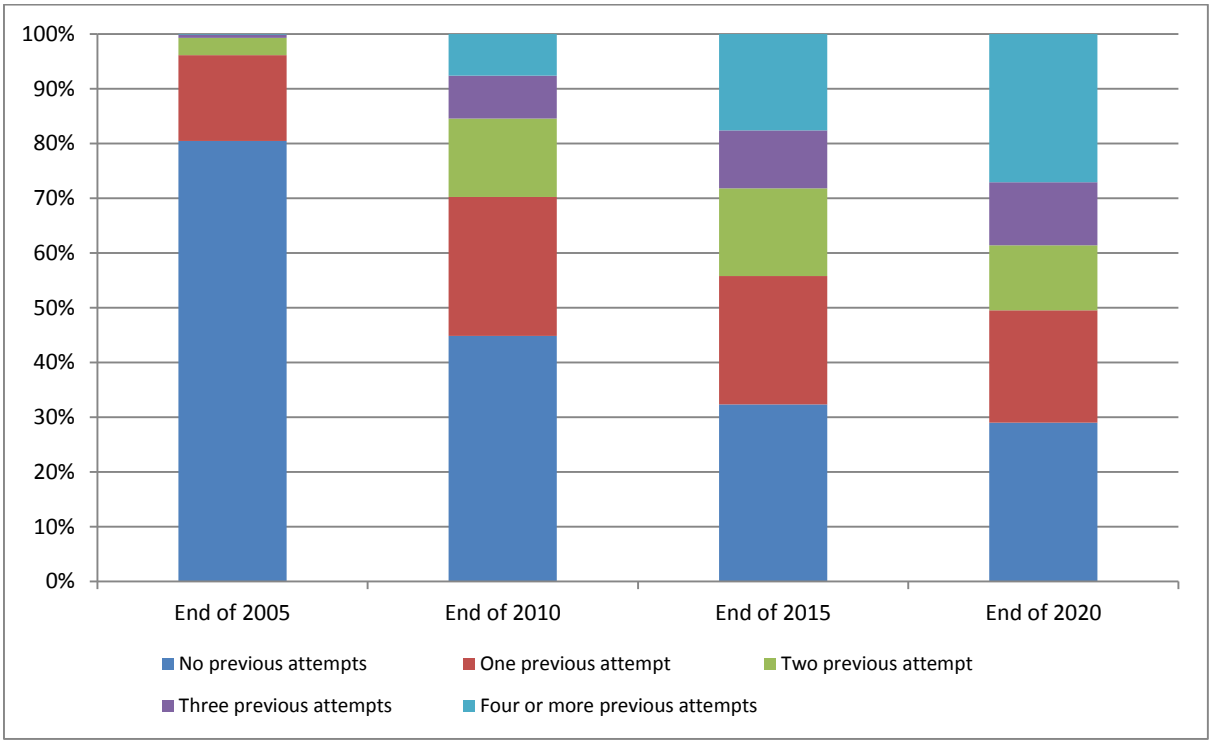

Figure 56: Number of previous attempts at treatment for opiate users in treatment in 2020 (all ages). Actual breakdown for 2005, 2010 and 2015 and projected breakdown for 2020

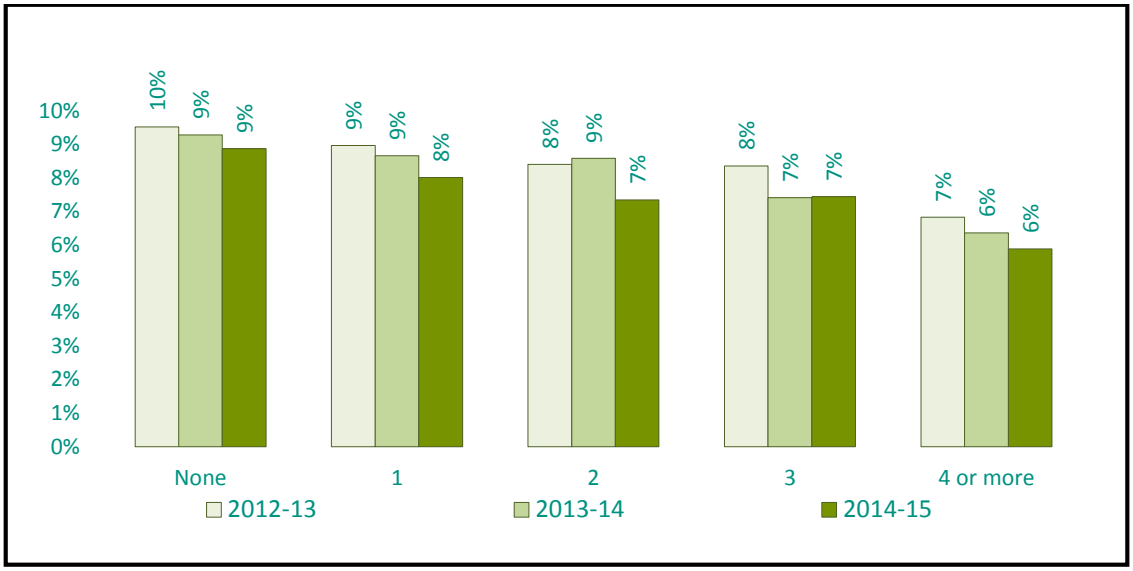

Figure 57: Number of previous attempts at treatment and annual successful completion rates as a proportion of all opiate users in treatment (aged 18 and over)

Projections for non-opiates

This section presents the results of the projections of the six scenarios up until the end of 2020, but this time for users of non-opiate substances in community treatment (adults only). The projections are also broken down by age.

However, trends in non-opiate users entering and leaving treatment have generally been more uniform when compared to opiate users. The non-opiate population is also much smaller than the opiate population and the duration of treatment is generally much shorter. As a result, the modelling is more volatile when trying to project activity going forward. It is also noted that ‘non-opiate’ is a broad term to cover a range of different drugs and that the profile of this group may change over time. Furthermore, it is difficult to predict the impact of relatively new drugs, as it may be too early to predict the demand for treatment. These caveats should be borne in mind, alongside the other caveats at the start of this chapter, when interpreting the data and projections in this section.

The makeup of the non-opiate treatment population

This group are people who present for treatment with problems with one or more substance, that are not opiate based. Figure 58 below shows a breakdown of the different substances that made up the non-opiate presentations in 2005–2006 and in 2015–2016.

Cannabis presentations were the most common in both periods, with the proportion increasing by 2015–2016. Cocaine presentations made up the next largest group, followed by amphetamines and benzodiazepines. The proportion of crack cocaine presentations halved over the ten-year period.

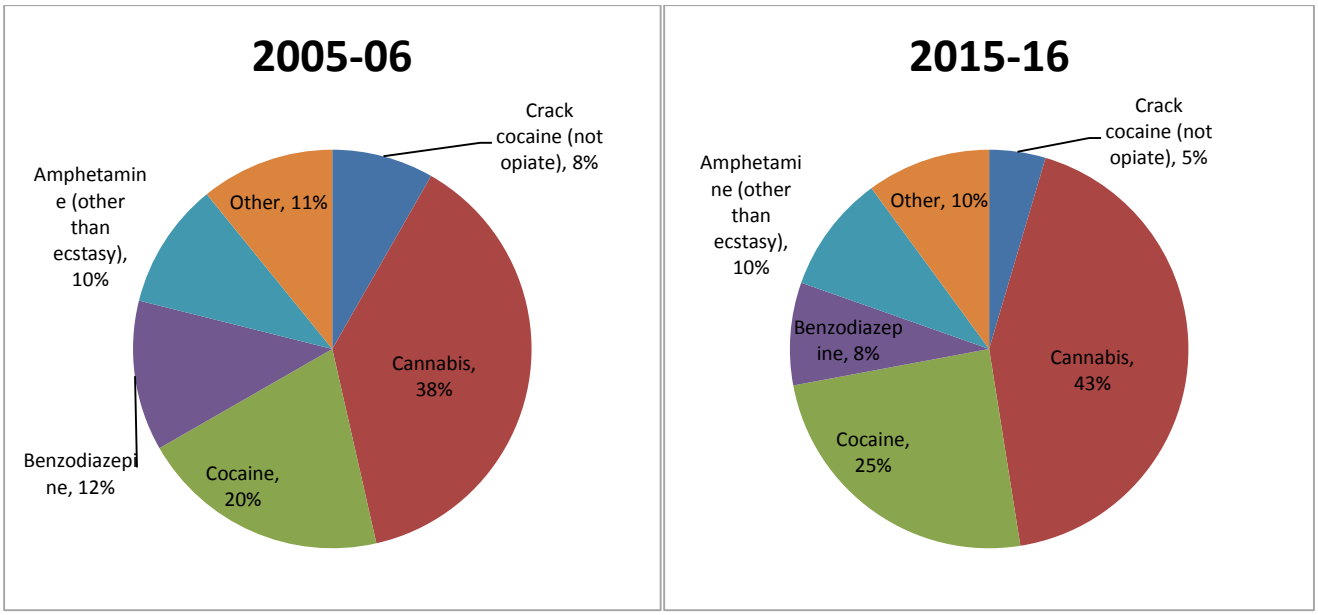

Figure 58: Substances that make up non-opiate presentations in 2005-06 and 2014-15 (aged 18 and over)

People entering treatment

The monthly numbers entering treatment for the first time ever for non-opiate use have levelled off over the past few years. Modelling the trend from 2011, it is projected that the monthly number of non-opiate patients entering treatment for the first time will fall very gradually until December 2020.

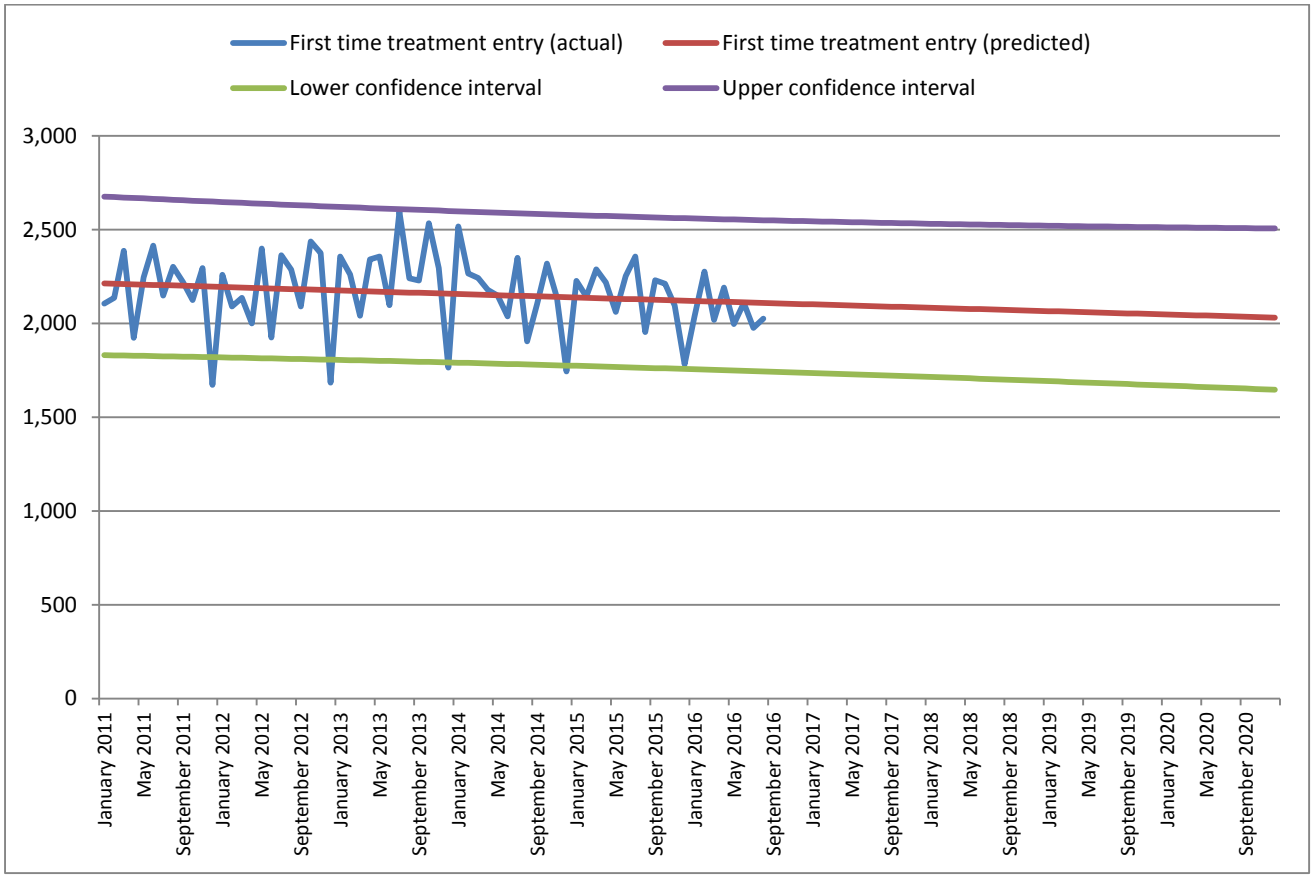

Figure 59: Projection of the number of non-opiate clients presenting to treatment for the first time ever (aged 18 and over), predicted and actual activity (January 20011 to December 2020)

Figure 60 below reports the projected trend in the number of people presenting to treatment following either a previous successful completion or previous unplanned exit from treatment. It is estimated that both the number of presentations following a previous successful completion from treatment and the number presenting following an unplanned exit from treatment will remain steady over the next four years. Therefore, it is predicted that there will not be much change in the monthly number starting treatment.

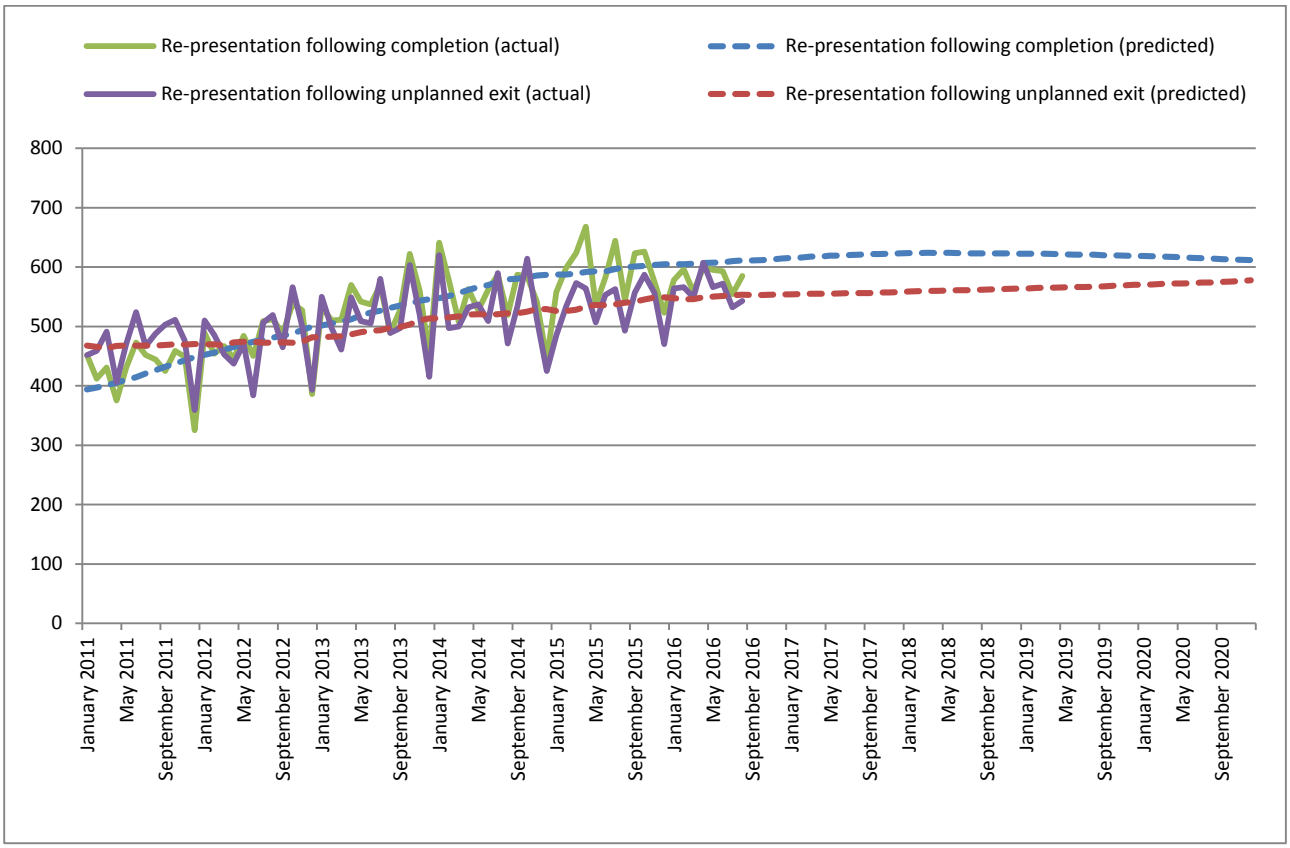

Figure 60: Projected trend in the number of individuals using non-opiate substances who have returned to treatment following a previous planned or unplanned exit (aged 18 and over), predicted and actual activity (January 2011 to December 2020)

Leaving treatment

The modelling of non-opiate users leaving treatment is presented as a proportion of the monthly number in treatment, rather than as a number, to reflect the fact that there will be uncertainty in the overall numbers in treatment, which would increase the potential margin of error.

Unplanned exits

Figure 61 presents the proportion of people treated for non-opiate misuse projected to leave treatment in an unplanned way. The monthly rate of unplanned exits from treatment has risen slightly over the last five years. It is predicted that this rising trend will continue over the next four years.

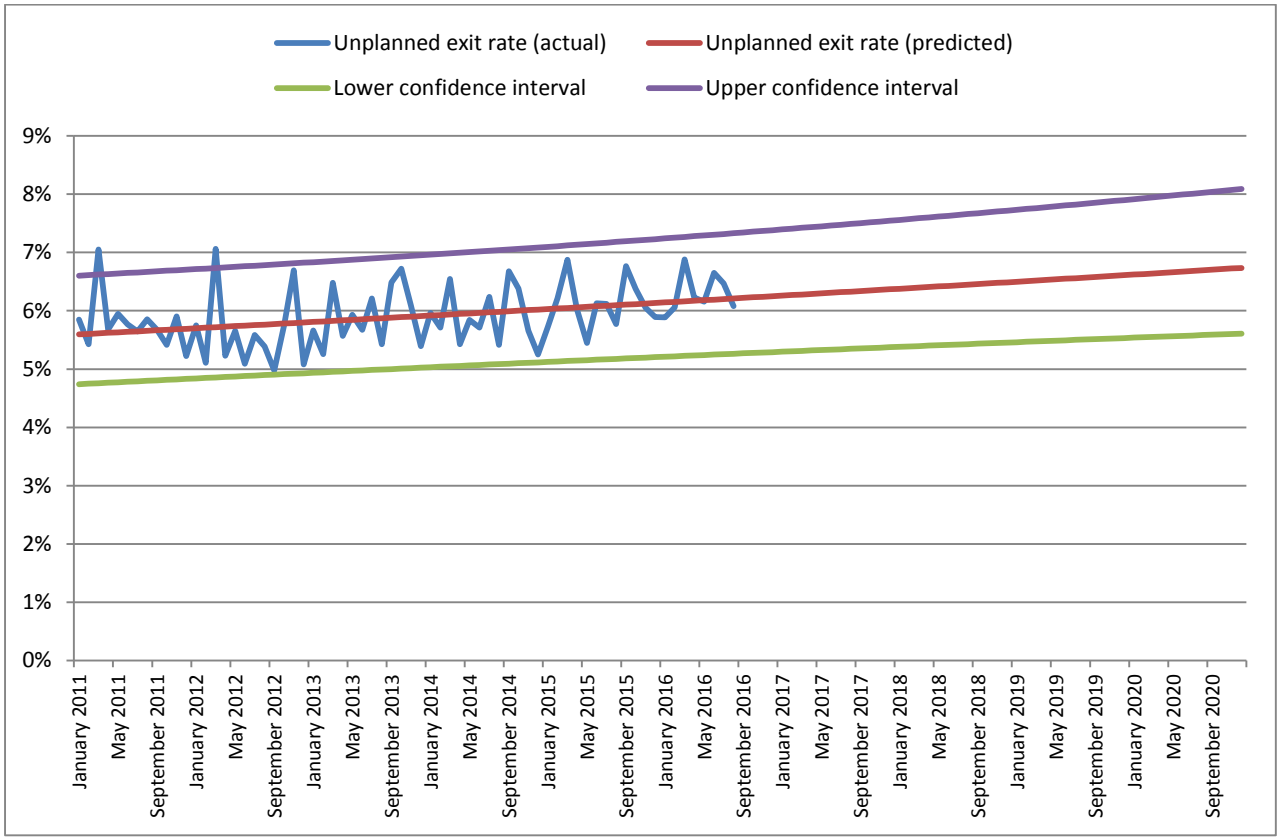

Figure 61: Proportion of non-opiate clients out of all in treatment projected to leave treatment each month due to an unplanned exit (aged 18 and over), predicted and actual activity (January 2011 to December 2020)

Mortality

Figure 62 presents the projected proportion of non-opiate users who will die in treatment up until 2020. While the rate is projected to rise slightly over the next four years, this is from a very low baseline and the rate is substantially lower than that seen for users of opiates.

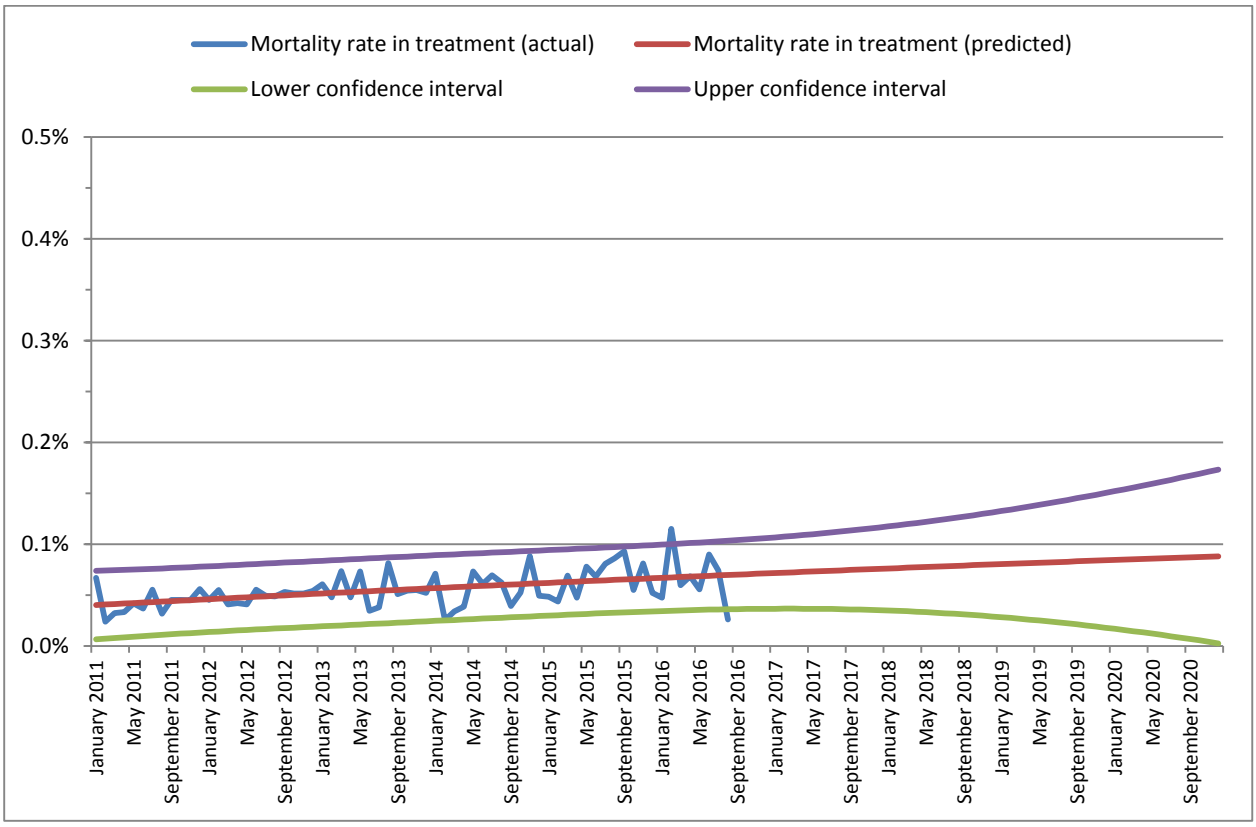

Figure 62: Monthly mortality rates among all individuals in treatment for misuse of non-opiates (aged 18 and over), predicted and actual activity (January 2011 -December 2020)

Successful completion of treatment

The monthly successful completion rate has fallen slightly in recent years. It is projected that this gradual decline will continue up until the end of 2020.

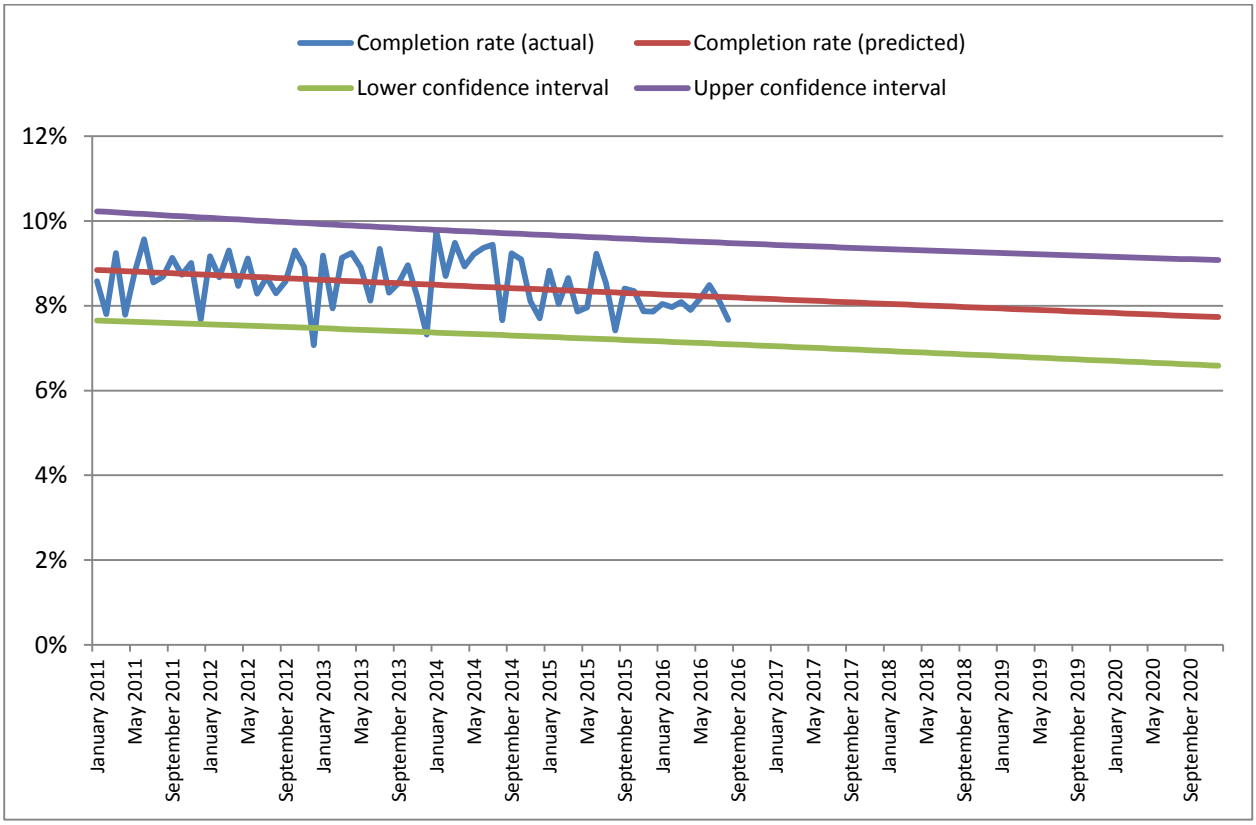

Figure 63: Proportion of all individuals that are being treated for non-opiates that successfully complete treatment each month (aged 18 and over), projected and actual activity (January 2011 -December 2020)

Age profile

The age profile of people with non-opiate misuse presenting to treatment has not changed over the last 10 years as substantially as the change in the profile of opiate users. The proportion under 35 has fallen slightly between 2005 and 2015 and the older population has increased slightly but remains the majority as of 2015 and the ageing trend is much less pronounced than for opiate users. It is projected that this pattern will continue over the next four years, with those aged 35 and over slightly exceeding those aged under 35 by 2020.

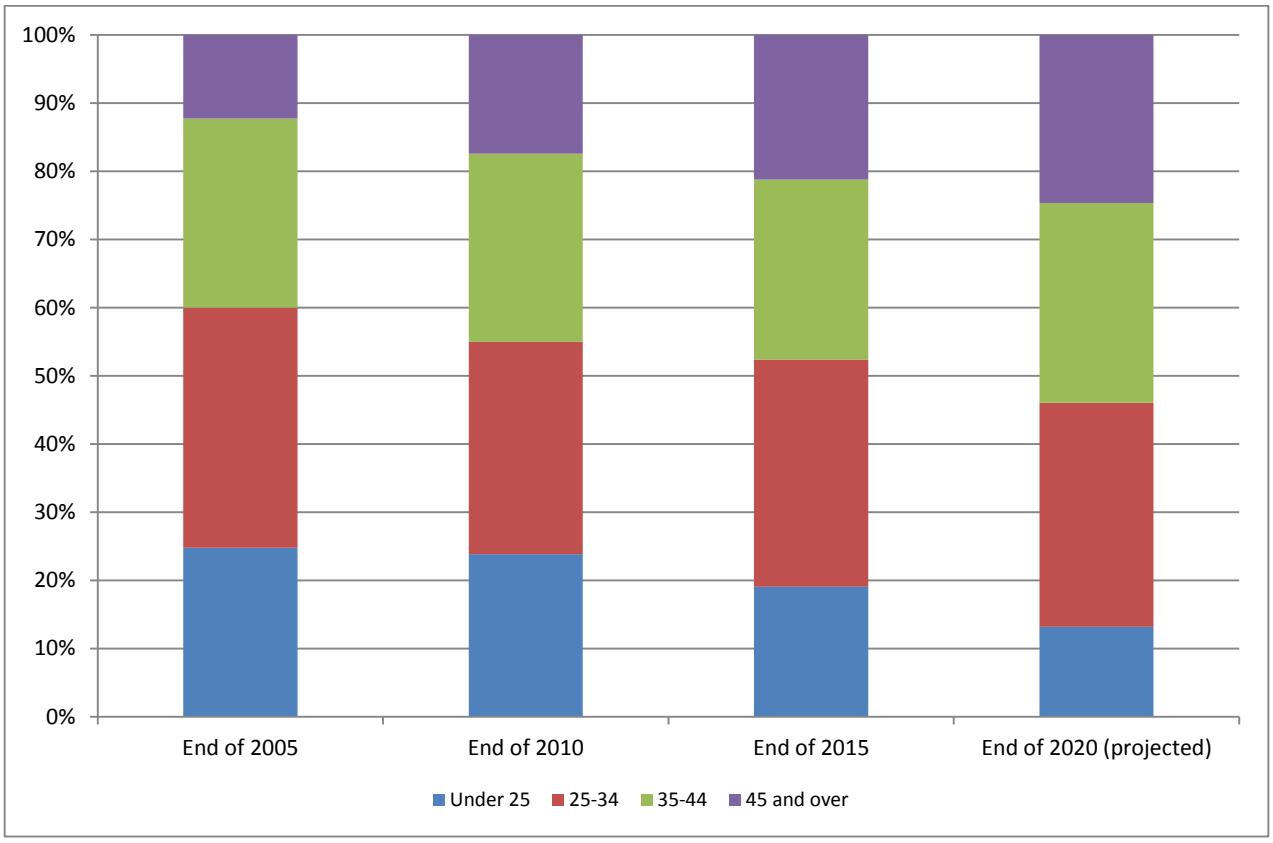

Figure 64: Age profile of non-opiate clients in treatment by the end of 2020 (aged 18 and over). Actual breakdown for 2005, 2010 and 2015 and projected breakdown for 2020

Implications for services and practice

The possible implications for treatment service delivery and practice are listed below. They are based on feedback from the expert reference group and the expert by experience consultation.

The ageing population of heroin users make the following important:

- robust links and pathways with mental and physical healthcare
- effective screening and identification of co-morbidity
- effective pathways to and linkages with housing and employment support services
- effective pathways between the criminal justice system, drug treatment and related services, including effective through care post prison release
- a need to ensure that there is an appropriate focus on end of life care

Changing and new patterns of drug use make the following important:

- the development of new referral pathways and partnerships to reach new and emerging groups of users
- staff with the cultural competence to work with new users and patterns of use
- a focus on psychosocial interventions and core key-working competencies
- a focus on fundamental physiological and psychological effects of the broad categories of drugs (ie stimulants, sedatives, hallucinogens, dissociatives such as ketamine, and synthetic cannabinoids)
- partnerships, pathways, and screening and identification with the acute health sector, sexual health services and primary care

Expert by experience consultation

Feedback on changing patterns of drug use

Participants considered that NPS will attract a new and different population to using drugs.

Participants were also concerned by the use (and misuse) of terms like 'legal highs', which may give a misleading impressions of safety. Widespread availability of NPS was also a concern.

"When you don't want to feel 'like you', you will take anything and they are cheap." Male, North West

Some participants felt that treatment staff were well prepared and adequately skilled to meet the new challenge, and did not want to see separate NPS services. However, many felt that treatment staff needed to adapt their practice and develop new skills.

Many NPS users felt their GP had not been able to help them.

Participants were keen to engage with children and young people to discourage them from drug use. Most participants were highly motivated to, as they saw it, help future generations and to give something back.

Participants felt that technology can have a role in facilitating new ways both to access support and manage risky behaviour. Some participants felt that the developers of social media sites and apps should be encouraged to include harm reduction links or messages.

There were mixed views about the ability of regular drug services to give adequate support to LGBT drug users. Some had poor experiences of primary care, A&E and mental health services, with a lack of understanding of drug use being the main problem, combined sometimes with a lack of sympathy for their position.

Main points:

- overall, it is projected that the number of people in treatment for opiate misuse will fall over the next four years, with fewer people starting treatment than leaving, particularly those new to treatment
- this projection is consistent with the latest prevalence estimates for illicit opiate use (presented in chapter one), where the number of new younger opiate users is falling substantially. The proportion of opiate users, both in and out of treatment, aged 45 and over is increasing
- this trend in the profile of opiate users in treatment will have significant implications for their health and mortality risks, particularly for older users, many of who will have been taking illicit opiates for very long periods
- drug treatment will need to respond to a range of age-related, long-term health conditions (which may be exacerbated by other drug use and smoking) and actively support referrals for primary and specialist care
- the projected profile will also influence the number of people that leave successfully, as treatment becomes more widely populated by those with entrenched drug use and people who have had multiple previous attempts at treatment
- it is much harder to effect behaviour change with people who have very entrenched patterns of use and their likelihood of achieving positive outcomes are greatly diminished when compared to opiate users who engage after a shorter period of use
- it is predicted that overall, the rate of completions for opiate users is likely to fall over the next four years and local areas should take this into account when considering setting any performance targets
- this is also important for other outcomes associated with recovery from dependency. For example, it has been shown earlier in this report that opiate career length negatively correlates with the chances of being in paid work
- while drug treatment services should always have high aspirations for all people in treatment, it is important that expectations are also realistic and reflect different populations in treatment, with very different likelihoods of success
- overall, it is projected that the number of non-opiate users in treatment will remain relatively stable over the next four years, as has been the case in recent years
- however, changes may be seen in the types of non-opiate substances that individuals are presenting for, with a rise in the use of NPS and the decline seen over the last 10 years in benzodiazepine and crack cocaine presentations
- it is projected that the age profile of non-opiate clients will not change that much over the next four years, with the majority of presentations continuing to come from the under 35 age group
- as the non-opiate population is fairly stable, and with everything else being relatively constant, it is projected that the proportion of individuals successfully completing treatment will also remain relatively stable

- the development of new referral pathways and partnerships to reach new and emerging groups of users will be essential. As will staff with the competences to work with new users and patterns of use
- the experts by experience consulted felt that NPS will attract new populations to using drugs and there were mixed views about the current ability of services to respond effectively and whether they gave adequate support to LGBT drug users

Chapter seven: What is an appropriate set of measures or indicators of drug treatment outcomes?

This chapter reflects on what would be an appropriate set of measures or indicators with which to monitor and evaluate drug treatment outcomes. It draws on the findings from the effectiveness review and also summarises the views of the experts by experience, and the expert reference group on this question.

Feedback from stakeholders

The expert reference group made the following general comments for consideration when developing measures or indicators of drug treatment outcomes:

- the primary outcome should be a measure of successful treatment
- there should also be measures which capture the benefit and response during treatment
- measures of broader recovery outcomes, which are reliant on the wide range of services that are needed to support drug recovery, should reflect the accountability for the commissioning and delivery of these broader services
- this is a complex area, which should be approached with caution due to the risk of generating unintended consequences (for example, a focus on a single outcome to the detriment of others and unethical practices)
- the impact of indicators on commissioning and service culture is considerable and should not be underestimated

Expert by experience consultation

Views on treatment indicators

Participants overwhelmingly felt that six months was insufficient time to be able to demonstrate stable recovery and therefore the ‘non-representation window’ in the successful completion definition for people returning to treatment should be longer than six months.

Many participants felt that the length and speed of a recovery journey were vital factors, and that they would have welcomed much longer periods of support after treatment, with two and five years being mentioned.

Many participants emphasised that recovery should be understood to consist of progress across broad range of issues. People described the things that were important to them – not just addressing substance misuse, but also improving their housing situation, physical and mental health, their social situation and relationships with their families and their employment and training opportunities.

"You should measure use; stable accommodation; education; training and employment; if life feels good; health issues are dealt with - mental and physical; is there family contact and money?" Male, London

Many participants emphasised that improving their quality of life while remaining healthy and stable on a methadone script should be considered a successful outcome, and acknowledged as such.

Recommended indicators and measures

The indicators that are used to manage and commission drug treatment can have a powerful impact on how services are developed and on how resources are allocated locally. These indicators play an important role in informing national policy makers and public health professionals about how effectively drug treatment is responding to need. Therefore, there should be careful consideration of how an indicator is defined, interpreted, and decisions which it informs.

As outlined in chapter one, national and local indicators can play an important role in improving the outcomes for those in drug treatment. Reduced waiting times, preventing early dropout, reducing the spread of bloodborne viruses and improving recovery outcomes are good examples of the effective use of data and performance information.

PHE provides regular benchmarked reports and toolkits to commissioners and treatment providers, which include a wide set of measures and outcomes. These information products are used to:

- help assess local need
- understand the profile of the local treatment population
- ensure that an appropriate range of interventions are targeted and delivered to the right people
- monitor and improve recovery and other treatment outcomes
- improve cost effectiveness and the value for money of drug treatment

Proposed indicators for local and national monitoring of drug treatment outcomes

The current primary drug treatment outcome measure in England is the sustained successful completion of treatment. This is defined as drug users who have left treatment successfully, free of their dependence, not in receipt of OST, and who do not re-present for further treatment for six months. In this definition, the 'no re-presentation' component is important in terms of safeguarding against poor or unethical practice in local treatment systems. This primary indicator is included in the Public Health Outcome Framework (PHOF) and is currently reported for opiate users and non-opiate users.

Following feedback from stakeholders – particularly the experts by experience – it is recommended that non re-presentation to treatment for a 12-month period is reported in addition to the six-month period. This could be used to help to ensure that post-treatment recovery support is maintained for as long as people find it helpful to their recovery.

Treatment and health Indicators

Chapters 2 and 3 reviewed outcomes that could be expected from drug treatment and considered how well the treatment system in England compares to the research literature and internationally. This review showed that for the majority of indicators (where comparative data is available), performance in England falls within the expected range, with treatment access rates and waiting times comparing favourably to the evaluation literature and other systems.

It should be borne in mind that good access and low waiting times for treatment have been achieved during years of increasing investment in the treatment system. There is understandable concern that any current or future funding constraints could result in those who need drug treatment not being able to access it. Therefore, it is proposed that waiting times and the proportion of opiate and crack users in treatment are included as national and local indicators to help monitor the accessibility of treatment. For example, successful completion rates in a particular area could be good, but this would need to be understood in the context of the rate of access.

There were two areas identified in chapter three where improvements could be made. These were reducing illicit opiate use for heroin users in treatment and tackling the rise in drug-related deaths. It is recommended that the development of an indicator on the use of illicit opiates is explored. This could be both in the first year of treatment and for subsequent years, for people who require a longer time in treatment. It is proposed that this indicator would primarily be used locally. It is also proposed that drug-related deaths are monitored locally and nationally, and alongside this drug-related hospital

admissions are also reported. These two indicators are likely to be closely related, reflecting the level of health harms associated with drug use in an area.

Recently, it has been announced by the Department of Health that local drug-related deaths rates will form an additional component of the PHOF. In the context of the recent increases in drug-related death rates and the findings of this review, this is a welcome addition.

It is also recommended that bloodborne virus rates are monitored nationally and locally, including access to screening and relevant treatment. This would be an important public health component, and measure a component of in-treatment benefit.

Lastly, it is proposed that an indicator is developed to monitor the impact of drug treatment on offending. This would sit alongside the recently established PHOF that monitors the referral pathways between prison and community treatment.

Wider recovery outcomes

Chapter four demonstrated how social determinants such as deprivation and employment influenced treatment outcomes and how by improving these areas of someone's life other outcomes could improve.

There is, therefore, a clear rationale to look at housing, employment and social deprivation as indicators. In conjunction with the Department for Work and Pensions, it is recommended that employment indicators are developed that help identify benefit claimants who might require drug treatment and also ensure that they receive appropriate and effective employment support. Similarly, it is recommended that a housing indicator is developed with the Department for Communities and Local Government that monitors whether people with drug problems are stably housed in the short and longer term. While it is not possible to have a social deprivation indicator, it would be expected that cessation of drug use, employment, and improved health outcomes should all have a positive impact on deprivation.

Segmenting the treatment population

The analysis and modelling in chapter five projected the make-up of the drug treatment system population in 2020. It was tentatively predicted, that if other factors remain fairly static, the non-opiate treatment population is not likely to change substantially.

However, it is projected that the opiate population in treatment will continue to get older and be likely to experience considerable ill health and an increasing risk of mortality.

The average length of time those in treatment will have been using opiates will also increase over the next four years. In addition, the proportion of opiate users presenting to treatment that will have had previous treatment episodes will also increase.

All these factors combined will result in a significant proportion of the opiate treatment population having entrenched patterns of drug use. Therefore, they are likely to find it harder to change behaviour enough to leave treatment successfully, compared to those who are younger and have been using drugs for less time.

It is therefore recommended that any drug treatment indicators that are developed for opiate users segment the population into those new to opiate use, and those that have been using for a substantial period. This will allow for more accurate levels of ambition to be set for both groups, and perhaps greater ambition for people who have been using for shorter periods. The evidence is that they are likely to achieve better outcomes, so ensuring they receive the right personalised intervention is imperative. It is also important that longer-term users receive interventions that meet their needs, including often complex physical and mental health needs.

Main points:

- the impact of indicators on commissioning and service culture is considerable and should not be underestimated. It is a complex area, which should be approached with caution due to the risk of generating unintended consequences. However, they can be, and have been, used to positive effect to enhance outcomes
- it is recommended that the primary drug treatment measure of successful completion and no return to treatment is augmented by a broader set of measures
- non re-presentation to treatment, a component of the successful completion measure used in the Public Health Outcomes Framework, should also be reported for a 12-month period, in addition to the current six-month period
- it is proposed that waiting times and the proportion of OCUs in treatment are included as national and local indicators to help monitor the accessibility of treatment
- it is also recommended that BBV rates are monitored nationally and locally, including access to screening and relevant treatment
- indicators that look at social determinants that have the most significant influence on outcomes are also recommended, these should include measures that look at improvements in employment and housing
- in the context of the review's findings on the possible future profile of people in treatment, it is recommended that the development of any drug treatment indicators for opiate users segment the population into those new to opiate use and those that have been using for a substantial period.

Chapter eight: Challenges facing the treatment system

This chapter looks at challenges facing the drug treatment system and discusses potential opportunities. It examines the risks to positive outcomes for people with drug misuse and summarises opportunities for improved delivery in local systems.

The material for this chapter is drawn from discussions with the external expert reference group (including academics, service commissioners and service providers and experts by experience) and also from the consultation process with the experts by experience.

Other organisations have recently published extensive accounts of stakeholders' perceptions of the current operating environment, based on extensive surveys (eg, the Recovery Partnership's annual State of the Sector reports).[224–226]

Opportunities to improve outcomes

Expert by experience consultation

Opportunities to improve outcomes seen by experts by experience

Participants thought there could be gains through more active promotion of recovery, including enhancing the visibility of people who had achieved recovery and relevant networks or groups. Many participants thought this would benefit people in and out of treatment, and help to address stigma and stereotypes.

"Having more visible recovery has helped me and added value to my life." Male, North West

Experiences of referral to peer support, such as mutual aid, were mixed and some felt practice could be improved.

Some felt there should be more services for gay men, more women only services and culturally specific services, working alongside other drug services, or based within them.

Many felt there should be clearer and more consistent sign-posting to services, including clearer information about the local treatment system and what is available.

There was consensus among members of the review's expert reference group that drug treatment in England stands at a critical juncture. The transition to local authority control of drug treatment from a partnership, and the move from a dedicated and nominally ring-fenced budget in 2013, were both identified as significant changes.

In the current climate of financial constraint, the increase in drug-related deaths, changing patterns of use, the drive to improve recovery outcomes and expectations that treatment is cost effective were all see as significant challenges to local areas and national policy makers. Opportunities to improve outcomes, identified by the expert reference group, are outlined below.

- the further development of an effective workforce to support recovery outcomes was seen as an opportunity to bolster specialist treatment provision. The recovery agenda is now well established and the sector has a significant opportunity to develop a diverse and dynamic workforce that is skilled at supporting behavior change. The group saw the development of the role of peer mentoring and collaborations between paid staff, volunteers and service users, as particularly welcome
- local authorities were seen as well-placed to lead the treatment and recovery agenda. The role of local authorities in supporting social reintegration, addressing social inequalities and developing local initiatives were all emphasised as areas of new opportunity. At the same time, the group called upon the treatment sector to develop and sustain effective relationships with local authorities, so that drug treatment is seen as supporting local priorities
- co-commissioning with clinical commissioning groups to ensure that the physical and mental health needs of drug users are met, was regarded as a significant area for development, which could deliver significant improvements in outcomes. This could include separate commissioning streams coming together to respond to need, such as connecting mental health and smoking cessation services to drug treatment more effectively
- devolution was seen by some of the group as an opportunity for the sector, in terms of releasing potential savings and allowing local political leaders to drive a broad agenda encompassing crime, health and economic development
- the group felt there was potential to further increase the proportion of drug users who are in treatment. There was a perception that improving access had not been a priority in recent years. The recent evidence on the proportion of drug users who die prematurely outside treatment, and change in the pattern of drug use, has bought this agenda into sharp focus
- the group saw opportunities to develop better links and pathways between recovery systems and mental and physical healthcare. They felt improved links to palliative care would also be important in responding to the needs of the ageing cohort of heroin and crack users who are experiencing high rates of mortality and chronic health problems

Risk to outcomes

Expert by experience consultation

Risks to improvements in outcomes, as seen by experts by experience

Participants were very concerned by frequent recommissioning and the impact it had had on services. They felt that staff were unsettled, which in turn affected the support that they were able to offer.

"It seems every time there's a tendering process services become more fragmented. One service provided all the drug and alcohol, needle exchange, and sexual health services, it was all singing all dancing, and then it got tendered and all that got split up. Now there is no communication between any of them. Everything keeps getting split into bits and then split again."

No participants had been told that they had to end OST or to reduce dose without some discussion and negotiation. But many had heard rumours that OST is, or is going to be, restricted or time-limited, and they were concerned by it.

Those who experienced mental health issues did not feel that services and professionals worked together.

The main risks to positive outcomes identified by stakeholders on the review's expert reference group are outlined below.

- stakeholders felt that programmes that partially rely on national coverage, such as the needle and syringe programme, are challenging to implement consistently under the currently very locally devolved systems of decision making and commissioning
- there was a view that, sometimes, local politics can be detrimental to what is an often marginalised agenda. Decisions can sometimes be taken locally based on local politics, which are not in line with the evidence for effective practice
- the group felt the focus on successful completions could risk premature or inappropriate discharge. In addition to the role of commissioners in this, the group felt that there is a treatment service responsibility to prevent this happening and ensure that patients are not pushed to reduce or stop treatment too quickly, in a way that could compromise care and outcomes
- the current drug strategy is balanced, but the group felt that it is perceived by some (including some commissioners and service providers) as strongly focused

on abstinence only. The group felt that this sometimes risks some in-treatment benefits, such as reduced premature mortality and the reduction of health harms, being compromised

- the group felt that there is evidence that prison management is becoming more difficult with the high levels of NPS use and a range of other factors
- many members of the group said that there is currently disinvestment in staff training and the workforce is becoming deskilled, with experienced workers leaving after long periods in the field. There are widespread concerns that the sector is struggling to attract high-quality staff and that too many people in the workforce do not have the required competence
- the group was concerned that the too frequent use of retendering in an attempt to improve quality and cost effectiveness of the local treatment system was sometimes having the opposite effect and resulting in a destabilised service and workforce
- the group felt that the move to full business rates retention (a vehicle for local funding allocation) will pose potential risks for service stability, which will require thorough consideration
- many members of the group said that attention needs to be given to the system's capacity to train healthcare workers, including addiction clinicians at undergraduate, post-graduate and specialist levels, and that capacity to do this was effected by retendering
- too often service contracts were seen as not covering the cost of research and evaluation. This could undermine the ability of treatment service providers to take part in research studies and hamper the further development of the evidence base

Summary and conclusion

The summary is organised according to the questions set for the review, with a brief recapitulation of the key findings (including the strengths of the evidence and its limitations, and the findings of the stakeholder consultation), and recommendations.

What is the history of drug misuse and drug treatment in England?

England has a well-established network of locally commissioned and run public drug treatment systems, which have developed since the early part of the 20th century. These local systems provide a range of harm reduction and structured treatment services. The policy objectives influencing the focus and resourcing of drug treatment have evolved over time, and include public health, crime reduction and recovery. The interactions between these are complex and dynamic.

The Health and Social Care Act 2012 moved treatment funding into a public health grant, making local authorities responsible for commissioning drug treatment and devolving decision making on the level of funding and the configuration of services to local authorities. The protection previously afforded funding for drug treatment through separate funding mechanisms was significantly diminished and local authority decision making on drug treatment is now made in the context of competing priorities. Aside from the anxieties expressed by stakeholders in relation to reduced budgets, many felt local authorities should be well placed to lead the treatment and recovery agenda. Their potential to ensure services work to support social reintegration in a more integrated way, address inequalities and develop local approaches was seen as important.

The current drug strategy outlines a balanced approach to treatment, but some of the stakeholders felt that it is perceived by some (including some commissioners and service providers) as strongly focused on abstinence only and that this could compromise some in-treatment benefits, such as reduced premature mortality and the reduction of health harms.

Drug misuse and dependency can cause substantial health, social and economic harm to individuals, their families and the wider community. Drug misuse and dependency is associated with a range of harms including poor physical and mental health, unemployment, homelessness, family breakdown and criminal activity. Investment in drug treatment can substantially reduce the economic and social costs of drug-related harm. Many studies have shown that the benefits of treatment far outweigh the costs, with the most recent evidence estimating a benefit-cost ratio of 2.5:1.[36]

What is the prevalence of drug misuse and the profile of the treatment population, and how are they changing?

There has been a decline in the prevalence of opiate and crack cocaine use over the last 10 years, primarily among younger people. Increasing problems of misuse and dependence have been reported with some medicines available over the counter and with other prescription medicines, especially opioid painkillers, and pregabalin and gabapentin. Use of NPS is also increasing, particularly in prisons, and these developments require close monitoring.

The number of people accessing treatment increased significantly from 2005-2006 to 2008-2009, and has steadily fallen since. After local initiatives, supported by national programmes, fewer people drop out of treatment early and a much higher proportion leave successfully than in 2005-2006. Successful completion of treatment rates has slowed over the last couple of years, this is likely to be in part because a high proportion of those in treatment are entrenched opiate users.

The number of drug-related deaths has increased over the last 20 years, with significant increases in the number registered in the last three years among older heroin users, many of who may have been in poor health after long periods of using the drug.

The rate of HIV infection has remained very low – evidence shows that this is in part a result of the widespread provision of clean injecting equipment and opioid substitution therapy. Stakeholders were anxious about the current degree of devolved decision making in relation to maintaining adequate national coverage of needle and syringe programmes and opioid substation therapy. Overall, good progress in reducing drug-related harm and promoting recovery has been made through the widespread implementation of evidence based drug treatment.

Recommendations:

- national and local government should build on the benefits this has achieved by enabling integrated drug treatment and recovery support systems, and ensure that there is adequate provision of needle and syringe programmes

- data on the prevalence and harms of NPS and other new patterns of use is underdeveloped and should be priority for future monitoring and research

What harms does drug treatment reduce?

Findings show that drug treatment affects a broad range of outcome domains, as demonstrated by the breath of outcomes measured by major international treatment outcome studies of opioid dependence.

Opioid substitution treatment (OST) is the most widely studied intervention. OST is associated with a marked reduction in heroin use (66% abstinent) and is associated with a marked reduction in illicit drug injecting and sharing of injection equipment and substantially reduces the risk of fatal opioid poisoning (overdose) and the risk of bloodborne viral infection. Many stakeholders were concerned that the focus on successful completions could risk premature or inappropriate discharge, in a way that could compromise care and outcomes. The government's Advisory Council on the Misuse of Drugs (ACMD)[227] concluded that the time limiting of treatment was not evidence-supported practice and could be counterproductive in terms of recovery and increase risk.

Many of the experts by experience said that OST was an effective means of bringing people into contact with treatment and bringing stability to lives. However, some said that services could do more to ensure that prescribing/dispensing arrangements were right for them, strengthen reviews of the care given and offer more alternative pharmacological therapies to methadone.

Psychosocial interventions are an important element of drug treatment, but there is a mixed evaluation literature on their effectiveness. Residential care is recommended for people who have significant comorbid physical, mental health or social problems and NICE recommends particularly for people who have not benefited from previous community-based psychosocial treatment. Continuing (after) care is associated with a positive effect on substance use.

In the criminal justice system, prison diversion initiatives are effective at reducing drug use and the evidence points to opioid substitution treatment as an important driver of crime reduction, with reduced offending proportionate to the time people spend in treatment.

There is evidence that community-based needle and syringe programmes are associated with reduced rates of HIV and hepatitis C infection in the target population.

Longitudinal outcome studies of heroin, cannabis, cocaine, amphetamines, alcohol and benzodiazepine misuse indicate that treatment interventions are associated with marked reductions in illicit opiate use. However, a significant proportion of people continue to use heroin and other drugs and the proportion that achieved complete abstinence was relatively low.

LJMU's REA was essentially a review-of-reviews, with priority given to high-quality systematic reviews (and meta-analysis), and evidence-based guidelines containing quantitative estimates. This meant that some single studies on specific interventions were not included, but this focus was essential to make achievable what would have otherwise been an unmanageable task in the context of this review. A pragmatic decision was also made to limit inclusion of systematic reviews to those published since 2006 because this postdates the date of the searches conducted for the suite of NICE guidelines on drug misuse. Information on the completion of treatment, offending and long-term outcomes are probably the most significant gaps in the comparable literature.

Recommendations:

- local and national government should ensure that drug treatment continues to address a broad range of outcomes, including harm reduction, reduced drug use and social integration and recovery. This should be achieved through the implementation of evidence-based treatment interventions, recommended in the NICE drug misuse guidelines and the 'Drug Misuse and Dependence: UK Guidelines on Clinical Management'
- services users should be fully involved in making decisions about their care, in line with 'Drug Misuse and Dependence: UK Guidelines on Clinical Management'
- a policy of limiting the time that people are able to spend in treatment is not supported by scientific evidence and can be counterproductive
- local areas should also ensure that there are robust and integrated pathways between treatment and all points of the criminal justice system, including pathways between prison and community-based treatment, to ensure the crime reduction benefits of treatment can be realised

Does drug treatment England achieve the outcomes we should expect?

The review aimed to contrast the effectiveness of drug treatment in England with other national public treatment systems and, for the outcomes where this was not possible, to make comparisons to the academic literature. A review of available comparable data from the rest of the world was carried out by LJMU, which found that there was only limited information available, which was confined to a few countries.

The majority of comparisons show that the English treatment system achieves outcomes comparable to, or performs better, when contrasted to the research studies, bearing in mind the important caveats relating to making such comparisons. Similarly, where international comparisons were possible, the few indicators available showed England doing comparably, and sometimes well, when compared to most other countries, especially for access to treatment and bloodborne virus rates. The headline findings are:

- treatment penetration rate for England (60%) is among the highest reported
- treatment access (97% seen within three weeks) is comparable to other systems
- the rate of injecting drug injecting (0.25%) is relatively low
- the rate of current injecting 15.5% at presentation to treatment is comparable to that in continental Europe
- the rate of dropout from treatment before three and six months (18% and 34%, respectively) is comparable to the literature (28% on average)
- England has very low rate of HIV infection among the injecting drug user population (1%), which compares favourably internationally, with some countries, the USA, Canada, Italy and Spain, having considerably higher rates between 11% and 33%
- the rate of HCV infection (50%) is lower than several other countries with available data
- the rate of cessation in illicit injecting (52% after three months; 58% after six months and 61% after one year) is comparable or better than the literature
- treatment in England is associated with a marked reduction in convictions (47% among those retained in treatment for two years or successfully completed treatment)

As should be expected, there is room for some improvement and the review suggests two initial areas of specific focus where outcomes could potentially be improved. They are reducing the use of illicit opiates at the start of and throughout treatment, and reducing drug-related death rates for those in, and especially those not in, contact with treatment. The headline comparisons are:

- the drug-related death rate in England (34 per million in 2013) is considerably higher than elsewhere in Europe, thought substantially less than in the USA. However, treatment in England protects against drug-related death and is comparable to the literature
- the rate of illicit opiate abstinence after three and also six months of treatment in England (46% and 48%, respectively) points to relatively poorer performance in contrast to the literature (66% on average)

During discussions about OST as part of the expert by experience consultation process, there was an endorsement that methadone had been an effective means of bringing many participants into contact with the treatment system and bringing stability to lives. Some participants felt that some services could work more to ensure the dose and the prescribing methods were right for them.

Comparing available data to published research is not straightforward due the fact it is international, sometime collected over decades, with different populations, drugs environmental factors and treatment interventions. Making a fair comparison between

experimental (randomised controlled) trial data and routinely delivered treatment data is also challenging due to the highly controlled conditions, strict selection, differing methods and measures of effectiveness. It is important that the comparisons are understood in the context of these caveats.

Recommendations:

- national and local government should develop strategies to address the recent increases in drug-related deaths, in line with the recommendation of the recent PHE inquiry into drug-related deaths, including enhancing enquiry processes into incidents and integrating healthcare
- local services should focus on the implementation of evidence-based interventions to reduce the use of illicit opiates at the start of and throughout treatment

What is the impact of housing, employment and social deprivation on treatment outcomes and what are the interdependencies between drug treatment and other services?

Social factors, including housing, employment and deprivation, are associated with substance misuse. Findings from the evidence review and NDTMS analysis suggest that some of these social factors act as moderators of drug treatment outcomes, with clear negative associations between outcomes and neighbourhood deprivation, housing problems and unemployment.

Drug use tends to be clustered in deprived areas of the country, with both the estimated use of opiates and crack cocaine and the rates of those in treatment being higher in the more deprived local authorities

Early findings from this review were endorsed by many experts by experience, who had personal experience of treatment for substance misuse, worklessness and housing problems. Participants emphasised that achieving stability in their lives, improving their health and being in stable, secure and suitable housing, were all important parts of progressing to employment.

Integrated approaches to meeting housing and other needs are more likely to enable navigation through an often complex system of housing, treatment, health care and social care. There is evidence that housing insecurity may contribute to an increased risk of relapse.

There is also evidence that alongside other benefits, employment support and achieving good employment may lead to improvements in treatment outcomes, including improved engagement, retention in treatment and reduced severity and frequency of relapse.

Evidence also supports co-ordinated approaches to employment support. Many people affected by drug misuse will face multiple barriers and the process of securing paid work may not be quick or straightforward. The value of longer-term support, including in-work support to help people maintain employment, was emphasised by the REA.

Employment rates at the start of treatment are generally low, and the main factors associated with employment at treatment start are being male, having better physical and mental health, using drugs for less time and living in areas that are more affluent. Employment rates, in the main, remain static during treatment, but individuals who successfully complete treatment have the highest rate of employment. Most opiate clients (68%) remain unemployed while in treatment, reflecting the difficulties they face in obtaining paid work and the challenge that Jobcentre Plus, the Work Programme (and its successor, the Work and Health Programme) and treatment providers face in working together to help them.

The employment REA looking at the relationship between drug treatment outcomes and employment searched for literature between 1995 and 2015. The housing and homelessness and drug use REA identified 57 key studies published after 1995. In much of this research, drug misuse and drug treatment was not the primary focus and many studies followed participants only in short term.

Recommendations:

- local and national government should provide longer-term employment and housing support, including in-work support, to help people gain and maintain employment and appropriate housing. The evidence supports co-ordinated approaches to employment support and approaches to meeting housing and other needs which are integrated with treatment services. Such approaches are more likely to enable navigation through an often complex system of housing, treatment, health care and social care

How should treatment be configured and resourced to meet the needs of an ageing heroin using population and respond to new patterns of drug use?

The review estimates the size and characteristics of the drug treatment population in England in the next four years (to the end of 2020). These estimates are made using trend data from the National Drug Treatment Monitoring System (NDTMS) alongside other data sources including prevalence estimates. Even though they are approximate, these projections should be useful when judging the required treatment capacity in England, and in identifying the harms it will need to address, and in informing future expectations for treatment effectiveness.

Overall, it is projected that the number of people in treatment for opiate misuse will fall over the next four years, with fewer people starting treatment than leaving, particularly those new to treatment. This projection is consistent with the latest prevalence estimates for illicit opiate use. The proportion of opiate users, both in and out of treatment, aged 45 and over is increasing. This trend in the profile of opiate users in treatment will have significant implications for their health and mortality risks, particularly for older users, many of who will have been taking illicit opiates for very long periods.

Drug treatment will need to respond to a range of age-related, long-term health conditions (which may be exacerbated by other drug use and smoking) and actively support referrals for primary and specialist care.

Stakeholders saw the necessity and opportunities to develop better links and pathways between treatment systems and mental and physical healthcare. They felt improved links to palliative care would also be important in responding to the needs of the ageing cohort of heroin and crack users who are experiencing high rates of mortality and chronic health problems. Many of the experts by experience felt that drug treatment and mental health professionals had not worked effectively together to meet their needs in the past.

The projected profile will also influence the number of people that leave successfully, as treatment becomes more widely populated by those with entrenched drug use and people who have had multiple previous attempts at treatment. It is much harder to effect behaviour change with people who have very entrenched patterns of use and their likelihood of achieving positive outcomes are greatly diminished when compared to opiate users who engage after a shorter period of use. It is therefore predicted that, overall, the rate of completions for opiate users is likely to fall over the next four years and local areas should take this into account when considering setting any performance targets.

This is also important for other outcomes associated with recovery from dependency. For example, it has been shown earlier in this report that opiate career length negatively correlates with the chances of being in paid work.

The number of drug misuse deaths has increased over the past 20 years, with a significant rise in the last three years, to the highest number on record. In the next four years, PHE estimates that there will be a progressive increase in the proportion of people in treatment for opiate misuse users who die in treatment, from long-term health conditions and overdose.

Overall, it is projected that the number of non-opiate users in treatment will remain relatively stable over the next four years, as has been the case in recent years. However, changes may be seen in the types of non-opiate substances that individuals

are presenting for, with the rise in the use of NPS and the decline seen over the last 10 years in benzodiazepine and crack cocaine presentations. The experts by experience felt that NPS will attract new populations to using drugs and there were mixed views about the current ability of services to respond.

The development of new referral pathways and partnerships to reach new and emerging groups of users will be essential, as will a workforce with the competences to work with new users and patterns of use. Some of the experts by experience felt there should be more services for gay men, more women-only services and culturally specific services, working alongside other drug services, or based within them.
The modelling presented in this review does not attempt to produce exact predictions, but rather offers a general picture of what should be seen, if current trends continue and other conditions remain relatively stable. The analysis is therefore based on a number of assumptions, chiefly that current trends in prevalence and incidence are maintained. Due to time and resource restraints inherent in this REA, it has not been possible to take into account every eventuality that might influence treatment demand. It is important that these caveats and limitations are understood when using any of the projections in this chapter.

Recommendations:

- segment drug treatment indicators for opiate users into new and chronic cohorts to give a clearer picture of outcomes. This will allow the progress of those that evidence tells us we can expect even higher recovery rates for to be tracked
- note that the proportion of people who successfully complete treatment is likely to continue to fall; however, it is important to continue to maintain a recovery ambition for the ageing cohort of heroin users with complex needs
- develop national and local strategies to address the recent increases in drug-related deaths, including enhancing enquiry processes into incidents and integrating healthcare
- ensure that local arrangements exist to meet physical and mental health of drug misusers – particularly the needs of the older treatment population with long-term health conditions
- closely monitor changing patterns of drug use, including NPS use and problematic use of medicines; use multi-faceted responses, including managing prescribing practice, developing workforce skills and the development of new service pathways for specific sub-populations

What are the appropriate outcomes to evaluate treatment?

This final component of the review reflects on an appropriate set of measures or indicators with which to monitor and evaluate drug treatment outcomes. It draws on the

findings from the review and also summarises the views of the experts by experience, and the expert reference group on this question.

The expert reference group was clear that the impact of indicators on commissioning and service culture is considerable and should not be underestimated. Members felt it was a complex area, which should be approached with caution due to the risk of generating unintended consequences. However, they were also clear that indicators can be, and have been, used to positively effect to enhance outcomes.

Recommendations:

- national and local government should expand their assessment of drug treatment outcomes to better reflect the breadth of the benefits of drug misuse interventions
- the current primary outcome measure (successful treatment completion and no return to treatment) should be augmented through the national and local monitoring of:
    - the proportion of people in need who are in treatment
    - adequate treatment access
    - incident rates of bloodborne viral infections
    - cessation of illicit opiate use while in treatment
    - longer-term rates of treatment re-presentation (12 months)
    - treatment entry rates following prison release
    - access to employment and housing support services

These measures are discussed in more detail in the review, but it does not precisely specify the measures. This would involve a longer process, involving extensive stakeholder consultation and engagement with the relevant government departments. However, the recommendations are broadly achievable through existing data sets.

Conclusion

England has a well-established network of treatment systems, which have evolved over time, informed by evidence and dynamically interacting policy objectives, which have shifted in balance over time.

There is an extensive international research literature on drug treatment interventions and how people can be helped to tackle drug misuse and recover. However, evidence on the completion of treatment and long-term outcomes is more limited. Treatment outcomes in England are comparable to other countries and to the research literature, where such limited comparisons are possible. England performs well in terms of the ability of people to access treatment and the low incidence of bloodborne viral infection in the community. However, there are two areas where drug treatment in England compares less favourably:

the rate of illicit opiate use at the start and during interventions; and the rate of drug-related deaths, particularly among those who are not in treatment.

Good progress in reducing drug-related harm and promoting recovery has been made through the widespread implementation of evidence-based drug treatment, and national and local government should build on these benefits. It is vital that drug treatment continues to address a broad range of outcomes, including harm reduction, reduced drug use and social integration and recovery. The assessment of drug treatment outcomes should be expanded to better reflect the breadth of the benefits of drug misuse interventions.

Social factors, including housing, employment and deprivation, are associated with substance misuse and these social factors act as moderators of drug treatment outcomes, with clear negative associations between outcomes and neighbourhood deprivation, housing problems and unemployment. It is important to provide longer-term employment support, including in-work support to help people maintain employment, and integrated housing support.

Finally, outcome expectations need to be cognisant of the fact that the proportion of older heroin users in treatment with poor health has been increasing in recent years and is likely to continue to rise. An ageing cohort of heroin users (many of whom started to use heroin in the 1980s and 1990s) is now experiencing cumulative physical and mental health conditions and is more susceptible to overdose. It may be very challenging to help people with complex needs and a long treatment history to achieve recovery, but it is vital to help them access appropriate healthcare services.

Annexe A. The expert reference group

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Professor Sir John Strang, King's College London
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Paul Hayes, Collective Voice
Dr Andrew Howe, Director of Public Health, Barnet & Harrow
Dr Adrian Phillips, Director of Public Health, Birmingham
David Biddle, Chief Executive, CRI
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Tim Leighton, Action on Addiction
Dr Linda Harris, Medical Director, RCGP Substance Misuse and Associated Health
Andrew Brown, Making Every Adult Matter, MIND
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Dan Greaves, Home Office (observer)
Kirsty Scholefield, DWP (observer)
Chris Kelly, NHS England (observer)
Simon Marshal, NOMS (observer)
Rob Unsworth, Health Economist, Department of Health (observer)
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Annexe B. Report structure outline

	Review question	Review aim	Rapid evidence assessment	Other methods and processes
1	What is the history of drug misuse and drug treatment in England?	Consider how drug treatment will need to be configured to meet future need and recommend an appropriate set of measures or indicators for treatment evaluation.		Consultation with the expert reference group. Peer review.
2	What is the prevalence of drug misuse and the profile of the treatment population, and how are they changing?	Consider how drug treatment will need to be configured to meet future need and recommend an appropriate set of measures or indicators for treatment evaluation.		PHE analysis of NDTMS and other relevant data sets. Consultation with the expert reference group. Peer review.
3	What harms does drug treatment reduce?	Give policy makers and local areas an objective assessment of the research evidence on what drug treatment outcomes are achievable.	The published evidence on drug treatment outcomes and international comparators. Commissioned from the Centre for Public Health, Liverpool John Moores University. (Available here)	Consultation with the expert reference group Consultation with relevant service user networks and groups. Peer review.
4	Does drug treatment England achieve the outcomes we should expect?	Contrast outcomes in England to the evidence and other drug treatment systems.	The published evidence on drug treatment outcomes and international comparators. Commissioned from the Centre for Public Health, Liverpool John Moores University.	PHE analysis of NDTMS and other relevant data sets. Consultation with relevant service user networks and groups. Peer review.
5	What is the impact of housing, employment	Review the impact of housing	The evidence on employment as	PHE analysis of

	and social deprivation on treatment outcomes and what are the interdependencies between drug treatment and other services?	problems, unemployment and social deprivation on treatment engagement and outcomes.	a moderator of recovery outcomes and different models of employment support. Commissioned from The Learning and Work Institute The evidence on housing as a moderator of recovery outcomes and different models of housing support. Commissioned from Gill Leng Housing Services Ltd.	NDTMS and other relevant data sets. Consultation with a technical academic working group. Peer review.
6	How should treatment be configured and resourced to meet the needs of an ageing heroin using population and respond to new patterns of drug use?	Consider how drug treatment will need to be configured to meet future need and recommend an appropriate set of measures or indicators for treatment evaluation.		Consultation with the expert reference group Consultation with relevant service user networks and groups. Peer review.
7	What are the appropriate outcomes to evaluate treatment effectiveness?	Consider how drug treatment will need to be configured to meet future need and recommend an appropriate set of measures or indicators for treatment evaluation.		Consultation with an expert reference group Consultation with relevant service user networks and groups. Peer review.
8	Challenges facing the treatment system	Consider how drug treatment will need to be configured to meet future need and recommend an appropriate set of measures or indicators for treatment evaluation.		

Annexe C. Abbreviations and glossary

Abbreviations

CSEW	Crime Survey for England and Wales
DIP	Drug Interventions Programme
DRD	Drug-related death
EMCDDA	European Monitoring Centre for Drugs and Drug Addiction
GP	General practitioner
IBA	Identification and brief advice
LJMU	Liverpool John Moores University
ONS	Office for National Statistics
OST	Opioid substitution treatment
NDTMS	National Drug Treatment Monitoring System
NHS	National Health Service
NICE	National Institute for Health and Care Excellence
NPS	New psychoactive substance
NTA	National Treatment Agency for Substance Misuse (now part of PHE)
PHE	Public Health England
REA	Rapid evidence assessment
TOP	Treatment Outcomes Profile

Glossary

Service/provider	A provider of services for the treatment of drug and/or alcohol misuse. It may be statutory (ie NHS) or non-statutory (ie third sector, charitable).
Benefit-cost ratio	This is often presented either as the benefits for every £1 spent or as a ratio. For example, for every £1 spent on drug treatment there are estimated to be £2.50 of benefits, or simply 2.5:1. The higher the ratio, the better the return on investment.
Chemsex	Chemsex is a term for the use of drugs before or during planned sexual activity to sustain, enhance, disinhibit or facilitate the experience. Chemsex commonly involves crystal methamphetamine, GHB/GBL and mephedrone, and sometimes injecting these drugs (also known as slamming).

Club drug	A collective term for a number of different substances typically used by people in bars and nightclubs, at concerts and parties, before and after a night out.
Community setting	A structured drug and alcohol treatment setting where residence is not a condition of engagement with the service. This will include treatment within community drug and alcohol teams and day programmes (including rehabilitation programmes where residence in a specified location is not a condition of entry).
Cost-benefit	Identifying and quantifying in monetary terms as many of the costs and benefits of an intervention as feasible, including items for which the market does not provide a satisfactory measure of economic value (e.g. QALYs).
Cost-effectiveness	An economic comparative analysis of relative costs and outcomes for different intervention
Drug-related death / drug misuse death	Annual figures published by the Office for National Statistics (ONS) since 1993 cover deaths in England and Wales related to “drug poisoning (involving both legal and illegal drugs)” and to “drug misuse (involving illegal drugs)”. ONS’s definition of a drug misuse death is “(a) deaths where the underlying cause is drug abuse or drug dependence and (b) deaths where the underlying cause is drug poisoning and where any of the substances controlled under the Misuse of Drugs Act 1971 are involved.” Where people do suffer drug poisonings while in treatment, these are overwhelmingly classed as drug misuse, so this definition may be seen as more relevant to this population. However, many of those who die in treatment are not included under either definition as they die from causes other than poisoning.
Episode (treatment)	A set of interventions with a specific care plan. A client may attend one or more interventions (or types) of treatment during the same episode of treatment. A client may also have more than one episode in a year. A client is considered to have been in contact during the year, and hence included in these results, if any part of an episode occurs within the year. Where several episodes were collected for an individual, attributes such as ethnicity, primary substance, etc. are based on the first valid data available for that individual.

Inpatient setting	An inpatient unit provides assessment, stabilisation and/or assisted withdrawal with 24-hour cover from a multidisciplinary clinical team who have had specialist training in managing addictive behaviours. In addition, the clinical lead in such a service comes from a consultant in addiction psychiatry or another substance misuse medical specialist. The multidisciplinary team may include psychologists, nurses, occupational therapists, pharmacists and social workers. Inpatient units are for those alcohol or drug users whose needs require supervision in a controlled medical environment.
Intervention	A type of treatment, eg structured counselling, community prescribing.
New psychoactive substance (NPS)	Chemical substances that produce similar effects to 'established' drugs (like cocaine, cannabis and ecstasy). Originally created to side-step legislation, an increasing number are controlled under the Misuse of Drugs Act but all remaining are now covered by the Psychoactive Substances Act.
Non-opiate	Any drug other than those that act on opioid receptors (heroin, methadone, buprenorphine and others).
Opiate	A group of drugs including heroin, methadone and buprenorphine that act on opioid receptors.
Presenting to/for treatment	The first face-to-face contact between a client and a treatment provider.
Quality-adjusted life years (QALYs)	The estimated additional quality and quantity of life due to an intervention. QALYs are calculated by determining the difference between mortality rates and quality of life for drug users in different scenarios, eg not in treatment, in treatment, in recovery.
Residential rehabilitation	A structured drug and alcohol treatment setting where residence is a condition of receiving the interventions. Although such programmes are usually abstinence based, prescribing for relapse prevention prescribing or for medication assisted recovery are also options. The programmes are often, although not exclusively, aimed at people who have had difficulty in overcoming their dependence in a community setting.
Social return on investment (SROI)	A general term for comparing the costs and public value benefits generated by an investment.

Structured drug treatment	Structured drug treatment follows assessment and is delivered according to a care plan, with clear goals, which are regularly reviewed with the client. It may comprise a number of concurrent or sequential treatment interventions.
Successful completion	A term that describes a client that completes treatment successfully as either: 'treatment completed drug free' – no longer requiring any structured drug treatment interventions and judged by the clinician not to be using heroin (or any other opioids) or crack cocaine or any other illicit drug or 'treatment completed occasional user (not heroin and crack)' – 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.
Value for money	Widely used to describe the optimal balance between outputs and inputs. Good value for money gives efficiency (the relationship between outcomes and the resources used to produce them – spending well), economy (the purchase of resources at lowest cost – spending less) and effectiveness (the extent to which objectives are achieved and the relationship between intended and actual impacts of an intervention – spending wisely).
Waiting time	The period from the date a person is referred for a specific treatment intervention and the date of the first appointment offered. Referral for a specific treatment intervention typically occurs within the treatment provider at, or following, assessment.

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