

The Social Impact of Solvent Abuse

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Image credit: The Dream Door is Too Small

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Re-Solv

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Contents

Executive summary	2
Introduction	10
Background on Re-Solv	12
Section 1: How people fall into solvent abuse	13
Section 2: Social & financial costs of solvent abuse	33
Profile 1: Young & experimental users	41
Profile 2: Young & regular users	44
Profile 3: Adult & high functioning users	47
Profile 4: Unstable lives	50
Profile 5: Chronic solvent users	54
Profile 6: Chronic poly-drug users	58
Cost to Government Services	61
Sensitivity Test	68
Section 3: Themes & recommendations for reducing the impact of solvent abuse	71
Appendices	83
Appendix A: Methodology	84
Appendix B: Sensitivity Test Explanation	86
Appendix C: Re-Solv's Theory of Change	92

The images used in this report

This report is illustrated with artwork entered into the Koestler Trust's annual award scheme. The images were created by people in prison, on probation, and in other secure settings. The Koestler Trust is the UK's best-known prison arts charity. It encourages prisoners to change their lives through taking part in the arts, and aims to challenge negative preconceptions of what those in prison are capable of achieving.

Many of the artworks show how it feels to live with the problems frequently raised in this research, such as poor mental health, the impact of substance use, and the experience of imprisonment. The images bring to life raw experiences that can get lost and become more sanitised in reports such as this one. The images have been chosen from the Koestler Trust's extensive collection, rather than being specifically produced for this report, to illustrate some of the themes identified in the research. We'd like to extend our thanks to the Koestler Trust and those prisoners whose work features here, for allowing us to use them.

The report features the following artists and images:

- 1. Front Cover**
The Dream Door is Too Small
Katherine Price Hughes House, Gold Award for Painting, 2017
- 2. Page 41**
Coin Toss
HM Prison Elmley, Drawing, 2017
- 3. Page 44**
Trapped... Inside
HM Prison Peterborough, Bronze Award for Mixed Media, 2017
- 4. Page 47**
Ghost Runner
HM Prison Inverness, Pastel, 2017
- 5. Page 50**
Broken Person
HM Prison Peterborough, Drawing, 2017
- 6. Page 54**
Am I Laughing, or Am I Screaming Inside?
HM Prison Lewes, Mixed Media, 2017
- 7. Page 58**
Explaining My Acquired Brain Injury
St. Andrew's Healthcare, Northampton (secure mental health unit), Commended Award for Pastel, 2017
- 8. Page 61**
Female Officer
HM Prison Lewes, Bronze Award for Sculpture, 2017

For more information on the Koestler Trust and the work of its artists visit www.koestlertrust.org.uk

Executive summary

There are an estimated 164,000 solvent users in England. Of these, 107,000¹ are children, some of whom will start inhaling everyday household products, such as aerosols, while still at primary school. Despite this, there is very little national data on how solvent abuse impacts these users' lives and wider society.

Neither data on prevalence nor data on deaths from solvent abuse, which can happen at any time of use, are routinely collected by government, and it is not known how many of England's 164,000 users have problematic solvent use, nor to what degree. Consequently, until now, the social impact and financial cost to society was completely unknown.

This report, commissioned by Re-Solv, is the first to set out the social impact and model the financial costs of solvent abuse felt by society. It uses the available data on solvent use, proxy data on substance abuse and draws upon Re-Solv's experience to form the assumptions underpinning these costs. As with any model, the underpinning assumptions can, and should, be refined over time as more data and research becomes available. In the meantime, we have made a number of material assumptions about the 164,000 known users and, where possible, we have triangulated these with other data, such as national treatment data, to arrive at surprisingly high level costs. The Appendices set out a sensitivity test on significant assumptions made during the research.

Significant missed opportunities

The research with ex- and current solvent users, and frontline workers had a stark theme: missed opportunities – to live a full life, to get back on track, to save upstream costs through prevention and early intervention. As a result we estimate that:

The cost of solvent abuse² to the public purse is £346 million³ every year.

A 20% reduction in the number of all users could save £69 million each year.

Reducing the length of addiction by 5 years would save circa £1.5m for every group of 20 habitual and chronic users supported to recovery⁴.

The report describes why people use solvents, the patterns that follow and the consequences that they lead to.

¹ Since our research has been carried out, new data has been published on young people's use of volatile substances which shows a 1.5% rise in the number of pupils aged 11-15 who have used solvents in the past year. The costs in this report are based on the 107,300 young users in 2014 rather than the increased numbers of 132,908 young users in 2016 and are therefore an underestimate.

² The costs here are based around whole individuals rather than those costs solely attributable to solvents. Solvent abuse is an example of a complex problem which has many interconnected causes and relationships, and all of these factors combine over time to result in poor outcomes. Setting the data out in this holistic way risks double-counting with other studies, however we felt it important to show whole person costs as this report argues that whole person, and solvent appropriate, treatment is needed.

³ In the absence of sufficient national data a number of material assumptions have been made to arrive at these costs. A sensitivity test can be found in the Appendices, and the full financial models can be found in the Annex.

⁴ Those with 'Unstable Lives' £5,245 pa (p.50) and those who are 'Chronic Solvent Only' users £24,748 (p.53), giving an average annual cost of £14,997.

People use solvents for reasons that range from recreation to an escape from trauma

Our qualitative research found that there are a range of factors which can lead young people and adults to begin using solvents. For some, this will include local cultural norms or periods of brief experimentation; for others solvent use can be understood as a signal for help, associated with a lack of personal resilience – perhaps triggered by difficult life events, such as abuse or bereavement, or living in socioeconomic deprivation and its attendant difficulties.

Importantly, unlike many other substances, solvents are legal, ubiquitous, and cheap and so much easier for children and vulnerable adults to start using. These themes around solvent use are explored in more detail on pages 14-31 and the visual life course journeys in those pages illustrate how people's lives play out.

There are six types of solvent users, each with distinct characteristics

We have developed six different profiles of users, based on Re-Solv's experience, each with common features and life experiences. The profiles range from brief recreational use through to highly problematic use of solvents and other substances, with each profile type attracting different service costs such as police, social services, justice, and healthcare. The six identified profiles are listed below:

1. Young and experimental users
2. Young and regular users
3. Adult and high functioning users
4. Adult users with unstable lives
5. Adult chronic users
6. Adult chronic poly-drug users

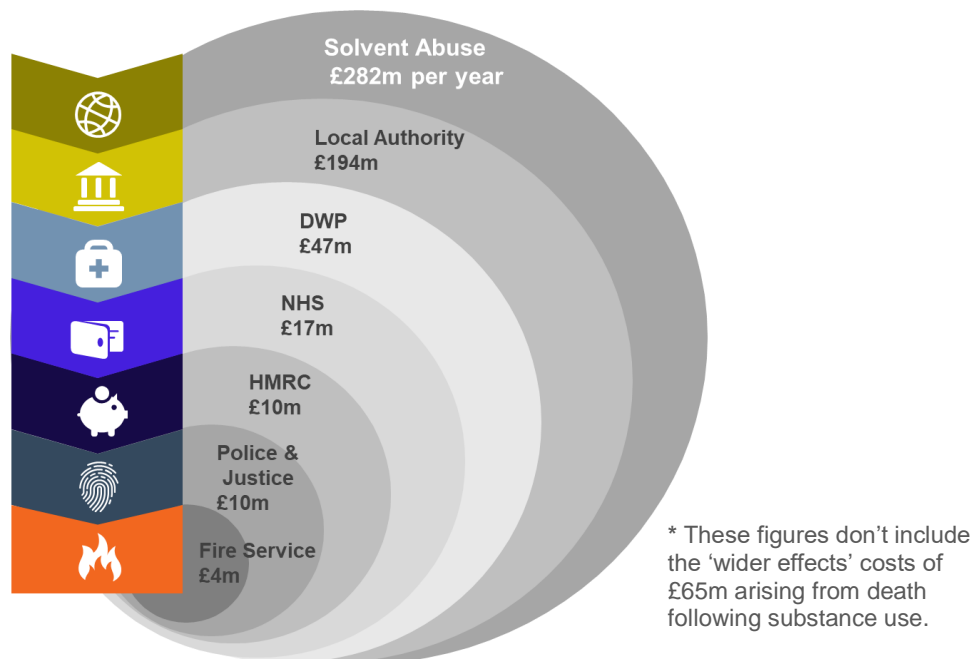
A breakdown and description of each of the profiles can be found on page 25.

The cost of solvent abuse to the public purse is an estimated £346 million every year

We developed *annual* costs of solvent abuse for each of these profile types as there was insufficient data to understand, on average, how long solvent use lasts and how users move through the profile types if their use becomes habitual. For example, some solvent users will start out as recreational or occasional users, progressing to habitual and then chronic use. In our qualitative research, all participants with problematic use were long-term users for 15-20 years, some of these became problematic users very quickly as children, others returned to solvent or poly-drug use as adults – often triggered by a shock or traumatic life event. These costs are set out in more detail in Section 2 and the highlights are presented below.

- **Young recreational users** have the lowest annual costs at **£1.2k per person**.
- However, collectively young recreational users are a large group and incur costs of over **£64 million a year** – while young more regular users attract costs of **£144m a year**. These costs are predominantly around alternative education, healthcare, and the impact associated with sudden death.
- Those users who become more dependent are characterised by greater chaos in their personal and working lives, requiring welfare support, increased healthcare and are likely to have increased interaction with blue light services and justice. As such we termed this group '**Unstable lives**' and by this stage the annual cost per person leaps to **£5k**.

- We have assumed that just under 17,000 people fit ‘Unstable lives’ based on those who self-identify in national surveys as having used solvents in the last month, (see page 50). If our assumptions here are correct, this group represents collective costs of **£88m a year**. In Re-Solv’s experience, those fitting this profile have the highest potential for turnaround if they can be identified and supported early. More needs to be known about those surveyed to understand the scale of this cohort.
- Perhaps not surprisingly, those with **long-term chronic use** have much greater interaction with services and attract higher annual costs of between **£25k-£40k per person**. Typically services involved include social care, children’s services, police, justice, health, DWP, housing, and fire services. These are all likely to create a significant local impact on resources; over 15 years £40k would grow to **£600k per person**.
- These chronic users are smaller in number and collectively attract costs of **£13m a year**. However, we believe this is a significant underestimate as it is based on the number of solvent users in treatment programmes, and we know that many solvent users fail to access treatment or, if they are poly-drug users, they often don’t disclose solvent use.
- The diagram below shows that services incur a heavy demand on their resources; of the £346m attributable to solvent use, **£282m is spent by government services**. Local authorities, with an annual cost of £194 million, could expect to pay £2.9 billion over a 15 year period, largely on temporary housing, child protection and social care.



Costs could be significantly reduced with prevention and effective early intervention

Currently there are a number of barriers to delivering preventative and early intervention approaches. Common themes in the research included:

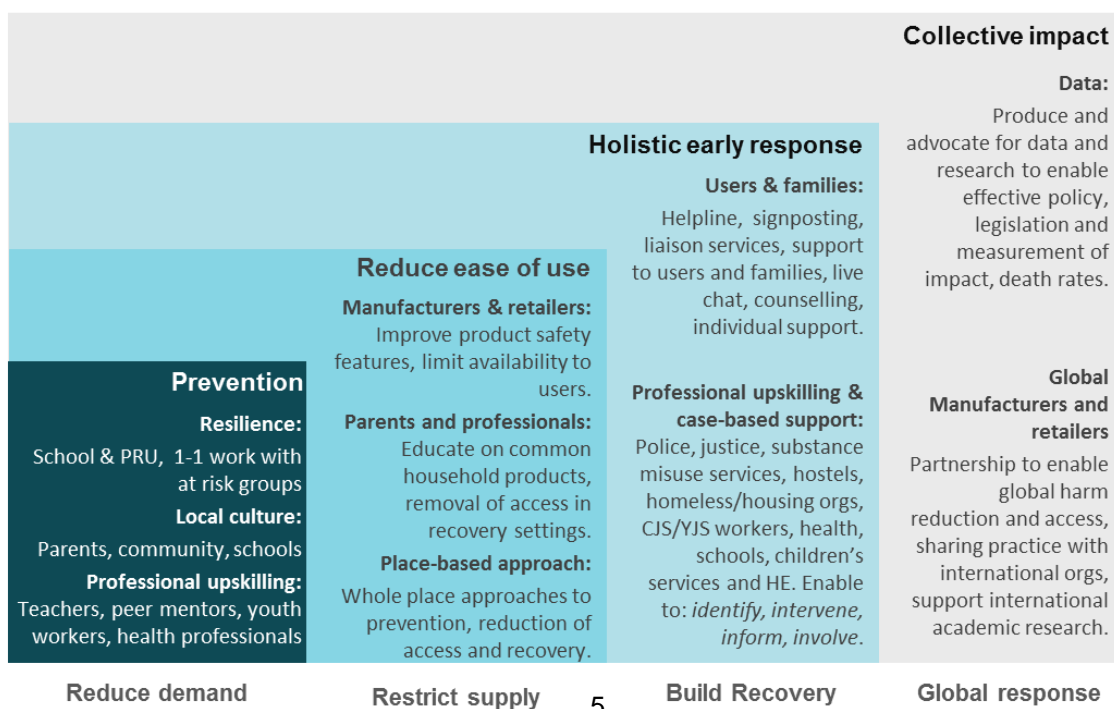
- Lack of early support for difficulties puts people at greater risk of self-medicating.
- Solvents are easy to obtain and hide as parents and professionals lack knowledge and confidence on how to spot and respond to the symptoms of use.
- There are opportunities for early intervention and referral but they are missed by services including, but not limited to, policing and health.
- There is a lack of a whole systems approach. Care pathways are designed without solvent users in mind and support is hampered by a lack of joined-up pathways across services such as policing, health and mental healthcare – as a result of which, solvent users often fail to get access to care.

Consequently, users go unnoticed and remain stuck in a cycle of use for many years which escalates costs. Mark’s case study (page 26) highlights this, showing many missed opportunities to intervene with effective recovery support, which even as late as six years on could have enabled Mark to get back on his feet and saved £218k in costs (before the cost of treatment).

An effective ecosystem is needed to prevent and treat solvent use

There is no single organisation or department that can prevent and treat solvent use; instead a responsive ecosystem is needed to work holistically on the problem. Re-Solv occupies an important niche in this ecosystem as the only national expert on solvent use. The diagram below sets out a summary of Re-Solv’s activities in their mission to improve outcomes for existing and potential solvent users. It can be seen that they play a key role in enabling others to prevent, identify, refer and respond to solvent use (as well as working directly with solvent users and their families). Re-Solv will only be able to have an impact on solvent use if the rest of the ecosystem is working optimally – this includes local communities, schools, children’s services, youth workers, housing, policing, justice, health, retailers and manufacturers of the products abused, employment and employers, as well as central government.

Re-Solv’s role in reducing the impact of solvent use



Since Re-Solv's inception, deaths from solvent abuse have dropped by 75%. If Re-Solv, together with the wider ecosystem, could prevent 20% of people using solvents this would represent annual savings of *circa* £69.4m, not only from preventing deaths but also through reducing poor outcomes.

Shortening the length of time that habitual and chronic users spend living within the confines of solvent abuse would also yield significant social and financial savings: reducing a solvent abuse lifecycle by five years would save around £1.5m for every 20 habitual and chronic users⁵ supported to recovery.

These figures are simply illustrative – naturally there is unlikely to be a 100% saving of costs and some people may continue to need welfare support, for example, or ongoing healthcare – however, they show an important opportunity for improving lives and outcomes.

Recommendations

A consistent three-pronged strategy of prevention, early intervention and intensive later support is needed in order to turn lives around and reduce costs. The government's 2017 Drug Strategy⁶ signals support for this but to become much more effective in reducing the impact of *solvent* abuse we make a number of recommendations that build upon that strategy. We have set out the recommendations under the four key headings identified by government.

These recommendations apply to central government, local government, schools, police and the NHS.

1. Reducing demand

- a. **Build resilience at primary school age** – educate to prevent earlier onset of solvent abuse. This should be holistic in nature, and followed up with a booster session at secondary school as part of the wider PSHE curriculum.
- b. **Ensure access to support** – for those with reduced resilience, including wider children's services. Develop less costly place-based models of care.
- c. **Commission solvent education for parents and schools** – to enable them to identify and act on early signs of solvent abuse through the provision of resources.
- d. **Co-commission preventive services** – these recommendations could be enabled through pooled budgets. We suggest health, police and local authorities, as significant cost bearers, create pooled budgets to enable holistic approaches.

2. Restricting supply

- a. **Place-based approaches to reducing solvent supply** – take whole place-based approaches working with local retailers, employers, police, housing, and health.

⁵ Those with 'Unstable Lives' £5,245 pa and those who are 'Chronic Solvent' only users £24,748, giving an average annual cost of £14,997.

⁶ HM Government, *2017 Drug Strategy*, July 2017.

- b. **Ensure funding for place-based approaches** – there is a role for national bodies, such as the Big Lottery, to catalyse the growth of local support ecosystems.
- c. **Monitor sales of solvents** – Re-Solv recognises that headshops have been closed down by the Psychoactive Substances Act but there is a need to monitor the sale of legitimate products that can be abused, particularly cigarette lighter refills.
- d. **Spotting multiple purchases** – Re-Solv has been instrumental in liaising with UK retailers to prevent multiple sales of cigarette lighter refill cans, but there is still work to be done on the high street, in markets and, crucially, with online retailers. The same learning now needs to be applied to the retailing of nitrous oxide canisters – with a very particular focus on online sales.
- e. **E-retailers to develop policies and processes to spot solvent abuse** – online purchasing of solvents provides an easy route of access. Large public brands, such as Amazon and eBay, could take further steps to use the data at their fingertips to spot and safeguard solvent users.

3. Building recovery

- a. **Education of service professionals to enable earlier identification** – this includes schools, welfare support, blue light services, health and rehab, social services, and third sector. Training for service staff on safeguarding techniques for users who are under the influence of solvents is also necessary.
- b. **Design of care pathways that recognise solvents** – solvent users should be able to access mental wellbeing support and expert rehabilitation. This includes pathways such as those being re-designed under new community sentencing guidelines for other substance users. To reduce cost and improve support, consider the further development of peer-to-peer communities, particularly for those who are isolated.
- c. **Third sector to be part of a joined-up system** – the third sector forms an essential part of the prevention and recovery system and should be at local and national tables when designing new care pathways.
- d. **Referral points and supporting documentation** – services should specifically assess for solvents when people first enter services. Including solvents in the list of substances on TOPS (Treatment Outcomes Profile) forms would be a quick win as the back-end architecture is already in place to collate this data.
- e. **Community sentences** – any protocol developed for drug rehabilitation and other treatment needs to be able to work effectively with solvent users too.
- f. **Co-commission support services** – this could be achieved through pooled budgeting by local authorities, police, healthcare, social care, and justice. An initial investment in early intervention will ensure savings in late intervention costs which do little to break the cycle (arrest, emergency care, imprisonment etc.). Public Health England (PHE) health economics data show that for every £1 spent on drug

treatment services there is a £2.50 return on investment in terms of longer-term savings.

4. (National &) Global action

- a. **National data and research to address glaring gaps about solvent abuse.** The data frameworks simply don't exist that would give policy makers and heads of services actionable insight on the numbers of solvent users, the degree of problematic use, how many fail to access treatment services, and how many people die from solvents. As a result, government and services are blind to the social impact and costs. There are a number of clear actions that can be taken by the ONS, PHE, and the Home Office. These are:
 - i. **Crime Survey of England and Wales** – To collect national prevalence rates it is recommended that the ONS reinstates questions relating to solvent abuse; these were removed in 2011.
 - ii. **Data collection on wider solvent-using populations** – the Crime Survey data does not include key groups that are likely to have significant numbers of solvent users, for example homeless and prison populations. ONS to consider surveying these important populations.
 - iii. **Mortality data collection** – the ONS recognise that mortality data on VSA ('solvent abuse') is under-reported⁷. The internationally respected – but now discontinued – St George's report⁸ drew on several data sources that gave a more accurate attribution of deaths to solvents each year. In its absence, Re-Solv welcomes the new data collection work being undertaken by the ONS, which has the goal of ensuring a more accurate reporting of VSA mortality. Re-Solv hopes that this will mean data on VSA deaths can be included in the annual 'Deaths Related to Drug Poisoning in England and Wales' report – from where it has traditionally been omitted.
 - iv. **Life impact** – it is recommended that the Home Office urgently commissions a quantitative study to build upon the qualitative findings and solvent user profiles in this report. This includes collecting data on the prevalence of service use, degree of costs, and longevity of solvent use. This investment would yield government cost savings as a result of focused action on solvent use.
 - v. **Treatment data** –Re-Solv welcomes the annual NDTMS (National Drug Treatment Monitoring System) reports but if data on solvent use can be drawn from TOPS forms this will help to contribute towards understanding the severity of solvent use and act as a barometer to measure the effectiveness of referral and care pathways.

⁷ As Stephen Penneck, Director General of the ONS reflected in Hansard (2011), House of Commons Debate, 9 September, Vol. 532, Col. 938W : "It is important to note that the figures presented [by the ONS] are not the total number of deaths involving volatile substances ... Deaths associated with volatile substance abuse are under-reported in official statistics based on death registration data."

⁸ Ghodse, H., Corkery, J., Ahmed, K., Shifano, F. (2012) *Trends in UK Deaths Associated with Abuse of Volatile Substances 1971-2009*, International Centre for Drug Policy, St Georges University of London, Report 24.

- b. **Collective impact model** – in an age of receding public finance, but increasing engagement of business in the social agenda, there is an exciting opportunity for business to play a positive role in the impact on solvent use. It is recommended that global and local retailers, manufacturers and the third sector work together with Re-Solv, and others, to build on the work already done, for example with BAMA (British Aerosol Manufacturers' Association), and explore ambitious ways of achieving collective impact.

Introduction

Re-Solv is the UK's leading charity working to prevent volatile substance abuse and to support all those whose lives are affected by it.

Founded over 30 years ago, Re-Solv's work has evolved over time from the glue-sniffing epidemic of the late 80s and early 90s, to the serious and under-recognised issue of butane gas inhalation today and the growing popularity of some new psychoactive substances such as nitrous oxide.

Volatile substance abuse (VSA), more commonly known as 'solvent abuse', is when the volatile chemicals in everyday household products such as aerosols and cigarette lighter refills are inhaled for the purpose of getting high. Although not all volatile substances are solvents (for example butane gas), in this report we will use the commonly understood term 'solvent abuse' to cover all volatile substances.

We worked together with Re-Solv to help them refine their approach to social impact management. This work included setting out the societal and financial costs of solvent abuse as well as developing an impact measurement framework with Re-Solv, to enable them to track the effectiveness of their work.

It should be noted that nitrous oxide is a volatile substance but is not included in the scope of this report. The nature of nitrous oxide use and its recent dramatic rise in popularity among 16-24 year-olds warrants a specific and separate study.

Societal and financial costs of solvent abuse

Not enough is known about the social impact of solvent abuse, and much less is understood about the financial costs of that impact to individuals, their families, and to wider society. The absence of this insight means that policy and decision makers, and commissioners lack the information that they need to make sound decisions on policy, research, and commissioning.

Solvent abuse can kill instantly, even on the first time of use, leaving an indelible mark upon families' lives. Solvent use can also steal lives slowly over time as its use becomes habitual.

This study aimed to draw together existing research on that impact, as well as to conduct focussed research with former and current solvent users to understand the trajectory of people's lives once they become involved in using solvents. The study drew out a number of different user profiles— and their distinct life-courses, demonstrating the significant costs that are associated with many of these journeys. We show these stories and costs in a number of ways throughout the report: as individual case studies and life-course journeys bringing to life the lived experience of solvent abuse, as well as holistic financial models which create an overall view of the costs experienced by wider society. These models are based on Re-Solv's experience with different types of solvent users, as well as wider research available in the public domain.

As with all models some data is more readily available than others and we've identified a number of areas in which further research is needed by the sector to build up a more robust picture of the impact and costs experienced by society. It is important to note that the scope of the research did not extend to exploring and evaluating the impact of substance abuse from those who no longer use solvents,

but who may have started out on their substance use journey in this way. If this wider group is taken into account the cost attributed to solvent abuse is likely to be significantly higher.

Reading this report

- **Section 1:** Sets out how people fall into solvent abuse, introduces the six profiles we developed for the financial models, and presents some case study life journeys.
- **Section 2:** Gives the social and financial costs of solvent abuse in summary, for each of the six profiles, and for government services.
- **Section 3:** Draws together the main themes of how people fall into and stay stuck in solvent abuse, and makes recommendations for how government and service providers can take action to reduce the impact of solvent abuse.
- **Appendices:** Set out the methodology used in this research.
- **Annex:** The separate Annex accompanying this report gives the detailed models that underpin the figures in this report.

Background on Re-Solv

Since 1984, Re-Solv has been the UK's leading charity working to prevent volatile substance abuse (VSA) and support all those whose lives are affected by it.

Volatile substance abuse (VSA) is the misuse of consumer products found in all our homes and high streets. Many people are either unaware that VSA exists or make the assumption that because these products are 'legal' they are 'safe'. In fact, volatile substances when inhaled can kill suddenly and unpredictably, and there is no way to avoid this risk.

Re-Solv campaigns for:

- Prevention of solvent and volatile substance abuse to be placed high on the national and international agenda.
- Clear educational messages to ensure that products are used for their intended purposes.
- Better services and provision for those affected especially young people and their families.

Areas of work

- **Education and early intervention:** Re-Solv provides sessions in schools and with alternative providers to influence children at the age they are likely to try solvents, to encourage safety in the home and to build resilience around risk-taking behaviours and peer pressure more generally. Re-Solv also provides one-to-one and/or group work with young people using and with other vulnerable and/or at-risk groups such as those living in care.
- **Community prevention and place-based change:** Raising awareness of solvent abuse among parents and community groups is key to prevention, as is raising awareness and responsibility among local storeowners, retail employees and other suppliers of the products involved.
- **Response and recovery:** Re-Solv runs a helpline providing signposting and support to users, families and friends through one-to-one phone/SMS/live chat drop-in, counselling (online and telephone), referral into local services and, when appropriate, direct face-to-face sessions to provide a holistic support system around an individual. Re-Solv also works within the wider recovery community to reduce stigma, raise awareness of VSA and ensure users have wider support networks.
- **Professional training:** Re-Solv delivers a range of professional training and workshop sessions for professionals and peer mentors who work and interact with vulnerable people and solvent users, for example substance misuse services, homeless/housing services, youth and criminal justice workers, police, health professionals, etc.
- **Advocacy and Research:** Re-Solv works to keep VSA on the public and political agenda, campaigning for and disseminating effective data to inform evidence-led policy-making. Re-Solv is co-Secretariat to the All Party Political Group for NPS and VSA.
- **Stakeholder engagement:** Re-Solv has worked for many years with the manufacturers and retailers of the products abused to drive a shared agenda of improving product safety, appropriately limiting availability and promoting harm reduction.

**SECTION 1:
HOW PEOPLE FALL
INTO SOLVENT ABUSE**

How people fall into solvent abuse

Our primary research sought to shine a light on how people become solvent users and how that journey develops over time. Revealing these experiences helps to evidence the social and financial impact of solvent abuse, and establishes which types of policies and interventions could be effective for addressing solvent abuse. This understanding is often referred to as a theory of change.

We developed this picture from direct research with current and former users of solvents, front-line staff who work directly with solvent users, as well as secondary research on solvent users and wider substance abuse research.

This section sets out the context and five drivers of solvent use, describes the six profiles of solvent users developed through the research, and finally presents some visual life-course journeys that give a feeling for how solvent use plays out in people's lives, the toll it takes on those lives and the cost of this to public services. The following section builds upon these insights by drawing together national costs of solvent abuse for each of the profile types.

Context and drivers

The research revealed that there is not one typical experience, or user, but rather a range of contexts and drivers that influence whether people will experiment and stick with solvents, and how they will fare trying to escape from substance use.

The five main drivers of solvent use are identified as:

1. **Socio-cultural factors** – attitudes at a family, friendship and community level
2. **Availability and ease of use** – affordability and accessibility to all ages
3. **Poor personal resilience** – contribution of difficult backgrounds and life effects
4. **Deprivation** – the link between deprivation, habitual solvent use and recovery
5. **Systemic challenges** – how poor systems design allows solvent use to start and persist

Each is explained further below.

1. Socio-cultural factors

Local social and cultural factors exert an influence over whether people consider it to be acceptable to use substances such as solvents. Attitudes amongst friendship groups, peer pressure, and guidance at home all influence an individual's decision on whether to use. Research shows that the majority of solvent use is amongst children and teenagers, with the age of first use occurring at a younger age than that of other substances⁹. Around 6.4% of 11-15 year olds have tried solvents at least once¹⁰.

⁹ Stephen R. Shamblen, T. (2013). *Inhalant initiation and the relationship of inhalant use to the use of other substances*. [online] PubMed Central (PMC). Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3671352/> [Accessed 9 Jan. 2017].

¹⁰ Fuller, E. (2015) *Smoking, drinking and drug use among young people in England in 2014*, Health & Social Care Information Centre. Available at: <https://digital.nhs.uk/catalogue/PUB17879> [Accessed 22 Nov. 2017].

Solvents are still the most likely drug that 11-13s will use, and once children reach the age of 15 its use is second only to cannabis¹¹.

Viewed as a normal social experience for some

During the qualitative research current and former solvent users revealed that, for some, inhaling solvents was seen as a normal social experience while growing up.

“I was 14 when I started using solvents, I started running (heroin) packages around...so I was addicted to heroin from age 15. Crime went hand in hand with it. ...part of the culture, going out on motorcross bikes and sniffing the petrol – you don’t think of it”

Adult ex-poly-drug user (solvents and heroin)

Solvent use for some was associated with testing boundaries and spending time away from home or school with friends as a form of escape and experimentation.

“I was quite disengaged from school. I used to go, but I didn’t really pay attention or listen. I was just more interested in getting with my friends, planning parties, going out drinking and smoking...My dad was very strict, it made me feel uncomfortable, he could be violent...so you know.”

Adult ex-poly-drug user (solvents and prescription medication)

Some users can ‘progress’ on to other substances

Most young people will grow out of inhaling solvents – research shows that the majority of young people don’t continue to use solvents into adulthood. However these early experiences are likely to leave a future imprint. Those who do use solvents are more likely to start smoking, drinking, and use other drugs at a younger age, as well as have a higher lifetime prevalence of substance use disorders when compared with substance abusers without a history of solvent use¹². Some research suggests that those early users are more likely to gravitate towards ‘harder’ drugs¹³.

Keele University’s recent literature review¹⁴ concludes that delaying the onset of solvent abuse has positive effects in the long term, including delaying the use of other substances. During our qualitative research a common theme arising was the need for users to seek out additional substances once solvents started failing to deliver benefits.

“I started developing a tolerance so not getting as much of a buzz, so moved on to other substances and developed an addiction to heroin and crack”

Adult ex-poly-drug user (solvents and heroin)

¹¹ Fuller, E. (2015) *Smoking, drinking and drug use among young people in England in 2014*, Health & Social Care Information Centre. Available at: <https://digital.nhs.uk/catalogue/PUB17879> [Accessed 22 Nov. 2017].

¹² Drugabuse.gov. (2017). *Inhalants*. [online] Available at: <https://www.drugabuse.gov/drugs-abuse/inhalants> [Accessed 9 Jan. 2017].

¹³ Stephen R. Shamblen, T. (2013). *Inhalant initiation and the relationship of inhalant use to the use of other substances*. [online] PubMed Central (PMC). Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3671352/> [Accessed 9 Jan. 2017].

¹⁴ Weston, S.(2016). *Early Intervention and Prevention of Volatile Substance Abuse (VSA): A Literature Review for Re-Solv*

“They alternate (gas) with class As, while cooking heroin and crack, have tins while they’re waiting...use the gas to them get through the rattle.”

Re-Solv support worker and trainer

Some of the research participants felt that their early experiences with solvents opened the door to addiction later in life, which then quickly escalated out of control. This can be seen in the case below of an adult who started using solvents as a teenager.

“I hurt my neck at work and the next day I couldn’t move. The doctor gave me some co-codamol and diazepam for them and they made me feel good...I kept on taking them, going to the doctor’s making excuses to get more tablets. It started getting quite bad as I was stealing medication to feed my habits...Over a period of time my friends worked it out and turned their backs on me, then my marriage broke down and I left the (marital) home.”

Adult ex-poly-drug user (solvents and prescription medication)

Triggers for use

We found that some people managed to hold their lives together for a while despite solvent addiction, maintaining a façade of normality – but this often crumbled at the onset of stressful life events, particularly bereavement or loss.

What is significant is that many users, though not all, saw their social support networks start to change; some leave or are abandoned by their families, who are no longer able to cope; some seek out or spend time with others who are also struggling with addiction, or as adults in receipt of welfare support they are moved to areas which are characterised by crime and social difficulties. While others needed to tap into new and more dangerous networks once they became addicted to Class A drugs.

Stigma keeps use hidden

There are also complex issues of stigma around solvent abuse, both from the stigma users attribute to themselves, and a wider stigma from others in the community – including other drug users. In the research, solvents were called ‘kiddie drugs’. Stigma resulted in solvent abuse remaining hidden for longer, as many users tended to use alone and in secret (solvent abuse is not a sociable drug), failing to come forward for help.

This degradation of a user’s circumstances serves to keep people stuck, deepening their substance use, or making them vulnerable to harm. Participants described being burgled, being involved in violent altercations, and getting into situations in which they were falsely accused of assault.

2. Availability and ease of use

Everyday household items

The most commonly abused substance, butane, is found in everyday household products such as aerosols and cigarette lighter refills. Adults and children find solvents cheap, simple to access on the high street, and easy to use and hide.

A quick high

Solvents also provide a quick high with less 'sobering up' time needed than with other substances. Parents and teachers tend not to know the signs that indicate solvent use, and the ones which they do spot are easily put down to normal teenage development – skin problems, mood swings, and spending time alone in their rooms.

Hidden in plain sight

Almost all of the research participants started using solvents as school children and discussed the ways in which they kept cans hidden – in bags, coats, up sleeves, visiting the toilets in between lessons to inhale. Parents failed to spot the clues of cans of deodorant amassing in rooms and under beds.

We found that users became skilled at obtaining and using solvents in secret, even from their friends. Re-Solv's experience shows that parents, teachers, and other professionals typically lack the knowledge and skills to identify and respond to solvent use which enables the problem to remain hidden and escalate. A key area of work for the charity is training and upskilling services that come in contact with solvent users.

"I would be using them (solvents) on my own and hiding them. I'd be drinking and smoking with my friends."

Adult ex-poly-drug user - solvents and prescription medication

Early signs are missed

During the research we found that other professionals were not joining the dots either. As problems escalated to involve police, officers rarely seemed to refer users into programmes of support, despite many ending up on first name terms with users. Local retailers played a role too – users dependent on cigarette lighter refills were more likely to buy them from smaller local shops - which were willing to sell larger quantities of butane cans question-free, even offering discounts for bulk orders.

"I couldn't see my kids due to social services because of my ex-wife. I found it very difficult... 10 years in the armed forces and I ended up doing a paper round, can you believe that? And I used to say 'can you pay me in cherryade and a can of gas?', so I got two cans of gas and two bottles of cherryade a day."

Long-term solvent and alcohol user

This indicates the need for local area approaches to the education of retailers, police, youth workers, and schools. The last quote illustrates that users can be drawn into solvents through a lack of personal resilience, triggered by events, or a difficult childhood. In the qualitative research those who turned to solvents later in life often had an early history of solvent use and childhood difficulties.

3. Resilience

Vulnerable groups

The Home Office report 'At the Margins' showed solvent use to be particularly prevalent amongst vulnerable young people, for example those who had been excluded from school, were in care or who found themselves homeless^{15,16}. The Home Office study showed a number of factors associated with an increased risk of taking harmful substances: being in trouble at school, anti-social behaviour, having peers who were in trouble, early smoking, impulsivity, lack of parental support, and participating in few (or no) social groups.

Signal drug

Solvents have been described as a signal drug – signifying unmet needs for support – and tend to be the first drug a young person will try. Annual HSCIC (Health and Social Care Information Centre) reports tell us that solvents are the most commonly misused substance among children under the age of 14. Research¹⁷ shows that the longer the use of substances can be deferred, the better the health outcomes are likely to be.

Damaging life events

A lack of personal resilience and damaging life events were consistent themes in our research. Whilst users are more likely to come from deprived backgrounds, a lack of resilience can be found across the socio-economic divides arising from other strains such as family difficulties and exam pressures.

“It was escapism, (he) did it to switch off – at this point he was being bullied at school...feeling isolated at home...both parents out at work a lot... it got him through the days”

Re-Solv support worker and trainer

“...Northern Ireland and traumatic experiences there... Since then he has been inhaling gas and drinking significantly”

Re-Solv support worker

Not long after a traumatic assault, one research participant tried solvents. He found it easier to disengage from family and friends and to self-medicate with solvents, unable to discuss his trauma. He stuck with solvents as he could use them without having to interact with other users or drug sellers.

“I was in high school, skiving school one day, at my mate’s house, and these lads came around, much older than us – about 18. They locked me up in a bedroom – there was 7 of them – just kept on beating me up all the time – all day – for about 6 hours. Then ever since

¹⁵ Goulden, Chris and Sondhi, Arun (2001), *Home Office Research Study 228: At the margins: drug use by vulnerable young people in the 1998/99 Youth Lifestyles Survey*, Home Office

¹⁶ IRISS, (2008). *Tackling volatile substance abuse in Scotland - VSA background, prevalence of use*. [online] Available at: http://content.iriss.org.uk/vsatraining/background_2.html [Accessed 9 Jan. 2017].

¹⁷ Weston, S. (2016). *Early Intervention and Prevention of Volatile Substance Abuse (VSA): A Literature Review for Re-Solv*, Keele University.

then I just didn't want to hang around with anyone else. I didn't want no mates, I just wanted to be on my own – that's all I wanted to do" [solvents/gas]...a way of blocking things out, biggest escape from reality, took me out into another world"

Ex-solvent user

Periods of transition can be fault lines

Upskilling professionals should include those who come into contact with young adults in the process of transitioning from home or school. One research participant had faced a difficult childhood and took a turn for the worse when his mother's new partner abused the children.

"I was trying to block out things that happened abusive-wise when I was younger, I had a nervous breakdown when I was 16."

Ex-solvent user

Leaving home and escaping the abuse seemed to trigger a crisis in itself for this participant. He explained that he started sniffing petrol, unable to cope with his feelings.

"...I missed getting hit (by stepfather)"

Ex-solvent user

When vulnerable children come of age and leave home, they won't always self-right. Instead they might self-medicate. Leaving school and home are important transition periods and ones in which young adults often fall between the gaps of care.

Catch 22 as solvent use escalates

Experiences in the research revealed that a solvent use becomes a daily fixation, problems begin to escalate: chaotic home and family lives, family break-up, disengagement from schools, shoplifting, impact on employment, multiple house moves, run-ins with neighbours, police involvement, prison, health problems, homelessness, and the use of other substances. Once problems had escalated users found themselves at an even greater distance away from any kind of resilience and in situations that only contributed to a worsening of their circumstances.

"I was going through a bad time, I'd lost one of a set of twins, sent me right over the edge, once I'd started (again) on it, I wouldn't do one, I'd do 15 tins a day"

Long-term solvent and drug user

"It is very difficult because every shop I go into it's there [cans of solvents], right in front of me. I buy beer to compensate. I wake up at night and I think 'I've got the money, I've got the money.'"

Long-term solvent and alcohol user

"I went to change the address on my driving licence, I got a letter back saying I had to go for a medical, then they revoked my license...I lost all my jobs at the same time, there was nothing. That's when I thought, 'Do you know what? I've had enough'"

Long-term solvent and alcohol user

In the research users described being desperate to resist use. They want their lives to be different. However when circumstances reach rock-bottom change is hard to maintain.

4. Social and economic deprivation

While significant life events and poor resilience can happen across all social divides, research¹⁸ shows that there is also a relationship between those who live in areas of deprivation and progression to long-term or problematic use of substances.

The Advisory Council for the Misuse of Drugs (ACMD) report ('Drug Misuse & the Environment') highlighted a number of important findings on substances in general. Deprivation is linked to; lower age of first use, progression to dependence, progression to injecting drug use, risky use of drugs, health and social complications from use, and criminal involvement.

More likely to suffer from problematic use

People living in deprivation may be the ones who are least likely to grow out of solvent use – or to use it purely for recreational purposes. The ACMD report found that deprivation is linked most strongly with the extremes of problematic drug use and least strongly with casual, recreational or intermittent use of drugs.

In addition, this creates an impact across the whole community as deprived areas often suffer from greater and more visible public nuisance from drug taking and supplying. On the whole, solvent users tend to be more secretive in their use, but there may be paraphernalia (e.g. cans) left in public spaces from use. Research shows that when areas look and feel run down, those living in them feel less safe.

Less likely to get care and treatment

Not only are those living in deprived areas more likely to become problematic users but they are less likely to be identified and supported into the right recovery pathways. There are also other drivers that influence a sense of hope for recovery – for example meaningful employment, housing, and the quality of community relationships. The quote below highlights the sense of hopelessness felt by one of our research participants who had been moved into a challenging community.

“I rang the police as it’s not a very safe area, then I rung the Samaritans, and I must have rung them back again – leant on it. They (police) bust my door down and didn’t fix it...I was quite worried, what am I supposed to do?...I phoned 3 locksmiths to fix it, one came out and said sorry I can’t fix it...one I paid using my bank card, he never came out but took my money. The other came out and said you need a whole new door fixing...I couldn’t take it. I spent two or three weeks living there, they served me an eviction notice, so I grabbed all my stuff, everything of value that anybody could get and I went to X police station, cider in one hand, can of gas in the other and I said ‘you best arrest me, because I’m going to hurt myself or somebody else.’ They took the cider off me and the gas off me and told me to eff off.”

Long-term solvent and alcohol user

¹⁸ The Advisory Council on the Misuse of Drugs (ACMD), 1998. *Drug Misuse and the Environment: A summary*

This suggests that programmes that build whole community and whole family resilience early on are important – particularly so in deprived areas. The Icelandic model¹⁹, upon which Re-Solv based their recent whole-place pilots, is built around shoring up protective factors such as participation in organised activities, increasing time that children spend with parents, feeling engaged at school by having a sense of being cared for, as well as being busy in the evenings. As a result there was a significant decline in Iceland, over 10 years, of adolescents having a problematic relationship with substances.

5. Systemic challenges

Gaps in knowledge and practice

The research highlighted gaps in the knowledge and practice of professionals (for example, teachers, police, and youth workers) such as spotting signs of vulnerability and behaviour that suggest use, as well as having the pathways available to refer into and the skills to do so.

Quick wins

Often there were simple solutions that could help to identify those with problematic solvent use earlier, for example the adult Treatment Outcome Profile (TOP) form doesn't list solvents despite the Young People's Specialist Substance Misuse Record having been updated to include solvents in 2013. Key workers often don't think to ask, or know what details to enter about solvents, again missing windows of opportunity to break the cycle.

Lack of joined-up working

As casual or irregular use transforms into problematic use, a lack of joined-up working meant that people kept using for a long time, despite calls for help – such as repeated interactions with police and self-harming. What we saw in the research was a picture of repeated interactions with emergency services or with welfare agencies – such as housing and unemployment – each one representing missed opportunities for effective intervention.

Provision has not been designed for solvent users

Not all opportunities were missed, there were cases where people were picked up and referred into support – either programmes of change or emergency provision such as sectioning. However, this provision was not always suitable for solvent-users; for example, mental health facilities for non-drug-related mental health. Two participants were discharged after being sectioned as they were deemed to have solvent-induced psychosis, with the underlying mental health problems missed. Some mental health facilities had a policy of not treating users until they stopped using solvents, while other substance desistance programmes were geared to Class A drugs or clinical intervention. As solvents

¹⁹ I.D. Sigfúsdóttir et al, (2008). *Substance use prevention for adolescents: the Icelandic Model*, [Health Promotion International, Vol. 24 No. 1], Oxford University Press

are not physically addictive, participants failed to qualify for addiction support. Some had to turn to charities that specialise in advocacy in order to get the support they needed.

“The heroin and crack help services knew about the gas addiction but couldn’t do anything for him – partly because their approaches to treatment were medical, which is of little help for substances that are not chemically addictive.”

“He’s been round the loop with a lot of services a number of times, and they’ve all said they can’t help. They are wary of working with him because of his previous interactions with them.”

“She has aggressive paranoia due to the petrol (inhalation) and a feeling of vulnerability because of her disability, which means she attacked anyone that would come in to check on her. So Council workers won’t go around without the police”

“She is in and out of hospital, as she panics after inhaling too much and calling the ambulance and then she spends a few nights in hospital”

All quotes from Re-Solv support worker and trainer

Siloed approaches

Those who had been spotted and referred often got caught between the gaps in services that don’t operate as an ecosystem. In some cases, due to the lack of effective joined-up work, participants were able to play professionals off against one another – for example, to maintain an addiction to prescription drugs, or to ‘tick the box’ for attending addiction support sessions following community sentencing.

This lack of a whole-systems approach combined with a poor understanding of solvent abuse meant that those with solvent problems often remained without regular support and over-reliant on emergency response. The result is greater costs over many more years. A significant part of Re-Solv’s work is to act as a safety net to catch and support people at this point.

Profiles of solvent users

In order to draw together the cost of solvent abuse we used findings from the research to identify six different profiles of solvent users and the journeys that they typically go on. These different journeys reflect different degrees of chaos in users' personal lives, ranging from relationship breakdown, sporadic employment, need for housing support, homelessness, health problems, the loss of children into care, and addiction to alcohol and class A substances.

These differences each attract a range of public services and associated costs. Common services were: children's services, commissioned support services, hostels, housing, policing, case conferences, justice, imprisonment, community sentencing, increased GP use, medication management programmes, A&E, rehabilitation, counselling, mental health sectioning, housing benefits, refurbishment of housing, unemployment benefits, the consequences of family break-up, costs to community such as shoplifting, and vandalism or violence.

We also formed some assumptions about how the number of estimated solvent users in the UK²⁰ fitted each of the profiles. There is an urgent need for more national data on solvent use, so we have used proxy data in some cases to form those assumptions. The resulting split of volumes across the profile types are set out below and shown in the diagram on page 26.

Six profiles of solvent users

1. **Cohort 1. Young and experimental:** Experimental or recreational users who use infrequently for a short period in their lives.

***Estimated numbers:** The government's 'Smoking, drinking and drug use' survey states that 2.9% of 11-15 year olds had used solvents at least once in the year of the survey.²¹ For the purposes of modelling we have classified the young people who had used solvents in the month prior to the survey as regular users (Cohort 2), and those who had used in the last year (and not in the last month) as an experimental user (Cohort 1). There are around 3.7m 11-15 year olds in the UK, which would mean 55,500 experimental users in any one year. This group makes up 52% of the young users in our six profiles.*

2. **Cohort 2. Young regular users:** Young people who use solvents more regularly, who may stop as teenagers but experience problems such as getting into trouble with the police and at school.

***Estimated numbers:** Based on the 2016 'Smoking, drinking and drug use' survey which states that 2.9% of 11-15 year olds had used solvents at least once in the year of the survey, and 1.4% had used solvents in the month prior to the survey. For the purposes of modelling we have classified those who had used solvents in the month prior to the survey as regular users. There are 3.7m 11-15 year olds, meaning 51,800 regular users in any one year. This makes up 48% of the young users.*

3. **Cohort 3. Adult high functioning users:** Adult users who, at this stage, are still able to maintain normal lives, such as jobs, home, family and friends. They are likely to keep their

²⁰ Since our research has been carried out, new data has been published on young people's use of volatile substances which shows a 1.5% rise in the number of pupils aged 11-15 who have used solvents in the past year. The costs in this report are based on the 107,300 young users in 2014 rather than the increased numbers of 132,908 young users in 2016 and are therefore an underestimate.

²¹ Fuller, E. ed. (2015). *Smoking, drinking and drug use among young people in England in 2014*, Health and Social Care Information Centre.

use a secret from others and therefore are 'under the radar' of services. A life event may cause them to move into another cohort.

Estimated numbers: One survey²² estimated that there are 57,000 adults who had used solvents in the year prior to the survey. Amongst these there were 17,000 adults who had used solvents in the month prior to the survey. These numbers are likely to be an underestimate as the survey only contacts people with a fixed address, and therefore excludes people who are homeless or in prison. In addition there will be users who didn't disclose their solvent use on the survey. For the purpose of the models, we assumed the total adult solvent using population was 57,000. We have assumed that the 17,000 who had used solvents in the month prior to the survey would be more costly than the less frequent users – and therefore didn't fit the profile of Cohort 3, instead were more likely to fit the profiles in Cohorts 4-6. We have assumed that the remaining 40,000 (70% of adult users) may be more likely to have infrequent use and are able to function well in life and therefore we have placed them in Cohort 3. It is possible that their solvent use may be higher than we have assumed, or they may not be as high functioning, however in the absence of other data we felt that it was prudent to assume that most adult users matched this lowest cost adult profile.

4. **Cohort 4. Users with unstable lives:** Adult and problematic users who tend to have more chaotic personal lives and have some interaction with wider services such as the police or the NHS.

Estimated numbers: Again, there is little data to support an estimate of the number of people in this category. Re-Solv's experience suggests that those with problematic use are smaller in number than Cohort 3 but those fitting the profile of Cohort 4 are likely to be greater in number than those in Cohorts 5 and 6. We had access to data which allowed us to form assumptions about the numbers of people in Cohorts 5 and 6 – based on the numbers of solvent users in drug treatment in one year (370 people). After taking into account the volume of users in Cohorts 5 and 6 this left us with 16,630 (from the 17,000 users who had used solvents in the last month) which we placed in Cohort 4 (29% of adult users).

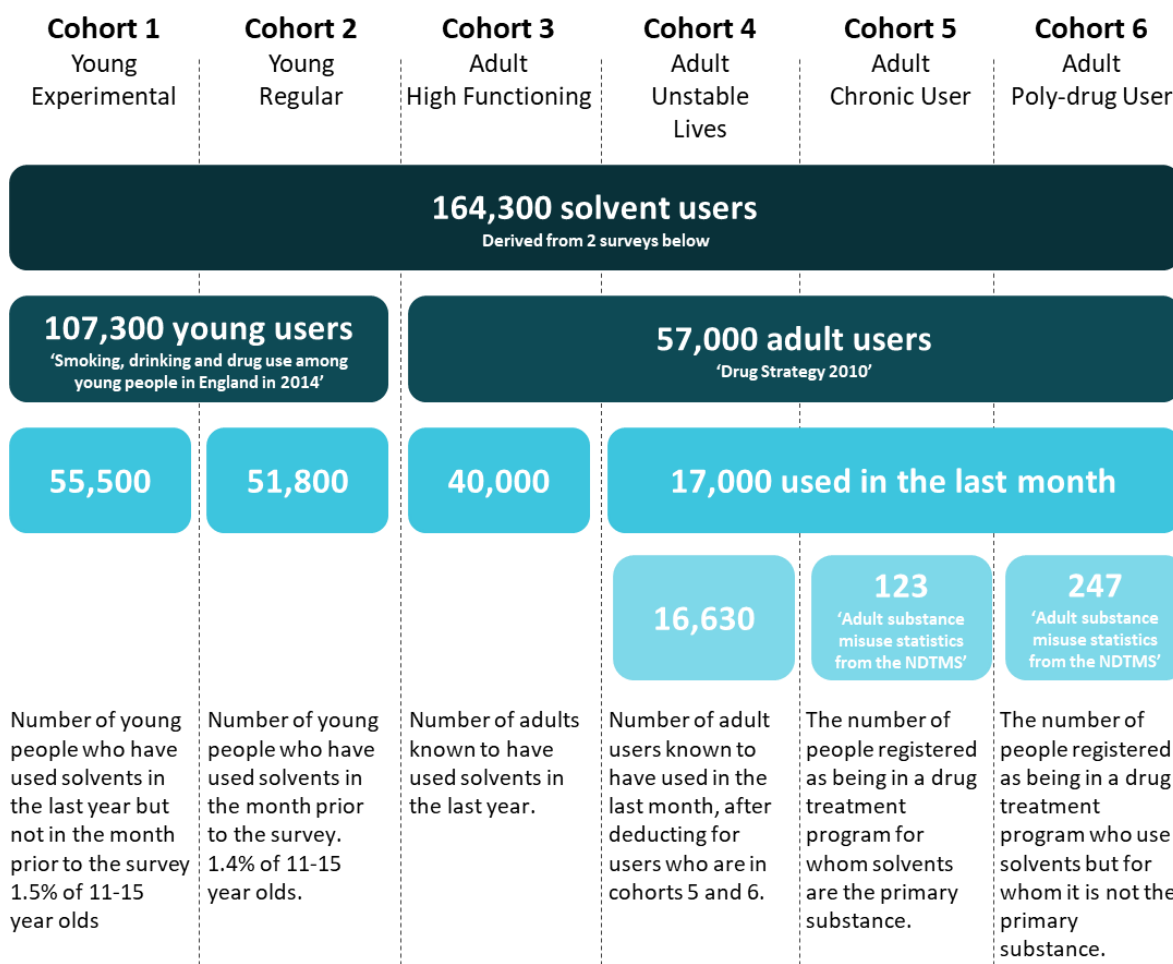
5. **Cohort 5. Chronic solvent users:** Adult and problematic users whose lives have spun out of control. Solvents are their main substance and they have frequent interaction with services such as police and justice, local authorities, health, and emergency services.

Estimated numbers: There is no direct data to show how many of the 17,000 solvent users would fall into this cohort. There are 123 people registered as being in a drug treatment program for whom solvents are their primary drug. We have used this data to represent the proportion of people fitting this profile (0.2% of adult users). However this is highly likely to be a significant underestimate, as we know that many substance users don't access treatment and that solvent users find it particularly hard to access support.

6. **Cohort 6. Chronic poly-drug users:** Adults whose main substances will be either alcohol, or Class A drugs, or prescription medications, (or a combination). Solvents will be a secondary substance – though solvents may have been their first introduction to substance use. As poly-drug users their lives and interactions with services are more complex and costly.

²² HM Government, (2010). DRUG STRATEGY 2010 - Reducing Demand, Restricting Supply, Building Recovery: Supporting People to Live a Drug Free Life.

Estimated numbers: We have assumed 247 people fit this profile at any one time (0.4% of adult users). This is the number of people registered as being in a drug treatment program who use solvents, but for whom it is not the primary addiction. Again this is almost certainly an underestimate as there will be many people who fit this profile but are not in treatment, or who haven't disclosed solvent use alongside their primary drug use.

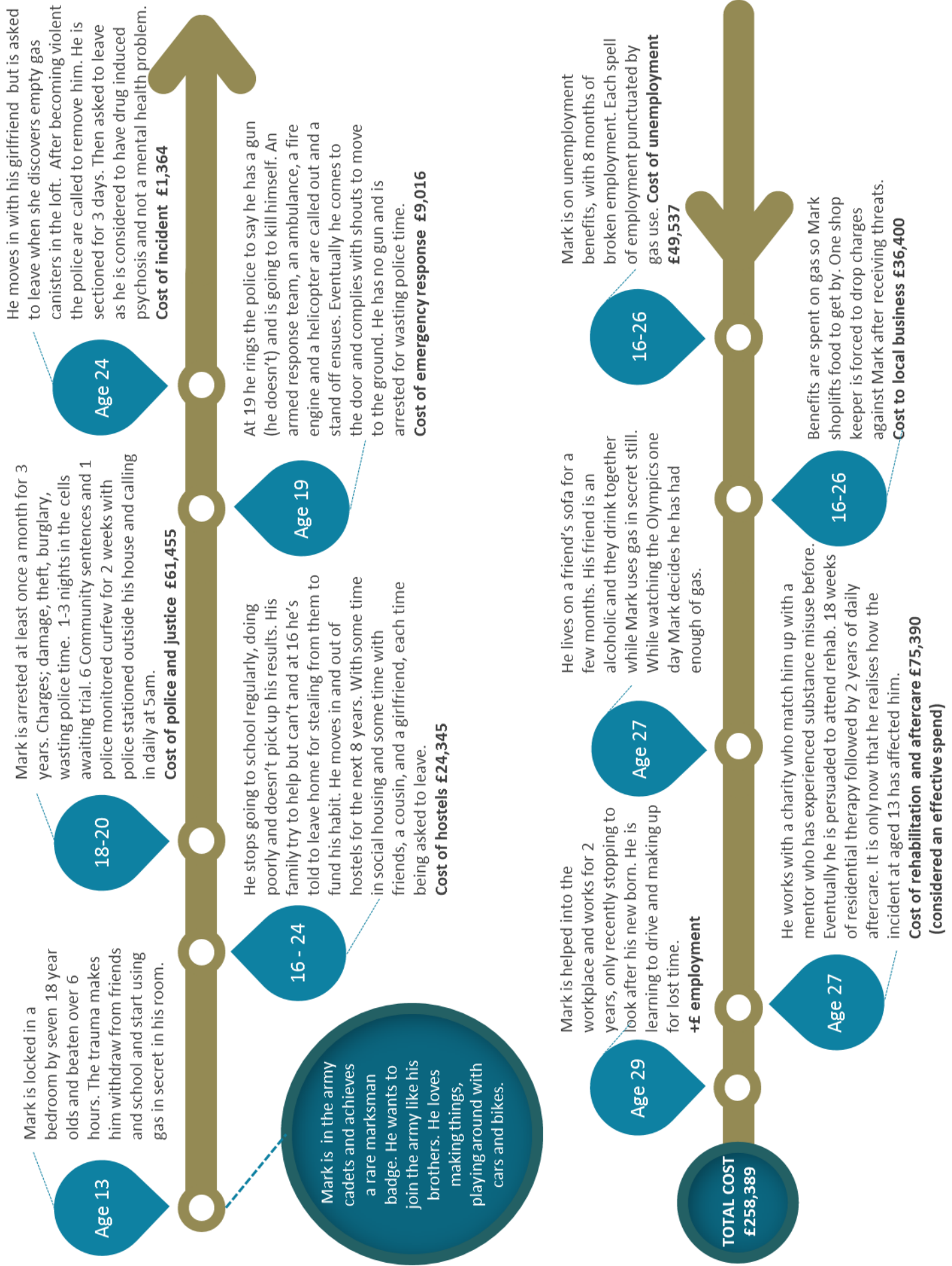


Life-course journeys

Those fitting profiles four, five and six typically attract higher costs per person. The life-course journeys over the following pages illustrate some typical stories and outcomes for those who share the characteristics of these particular profiles.

Two of the case study subjects found the right type of support, at a time when they were ready, but spent many years in chaos. The subject of the other case study is still struggling to recover and find the right type of support. All names have been changed to protect the research participants.

An illustration follows the case studies, drawing attention to missed opportunities for earlier intervention and the public money that could have been saved. Of course, there are future savings to be made at most intervention points; however, the earlier that support can be accessed, the better the outcome for people and their families, as well as to the public purse. It may also mean that journey back to recovery is easier and quicker.



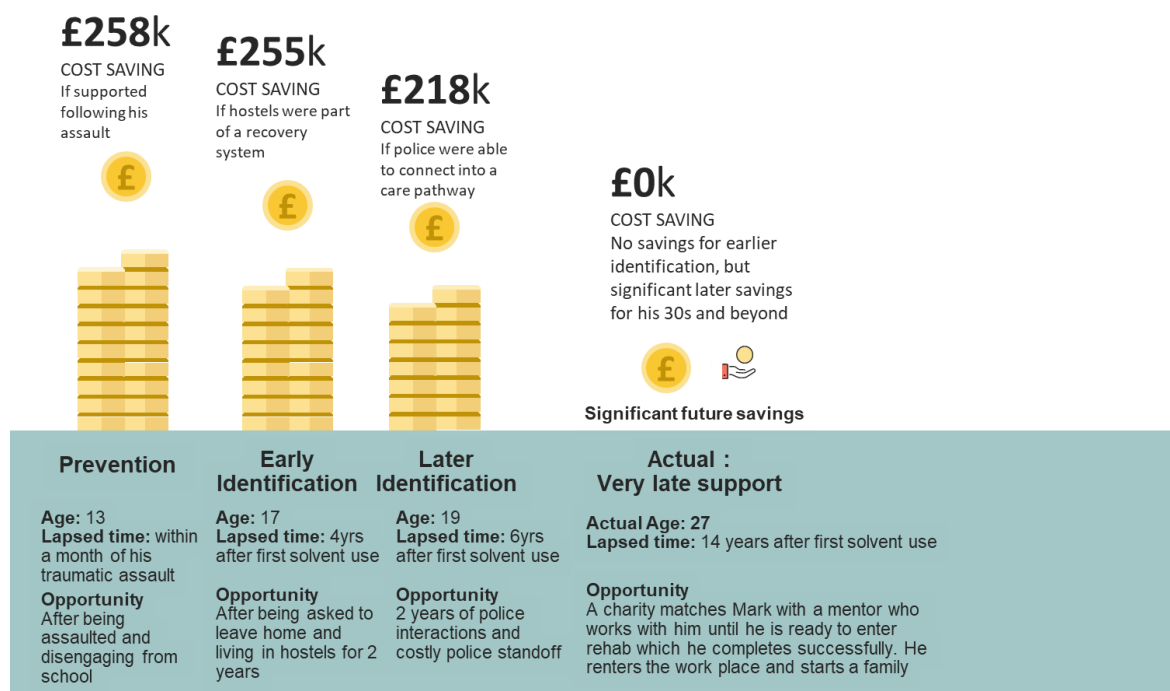
Opportunities for earlier intervention and cost saving: Mark

The illustration below shows just three of the opportunities in Mark's journey where professionals such as teachers, hostel staff, and police, had a critical moment in time in which they could have helped Mark into an effective care pathway. In Mark's case he needed support to recover from a traumatic assault which caused him to drop out of school and triggered his solvent use.

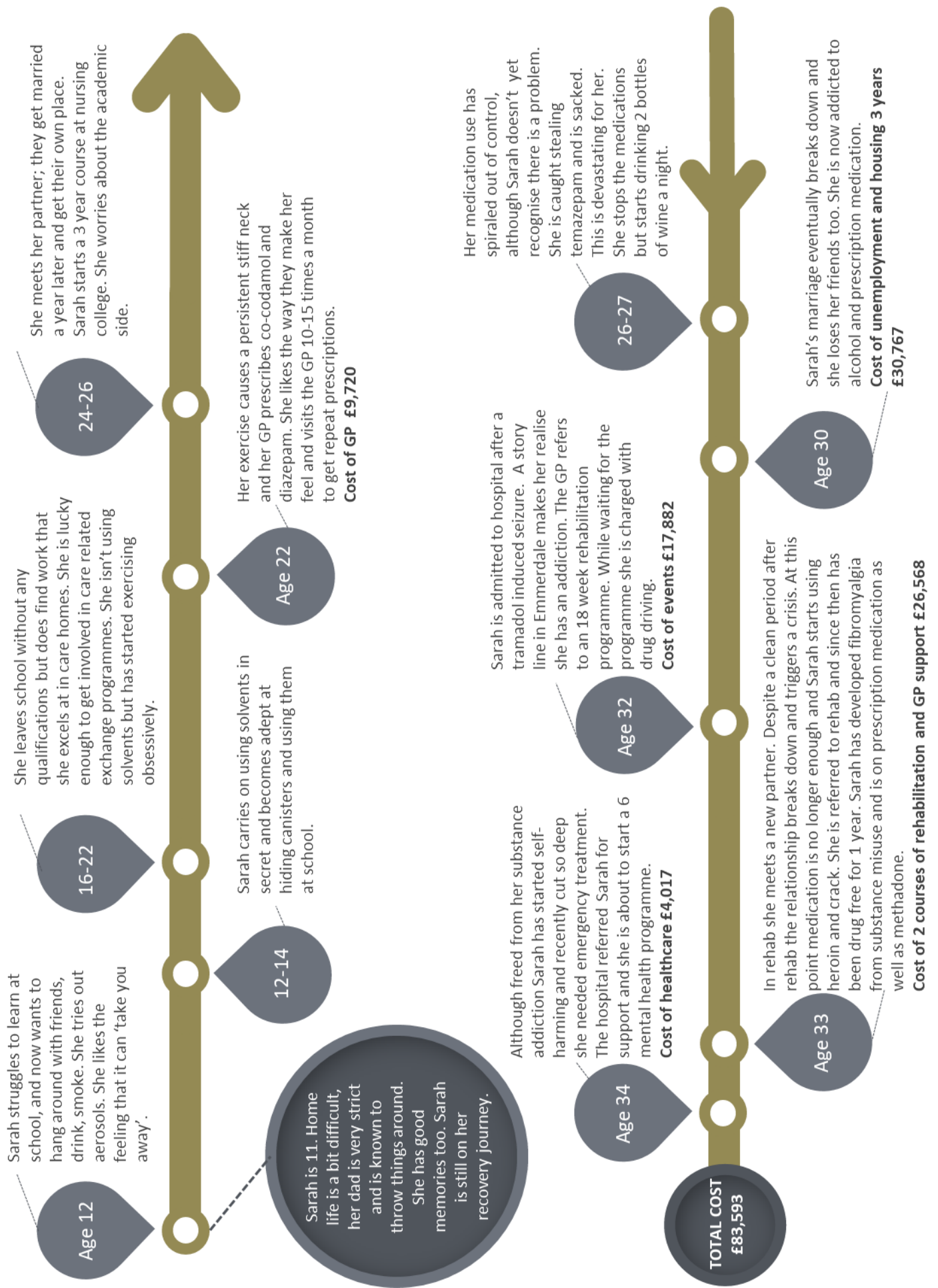
The figures at each of the stages illustrate the savings that were still able to be made at each point in time.

MARK'S JOURNEY :

Missed opportunities for support and cost savings



Even as late as four to six years into Mark's solvent use there were opportunities to enable Mark to reintegrate back into life more easily, and save on repeated service costs. Mark's mentor was very well matched to Mark and this trusting relationship led to him engaging with rehabilitation support. Although Mark's rehabilitation was expensive, it was successful and he rebuilt his life relatively quickly.

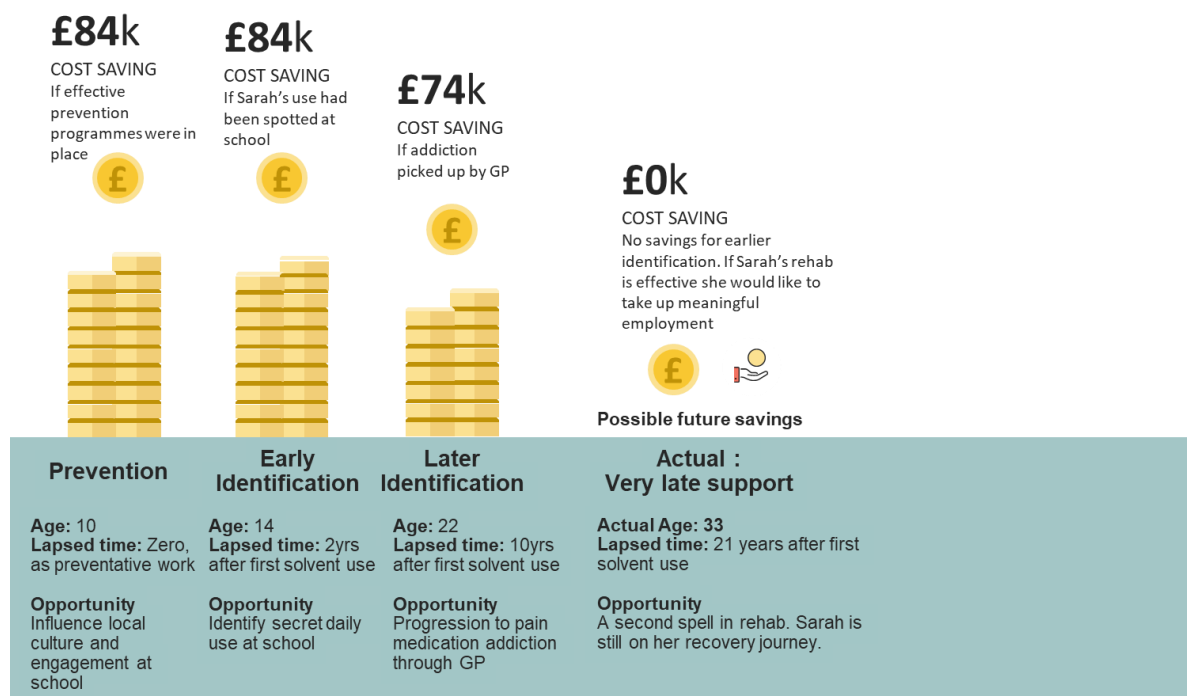


Opportunities for earlier intervention and cost saving: Sarah

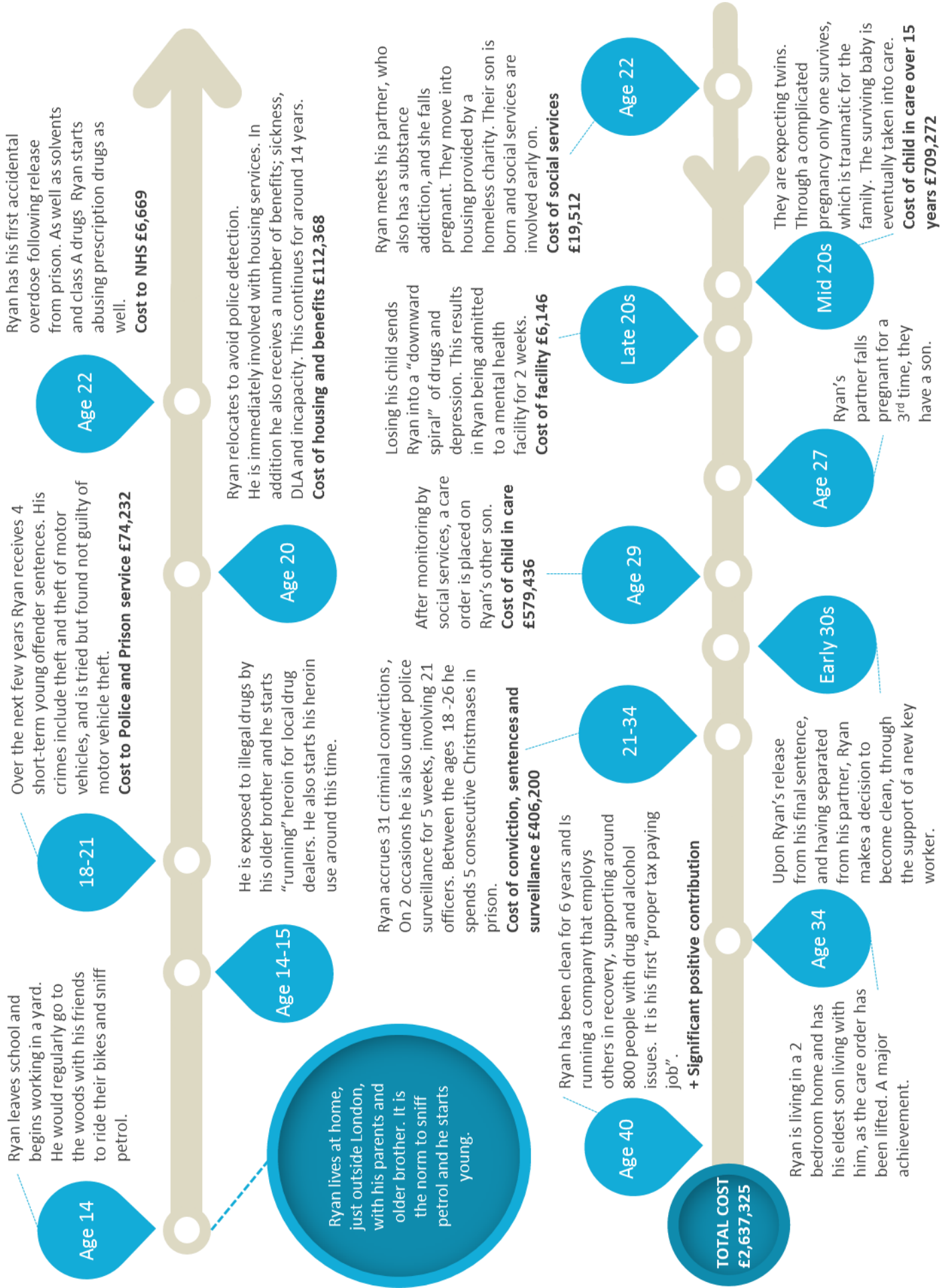
The illustration below shows just three of the opportunities in Sarah's journey where professionals such as teachers and GPs had a number of signals, which if picked up, could have enabled Sarah to be given support for solvent and prescription medication use.

The figures at each of the stages illustrate the savings that were still able to be made at each point in time.

SARAH'S JOURNEY: MISSED OPPORTUNITIES FOR SUPPORT



A local preventative programme of support could have been effective – providing diversionary activities, as well as educating parents and teachers about signs of solvent use at home and in schools. Sarah's first spell in rehab, in contrast to Mark's, wasn't successful, and in large part she attributes this to a complicated romantic relationship that she began with another patient on the programme. It is vital that these types of challenges are fed back into the design of care pathways and programmes.



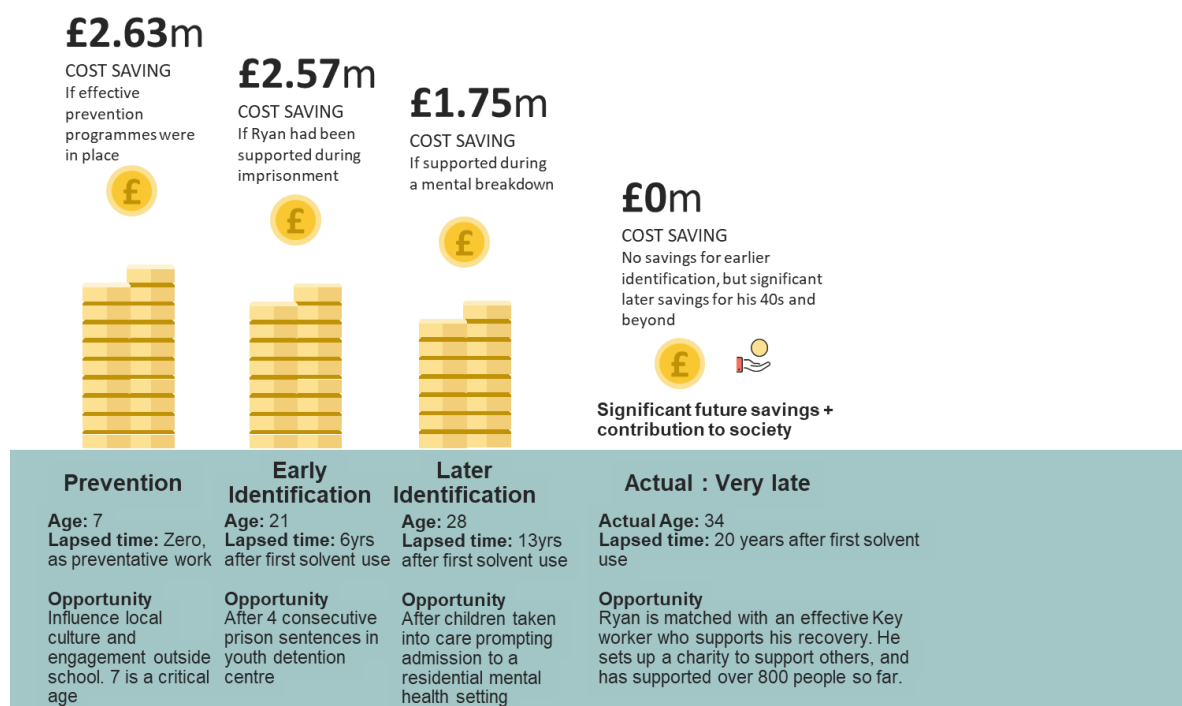
Opportunities for earlier intervention and cost saving: Ryan

There were many opportunities to connect Ryan with effective support. Ryan is very savvy and would have needed highly effective diversionary activities, with an entrepreneurial twist, at a young age, to channel him into a life well-lived. Failing a preventative approach, four spells in a young offenders' institution could have been used to treat addictions and enable Ryan to be successful once released back into everyday life.

The figures at each of the stages illustrate the significant savings that were still able to be made at each point in time.

RYAN'S JOURNEY :

Missed opportunities for support and cost savings



When Ryan's children were taken into care it was a huge blow to Ryan and the family. Clearly, it was in the best interests of the children; however, if Ryan could have been supported before having children it would have saved much family heartache and high cost intervention from services.

A silver lining to Ryan's story is that he has gone on to set up a charity which has been hugely effective at working with others like him. His journey has come at a high cost to society, but there is no doubt that this debt has also been repaid many times over with Ryan's new purpose in life.

**SECTION 2:
SOCIAL & FINANCIAL COSTS OF
SOLVENT ABUSE**

Financial effects of solvent abuse

The life-course journeys show the social, emotional and financial effects of lives that have spiralled out of control as they become blighted by solvent and substance abuse. They also serve as a powerful illustration of the cost of late intervention or ineffective support.

The next phase of the research built upon the insights from the qualitative research, drawing in wider research in order to model the costs of solvent use on a national scale. The social value models created used the six profiles set out earlier in the report as a basis for the modelling.

Challenges in establishing costs

It is worth setting out some brief notes on some of the challenges and dynamics in arriving at the cost of solvent abuse.

1. **Problematic solvent users have complex lives** – We recognised early on in the research that once people's lives begin to unravel, it becomes more difficult to attribute certain types of costs, such as police call-outs, to either solvents or another substance, or to factors such as vulnerability. The circumstances, and related costs, arise due to the state of chaos that some people start to find themselves in. This includes the presence of concurrent conditions such as poor mental well-being. In fact solvent use, for a significant proportion of users, is itself symptomatic of wider problems.

Recognising this complexity means that there is no *pure* cost of solvent abuse, but rather there are costs that arise from different phases of solvent use in those who experiment, those who become regular users, and those whose lives unravel to greater or lesser degrees.

2. **Not all solvent users exclusively use solvents** – Some users progress on to other drugs and no longer use solvents. Others progress on to other substances including alcohol, heroin, crack, and prescription medications, whilst continuing to use solvents. We haven't included those who started out on solvents but now have other substance addictions instead. People whose primary substance is solvent-based may also be using other substances, such as alcohol, as part of their coping mechanisms, but solvents can be considered to be their primary substance.

We treated poly-drug users, and primary solvent users as separate groups to ensure the costs were a true reflection and proportionate. Poly-drug users tend to have even more complex lives – for example, greater levels of interaction with services such as children's services – that attract greater costs.

3. **Estimating the numbers of people in each profile** – We have drawn on survey data, Re-Solv's experience and triangulated information in order to reach some broad conclusions about the numbers and proportions of solvent users in each of the profile types. Due to the lack of direct data we have been *deliberately conservative with our assumptions* on the numbers of people in each profile. This means that some of our figures *may be a significant under-estimate*, and consequently underplay the financial cost of solvent abuse. One of the recommendations arising from this report is for more regular national research and survey work to be conducted so that we can be much clearer on the scale and nature of problematic solvent use. A sensitivity test on key assumptions can be found in the Appendices and at the end of Section 2.

4. **Prevalence of service use** – The qualitative research, combined with Re-Solv’s experience, gave a good indication of the types of services engaged for each of the different types of profiles. However there is no national data to draw upon to make assumptions about national prevalence of the use of these services – housing, police, welfare benefits etc. Here, we were reliant on accessing drug survey data²³ and drawing on the experience of professionals to form reasoned assumptions.
5. **Length of time** – Arriving at a financial value also means having an idea of the length of time that people’s lives are off-track, and how they move between different profile types. For example, some people will only ever be recreational users, while others will progress on to problematic use. To address this we have arrived at an average annual cost for each profile type. This can then be multiplied to produce different cost scenarios. In the qualitative research we found that those who fell into problematic use did so fairly quickly and tended to stay stuck there for many years – often 10-25 years.

As can be seen in the earlier case studies the experience of solvent abuse is often long-drawn out. For example, Mark was unable to find his way out for over 10 years, and Ryan attracted over 20 years of costs. Sarah is still in the system and working through her addictions. Recovering from addiction is a difficult journey and is compounded by a lack of specific and joined-up provision for solvent users.

6. **Nature of costs** – The nature of costs – such as policing and housing – were understood through qualitative research with ex- and current solvent users, frontline workers, Re-Solv and secondary research. Many costs have not been included here – they include the impact on families through breakup, poor mental wellbeing, and life-chances for children. As such, the overall costs are greater still. We have also included a cost type termed ‘wider effects’ to be able to account for the impact of loss of life. To recognise the impact of emotional loss we have not been reductionist in our approach to the costs here, and have included value that individuals would ascribe to avoiding loss of life. For each death this totals £1.1m and includes NHS costs, lost productivity, and emotional impact (a breakdown of this figure is provided in sections 1.1.1 – 1.1.3 of the accompanying Annex).

With these notes in mind, the financial models should be seen as a starting point, to be refined over time as additional research and data becomes available.

²³ NTORS study: Gossop, M., Marsden, J., and Stewart, D. (1998) NTORS at one year: changes in substance use, health and criminal behaviour one year after intake. London: Department of Health. As quoted in: Godfrey, C., Eaton, G., McDougall, C. & Culyer, A. (2002). The economic and social costs of Class A drug use in England and Wales, 2000. London: Home Office

DTORS study: Jones, A., Weston, S., Moody, A., Millar, T., Dollinm, L., Anderson, T. & Donmall, M. (2007). The drug treatment outcomes research study (DTORS): baseline report: The drug treatment outcomes research study (DTORS). Home Office

Reading this section

The rest of this section sets out a series of financial summaries showing how the costs are experienced and for whom.

- **Overall costs to society** – this section sets out the headline costs of solvent use.
- **Comparison of costs between the profiles** – this provides a summary of the different profile types and compares the costs between them.
- **Average costs for services** – this breaks the numbers down into a summary for different service types to see which services are shouldering the cost.
- **Profiles 1-6** – this takes each profile and sets out the costs showing how they arise and develop if solvent use continues.
- **Cost of solvent abuse to government services** – this section looks beneath the summary costs presented earlier to show how the costs for each of the services arise.

The full social value models can be found in the accompanying Annex to this report.

Overall costs to society

Solvents are often thought of as having a less harmful effect upon people and wider society than so-called 'hard' drugs. Our research challenges this perception. We discovered that solvent users' lives bear many of the long-term hallmarks of chaos and loss found in other substance users' lives. Consequently individuals, families, and wider society incur high social, emotional, and financial costs.

Families and friends get caught up in the damaging consequences of solvent use and are susceptible to poor mental wellbeing, family break-up, and unemployment. These wider effects have not been costed out in this study but they are likely to be significant. Organisations such as schools, charities and local shops (shoplifting) also experience a demand on resources and finances, however the cost of this demand hasn't been evaluated in this study. This means that the figures presented here are likely to be conservative – with the overall cost of solvent abuse greater than stated here.



Key Points

- Society experiences a financial cost of £346m per year (£2,106 per user each year) as a result of solvent use.
- The large number of young and adult recreational users masks the much larger average costs attracted by those with problematic use.
- As solvent users progress into problematic use, annual costs rise to £40k per user.
- Progression to this stage can happen quite quickly and people can easily remain stuck there for 10-25 years, which would give average costs of between £400k - £1m per person.
- Young solvent users can find it harder to access help, such as mental wellbeing support, and so lower average costs for younger users, in some cases, represent poor access to services rather than less need for those services.
- Included within these costs is £65m of 'wider effects'. This cost is not a direct cost but is instead a proxy used to measure the impact of sudden death that can occur to any solvent user. Solvents indiscriminately kill around 45 solvent users a year.

Comparison of costs between the profiles

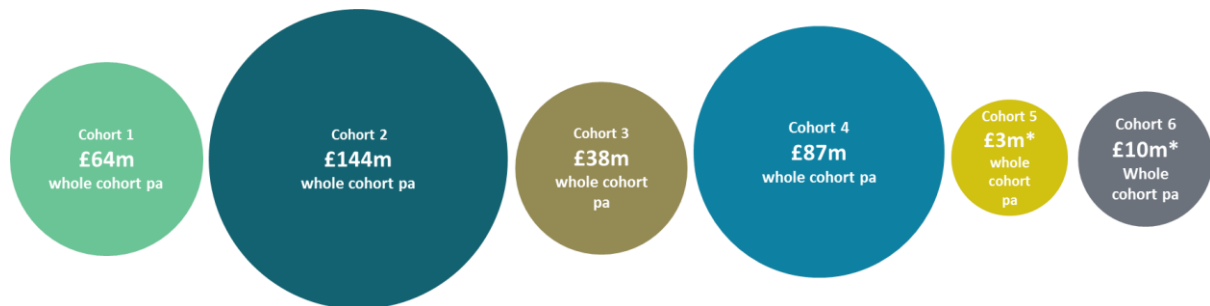
Most solvent users attract escalating annual costs as their use of solvents becomes more problematic and long term. The diagram below shows the marked rise in annual costs across the different profiles. Cohorts 1 and 3 can be thought of as having similar usage patterns to each other – both contain less frequent users and on the whole are less problematic than the users to the right of the diagram.



Key Points

- The young *recreational* users in Cohort 1 have an average lower cost per person, and most of these young experimenters will grow out of solvent use.
- Young *regular* users start to attract more costs as solvent use become habitual. Professionals consider regular use to be a signal for hidden support needs.
- Adults in Cohort 3 are high-functioning and as a result gather lower support service costs around them. However they are at risk of tipping into problematic use when testing life events arise.
- As people slip into more regular solvent use (Cohort 4), they can find it difficult to hold their working lives and important relationships in the home and community together. These experiences can mean the need for welfare support and use of emergency services such as the NHS and police. These events impact resilience triggering greater solvent use.
- Some users from each of the cohorts will fall into the deeply problematic use seen in Cohorts 5 and 6. The costs described for Cohort 4 snowball and are added to through the engagement of services such as courts, prisons, and children's services. The latter three cohorts are likely to have a significant demand on resources at a local level.
- Self-medicating through solvents won't be enough for some users to experience the escape, buzz, or relief that they need, and they will introduce other substances such as heroin, cocaine, prescription medications, and alcohol. This group – Cohort 6 – attracts the greatest costs and is often the hardest to support back to good health.

The number of solvent users that sit within each of the cohorts has a large influence on the accumulating costs. The previous illustration showed how the costs escalate when looking at those costs on a per person basis. A different pattern emerges in the diagram below, when analysing the costs by cohort size:

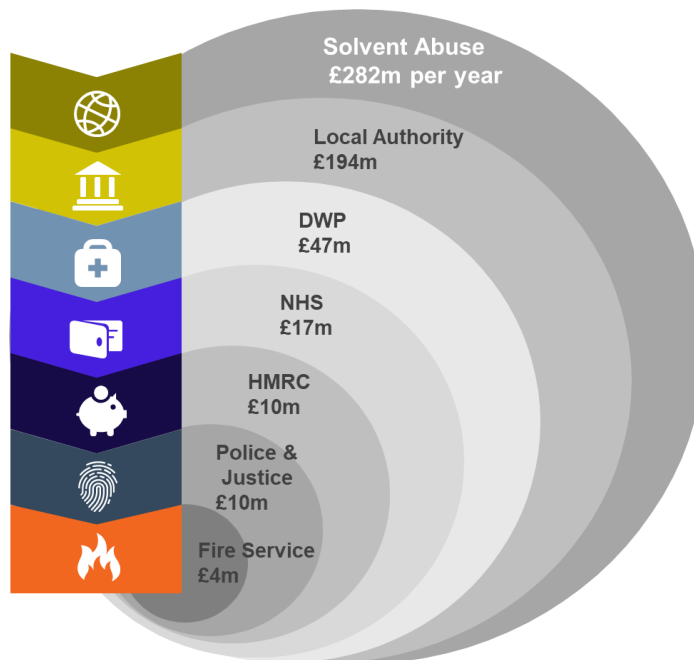


**we believe the estimated size of these cohorts is significantly underestimated*

- The young regular users in Cohort 2 emerge as the highest cost group collectively.
- Cohort 4 has the greatest costs for adults. This cohort has the most potential for positive social impact, according to Re-Solv’s experience, as they are not yet so out of control of their lives that they can’t find their way back, but they have the benefit of showing greater readiness for support than those with less regular solvent use.
- Cohorts 5 and 6 seem to be relatively low cost, however these figures should be read with caution - the estimates for the size of this group have been drawn from data on the number of known solvent users already in drug treatment programmes. We know that many users don’t make it into treatment - or treatment may be in a mental health setting instead. We also know that many poly-drug users don’t disclose solvent use, even once in treatment. We believe, that on balance, the actual cost of these last two cohorts is much greater than shown here.

Average costs of solvent abuse for services

We have modelled the financial outlay for six different government services here, using the assumptions described earlier. To this, should be added the costs incurred by family, friends and local communities which are not included in our research.



* These figures don't include the 'wider effects' costs of £65m arising from death following substance use.

Key points

- Local authorities bear the greatest brunt due to the breadth of support that they provide: from children's services, alternative education, to adult social care.
- The NHS spends £17m a year by picking up emergency care and extensive GP interactions, as well as periods of detox and rehabilitation.
- The DWP and HMRC incur increased spend and reduced income as a result of welfare support and periodic, or permanent, joblessness. Over a 20 year period this cost would swell to £1.14 billion.
- Interactions with the police tend to accumulate and intensify over time incurring substantial costs over many years.
- Fire services have undergone budgetary cuts of between 29% and 39% (NAO), and operate with a diminished number of fire safety officers. The additional £4m annual demand created by solvent use will further stretch valuable resources.

Three-pronged approach to tackling solvent use

The pattern of high individual and collective costs and the amplification of costs across a breadth of services tell us that in order to tackle solvent use effectively, and reduce demand on services, it is vital to work within a **three-pronged strategy of prevention, early intervention, and competent support** for those users identified late in their journey. This is explained further in section three.



**PROFILE ONE:
YOUNG & EXPERIMENTAL USERS**

Profile 1: ‘Young and experimental’ users

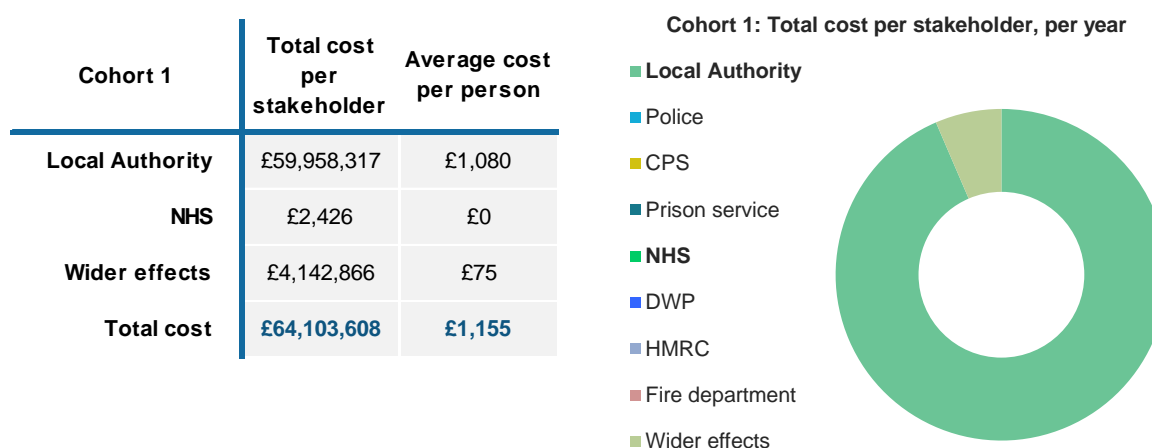
Introduction

These experimental users usually consume solvents infrequently, recreationally with friends, or in secret.

Estimated number of users in England: 55,500

Key Points:

- Young and experimental users draw in the lowest costs a year as individuals. However, as a large cohort, service costs for this group exceed £64m per year.
- Local authorities shoulder the majority of costs at £60k pa largely as a result of disrupted education.
- This group is just as vulnerable to sudden death as more regular users and the cost of this wider effect is assumed to be £4m per year.
- The majority of those in this profile will grow up unscathed by their brief experimentation but a significant number of people will go on to become problematic users.



Local Authority costs

Local authority costs – the largest single spend – arise from the positive correlation between young people who use solvents and young people being in Pupil Referral Units (PRUs)²⁴ and the care system.²⁵ Solvent use is not the sole *cause* of children attending PRUs or being in care, but is likely to play a contributory role. Many of the factors that have made these children vulnerable also lead them to be more likely to use solvents, and a complex chain of events builds up. For this cohort we have assumed, in line with national figures, that 0.3% would attend a PRU in any given year, and that 2%

²⁴ At the Margins highlighted that 13%-29% of those excluded had used solvents – this is a higher proportion of young people using solvents than in the wider population for this age group. Goulden, C. and Sondhi, A. (2001). *At the margins: drug use by vulnerable young people in the 1998/99 Youth Lifestyles Survey*. Home Office Research Study. Home Office.

²⁵ Melrose, M. (2000). *Fixing it?: Young people, drugs and disadvantage*, Dorset, Russell House Publishing Ltd.

of this cohort would be living in care. We have included the whole cost of these services in the model rather than apportioning spend according to the relative contribution of solvent use.

NHS costs

Solvents can kill regardless of whether they are being used occasionally or regularly, and each year five to seven young people die from solvent use.²⁶ In many of the deaths reported annually there is no known history of solvent use, suggesting the young person was an experimental user or that their use remained hidden. The table shows the NHS and 'Wider effects' costs as a result of sudden death – £1.1million for each person.²⁷

²⁶ Claridge, H. and Goodair, C. (2015). Drug-Related Deaths In England, Northern Ireland, The Channel Islands And The Isle Of Man: January-December 2013. London: National Programme on Substance Abuse Deaths (NPSAD) / St George's University of London.

²⁷ Please see page 35, point 6, for an explanation on wider costs.



PROFILE TWO: YOUNG & REGULAR USERS

Profile 2: ‘Young and regular’ users

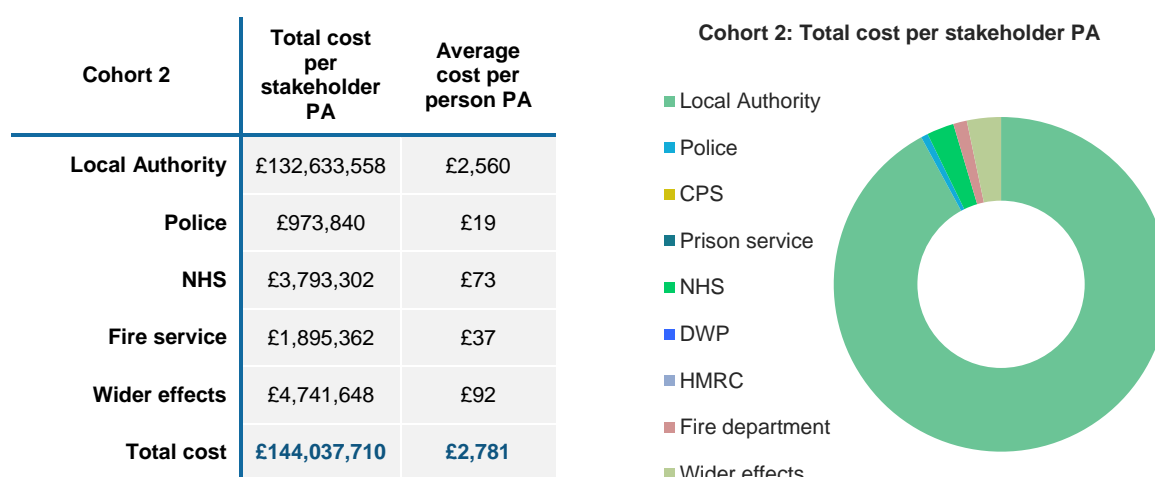
Introduction

Young people in this cohort are likely to be using solvents more frequently than those in the previous cohort. Some of this use is likely to be experimental and recreational still, but for others use has become a coping mechanism.

Estimated number of users in England: 51,800

Key Points

- The average costs per person have doubled but are still lower relative to those with long-term problematic use. Collectively though, this cohort costs £144m per year.
- Local Authorities still bear the largest service-based costs, but the amount has now doubled in size at £133m pa – an average of £2,560 per person per year.
- The costs would be greater if young people were more able to access effective services such as mental health support and housing. This failure of access, while appearing to be a saving, is likely to cause greater costs to accrue over time.
- Emergency service interaction²⁸ becomes more likely, attracting expenditure of more than £6.7m pa.
- Most of these young users will give up solvents but a significant minority will continue and develop problematic use.



Local Authority costs

The regular users attract the same nature of costs as Cohort 1. However, we have assumed that these regular users are more likely to have greater vulnerabilities than the experimental users, and have a greater likelihood than the general population of being educated in a PRU setting and subject to a local authority care plan. Here we have assumed that 2% of this cohort would have a care plan

²⁸ Combined costs of Police, NHS, and Fire service.

and 5% attend a PRU (based on the number of people excluded from mainstream education who are known to use solvents, as highlighted in 'At the Margins', the Home Office's report into vulnerable young people²⁹).

NHS costs and wider costs

A minority of people in this cohort (1%, compared to 0.4% for this age group as a whole)³⁰ are likely to need access to CAMHS (Child and Adolescent Mental Health Services). In Re-Solv's experience some people fitting this profile are likely to experience poorer mental health than average, and their parents usually seek support from CAMHS to address any solvent use that they have discovered. Mental wellbeing services may also act as a referral pathway into drug treatment for young people.

Sadly, this is likely to be far fewer people than could benefit from such support, as CAMHS is vastly oversubscribed – of those referred in 2016, 28% were turned away.³¹ As well as having a detrimental impact on young people and their families the ramifications are likely to include increased later costs. Keele University's literature review³² shows an association between those who use solvents as young people and those who go on to use other damaging substances later in life. Early support could help prevent this escalation.

Emergency service costs

Regular use of solvents increases the chance that emergency services will need to respond to a range of incidents.

The fire service costs arise because many solvents, such as petrol and aerosols, are highly flammable.³³ The exact risk of fire due to solvent use is unknown. However, in Re-Solv's experience the chances of accidental fires occurring are increased by people having accidents or smoking in close proximity to flammable substances whilst high.

Young regular solvent users under the influence of gas and other substances are more likely to come into contact with the police through antisocial behaviour or for offences such as shoplifting.

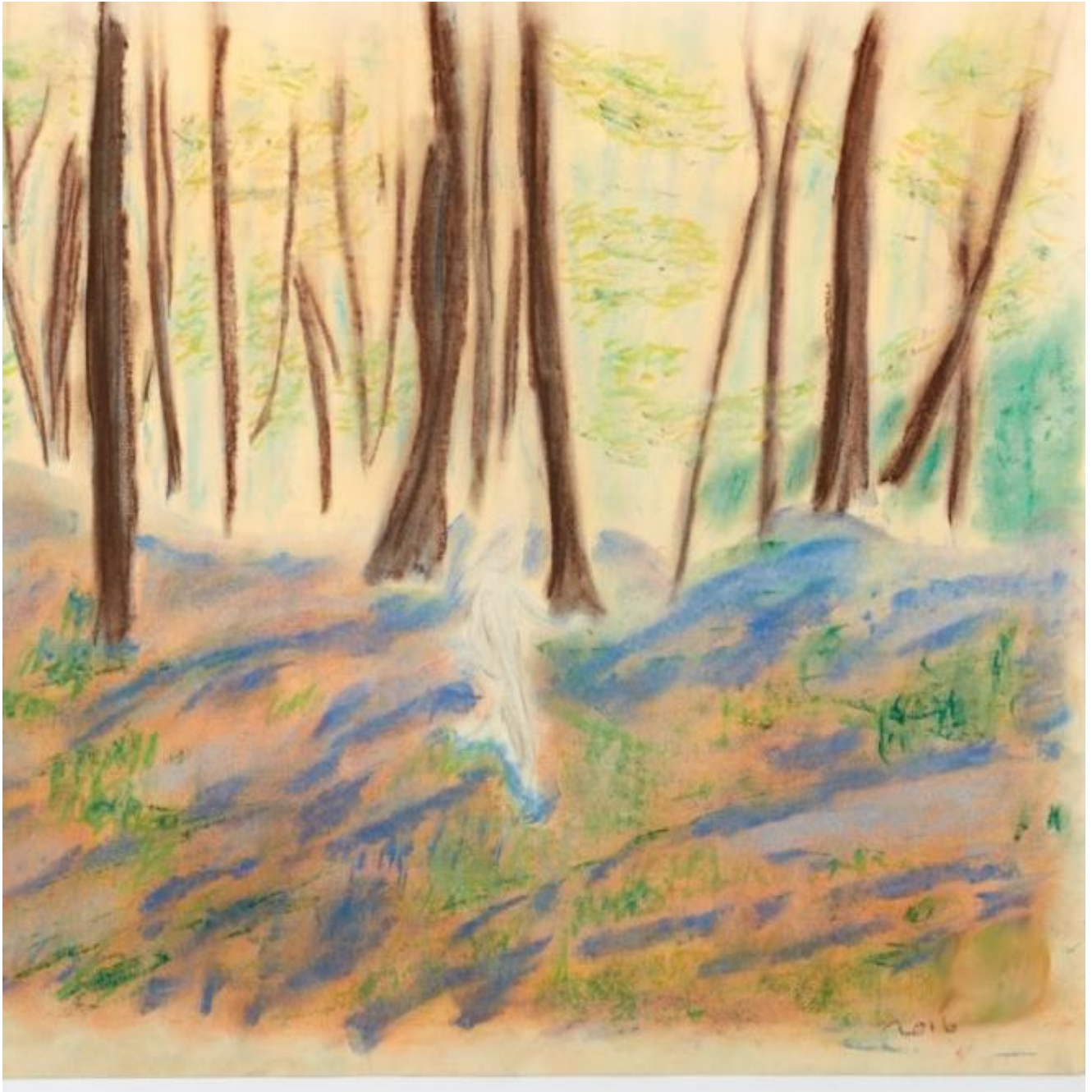
²⁹ *At the Margins* highlighted that 13%-29% of those excluded had used solvents. If 13% of those attending a PRU use solvents, this is 2,600 people, or 5% of this cohort. Goulden, C. and Sondhi, A. (2001). *At the margins: drug use by vulnerable young people in the 1998/99*, Youth Lifestyles Survey, Home Office Research Study, Home Office.

³⁰ In 2015, 1 in 250 young people were referred to CAMHS. About 2/3 were aged between 11 and 18. Of those referred 28% were turned away. Source: *Lightning Review: Access to Child and Adolescent Mental Health Services May 2016*, Children's Commissioner for England.

³¹ (2016), *Lightning Review: Access to Child and Adolescent Mental Health Services May 2016*, Children's Commissioner for England.

³² Weston, S. (2016). *Early Intervention and Prevention of Volatile Substance Abuse (VSA): A Literature Review for Re-Solv*, Keele University.

³³ Flanagan, R. J., Streete, P. J. and Ramsey, J. D. (1997). *Volatile Substance Abuse - Practical Guidelines for Analytical Investigation of Suspected Cases and Interpretation of Results*.



PROFILE THREE: ADULT & HIGH FUNCTIONING USERS

Profile 3: ‘Adult and high functioning’

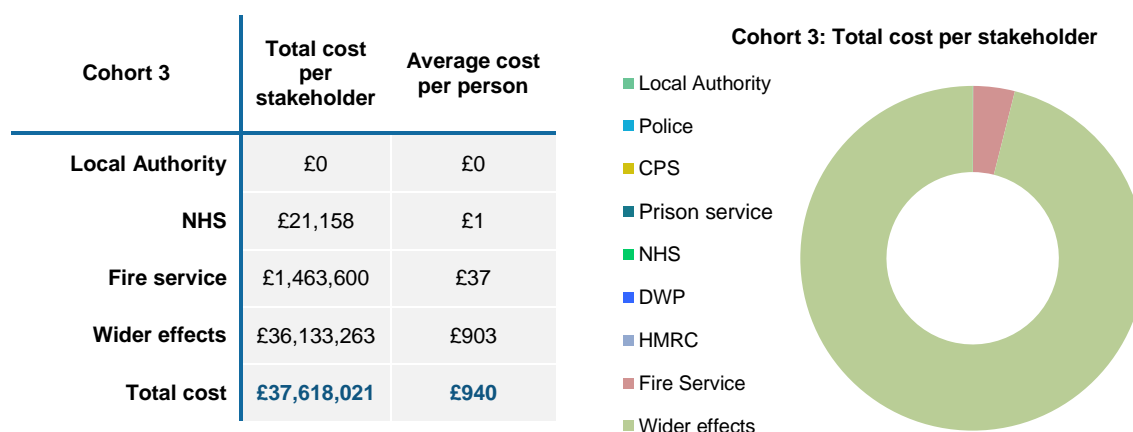
Introduction

Survey evidence shows that there are 57,000 adult solvent users most of whom don’t seem to come into contact with agencies and services, except those which we have identified as being in treatment (Cohorts 5 and 6).³⁴ This suggests a large proportion of adults who are able to carry on with their daily activities and supplement with solvents. Re-Solv has some experience with this profile of user. To an outside observer, these people will seem to have fairly normal lives – for example maintaining work and family – but this cohort is likely to be characterised by regular, secretive use of solvents.

Estimated number of users in England: 40,000

Key Points

- Users in this group are able to keep their use hidden owing to their high-functioning nature. More data is needed to understand the risks, costs, and progression for this cohort.
- Our qualitative research suggests that a significant negative event (such as job loss or bereavement) is sufficient to catalyse sudden and problematic use.
- Re-Solv reports that this group is the hardest to reach – there may be a wider role for the media here – such as soap opera storylines that help people to recognise themselves.
- Costs relate to increased risk of fire and sudden death. Per person the costs are lower, but, as a larger group, collectively they represent a cost of £37m per year



This group attracts the lowest individual costs by virtue of users’ high-functioning nature. However, the size of this cohort means that collectively it attracts the highest costs.

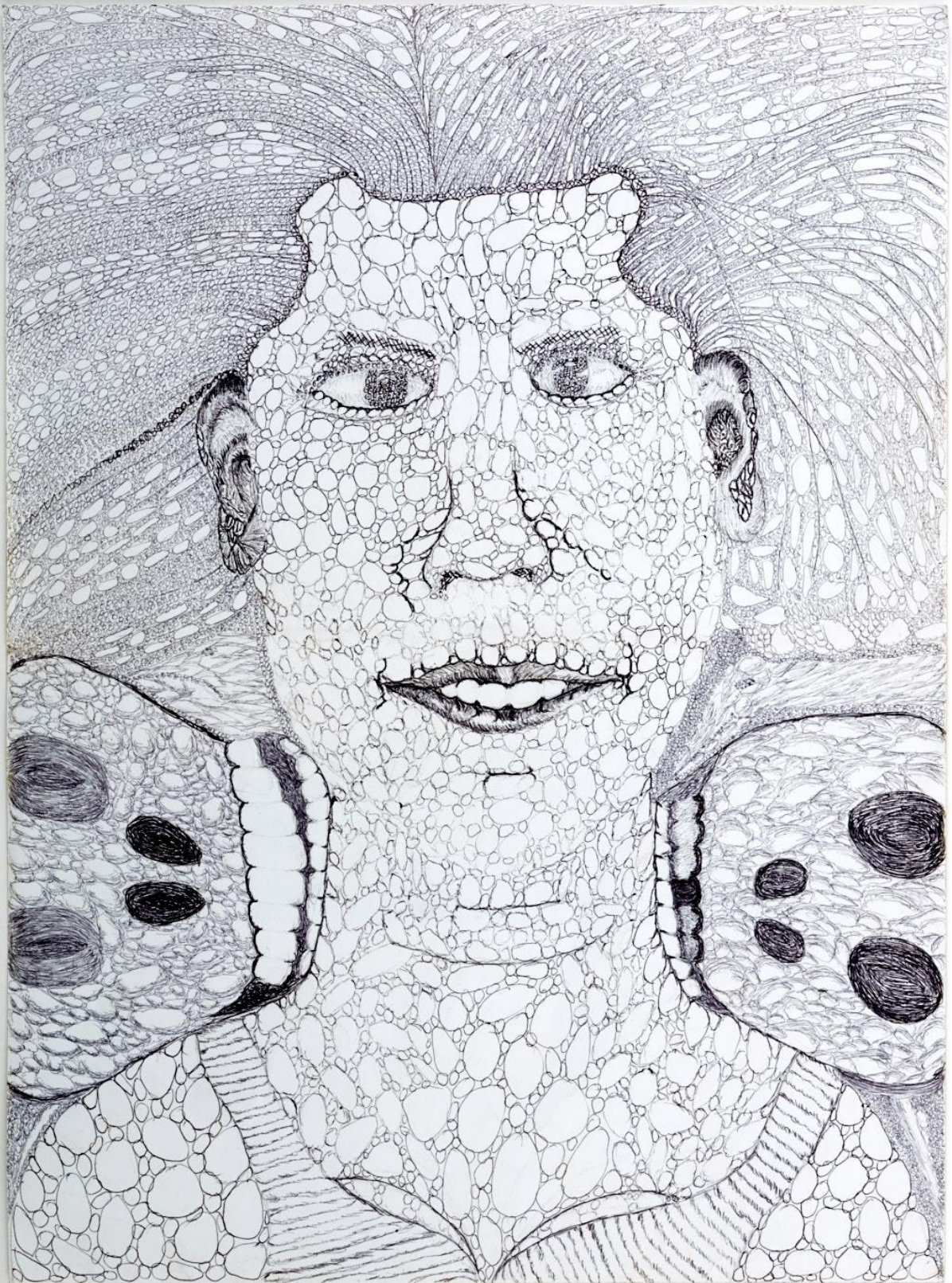
NHS, wider costs and fire risk

For this cohort, the largest costs relate to the risk of death. This makes up the entire NHS cost for this cohort, as well as the ‘Wider effects’ cost. In addition, as with the young regular users, there is a risk

³⁴ There are 17,000 known adult solvent users (Drug Strategy, 2010). Because there is little evidence to suggest otherwise, we have to suggest that the majority are high functioning (therefore low cost) users.

of fire.³⁵ The fire service costs arise because many solvents, such as petrol and aerosols, are highly flammable. Costs are incurred by the fire service when they respond to these fires.

³⁵ Flanagan, R. J., Streete, P. J. & Ramsey, J. D. (1997). *Volatile Substance Abuse - Practical Guidelines for Analytical Investigation of Suspected Cases and Interpretation of Results*.



PROFILE FOUR: UNSTABLE LIVES

Profile 4: ‘Unstable lives’

Introduction

Life for people in this cohort is characterised by increasing instability; solvent use is beginning to dominate, making it difficult to maintain relationships, a livelihood, and breaking supportive social ties.

Estimated number of users in England: 16,630

Key Points

- These more regular and chaotic users stimulate burgeoning service expenditure – over £87m per year.
- This cost is highly sensitive due to the large volume of adult solvent users estimated to fall within this cohort.
- An increasingly unstable life and dependence starts to impinge on their ability to hold down regular work – the largest single cost is for the DWP at £45m.
- The NHS incurs a significant number of costs at £11m for this cohort through secondary, primary and specialist mental health care.
- Much of this group is invisible having fallen under the radar for the types of support services that could intervene early.
- Re-Solv feels that this is one of the high potential groups to work with as they are much more likely to be able to get their lives back on track with skilful support.

Cohort 4	Total cost per stakeholder	Average cost per person
Local Authority	£436,662	£26
Police	£815,942	£49
CPS	£3,023,833	£182
Prison service	£1,288,766	£77
NHS	£10,905,555	£656
DWP	£44,664,193	£2,686
HMRC	£9,268,737	£557
Fire service	£610,535	£37
Wider effects	£16,205,795	£974
Total cost	£87,220,019	£5,245

Cost types

The breadth of services involved has grown for this cohort compared to others. In the main, costs arise from welfare support or responding to deteriorating health and wellbeing.

For overstretched service providers, this ‘Unstable Lives’ group is perhaps not seen as having priority for rehabilitation services, or these users are simply not coming to their attention, or they are presenting in wraparound services (e.g. mental health) but their solvent use is not identified or assessed.

Re-Solv reports that many clients are reluctant to seek help for fear of being a ‘burden’ or because they fear involvement with statutory services and the consequences that may bring. Some public services turn this group away, not having the knowledge or specific resources to offer support.

Out of work and housing benefits

Many people in this profile will find it hard to be reliable employees. Some of the research participants had lost their jobs directly because of solvent abuse – either through being caught using substances (unacceptable in roles such as HGV driving, nursing or working with children) or through becoming unreliable employees.

Behaviours such as bingeing on solvents on pay-days and failing to turn up for work the following day or week were given as examples by research participants. This led to cycles characterised by low pay and short-term work. In terms of costs, we've assumed that 25% of this group will not be paying Income Tax, and may be claiming unemployment or in-work benefits. In Re-Solv's experience, many of those in the profile will be reliant on Housing Benefit/Universal Credit to pay help with their housing costs, and a small percentage will have periods of homelessness – relying on friends and family to help them out.

Health costs

Health costs arise from a range of health service types from increased use of GPs and prescription medicines, referrals, assessment and engagement with mental health services. Poor mental wellbeing is often so closely bound together with substance misuse that it can act both as a cause and consequence of inhaling solvents.

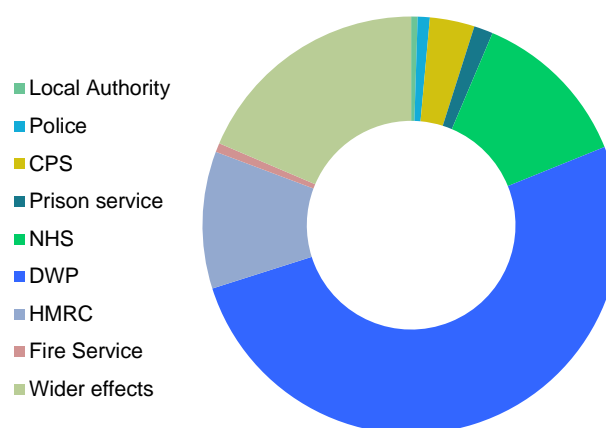
Research³⁶ shows that concurrent conditions such as mental health and substance use is particularly high.

However, in our qualitative research we found that drug services frequently would not treat solvent users, who then find themselves caught 'between a rock and hard place' as they are also refused treatment from mental health services until they have stopped misusing solvents.

Police costs

Solvent intoxication changes people's personality and behaviour, often inducing aggressive behaviour towards others, such as neighbours and family. These stand-offs lead to more frequent police call-outs and arrests. Police are often seen as responsive and reliable in contrast to the perceived indifference of other services. In some cases, this leads to vulnerable and isolated users regularly calling the police, or provoking arrest in order to feel safe, and access hot food. As a result, the police are spending time supporting vulnerable people who are not always dangerous to others, and could be supported much better through other means.

Cohort 4: Total cost per stakeholder



³⁶ Public Health England, (2017). *Better care for people with co-occurring mental health and alcohol/drug use conditions: A guide for commissioners and service providers.*

High potential for impact

Some people in this group will seek treatment, others will find that their lives slowly slide into chaos. It was common for participants to take a long time to recognise that they had become dependent on their solvent misuse habit. Many people may maintain this state of instability for decades – getting enough support to get by, but never being supported sufficiently to get their lives back on track.

Each of the services - police, GPs, mental health teams and job centres – provide critical windows of opportunity to offer or enable access to support before problems escalate and, for some, become intractable.

Re-Solv's experience is that this group, if worked with effectively, has the highest potential to bring about major social impact.



**PROFILE FIVE:
CHRONIC SOLVENT USERS**

Profile 5: Chronic solvent users

Introduction

For someone in this group, solvent use has become the centre of their life, around which everything else revolves. The days are dedicated to obtaining and taking solvents and life for this cohort will have become increasingly chaotic. To an outsider, this person's life may seem to be like a rollercoaster, lurching from one crisis to another. Many personal and social relationships, other than with other substance users, are likely to have been severed. Intimate personal relationships may be more likely to be with those whose lives are also chaotic, compounding difficulties – particularly if this person has children.

Estimated number of users in England: 123 (likely to be significantly higher)

Key Points

- As a small cohort this group has annual costs of £3m per year, however, our conservative estimate on the numbers in this group may need revising upward. More data is needed to further develop these assumptions.
- Individually this cohort represents the second highest service-based costs of £25k per person per year which is likely to have a significant local impact.
- Police interaction and offending attracts the greatest single costs at £8.8k per person per year, followed by NHS, DWP, and local authorities. Over 15 years of service interactions the NHS would incur costs of at least £78k per person.
- The impact on local businesses, as a result of acquisitive crime has not been costed but is likely to be significant.
- Some people fitting this profile will progress to poly-drug use in order to cope with their lives.

Cost types

Out of work and housing benefits

A substantial number of people in this cohort will be unemployed or working very sporadically, likely to be claiming benefits and dependent on the LA for housing support. Welfare and housing costs are likely to be much greater where there is family breakdown resulting in two separate homes.

NHS costs

Solvent users are driven to prioritise buying solvents over food or taking care of their health and consequently are more likely to have poorer health. Poor wellbeing is compounded by poor housing, homelessness and a lack of self-care. As a result of

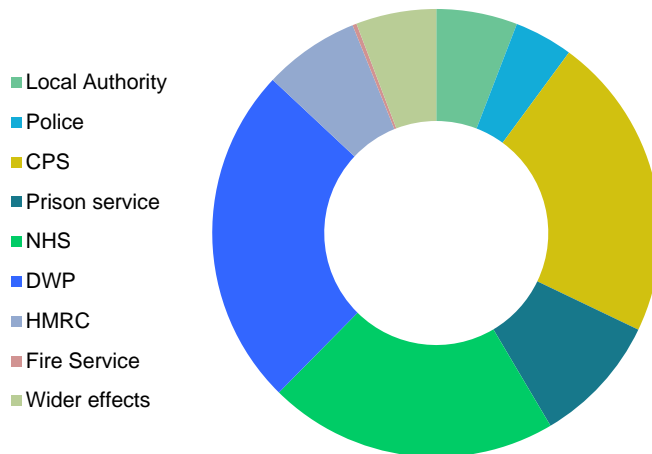
Cohort 5	Total cost per stakeholder	Average cost per person
Local Authority	£178,639	£1,452
Police	£129,019	£1,049
CPS	£670,953	£5,455
Prison service	£285,962	£2,325
NHS	£637,501	£5,183
DWP	£749,457	£6,093
HMRC	£211,147	£1,717
Fire service	£9,046	£74
Wider effects	£176,755	£1,437
Total cost	£3,048,478	£24,748

this, and other substance use, they may be using the GP frequently and receiving treatment for associated conditions. A number of those in the qualitative research had longer term health conditions, including lung conditions, fibromyalgia, and Crohn’s disease.

Many of the costs for the NHS also relate to crisis management including emergency call outs and admissions to hospital, as well as follow-on substance misuse treatment.

The numbers fitting this profile have been derived from those known to be in treatment. However, there will be many who are not yet in treatment (but fitting this profile) who will seek, or become ready for treatment. However, like those in Cohort 4, this group is likely to find it very difficult to access joined-up support services. Frustrated GPs, for example, may keep re-referring patients with continually unmet needs into different pathways in an attempt to access appropriate care.

Cohort 5: Total cost per stakeholder



Police and justice

Our research found that those fitting this profile were also more likely to come into contact with the police and criminal justice system for a range of reasons including antisocial behaviour, domestic violence, acquisitive crime to obtain solvents or to feed themselves, or as a result of being victims of crime due to their increased vulnerability.

Amongst the research participants the degree of police engagement was variable,

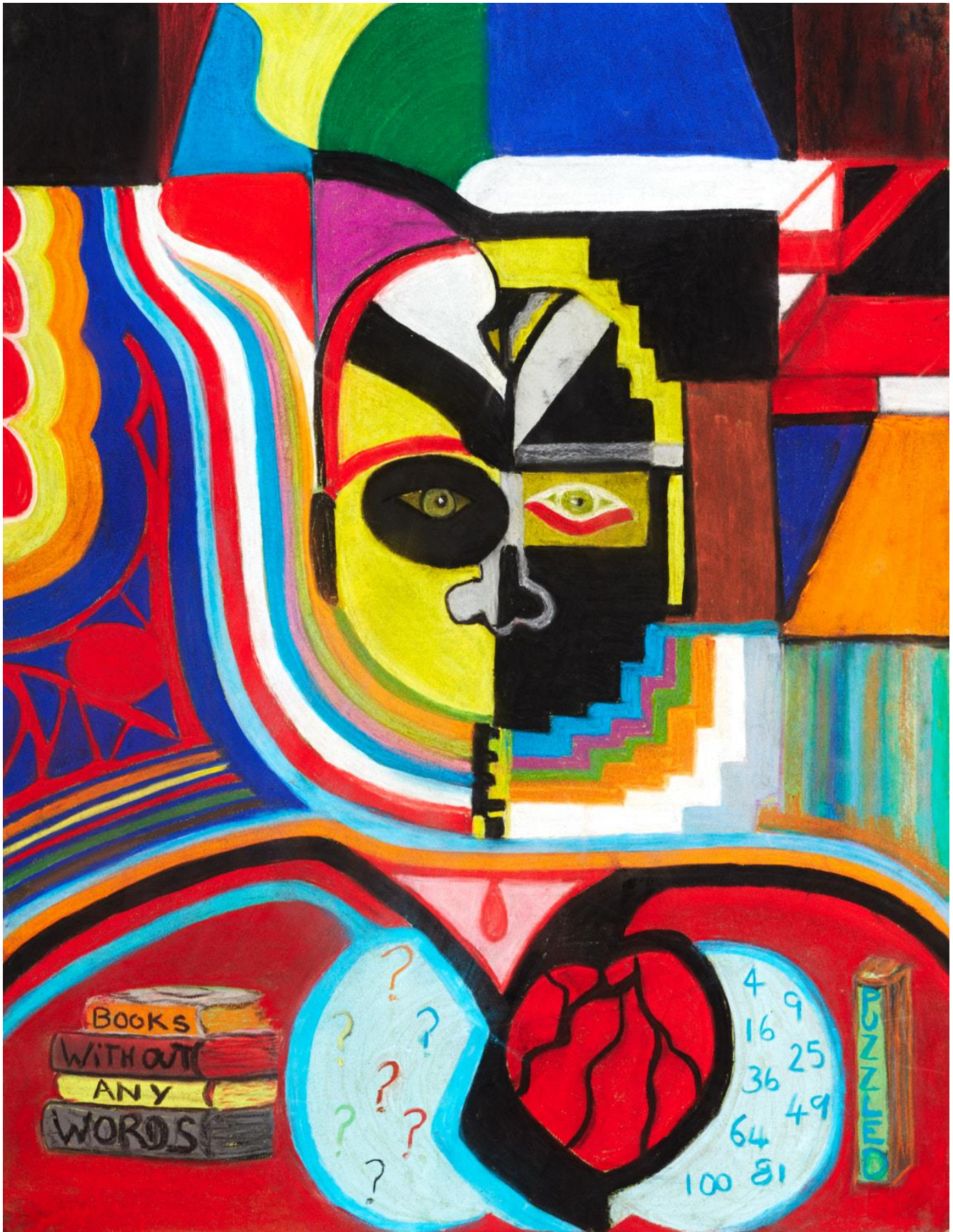
ranging from isolated incidents to weekly contact with the police. Based on Re-Solv’s experience, we have estimated that a person fitting this profile would have contact with the police once every two months, with some of these incidents leading to arrest and sentencing. Police and justice costs invariably escalate the more problematic solvent abuse becomes – with average costs of £8,829 per person per year.

Children’s Services

This people in cohort are likely to find it particularly difficult to maintain their family lives, especially if their partner is also a substance user. Members of this group are much more likely to have involvement with children’s services, ranging from crisis support to care arrangements. Unresolved solvent abuse means that engagement with children’s services is likely to take place over many years.

Fire Service

The all-consuming nature of solvent use can mean that at this stage there is a greater risk of fire, particularly for the more volatile solvents such as petrol. Housing associations that have become aware of solvent-using tenants have to respond to increased risk by engaging fire services for risk assessments and installation of protective equipment. Fire services incur costs through increased visits as well as emergency call outs.



PROFILE SIX: CHRONIC POLY-DRUG USERS

Profile 6: Chronic poly-drug users

Introduction

People in this profile are characterised by chaotic lives that revolve around substance use. Typically they use a number of substances (poly-drug use), including solvents. People in this cohort might use Class A drugs, such as crack cocaine, heroin, alcohol, prescription drugs, or a combination. Solvents might be used in combination with other drugs to prolong a high or ease a withdrawal from stimulants, or the person might turn to solvents because they are cheap and easily available.

Users may also inhale solvents as a means of quitting other substances, on their own or in programmes - often where the solvent use is not known to the treatment service, highlighting the importance of work by Re-Solv in training services to identify and treat solvent addiction. Re-Solv gave us an example of a client who, whilst in rehab to treat addictions to other drugs, had volunteered for cleaning duty – no-one had realised this was so he could inhale the gas from 'Pledge'.

Estimated number of users in England: 247 (likely to be significantly higher)

Key Points

- Individuals in this group have the highest use of services a year, at £42k a year and as a result they are likely to have a significant impact on local budgets.
- As a small cohort this group has annual costs of £10m per year. However, our conservative estimate on the numbers in this group may need revising upward.
- Police interaction and offending attracts the greatest single costs at over £10k per person per year, followed by NHS, local authorities, and DWP. Over 15 years of service interactions the NHS would incur costs of almost £112k per person.
- The impact on local businesses has not been included in the costs but it is likely to be significant due to acquisitive crime.

Cohort 6	Total cost per stakeholder	Average cost per person
Local Authority	£358,730	£1,452
Police	£353,803	£1,432
CPS	£1,347,360	£5,455
Prison service	£861,373	£3,487
NHS	£1,838,357	£7,443
DWP	£1,505,006	£6,093
HMRC	£424,010	£1,717
Fire service	£9,129	£37
Wider effects	£3,221,695	£13,043
Total cost	£9,919,464	£40,160

Nature of service costs

Users who combine solvents and addictive substances are likely to find that their drug dependency has ramifications for health, mental wellbeing and family life, and they are much more likely to increase their level of offending.

The chaos in the lives of this group is likely to be more extreme than those in Cohort 5. People in this group are using drugs that have different effects to solvents – usually being physically addictive, often illegal, and even more damaging to mental and physical health. In addition, using a cocktail of substances is always going to be more dangerous and there is the increased risk of overdose.

The main difference in costs between Cohorts 5 and 6 is an increase in police and justice and healthcare

costs due to increased offending and poorer health, as well as through 'wider effects' as this cohort carries a greater risk of premature death.

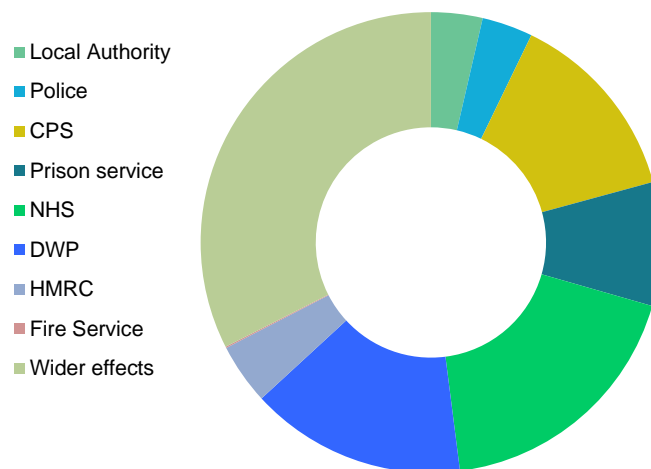
Police and justice

Poly-drug users are likely to be involved in more crime, not least because they are using drugs that are more expensive than solvents and because possession of these substances is often a crime in itself. In our models, this group were arrested more frequently (an average of 1.6 times a year per person, compared to 1.1 times for people in cohort 5), and spent longer in prison or serving other sentences (36.2 days in prison on average per year, compared to 24.1 days for cohort 5).

Health

As discussed above, in 'Nature of service cost', poly-drug dependency heightens the effects on the users' health, mental wellbeing and family life. Therefore this cohort has higher healthcare costs resulting from the greater risk of death bringing about 'Wider effects costs'. We assumed a 1% risk of premature death in any given year for this group, compared to 0.26% for solvent only users.

Cohort 6: Total cost per stakeholder



Health costs are also increased by an assumed greater average number of in-patient days per person, compared to cohort 5. In addition, as poly-drug users are likely to be using at least one addictive substance, they can access detoxification and rehabilitation services, which solvent only users cannot. There are some areas of healthcare where this cohort may be less costly compared to Cohort 5, such as GP service use and use of mental health services – which results from the relatively easier access to rehabilitation programmes that this cohort has.



COST TO GOVERNMENT SERVICES

Cost of solvent abuse to government services

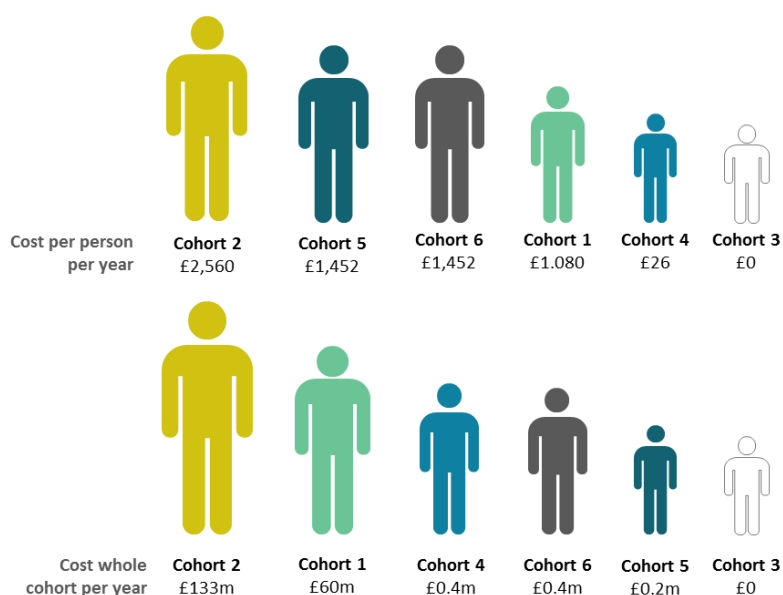
This section expands upon the summary on page 31 to look beneath the surface of the costs to illustrate how these build up and differ in nature across the cohorts. The full financial model and an explanation of the underlying assumptions can be found in the accompanying Annex document to this report.

Local authorities (LAs)

LAs face a dual challenge: long-term solvent users need a great deal of costly and often prolonged late intervention; however, they are fewer in number. On the other hand, the sheer volume of younger users across England means that while they receive less support, they are collectively more expensive for LAs.

Local Authority	Total cost per cohort	Average cost per person
Cohort 1 Young experimental users	£59,958,317	£1,080
Cohort 2 Young regular users	£132,633,558	£2,560
Cohort 3 High functioning adult solvent users	£0	£0
Cohort 4 Unstable lives	£436,662	£26
Cohort 5 Out of control solvent users	£178,639	£1,452
Cohort 6 Out of control poly-drug users	£358,730	£1,452
Total cost	£193,565,906	

As a consequence LAs attract a gamut of costs across the profiles; most notably through funding and administration of PRU education, hostel accommodation, interaction with children's services, and adult social care teams who come in to support those who are unable to take care of their daily living needs – often coordinating with social housing, police and fire services – which brings about its own cost burden.



In Re-Solv's experience, a significant number of clients, typical of profiles 5 and 6, are supported by adult social services teams. Foster care is financially costly, totalling over £50,000 per year.

We believe that the numbers of people in Cohorts 5 and 6 are underestimated. If just 10% (1700 people) of those in Cohort 4 advanced into more problematic use then the annual costs for LAs would top £3m.

Police and Criminal Justice System

Substance use is a key issue for the police force - the chaos in many users' lives mean that police are frequently called upon to mediate neighbour disputes, domestic abuse, domestic rows and anti-social behaviour. In the qualitative research, some former users had progressed to being on first name terms with local police and were habitually in contact with them.

As discussed earlier, some of this persistent contact was a repercussion of lack of support in other services, as police often ended up becoming the point of call for vulnerable people.

As substance use becomes entrenched, users often resort to acquisitive crime to fund their habit, or feed themselves. As the frequency and severity of offending grows, sentencing and imprisonment

Police, CPS and Prison Service		Total cost per cohort	Average cost per person	follow.
Cohort 1	Young experimental users	£0	£0	Prosecution and imprisonment is costly. Prosecutions range from £2,870-£4,697 for theft and drugs offences, and imprisonment typically costs £34,675 per year, with repeat offending common.
Cohort 2	Young regular users	£973,840	£19	
Cohort 3	High functioning adult solvent users	£0	£0	
Cohort 4	Unstable lives	£5,128,541	£308	
Cohort 5	Out of control solvent users	£1,085,933	£8,829	
Cohort 6	Out of control poly-drug users	£2,562,536	£10,375	
Total cost		£9,750,851		The poly-drug users are, per person, the

most costly for the police and criminal justice system. This is down to a greater severity of crimes, greater use of police time, and more frequent and longer-term sentences. By contrast, young users are individually less costly - the nature of their encounters with the police are less costly but this group is expensive collectively for the police due to its relative size.

NHS

The NHS is the stakeholder with the third highest costs as a result of solvent use (excluding wider effects) – spending £18m every year. Solvent and poly-drug use can have a far-reaching impact on people's health during their time as users and often into the longer term as a by-product of use. This risk is amplified where users have more than one condition. Research shows that people with concurrent conditions (such as poor mental health or drug addiction) have a greater risk of other health problems, suicide and early death.³⁷

Solvent users engage with a broad range of healthcare professionals ranging from prolonged GP use, emergency and in-patient services to mental health support and rehabilitation programmes. These individual costs grow rapidly for those in Cohorts 4, 5 and 6. Collectively those in 'Unstable Lives' (Cohort 4) are especially costly for the NHS. It is this group that Re-Solv is confident can be helped to turn around more easily with the right allocation of support and resources. The health costs outlined in the table below are conservative as they do not illustrate the expense of long-term health conditions

³⁷ Public Health England, (2017), *Better care for people with co-occurring mental health and alcohol/drug use conditions: A guide for commissioners and service providers*

triggered by substance use. Investing in supporting users early on in their journey would, therefore, deliver considerable savings for the NHS.

In our models, there were NHS costs for all cohorts. For Cohorts 1 and 3 this is limited to the costs to the NHS from sudden death due to solvent use. People in these cohorts tend to be using solvents in lower quantities, less frequently and in less risky ways (bearing in mind that this is relative to the other cohorts). This means that the physical damage done by drugs is less severe. Young users have not been using long enough to experience the cumulative effects on their health. In addition to these costs, a minority of people in Cohort 2 are likely to be accessing CAMHS.

The three remaining adult cohorts incur much higher costs. These costs increase the more chaotic a person's life becomes, as this means a higher risk of toxicity and side effects, and poorer self-care. Cohort 6 is particularly costly due to the effects of poly-drug use.

Use of GP services	NHS		Total cost per cohort	Average cost per person
Using solvents regularly can cause and exacerbate physical and mental health problems, as buying solvents and other substances takes priority over food and self-care. In the long run this leaves people in poorer health.	Cohort 1	Young experimental users	£2,426	£0
	Cohort 2	Young regular users	£3,793,302	£73
	Cohort 3	High functioning adult solvent users	£21,158	£1
	Cohort 4	Unstable lives	£10,905,555	£656
	Cohort 5	Out of control solvent users	£637,501	£5,183
	Cohort 6	Out of control poly-drug users	£1,838,357	£7,443
		Total cost	£17,198,300	

Solvent users in this study became more dependent on GPs for support when they were unable to access support elsewhere, such as mental health and addiction services. In one case this led to a GP referring a patient to many different psychological care pathways in an attempt to find the care she urgently needed – all without success. As a result, the patient continues to have recurring overnight stays in hospital, weekly visits from police and regular social care support.

Reforming and former solvent users also rely on GPs' support in recovery, regular appointments and prescriptions. Several of our participants had long-term prescriptions for mental health medication; some were visiting the GP weekly, or receiving weekly deliveries of prescription drugs. During the research, former users disclosed that, if patients were not truly in recovery, some used GPs as a means to access medication for their own use, or for re-sale. Some users 'strung along' several GPs in order to obtain as much prescription medication as possible.

In-patient and emergency services

Many of the research participants had been admitted to hospital after passing out, having an accident or getting into fights whilst intoxicated. Long-term users' health is also at risk of deterioration leading to periods of hospital care.

Mental health services

Many problem substance users, including solvent users, suffer from poor mental health. PHE's report cited earlier found that mental health problems are experienced by 70% of drug users and 86% of alcohol users in treatment programmes. Poor mental health can be both the cause of, and inflamed by, regular substance use and the social fallout that accompanies it.

Yet care is difficult for solvent users to access. Many mental health services are overstretched and a high bar for eligibility has been set in an attempt to focus resources. Evidence from the PHE report shows that those who suffer from poor mental health and addiction are often unable to receive the treatment they need. This experience is more marked for solvent users, as many of our research participants reported being turned away from mental health services due to solvent use. This can leave users stranded and only serves to prolong ill health and defer costs into the future or onto other services.

Rehabilitation and drug services

People who are dependent on solvents have difficulties in accessing drug rehabilitation programmes, particularly when the treatment method is medication-based (prescribing drugs such as methadone as a means to decrease dependency). Solvents are psychologically, rather than physically, addictive and require a different therapeutic approach to treatment.

This gap in care provision is conspicuous; as with mental health services, the expenditure on rehabilitation could and should be higher, if demand for support were met. The lack of recovery services for solvent users is likely to mean that people stay using for longer, perpetuating costs.

Solvent users do seem more able to access substance aftercare services and have drug support workers. Drug and rehabilitation services have very high relapse rates, underscoring the need for excellent support services, and in particular preventative programmes.

DWP and HMRC

Many habitual solvent users (Cohorts 4, 5, and 6) will become reliant on welfare support for housing and income. Those in Cohort 4 are characterised by cycles of employment and job loss, and those in Cohorts 5 and 6 typically fall into long-term unemployment. These cycles inflate the benefits budget as well as diminishing tax receipts from employment.

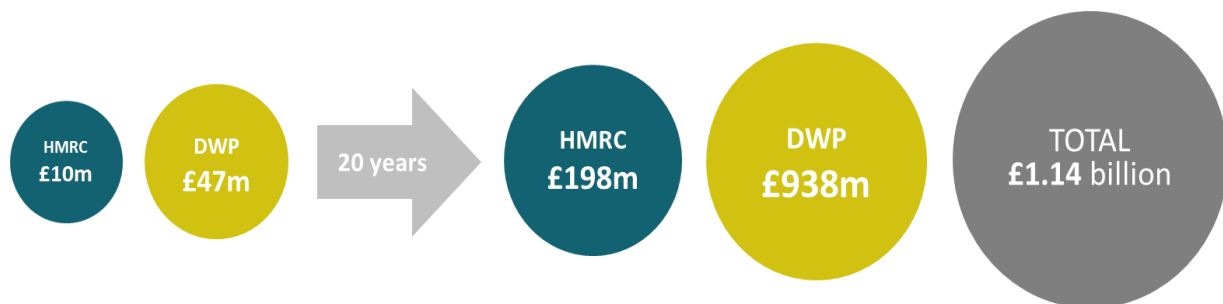
The result is a loss of income to the HMRC of at least £10m a year and expenditure by DWP of £47m a year. We have assumed that 25% percent of those in the Unstable Lives group will be sporadically employed throughout the year; however, the incidence of cyclical unemployment may be greater for this group, and so the actual costs are higher.

Lack of meaningful employment can be a symptom of and contributor to substance use. The Prince's Trust report on young people revealed that one in ten young people felt that unemployment drove them to drugs and alcohol.³⁸ Most of our research participants were unable to

maintain employment during the many years in which they were heavily dependent upon substances. For some people, brief spells of employment were used to fund their solvent habit; whilst for others; their jobs required high levels of responsibility (such as childcare or operating machinery) that were simply incompatible with solvent use.

Long stretches of unemployment and a history of substance use make it much harder to re-enter the job market. A literature review commissioned by the DWP set out the numerous barriers that all point to the need for holistic support for users and education of employers.³⁹ Over 20 years the cost to the public purse would be in excess of £1bn. The further away solvent users find themselves from jobs, the greater the penalty to society.

DWP & HMRC		Total cost per cohort	Average cost per person
Cohort 4	Unstable lives	£53,932,930	£3,243
Cohort 5	Out of control solvent users	£960,603	£7,810
Cohort 6	Out of control poly-drug users	£1,929,016	£7,810
Total cost		£56,822,550	£18,863



We should emphasise that some of those who manage to turn their lives around are highly motivated to help others, and in doing so become significant positive contributors to society.

³⁸ (2010). *The Prince's Trust - YouGov Youth Index 2010*.

³⁹ Sutton, L. E. A. (2004). *Drug and alcohol use as barriers to employment: a review of the literature*. Loughborough, Loughborough University.

Fire Service

Many solvents are highly flammable, particularly petrol and gas.

The impact of causing a fire or triggering sprinklers, in shared housing is far-reaching. Re-Solv noted that many of their clients live in densely populated blocks of flats or hostel-type accommodation, which puts many more lives at risk.

	Fire department	Total cost per cohort	Average cost per person
Cohort 1	Young experimental users	£0	£0
Cohort 2	Young regular users	£1,895,362	£37
Cohort 3	High functioning adult solvent users	£1,463,600	£37
Cohort 4	Unstable lives	£610,535	£37
Cohort 5	Out of control solvent users	£9,046	£74
Cohort 6	Out of control poly-drug users	£9,129	£37
	Total cost	£3,987,672	£220

The main costs modelled are the costs to the fire service caused by responding to fires, fire alarms and safety systems, as well as the costs of safe-guarding and preventative action, such as inspections, fitting fire alarms, and sprinkler systems in the homes of high risk people.

The risk of causing a fire is higher amongst solvent users than the general population, but is still relatively small. There is a lack of data on the level of risk, so in our models we have assumed that people in Cohort 5 have a 2% risk of causing a fire in a given year, due to the extent of their habit use and levels of intoxication that affect judgement. People in this group are likely to be using and storing solvents in their homes in larger quantities than other users, and are likely to be using in riskier ways. We assumed slightly lower risk of incurring fire service costs for the other cohorts, due to the size of Cohort 2. This group is the most collectively expensive for the fire service.

Sensitivity test

The purpose of a model is to bring clarity to a question: in this case to quantify the social impact and financial cost of solvent abuse. However there is very little national data to help bring this clarity. Therefore we have had to make a large number of assumptions based on our qualitative research and Re-Solv's experience with solvent users.

Sensitivity testing is the process of changing key assumptions in the model to understand the overall effect this has on the outputs (in this case on the total estimated cost of solvent use). In other words it asks the question 'What if we are wrong about the numbers of people that fit into each of our different profiles, or the degree to which they attract different costs? How does that affect the overall figures?' We do this to:

- Test the robustness of the results and assumptions; and
- Understand the importance of individual assumptions, and areas where more research would be useful – especially for those where there is less underpinning evidence and therefore a greater margin of uncertainty.

Sensitivity testing in this report is important due to the number of assumptions made, in particular with regard to the allocation of solvent users to the different profile types developed in this report, (as national data does not give any indication of the degree of problematic use). We have also tested a number of assumptions around the inclusion or prevalence of particular cost types, including the impact of death, Pupil Referral Unit (PRU costs), and children's services costs.

The detailed narrative for the sensitivity tests can be found in the Appendices and the financial models can be found in the Annex that accompanies this report. We have looked at the following key assumptions:

What if..	Difference	Notes
There are 20% more people using solvents than shown in surveys	£69m, 20%	A material difference. It is likely that overall prevalence is greater than surveys state. (For simplicity we have spread the additional 20% across all the cohort types).
We assigned 10% of the people in Cohort 2 into Cohort 1	£8m, 2%	Not considered to be a material difference.
We assigned 60% of the people in Cohort 2 into Cohort 1	£51m, 15%	Makes a material difference and therefore further national research needed to establish prevalence and degree of use.
We assigned 10% of the people in Cohort 4 into Cohort 3	£7m, 2%	Not considered to be a material difference.
We assigned 60% of the people in Cohort 4 into Cohort 3	£43m, 12%	Makes a material difference and therefore further national research needed.

We assigned 10% of the people in Cohort 4 into Cohorts 5 and 6.	+£41m, 12%	Makes a material difference. It is likely that the numbers in Cohorts 5 and 6 are greater than our assumptions, but there is no national data on the number of chronic solvent users.
We reduced the value assigned to the impact of a premature death by 50%.	-£31m, 9%	A material difference. However the base salary used for productivity loss is set to minimum wage and prevention of premature death is highly valued by society.
We reduced the costs associated with Pupil Referral Units by reducing prevalence by 50%.	-£12m, 4%	A moderate reduction. Children enter PRUs for multi-factorial reasons and therefore it is reasonable to recognise other contributory factors. We recognised that for some users solvent use would be a major contributory factor for entering a PRU, and a secondary factor for others, however there is no available data here. For caution we reduced the prevalence rate to be lower than other substance using populations. More research is needed here.
We reduced the prevalence of children in Cohort 2 going into care by reducing the prevalence by 50%.	-£84m, 24%	A material difference. Children go into care for complex reasons and therefore it is reasonable to recognise a range of contributory factors. For this reason we were particularly cautious about the prevalence rate.
We reduced costs associated with housing support by 50%.	-£16m, 5%	Moderate reduction. People need welfare support for various reasons, however as solvent use progresses it is likely to become the main contributor.
We reduced the costs associated with rehabilitation to account for variance in costs/frequency.	-£0.6m, 1%	Not a material difference
We reduced the costs associated with adult social care by 50% to account for variability.	-£1.6m, 1%	Not a material difference
We reduced the costs associated with fire risks by 50%.	-£2.0m, 1%	Not a material difference
We factored in the wider effect on families.	+ Unmodelled Likely to be material	A material difference. These costs should be assessed in future studies. Costs such as; housing, welfare, lost productivity and poor mental health for the wider family.

The table shows that there are a number of assumptions that are critical

1. Just how many solvent users are there?
2. What is the degree of problematic use/which cohort types do they belong in?
3. Designation of costs to solvent abuse or other effects.

Further research and regular data collection is needed to establish the facts around the first two questions.

Splitting out and attributing specific costs, such as PRUs, or children's services to solvent abuse or other effects, such as family difficulties, perhaps doesn't matter so much in the end. Rather what matters is the recognition that at a whole person level poor resilience is costly, personally, and for wider society.

This research shows that the impact of solvent abuse and the additional complicating factors that arise are significant. Solvent use either contributes towards, or goes on to drive, that poor resilience. As such the overall needs remain the same - improve resilience, work preventatively, and act early. This is explored in more detail in the following section.

**SECTION 3:
IMPROVING OUTCOMES
THEMES & RECOMMENDATIONS**

Reducing the impact of solvent abuse

The research findings highlight a number of common themes. Here we summarise those themes and make supporting recommendations that we believe are essential in order to reduce the costly impact of solvent abuse.

Main themes

1. Lack of early support

During the primary research, the majority of research participants displayed a lack of early resilience/lack of support that was not picked up and effectively dealt with by the professionals with whom they came into contact. These ranged from family difficulties, a background in the care system, or traumatic life events.

Challenge: Identifying a lack of resilience early and having a range of support mechanisms in place.

2. Hidden and easy to obtain

The ease of obtaining and using these everyday solvents is further enabled by a lack of knowledge about the signs of solvent use by significant people in children's lives. The stigma attached to solvent abuse can compel users to keep their dependency a closely held secret.

Families and professionals, who can't identify solvent use and the signals for support, don't have the knowledge, confidence and skills to intervene early and involve other agencies who could help.

Challenge: Education and confidence-building of parents and professionals.

3. Missed opportunities for support

All of our case studies highlighted a significant number of missed opportunities to identify solvent use and intervene with effective pathways of support. Longer-term solvent users are often known, and seen repeatedly, by many services and may experience multiple emergency response events, and yet they are still not being referred into effective pathways of support. This is costly for police, justice, healthcare, housing and employment services.

Challenge: Developing an ecosystem of referral pathways for support and adaption of existing frameworks, such as TOPS (Treatment Outcomes Profile) forms to better identify solvent use.

4. Lack of whole systems approach

The lack of a whole systems approach is being felt in a number of ways:

- a. **Service pathways are often designed without solvent users in mind** – meaning that solvent users can be ineligible for support, e.g. unable to receive addiction support because solvents are considered non-addictive. The solvent users that are picked up and referred into

services often experience an ill-fitting service that hasn't been designed with solvent abuse in mind and this impedes effective treatment – including failure to spot continuing solvent abuse.

- b. **Lack of joined-up pathways across services** – either users are not referred into other services when picked up by police or emergency health, for example, or they don't experience joined-up support from a range of agencies. Eligibility criteria can mean that solvent users often can't access pathways of support, for example, users who need mental wellbeing support are often unable to access this until they are no longer using solvents, but fail to access addiction support.

Challenge: Whole system design of referral and care pathways to ensure access and joined-up provision.

5. Escalating later intervention costs

All of these factors meant the long-term solvent users participating in the research attracted greater levels of costs from services. While these are essential services at the time of need, the burden on these services could have been avoided had there been earlier support and intervention.

Challenge: Reducing overly stringent criteria for support in order to avoid greater and more costly demand further down the track. Developing alternative models of early support. Ensuring multi-agency working across the community.

Case for earlier intervention

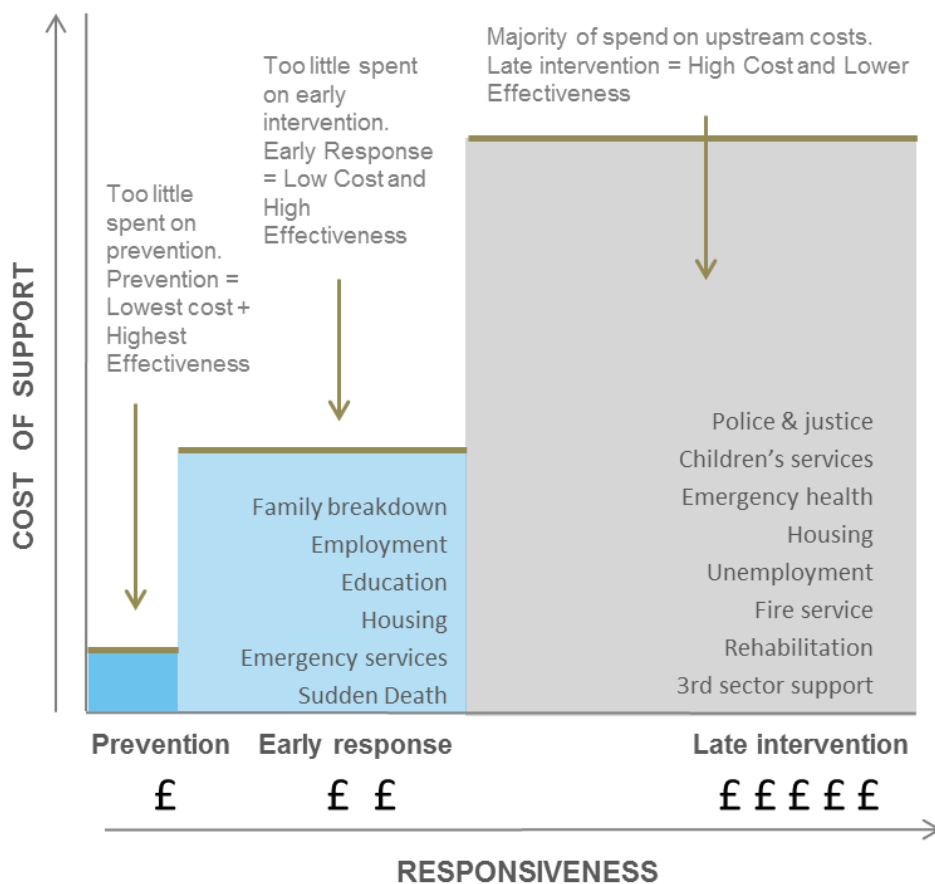
We can see from Ryan's case study (page 31) that if he had had access to effective support even as late as six years after first starting to use solvents, £2.57m could have been saved. If Mark had been identified during the first two years of moving in and out of different hostels £255k could have been saved. Yet Ryan and Mark were supported into recovery 21 and 14 years after first using solvents.

When looking at the life-course journeys set out in earlier sections, we can see that longer-term solvent and poly-drug use profiles attract repeated costs from service use.

Looking at the costs for users who are early on in their solvent use, or are using solvents recreationally, we can see that they attract lower service costs *per person*, but are *collectively* more expensive due to the larger cohort size. Of course, a percentage of these will go on to problematic use of solvents and/or other drugs.

Consequently there is a strong case for prevention and earlier intervention work with all of the profile types. The diagram on the following page illustrates the proportion of current spend across solvent abuse from prevention to late intervention. Lack of prevention work and effective early response programmes result in huge late intervention costs (or 'failure demand' costs). Only a small proportion of these costs are spent on rehabilitation.

Current relative spend on prevention , early response, and late intervention

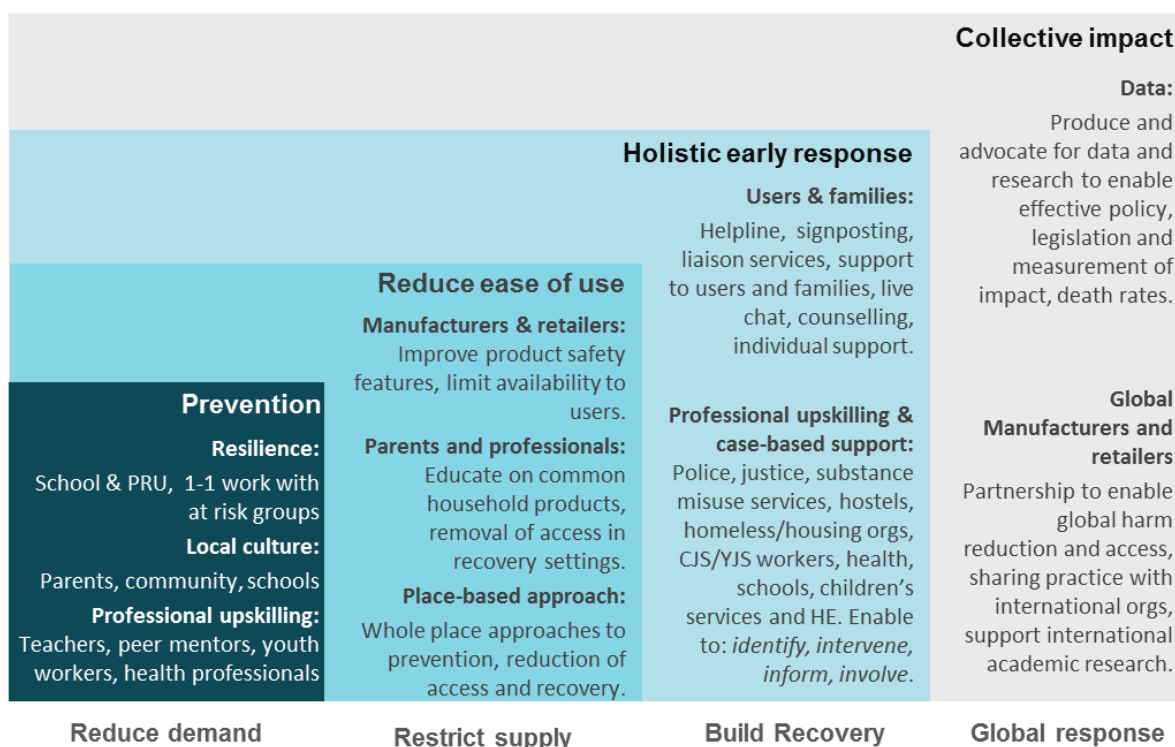


Government's 2017 Drug Strategy

Many of these findings are recognised in the Government's 2017 Drug Strategy which sets out a four-pronged strategy to reduce the impact of drugs, which we summarise here:

1. **Reducing Demand** – “to prevent the onset of drug use, and its escalation at all ages, through universal action combined with more targeted action for the most vulnerable. This includes placing a greater emphasis on building resilience and confidence among our young people ...”
2. **Restricting Supply** – “adapting ... to reflect changes in criminal activity; using innovative data and technology; taking coordinated partnership action ...”
3. **Building Recovery** – “improving both treatment quality and outcomes for different user groups; ensuring the right interventions are given to people according to their needs; and facilitating the delivery of an enhanced joined-up approach ...”
4. **Global Action** – “spearheading new initiatives ... sharing best practice and promoting an evidence-based approach to preventing drug harms.”

Re-Solv's role in reducing the impact of solvent use



Following extensive consultation, Public Health England (PHE) has also drawn together strategic plans that respond to many of the themes in this research. In particular they highlight the need to design holistic pathways of care, enable joint commissioning through collaboration, as well as provide individualised support to ensure that no-one drops through the gaps.

The schematic diagram above shows how Re-Solv's own theory of change and activities orient around these core principles to address solvent use.

Though Re-Solv is the national expert addressing solvent abuse (including volatile substances such as nitrous oxide and 'poppers') this is a complex and multi-faceted problem which demands an effective *ecosystem* of support. This ecosystem should be made up of many different factors all working in a joined-up way from prevention to recovery, as well as working holistically across a range of service types. Re-Solv plays a critical part in that ecosystem both through direct support to users and their families, and through enabling others within the ecosystem to act effectively by collecting data, educating parents, professionals and social organisations, in addition to delivering place-based support.

Recommendations

The government's and PHE's objectives are sound in principle. We have made a number of additional critical recommendations to ensure that the strategies are effective in addressing the impact of solvent abuse. These recommendations apply to central government, local government, schools, police and the NHS.

1. Reducing demand

- a. **Build resilience at primary school age** – use of solvents starts at a younger age than other substances so resilience-building work, and identification of vulnerability needs to start at primary school, followed with a secondary school age booster, integrated into the wider PSHE curriculum. It makes sense for the third sector to partner in delivering holistic resilience-building programmes.
- b. **Ensure access to support** – for those who are vulnerable or who have lower resilience. It is critical to ensure that support isn't rationed to those with the highest needs in order to avoid the risk of missing significant numbers of people in need of support, who might otherwise self-medicate with substances. This could be through mental wellbeing support, but also less costly place-based approaches.
- c. **Commission solvent education for parents and schools** – to build knowledge and skills in parents, schools, SEN and therapeutic staff to enable them to identify and act on early signs of solvent use.
- d. **Co-commissioned preventive services** – particularly with vulnerable groups such as LACs (Looked After Children), children with a care plan, and adoptive children. These recommendations could be holistically commissioned through pooled budgets from stakeholders standing to benefit from cost savings. See 3e.

2. Restricting supply

- a. **Place-based approaches to reducing solvent supply** – central legislation and guidelines need national and local action for solvent users in their communities. Take whole place-based approaches to reducing solvent supply and use, including working with individual local retailers, employers, police, housing, and health.
- b. **Ensure funding for place-based approaches** – there is a role for national bodies, such as the Big Lottery, to support place-based approaches in order to catalyse the growth of local support ecosystems.
- c. **Monitor sales of solvents** – Re-Solv recognises that headshops have been closed down by the Psychoactive Substances Act. However, there continues to be a need to monitor the sale of legitimate products that can be abused, particularly cigarette lighter refills which are implicated in a high proportion of deaths from solvent abuse.
- d. **Spotting multiple purchases** – Re-Solv has been instrumental in liaising with UK retailers to prevent multiple sales of cigarette lighter refill cans, but there is still work to be done on the high street, in markets and, crucially, with online retailers. The

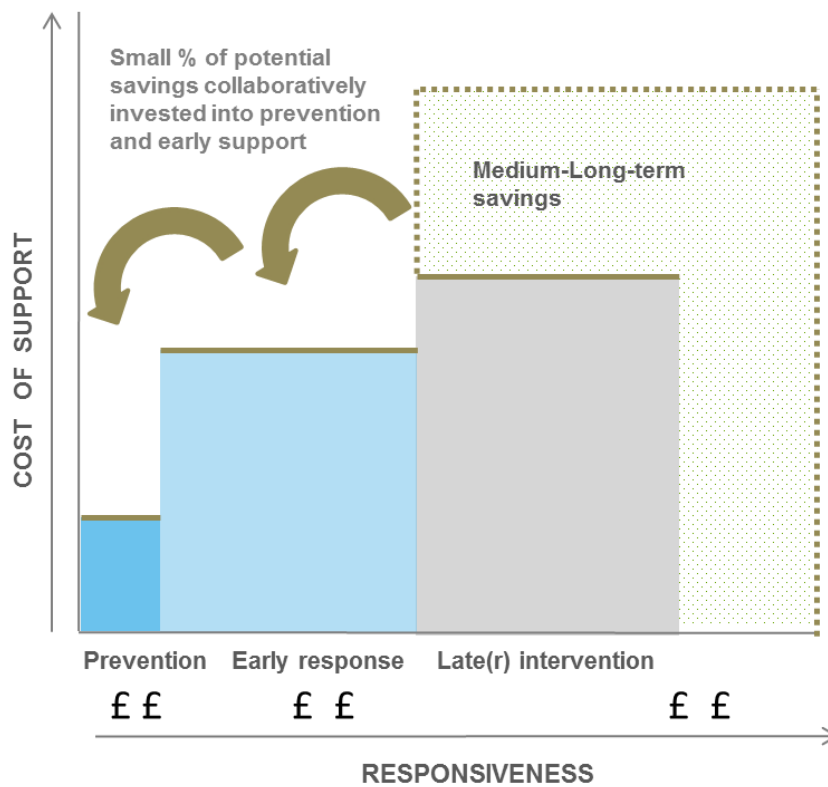
same learning now needs to be applied to the retailing of nitrous oxide canisters – with a very particular focus on online sales.

- e. **E-retailers to develop policies and processes to spot solvent abuse** – online purchasing of solvents provides another easy route of access. Large public brands, such as Amazon and eBay, could take further steps to use the data at their fingertips to spot and safeguard solvent users.

3. Building recovery

- a. **Education of service professionals to enable earlier identification** – education of schools, PRU staff, housing and employment benefits staff, police, primary and secondary health, mental healthcare professionals, key workers, youth offending teams/workers, rehabilitation staff and programmes – including other third sector organisations. Safeguarding training is also needed for professionals who come into contact with intoxicated solvent users – due the increased risk of heart failure and sudden death.
- b. **Design of care pathways that recognise solvents** – solvent use captured on adult treatment outcomes forms, solvent users able to access mental wellbeing support and expert rehabilitation. This includes pathways such as those being re-designed under new community sentencing guidelines for other substance users. To reduce the cost and improve support, consider the further development of peer-to-peer communities, particularly for those who are isolated.
- c. **Third sector part of joined-up system** – the third sector forms an essential part of the prevention and recovery system and should be at local and national tables when designing new care pathways.
- d. **Referral points and supporting documentation** – services should specifically assess for solvents when people first enter services. Including solvents in the list of substances on TOPS (Treatment Outcomes Profile) forms would be a quick win as the back-end architecture is already in place to collate this data.
- e. **Community sentences** – any protocol developed for drug rehabilitation and other treatment needs to be able to work effectively with solvent users too.
- f. **Co-commission support services** – recovery services to be commissioned through pooled budgets by stakeholders that stand to gain from cost savings. Dedicate 1% of budgets to prevention and early support. Significant beneficiaries include local authorities, police, healthcare, social care, and justice. PHE health economics data shows that for every £1 spent on drug treatment services there is a £2.50 return on investment.

Pool budgets to increase spend on prevention and intervention and reduce late intervention costs



4. (National &) Global action

- a. **National data and research to address glaring gaps on solvent use** – the data frameworks simply don't exist that would give policy makers and heads of services actionable insight (on the numbers of solvent users, the degree of problematic use, how many users fail to access treatment services, and how many people die from solvents). As a result, government and services are blind to the social impact and costs. There are a number of clear actions that can be taken by the ONS, PHE, and the Home Office.
 - i. **Crime Survey of England and Wales** – to collect national prevalence rates it is recommended that the ONS reinstates questions relating to solvent use (these were removed in 2011).
 - ii. **Data collection on wider solvent-using populations** – the Crime Survey data does not include key groups that are likely to have significant numbers of solvent users, for example homeless and prison populations. ONS to consider surveying of these important populations.
 - iii. **Mortality data collection** – the ONS recognise that mortality data on VSA (solvent abuse) is under-reported⁴⁰. From 1971-2009, the St George's,

⁴⁰ As Stephen Penneck, Director General of the ONS reflected in Hansard (2011), House of Commons Debate, 9 September, Vol. 532, Col. 938W: "It is important to note that the figures presented [by the ONS] are not the total number of deaths involving volatile substances ... Deaths associated with volatile substance abuse are under-reported in official statistics based on death registration data."

University of London report⁴¹ drew on coroners' reports, as well as drug poisoning data from death certificates giving a much more complete view. At the time, this was recognised as a world-leading programme of data collation and analysis. Re-Solv recognises that, in today's economic climate, funding for the reinstatement of such a programme is unlikely and therefore welcomes current work being undertaken by the ONS towards improving the quality of data collation on death. It is to be hoped that this new system of collation will ensure more accurate reporting of VSA mortality as well as ensuring that data on deaths is included in the annual 'Deaths Related to Drug Poisoning in England and Wales' report.

- iv. **Life impact** – it is recommended that the Home Office urgently commissions a quantitative study to build upon the qualitative findings and solvent user profiles in this report; this includes collecting data on the prevalence of service use, degree of costs, and longevity of solvent use. This investment would yield government cost savings as a result of focused action on solvent use.
 - v. **Treatment data** – Re-Solv welcomes the annual NDTMS (National Drug Treatment Monitoring System) reports. However, collecting data from TOPS forms (as detailed above) is also needed for two reasons: it will help to contribute towards understanding the severity of solvent use and can be used as a barometer to measure the effectiveness of referral and care pathways.
- b. **Collective impact model** – in an age of receding public finance, but increasing engagement of business in the social agenda; there is an exciting opportunity for business to play a positive role in the impact on solvent use. It is recommended that, global and local retailers, manufacturers and the third sector work together with Re-Solv, and others, to explore ambitious ways of achieving collective impact.

In conclusion, the true extent of solvent abuse is yet to be fully understood. However, this report identifies clear steps that could be taken to improve both the effectiveness of prevention, intervention and support which would lead to a clear reduction in human, social and economic cost of solvent abuse.

41

Ghodse, H., Cokery, J., Ahmed, K., Shivano, F., (2012), *Trends in UK Deaths Associated with Abuse of Volatile Substances 1971-2009*, International Centre for Drug Policy, St Georges University of London, Report 24.

APPENDICES

Appendix A: Methodology

BWB worked together with Re-Solv on two projects.

1. Social impact study on solvent abuse
2. The development of a social impact measurement framework that would enable Re-Solv to track the effectiveness of their work

This appendix sets out the methods used to develop the social impact study on solvent abuse, and Appendix C shows Re-Solv's Theory of Change which underpins their measurement framework.

Social impact study

Aim

The aim of the study was to describe the impact of solvent abuse and develop a financial model to estimate the costs to society of solvent abuse. The modelling work uses the principles of social return on investment (SROI)⁴².

Methods

Qualitative research: The purpose of the qualitative research was to establish how solvent users get into solvent use and their experience of problematic use – how it affects their lives and that of others, including interaction with public services.

We ran a focus group, in-depth interviews and review meetings with:

- 6 ex-solvent users, current solvent users, and users in recovery
- 3 frontline workers from agencies who mentor substance users
- Re-Solv staff who work directly with; solvent users, their families, and wider services including, mental health, addiction support, policing, education, local authorities and housing.

Secondary research: The purpose of the secondary research was to triangulate the findings from the primary qualitative research and draw together a theory of change for how solvent users fall into casual and problematic solvent use, as well as to test and challenge the primary research findings on how users are impacted by solvent use. The research references are set out in the main report and a separate Annex.

Secondary research was also used to identify the data needed to model the cost of solvent abuse, including using proxy data from wider substance use in the absence of data on solvent use. The Annex to this report contains a bibliography and research references for the modelling work too. Based on this work six different solvent user profiles were developed. They focused on the degree of solvent use and the impact of that use upon people's lives – as these features were found to be the drivers of experiencing different types of societal costs.

Social value modelling: The data from the primary and secondary research stages was used to build financial models to estimate of the social cost of solvent use in line with SROI principles. These models take the estimated number of national users and form assumptions about which of the six solvent use cohorts they fit into, and assumptions about a range of costs attached to each of those cohort types. The assumptions about behaviour and cost types were formed by drawing on available research and from Re-Solv's experience with different types of solvent use. The full models and the assumptions underpinning them can be found in the Annex accompanying this report. Due to the

⁴² <http://www.socialvalueuk.org/resources/sroi-guide/>

number of assumptions needed we carried out a sensitivity test on 12 assumptions that could have a material impact upon the overall figures. A summary of the sensitivity test can be found on page 64, and a full explanation in Annex B in this report, as well as in the separate Annex to this report.

References and bibliography

A list of references and bibliography can be found in the Annex to this report.

Appendix B: Sensitivity Test: Explanation

We have looked at the following 12 key assumptions that we felt could have a material effect on the results of the model.

1. The overall number of solvent users

What we tested and why: The volume of solvent users in the models is based on survey data. Individuals often under-report behaviours like substance use on surveys due to social desirability bias and concerns about legality. It is quite possible that there are greater numbers of solvent users. We have tested the effect of increasing the numbers of solvent users by 20% across all cohorts.

Effect: Increases the overall costs by £69m (20% of the overall cost).

Conclusion: A significant increase. More national data is needed to establish the number of solvent users and degree of solvent use, in order to bring greater accuracy and certainty on costs.

2. The split of young users between Cohorts 1 and 2

What we tested and why: In the model there are 107,300 young users who have used solvents;

- 55,500 who have used in the last year are assumed to be recreational Cohort 1 users
- 51,800 who have used in the last month are assumed to be more regular users and have been assigned to Cohort 2.

Cohort 2 users have been assumed to attract higher costs. Here we tested the assumption that some of those that we have categorised as Cohort 2 users could in fact be closer in nature to Cohort 1. We have therefore tested the effect of moving 10% of the people in Cohort 2 (5,180) into Cohort 1, as well as the effect of moving 60% of those in Cohort 2 (31,080) into Cohort 1.

Effects:

Moving 10%: This reduces the overall cost of solvent users by £8,344,864 (2% of the overall cost). This is because some of the costs, such as relating to police call-outs, and some NHS costs, are only applied to Cohort 2 and not Cohort 1, and similarly, some costs are assumed to apply to a higher proportion of Cohort 2 than Cohort 1.

Moving 60%: This reduced the cost of solvent use by £50,524,605 (15% of the overall costs)

Conclusions:

A 10% difference to the number of people in Cohort 2 does not make a material change to the overall costs in the model.

A 60% difference, however, does make a material change to the overall costs, and highlights the need for more national data on the nature of solvent use as well as the prevalence.

3. The split of adult users between Cohorts 3 and 4

What we tested and why: In the model there are 57,000 adult users (this data has been drawn from Drug Misuse Declared, 2010⁴³) of these 40,000 adults were known to have used in the last year, and 17,000 were known to have used in the last month. In the model we assumed that the 40,000 users were infrequent and non-problematic users and had a lower cost profile (Cohort 3), and the 17,000 users were more regular users and could fit one of three profile types; Cohorts 4, 5, or 6. For the latter 2 profiles we formed assumptions about the number of users in these groups from the numbers known to use solvent users who are in drug treatment data. This left 16,630 users which we assumed fit into Cohort 4 – those who have unstable lives – for example, in and out of employment, strife at home, occasional interaction with blue light services.

It is possible that those who are more regular users are managing to keep their lives together and have a closer fit to Cohort 3. We have therefore tested the effect of moving:

- 10% of the people in Cohort 4 into Cohort 3
- 60% of the people in Cohort 4 into Cohort 3

Effects:

Moving 10% of people this reduces the overall cost of solvent users by £7,082,130 (less than 2% of the overall cost). This reduction occurs because fewer costs are applied to Cohort 3 than to Cohort 4.

Moving 60% of the people reduces the overall cost by £42,948,196, 12% of the overall cost.

Conclusions:

A movement of 10% of people from Cohort 4 into Cohort 3 does not make a material difference to the overall costs.

However a movement of 60% of the people from Cohort 4 into Cohort 3 does make a material difference, and as with the above test highlights the need for more national data.

4. The volume of solvent users in Cohorts 5 and 6

What we tested and why: The numbers of solvent users in Cohorts 5 and 6 has been drawn from data on the number of known solvent users in treatment, as either sole solvent users or poly-drug users. However we believe that there will be many people who fit the profile of Cohorts 5 and 6 who have not made it into rehab for the reasons set out in the main report, but are attracting the costs associated with these profiles. Here we tested the scenario that a greater proportion of the adult users, who have used in the last month (17,000) were chronic users by moving 10% of those in Cohort 4 and re-distributing them across Cohorts 5 and 6 (reflecting the current split across Cohorts 5 and 6).

⁴³ Hoare, J, Moon, D, Ed (2010) *Drug Misuse Declared: Findings from the 2009/10 British Crime Survey England and Wales*, Home Office Statistical Bulletin, Home Office.

Effect: Moving 10% (1,663) from Cohort 4 into Cohorts 5 (554) and Cohort 6 (1,109) increases the overall cost by £40,827,127, 12% of the overall cost.

Conclusions: An increase of 10% in the numbers of those matching the profile of Cohorts 5 and 6 has a material effect on the costs. It is highly likely that these cohorts are more costly and the numbers in the current model are too conservative. More national research is needed.

5. Costs on the impact of death from solvent use (referred to as ‘Wider Costs’ in the main report)

What we tested and why: For all cohorts we included models to represent lost value when someone dies from solvent use. We chose not to take a reductionist approach and only look at fiscal spend – such as NHS costs (£670) – as we also wanted to recognise the significant emotional impact from bereavement. In addition we also wanted to include the loss of individual contribution from working and tax. For emotional impact we used a method which is based upon a value that individuals assign in order to avoid particular events and outcomes, such as dying. For loss of life this is £751,000 per person (Godfrey et al). Lost productivity at minimum wage is £393,000.

Together these costs make up a large part of the total cost of solvent users. We therefore tested the effect of reducing these values by 50%.

Effect: This reduces the overall cost by £31,488,757 – a 9% reduction.

Conclusions: This is a significant reduction. However although there is still a lack of consensus, and continued innovation in methods for valuing intangibles we felt it important to keep these costs within the model to reflect societal needs. To separate them out from fiscal and economic costs we have presented the data without these costs on pages 4 and 40 in the main report.

6. PRU costs

What we tested and why: The costs due to children attending Pupil Referral Units are amongst the largest costs for Cohorts 1 and 2. The relationship between these outcomes and solvents is complex: it is well established that solvent use is higher amongst children who are excluded from school,⁴⁴ solvents may not be the primary reason why a young person is not attending mainstream school. However our reason for their whole inclusion is to demonstrate whole person costs and the case for holistic person centred preventative and restorative work. However we also wanted to understand their effect on the total cost estimate. We have therefore halved the prevalence rate for the PRU amongst Cohorts 1 and 2.

Effect: This reduced the overall cost of solvent users by £12,316,977 – a 4% reduction (and a larger reduction in the total for Cohorts 1 and 2 only). It reduces the cost to LAs by around 6%.

⁴⁴ Goulden, C. Sondhi, A. (2001). *At the margins: drug use by vulnerable young people in the 1998/99 Youth Lifestyles Survey*, Home Office Research Study, Home Office.

Conclusions: This is a moderate reduction. Whilst PRU costs per person are high, they are only assumed to apply to a very small proportion of Cohorts 1 and 2, so the effect of potentially 'over attributing' this in the model is not significant. The prevalence for PRU use is also set cautiously low in the model.

7. Looked After Children costs

What we tested and why: The costs due to children being in care are amongst the largest costs for Cohorts 1 and 2. As with the PRU, the relationship between this outcome and solvents is complex: solvent use is higher amongst children in care, but solvents are unlikely to be the cause of a child being taken into care. However our reason for their whole inclusion is to demonstrate whole person costs and the case for holistic person centred preventative and restorative work. However we also wanted to understand their effect on the total cost estimate. We have therefore halved the prevalence rate for children being in care amongst Cohorts 1 and 2.

Effect: This reduces the total cost by £83,807,516, which is about 24% of the total cost of solvent users. It reduces the costs of Cohorts 1 and 2 by 46% and 41% respectively.

Conclusions: Because the costs of care are so high per person, this is a very large reduction, even though we only reduced the prevalence amongst Cohort 2 from 4% to 2%, and for Cohort 1 from 2% to 1% - i.e. a relatively small change in the number of people effected. Whilst we feel it is justified to include the care costs as part of a holistic picture of solvent users - these costs will only reduce if solvent users who are in the care system receive holistic, and intensive, support to overcome a range of difficulties.

8. Housing costs

What we tested and why: Housing costs are amongst the larger costs for Cohorts 4 - 6. The relationship between solvent use and housing situations is complex. In some cases solvents have led to an individual being dependent on welfare benefits as it has become impossible to find or maintain employment. In other cases the situation is more complicated; as with LAC and PRU costs, there are a range of complex and inter-related factors. As with LACs support will need to be holistic – for example treatment and upskilling if solvent users are to be independent and costs saving can be realised. To test the contribution to the overall costs we have reduced the prevalence of people claiming Housing Benefits for Cohorts 4 - 6 by 50%.

Effect: This reduces the overall cost of solvent users by £15,645,922, which is a 5% reduction. For Cohort 4, this is a 19% reduction in costs, but it is a smaller overall reduction for Cohorts 5 and 6.

Conclusions: This is a moderate reduction.

9. Rehab and aftercare

What we tested and why: We could not source consistent data about treatment patterns for solvent use and other substances, therefore we have made assumptions based on Re-Solv's experience about how long treatment lasts and wanted to test the effect of these assumptions. We have reduced the number of units per year of rehab and aftercare by 50%. This is relevant to Cohort 2 and to Cohorts 4 - 6.

Effect: This reduces the total cost of solvent users by £553,883, less than 1% of the total cost.

Conclusions: The current assumptions do not have a material effect.

10. Home-based support costs

What we tested and why: We included costs for Cohorts 5 and 6 relating to regular support provided by the council. We included these costs because they reflected Re-Solv's experience of the support clients receive, but we do not have secondary data to support the inclusion of these costs, and the costs are quite high. We have reduced the prevalence rate for this cost for Cohorts 5 and 6 by 50%.

Effect: This reduces the overall cost by £1,577,178, less than 1% of the total cost.

Conclusions: This suggests that the model is not sensitive to the current assumptions.

11. Fire risk

What we tested and why: Although the primary research showed regular use of fire services by some participants we could not source secondary data to quantify the risk of fire/ use of fire service time due to solvent use. We therefore wanted to understand the effect of our assumptions. We have reduced the prevalence for all cohorts by 50%.

Effect: This leads to a reduction in costs of £1,992,746 – around 1% of the total cost.

Conclusions: This is a very small reduction, suggesting that if we have overestimated the prevalence the effect is not material. On the other hand, in this analysis we reduce the prevalence from an already very small prevalence (2% risk per year at most). If we have underestimated the fire risk, the cost could be much higher.

12. The costs attracted due to the wider impact upon the family

What we tested and why: It was clear in the qualitative research that for many solvent users and their immediate families are affected by solvent use, including marriage/relationship breakdown, grandparents needing to become kinship carers, family support from welfare services, poor mental health, and impact on attainment at school. There wasn't the scope to conduct additional qualitative

research on this impact, however it would be valuable to commission this additional research in the future in order to understand the true impact.

Effect: We believe this is likely to have a material impact on the costs for cohorts 2, 4, 5, and 6 as well as for those who are bereaved as a result of solvent use.

Appendix C: Re-Solv's Theory of Change

RE-SOLV: THEORY OF CHANGE				
Programme Context	Programme Efficiency		Programme Effectiveness	
Theory of Change	Activities	Outputs (in past year)	Outcomes	Impact
<p>Current problem Solvents are available, affordable and legal, making them easy to access from a young age. Public awareness is low so parents, professionals, and local service providers often lack the skills to identify, intervene, inform and involve others. Users slip under the radar and suffer from poor life outcomes that also affect wider society (e.g. housing, policing, justice, family, children's services, education and healthcare). Volatile substances kill.</p> <p>Context of the problem Solvent abuse is a 'signal' drug – it often indicates trauma or other issues (deprivation, stress, etc.) in a user's life. It can be both a symptom and a cause of social isolation and a means of 'self-medicating'. Stigma and a lack of clarity as to whether solvent use is 'drug' use prevents users accessing support services. Problem use fails to be identified/ supported due to a lack of awareness on the part of key stakeholders and/or a lack of joined-up working practice, e.g. between substance and mental health services.</p> <p>The desired result Fewer people turning to solvents. For those who become users; equality of access to support services, a reduction in the length of time solvents are used and achievement of</p>	<p>Reducing Demand Prevention and early intervention: School/PRU-based sessions influence children at the age they are likely to try solvents, encourage safety in the home and build resilience around e.g. risk-taking behaviours and peer pressure. One-to-one and/or group work with young people using and with vulnerable and/or at-risk groups.</p> <p>Restricting Supply Community prevention and place-based change: Awareness-raising among parents and community influencers/groups/centres about VSA, how to talk with children and young people about drugs and how to signpost effectively. Raising awareness among local store-owners, retail employees and other suppliers of the products involved as well as product safety liaison with manufacturers.</p> <p>Building Recovery Response and support: Info, signposting and support for users/families/concerned others through phone/SMS/live chat drop-in, counselling (online and phone), referral into local services and, when appropriate, one-to-one sessions to provide a holistic support system around an individual. Wider recovery community and beneficiary engagement to reduce stigma, raise VSA awareness and build support networks.</p> <p>Professional upskilling: Educating professionals and peer mentors who work/interact with vulnerable people/solvent users (e.g. substance misuse services, homeless/housing services, CJS/YJS workers, police, health professionals, etc.)</p> <p>Global Action Advocacy and Research: Keeping VSA on the public and political agenda, campaigning for and disseminating effective data to inform evidence-led policy-making.</p>	<p>Reducing Demand Prevention and early intervention: Ran education sessions with 4500 young people in schools/PRUs and reached over 5000 16-24 year-olds with evidence-based advice and information.</p> <p>Restricting Supply Community prevention and place-based change: Reached over 7,500 adults with evidence-based information on VSA, including 160 working in the night-time economy, and recruited over 20 community volunteers. Liaison with Trading Standards, retailers and manufacturers over new P.S. Act.</p> <p>Building Recovery Response and support: Individually supported over 100 young people and 400 adults. National work with ex-users and recovery champions, training over 100 peer mentors and improving Re-Solv's expertise through reciprocal learning from those with lived-experience.</p> <p>Professional upskilling: Trained 800 multidisciplinary professionals working with adults and 150 working with young people.</p> <p>Global Action Advocacy and Research: Initiated current ONS review into VSA</p>	<p>Prevention Behaviour change in potential users: At risk children make better decisions on solvent use.</p> <p>Prevention Behaviour change in parents, peers, and community: Vulnerable children recognised and supported earlier by family and professionals.</p> <p>Recovery Earlier intervention: Parents, family, peers and local communities better able to respond either to prevent use or provide earlier support to users. Knowledgeable and more confident professionals with improved empathy for clients identify and support earlier, shortening the cycle of use and improving quality of life and life chances. Joined-up ecosystem able to work together effectively under a common goal.</p> <p>Evidence-led policy and practice Research and stakeholder engagement: Better understanding of the problem and empathy for those whom VSA affects. The development of effective</p>	<ul style="list-style-type: none"> • Reduction in solvent take up. • Reduction in length of solvent use. • Reduction in accidental death. <p>Leads to:</p> <ul style="list-style-type: none"> • Better life chances for young people due to increased/ continued engagement, attainment at school, resilience and mental wellbeing. • Reduced numbers engaging with children's services or adult social care. • Increased or continued employment. • Reduced demand on public services, i.e. health, mental health, housing, children's, jobs and education. • Better access to peer-led, recovery community support networks • Reduced engagement with police and justice. • Reduced demand on fire service. • Improved product safety reduces use.

<p>positive life outcomes.</p> <p>Re-Solv's theory of change encompasses public education, individual support, upskilling stakeholders and informing policy.</p>	<p>Stakeholder engagement: Including liaison with the manufacturers and retailers of the products involved to drive our shared agenda of improving product safety, appropriately limiting availability and promoting harm reduction.</p>	<p>mortality data collation and publication.</p> <p>Stakeholder engagement: Secretariat to APPG for NPS and VSA, expert advisor to Mentor UK and BAMA VSA Committee board member.</p>	<p>evidence-led policies and practice informed by data, lived-experience and expert input.</p> <p>Ongoing innovation in product design, safety and retail.</p>	
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BWB's Advisory & Impact department works co-productively with social good organisations to help them identify opportunities for social impact, and develop pragmatic impact measurement frameworks for integrated reporting. We also specialise in conducting impact studies to evaluate, value and articulate social outcomes that organisations achieve through their work.

Our multi-disciplinary team helps organisations respond to today's challenging environment by supporting with; strategic insight and development, governance, social investment, financial advisory, and major transactions – such as mergers and acquisitions.

The team is made up of strategists, researchers, financial modellers and accountants, all with a breadth of experience across the third sector, local government and private sector - and with the emergent fourth sector.

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