NACD
National Advisory Committee on Drugs

ROSIE
Research Outcome Study in Ireland
Evaluating Drug Treatment Effectiveness

Baseline Data Report

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ABSTRACT

The Research Outcome Study in Ireland Evaluating Drug Treatment Effectiveness (ROSIE) is the first prospective study of treatment outcomes for *opiate* users to be conducted in Ireland. The study did not seek to evaluate treatment services but rather treatment outcomes. The study recruited opiate users on entry into three index treatments; methadone, structured detoxification and abstinence-based treatment programmes. In addition, a sub-sample of opiate users was recruited from needle exchanges. These modalities were chosen in consultation with the National Advisory Committee on Drugs (NACD) as they were considered to represent the most widely implemented interventions for opiate users in Ireland. Services and/or individuals providing treatment in both community (local community based services, out-patient clinics, and General Practitioner surgeries) and residential (in-patient detoxifications, residential rehabilitation and prison-based services) settings throughout the country were included in the research.

Baseline data collection officially commenced in September 2003 and concluded in June 2004. Participants were interviewed at treatment intake, or as soon as possible thereafter, and again at 6 months and 12 months and 36 months after the baseline interview, thereby providing a natural history of an opiate using cohort. Data were collected by means of a structured interview. Trained fieldworkers carried out all ROSIE interviews. The interview instrument contained items and scales developed specifically for the project as well as measures adapted from other published research instruments (for example, NTORS and DORIS). This comprehensive set of outcome measures detailed the social and psychological characteristics, the drug use, the health and the crime characteristics of the cohort. A range of treatment processes and treatment pathways were also measured.

The current report presents baseline data on the 404 ROSIE study participants interviewed at treatment intake. Over half the study population were recruited from methadone programmes (53.2%, n=215) provided across three settings; health board clinics, community-based clinics and General Practitioners. One-fifth of the population (20%, n=81) were recruited from structured detoxification programmes (in-patient and out-patient facilities). A similar proportion of individuals (20.3%, n=82) were interviewed in abstinence-based treatment programmes and the remaining 6.4% (n=26) of participants were recruited from needle exchanges. The average age of the sample was 28 years (median=27 years) and one-quarter of study participants were female (n=102). More than three-quarters (77%, n=306) of the study population reported heroin use in the three months prior to interview, the rate and frequency of use varied across treatment modality. At baseline interview the majority of participants were poly-drug users (76%, n=308). Tobacco, cannabis, alcohol, cocaine and benzodiazepines were commonly used in addition to opiates. The majority of study participants, 87% (n=352) had engaged in some form of formal treatment for their drug use, prior to commencing their index treatment for this study. Most respondents reported a history of injecting drug use (76.6%, n=308); the proportion of participants who reported recently injecting (last three months) was lower (44%, n=177). This was affected by the fact that one-fifth of the study sample was entering an abstinence based programme. The sample experienced a range of physical and mental health problems at baseline interview. One-third of the cohort attempted suicide at least once, and 46% (n=177) had an accidental overdose at least once. Criminal activity was also common among study participants over half of the cohort (65%) had spent some time in prison.

The data in this document is presented firstly for the study population as a whole and secondly separately, within the appendices, for participants in each of the three treatment modalities and needle exchange. The analysis of the ROSIE baseline data highlights that Irish treatment services are facing broadly the same challenges identified in other countries.

EXECUTIVE SUMMARY

Background to Study

In Ireland, an estimated 14,452 individuals are thought to be problem opiate users in 2001. Recognition of the harms associated with opiate dependency, and the chronic nature of this condition has led to an increased availability of, and access to treatment and/or rehabilitative services, under the National Drug Strategy 2001-2008. At an international level, a number of outcome studies (e.g. DATOS, NTORS and DORIS) have supported the overall effectiveness of established treatment options available for opiate users. To date, no national longitudinal data have been available to determine the overall effectiveness of such treatment options in the Irish context. This lack of information coupled with the increased recognition of the need for treatment and care services to be informed by evidence based research contributed to the National Advisory Committee on Drugs (NACD) commissioning a national drug treatment outcome study. The tender was awarded to Dr. Catherine Comiskey at the National University of Ireland, Maynooth in 2002.

Study Aims

The Research Outcome Study in Ireland Evaluating Drug Treatment Effectiveness (ROSIE) is the first national, prospective, longitudinal drug treatment outcome study in Ireland. The primary aim of the study is to evaluate the effectiveness of treatment and other intervention strategies for opiate use within Ireland.

Method

The study design was based on the established tradition of longitudinal drug treatment outcomes research. For ethical reasons, the study did not advocate the use of a control or non-treatment group. Consequently, the study employed a before and after research methodology, whereby individuals are used as their own reflexive control. To this end, study participants were interviewed at service intake or as soon as possible thereafter and then at six months, twelve months and thirty six months post service intake.

Drug services were selected from both in-patient and outpatient settings and from three modalities; methadone maintenance, structured detoxification programmes, abstinence-based treatment programmes. In addition, a sub-sample of individuals were recruited from needle exchange. These modalities were selected as they were considered to be the principal interventions available to opiate drug users in Ireland.

Using a highly structured questionnaire, 404 service users were recruited from approximately 60 services provided by 43 separate agencies and/or organizations between September 2003 and July 2004. Client eligibility criteria were to be (a) over 18 years-of-age, (b) be an opiate user, (c) be commencing a 'new treatment episode', (d) be prepared to consent to the tracking/follow-up procedures and (e) be prepared to provide a range of locator information. The main outcome measures included in the study were drug using behaviour (including drug type, frequency and quantity of use), health (physical and psychological), social functioning (employment, accommodation, family relations), harm (injecting related risk and overdose), mortality and crime.

Results: Baseline Population

Demographics: One-quarter of the study population was female (n=102). The average age of participants was 28 years, the median age was 27. On average, respondents reported leaving school at 15 years-of-age with 28% having left school before the age of 15. Analysis revealed that current levels of employment were low; 16% of the population was employed (either full-time or part-time) at baseline interview, while 21% had been employed over the three months prior to baseline interview. The main source of income for the majority of participants (77%) was social welfare payments. Less than one-third of the cohort were living in the family home at the time of the baseline interview, and 25% were in their own or rented accommodation. 8% of the study population were homeless at baseline interview, where homeless is defined as having no fixed abode or being resident in a hostel, shelter or B&B. However, 18% reported a period of homelessness over the preceding three months. The majority of respondents (56%, n=216) reported having children under the age of 18 years. However, over half (57% n=122) of the participants with children did not have their children in their care.

Treatment History: The majority of study participants had previously sought treatment for their drug and/or alcohol use. Only 13% (n=51) of the study population were seeking treatment for the first time ever. Of those who had previously been in treatment, over half had been on a methadone programme (67%), in a structured detoxification programme (59%) and/or seen an addiction counsellor (70%).

Drug Using History: Generally speaking, study participants had a long history of substance use, with respondents' first using alcohol at an average age of 13.7 years (median 14 years), cannabis at 14.4 years (median 14 years), ecstasy at 17.6 years (median 16 years) and heroin at 18.3 years (median 17 years). Moreover, study participants reported their consumption of a range of substances as problematic at various stages in their drug using careers. The vast majority of the population considered their heroin use a problem (92%, n=355), with respondents reporting the onset of problem use at a mean age of 20 years, approximately two years after the average age of first use of the drug.

Current Drug Use: Over three-quarters (76.9%, n=306) of the study population had used heroin in the three months prior to interview. These participants reported using the drug on an average of 52 of the previous 90 days, consuming an average of 0.7 grams of heroin a day. Sixty-four percent of the cohort reported recent (last three months) cannabis use. These individuals used the drug on average 61 of the last 90 days and smoked an average of 12 joints a day. Less than half of the cohort reported recent use of non-prescribed or misuse of prescribed benzodiazepines, non-prescribed methadone and cocaine use. Patterns of cocaine use were somewhat different to other drugs, with respondents using less frequently (on average 17 of the previous 90 days) and consuming greater quantities on a daily basis (on average 2.3 grams). Regarding licit drugs, the vast majority of respondents (93%) were daily cigarette smokers. Over-half the population (54%) reported drinking alcohol in the preceding three months. These individuals reported drinking on average 25 of the last 90 days (median 1 day) and drank on average 17 units of alcohol a day.

Injecting Related Risk Behaviour: Over three-quarters of the study population (77%, n=308) reported having ever injected a drug. The average age respondents first injected was 20 years (median 19 years). Most of the injectors reported lifetime injecting risk behaviour, that is, having used someone other user's needles/syringes (63%), passed their used needles/syringes onto others (53%), shared filters/spoons/flush water (64%) and reused their own injecting equipment (88%). Despite this fact the majority reported having attended needle-exchanges (65%, n=229).

Forty-four percent of the study population (n=177), or over half of those that ever injected (56%) reported injecting in the three months prior to baseline interview. These individuals reported injecting on average 47 of the previous 90 days, with 27% of recent injectors (n=46) doing so daily. Levels of recent injecting risk behaviour (last month) were substantially lower then lifetime risk behaviour. For example, 12% of the injecting population (n=20) reported recently using needles/syringes used by others, and only 10% reported passing their used injecting equipment on to others.

Overdose: Analysis revealed that 45% (n=181) of the study population reported having overdosed at least once in their lifetime, where overdose was defined as an episode where respondents took drugs and as a result went unconscious. Levels of recent overdose were substantially lower, with 7% of the cohort reportedly having overdosed in the three months prior to baseline interview.

Physical and Mental Health: Participants reported suffering from a range of physical and metal health complaints, to varying degrees. For example, 72% (n=269) of the population reported suffering from a poor appetite over the three months prior to interview. These respondents reported this symptom on average 66 days of the previous 90. Regarding mental health complaints, over half of the population reported feeling tense (65%), while 57% reported feeling lonely over the three months prior to baseline interview.

Analysis revealed that 4% (n=12) of population that had been tested reported being HIV positive at baseline interview. That said, one-fifth of the population (20%, n=73) reporting having never been tested and an additional 9% of those tested (n=25) were awaiting their test results. However, of those tested for Hepatitis C (50%, n=140) reported being positive at baseline interview, with similar proportions of respondents being unaware of their HCV status (7%, n=20 awaiting results, & 18%, n=69 having never been tested).

Criminal Activity: The vast majority of study participants (90%, n=339) reported having committed some form of crime in their lifetime (excluding drug possession and driving related offences). Just under three quarters of the population (70%, n=243) reported having dealt/supplied drugs at some point in their lifetime. The proportions of respondents reporting recent involvement in crime were substantially lower than lifetime involvement across all categories of offences. For example, 30% (n=109) reporting having dealt drugs in the three months prior to baseline interview.

Over three-quarters of the population (76%, n=285) reported having ever been arrested for an offence, with 18% (n=69) reporting being arrested in the three months preceding baseline interview. Although levels of recent arrest were relatively low, 48% (n=219) of the cohort reported having legal problems at the time of treatment intake. For example, 22% (n=84) were on bail awaiting a trial or sentencing, 12% (n=46) had outstanding warrants and 10% (n=37) were serving a probation or community service order. In addition, 65% (n=253) of respondents reporting having spent some time in prison with 50% (n=193) of the population reporting having served a custodial sentence.

Conclusion

The ROSIE study is the first large-scale national prospective drug treatment outcome study to be conducted in Ireland. The data provides a wealth of information on opiate users presenting for treatment. The analysis of the ROSIE baseline data highlights that Irish treatment services are facing broadly the same challenges identified in many countries. However, the main aim of the ROSIE study is to evaluate treatment effectiveness within Ireland and the results presented here are but the first step towards providing that evaluation.

CHAPTER 1: INTRODUCTION

1.1 Background Information

Opiate users can experience a range of complex health-related and social problems that require treatment over time. However, opiate addiction is often referred to as a chronic relapsing condition. While many people do successfully recover from opiate dependency or addiction most make several attempts to do so, lapsing and relapsing into opiate use in intervening periods. While there are an ever-growing number of treatments and psycho-social interventions available to opiate users in Ireland, many have not been effectively evaluated. Increasingly, it has been recognised that there is a need to ensure that all treatments for opiate users are closely informed by research evidence and guided by performance monitoring.

In response to this need for evidence-based practice, an increasing body of research is available on the effectiveness of treatment for substance use problems, including several major outcome studies. The importance of these national studies cannot be overstated as they help to inform national drug policy, planning and resource allocation at a time when national resources are under increasing pressure. To address the lack of national research on treatment outcomes in Ireland, the National Advisory Committee on Drugs (NACD) commissioned a national drug treatment outcome study for opiate users in Ireland. The tender was awarded to Dr. Catherine Comiskey at the National University of Ireland, Maynooth in 2002.

1.2 Outcome Studies

Outcome studies have been widely accepted as providing the best evidence on the effects of therapeutic and rehabilitative interventions[1]. Such studies provide information about drug users, their associated problems and the nature of their involvement with treatment services. They also provide valuable data on the changes in patterns of drug use and other problems during and after treatment. To date, four major outcome studies have been carried out;

- **DARP** (Drug Abuse Reporting Programme[2]). This study, carried out in the USA, commenced in 1969 and investigated four types of treatment;
  - Methadone maintenance
  - Therapeutic communities
  - Out-patient drug-free services
  - Out-patient detoxifications

  In addition to investigating the four aforementioned treatment types, DARP used a comparison group of individuals who enrolled in, but never started, treatment. Between 1969 and 1973, DARP collected data at treatment entry for an initial sample of 43,943 clients at 52 treatment agencies and recorded their status ever two months until treatment termination. Follow-up data were also collected at one, two, and three years after treatment intake. In addition, two waves of 'post-treatment follow-up' interviews were carried out with over 6,000 individuals completing the first wave of interview, after an average of 6 years. The second wave of 'post-treatment follow-up' interviews were undertaken approximately 12 years after treatment intake, with a sample of 600 individuals.

[1] Kychetnik, L., Frommer, M, Hawe, P & A. Shiell (2002) Criteria for evaluating evidence on public health interventions. *Journal of Epidemiology & Community Health*. 56:119-127
[2] www.datos.org/background.html#DARP

DARP found length of treatment contact to be a key factor in determining outcome, with a minimum of three months in treatment required to produce positive changes in drug using behaviour. In addition, post treatment outcomes improved as the length of time in treatment increased. There were no consistent differences between methadone maintenance, therapeutic communities and drug free treatment, but all three had better outcomes than detoxification and intake group (those who enrolled but never started treatment).

- **TOPS** (Treatment Outcome Prospective Study[3]): This study, which commenced in 1979, was also carried out in the USA and was modelled closely on DARP. It aimed to assess short and long term treatment outcomes of four treatment types;
  - Methadone maintenance
  - Detoxification
  - Residential
  - Out-patient drug free treatment

  Data were collected from 12,000 people entering treatment in 42 treatment agencies, across 10 cities in the US. The sample was recruited in three waves, 1979, 1980 and 1981. Clients were interviewed at treatment intake and then one month, three months, six months, nine months and one year after treatment admission. Over 4,000 people were selected for post treatment interviews, at three months, one year, two years, three years and five years.

  During the first three months of treatment, TOPS found a dramatic decline in drug use and criminal activity in each of the three modalities methadone maintenance, residential and out-patients drug free treatment (the detoxification group were eventually excluded from the study). A year after treatment had ended, TOPS found reductions in drug use, crime and mental health symptoms for individuals who had stayed in treatment for at least three months. TOPS found that time in treatment rather than type of treatment was one of the most important predictors of positive outcomes. Relatively long periods in treatment were found to be necessary to effect change. However, it should be noted that the ROSIE study design is different to TOPS. Clients within ROSIE were interviewed at treatment intake and at six months, twelve months and thirty six months post treatment intake. Within TOPS, clients interviewed after one year had terminated their treatment.

- **DATOS** (Drug Abuse Treatment Outcome Study[4]). This study commenced in 1991 and aimed to investigate the link between patient outcomes, treatment process and programme structure in four treatment types;
  - Methadone maintenance
  - Short-term residential
  - Long-term residential (therapeutic communities)
  - Out-patient drug-free treatment

  Data were collected at treatment intake from over 10,000 clients attending 96 treatment programmes in eleven cities in the US between 1991 and 1993. Data were collected at 1 month after treatment admission and again at three and six months. Follow-up interviews were carried out on a stratified sample of approximately 3,000 clients twelve months *after treatment termination*. An extended follow-up gathered data on clients four years post-treatment.

[3] http://www.datos.org/background.html#TOPS
[4] http/www.datos.org

Clients treated in all four modality studies in DATOS showed large and significant improvements during one year follow-up. Overall, major outcome indicators for drug use, illegal activities, and psychological distress were each reduced by an average of 50%. However, there were notable distinctions between clients admitted to different types of treatment, as well as in the length of time they remained in treatment. There were further variations between programmes, even among those of the same general type. At five-year follow-up, slightly higher rates of cocaine use were reported; 25% compared with 21% reported at one-year follow-up. Note the difference in the DATOS study design compared with the ROSIE study.

- **NTORS** (National Treatment Outcome Research Study[5]). This UK study commenced in 1995 when 1,075 individuals from 54 treatment programmes throughout England were recruited. Treatment outcomes were sought from the following modalities;
  - Specialist in-patient treatments
  - Residential programmes
  - Methadone maintenance
  - Methadone reduction programmes

  Follow-up data were collected at one year from 72% of the baseline population (n=769). Additional waves of interviews were also carried out on a sub-sample of participants at 2-3 years and 4-5 years after treatment intake.

  At one year follow-up, NTORS reported a substantial reduction in heroin and cocaine use. Abstinence rates for opiates (heroin and non-prescribed methadone) more than doubled. Among individuals who reported using drugs at follow-up, there were reductions in both the quantity and frequency of use. Although there were reductions in alcohol use at follow-up, many participants remained heavy drinkers. In addition, NTORS reported a significant reduction in criminal activity at 1-year follow-up and a number of improvements in both physical and psychological health were reported. As in other outcome studies, NTORS results show that there were substantial inter-agency variation in outcomes. At present, a new study entitled Drug Treatment Outcome Research Study (DTORS) is underway in England to update the results of the original NTORS.

In addition to the outcome study outlined above, the Drug Outcome Research in Scotland (DORIS[6]) study is ongoing, as is the Australian Treatment Outcome Study (ATOS[7]). The main outcome measures across all the aforementioned studies are drug using behaviour (including drug type, frequency and quantity of use), health (physical and psychological), social functioning (employment, accommodation and crime) and harm (injecting-related risk and overdose). Generally, these studies have found substantial reductions in illegal drug use and improved outcomes for injecting risk behaviour. However, alcohol outcomes were often poor with many individuals continuing to, or starting to, drink heavily. In addition, reductions in levels of crime were also found providing substantial and immediate cost savings for society. Time in treatment and treatment completion were also found to be associated with better treatment outcomes.

[5] http://www.dtors.org.uk/NTORS.aspx
[6] http://www.gla.ac.uk/drugmisuse/DORIS.html
[7] http://www.turningpoint.org.au/research/si_research_atos_h.htm

1.3 Project Aims Overview

The ROSIE study sought to recruit *opiate* users on entry into one of three index treatments; methadone, detoxification and abstinence-based programmes. In addition, a sub-sample of individuals was recruited from needle-exchange. Participants were interviewed at treatment intake, or as soon as possible thereafter, and at two subsequent six monthly intervals. The project was subsequently extended to follow up clients thirty six months post treatment intake. The original aims of the study were:

- To undertake the first national, prospective, longitudinal opiate treatment outcome study;
- To describe the characteristics of people seeking treatment for their opiate use;
- To evaluate the effectiveness of different kinds of drug treatments and interventions currently available to opiate users in Ireland. The study examines treatment outcomes at six, twelve and thirty six months after commencing index treatment;
- To provide an economic cost-estimate for the problems associated with drug use among the cohort and;
- To identify and measure key treatment processes and assess their impact on treatment outcomes.

In dealing with the second aim, the current report describes the baseline characteristics of individuals seeking treatment for their drug use in Ireland. More details on the project aims, key hypotheses, outcome measures and study limitations are provided in Chapter 2.

CHAPTER 2: METHODOLOGY

2.1 Introduction

According to the World Health Organisation (WHO), the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) and the United Nations Drug Control Program (UNDCP), the ROSIE study may be described in summary as a naturalistic, observational, treatment outcome evaluation study. In naturalistic or observational studies clients are assessed on a set of measures at several points in time usually before, during and after they complete a treatment programme of interest. WHO (2000[8]) states that these studies are useful for the study of treatment systems where clients engage in multiple treatments of varying intensities and duration.

Outcome evaluations look at whether clients of a treatment service or system have changed over time and how much of this change can be attributed to the care received. In the past, most outcome studies of people treated for substance use problems tended to use post-treatment abstinence from these substances as a primary indicator of treatment success. However, recent studies have focused more on patterns and levels of post-treatment substance use while also considering post-treatment functioning in other life areas. Three other problem domains usually assessed are health risk behaviours, health problems and various aspects of personal/social functioning, including employment, family and other personal relationship problems and criminal behaviour.

The Drug Abuse Treatment Outcome Study (DATOS) (http://www.datos.org/) in the USA, the National Treatment Outcome Study (NTORS) (http://www.dtors.org.uk/NTORS.aspx) in the UK, The Drug Outcome Research in Scotland (DORIS) (http://www.gla.ac.uk/drugmisuse/DORIS.html) and the Australian Treatment Outcome Study (ATOS) (http://www.turningpoint.org.au/research/si_research_atos_h.htm) are all examples of naturalistic, treatment outcome evaluation studies.

2.2 Design

2.2.1 Design Objectives

The primary aim of this study was to evaluate opiate treatment effectiveness. The aim was not to have a sample large enough to compare across a range of treatment modalities or across a range of treatment settings. Rather the study was designed to describe the nature of treated opiate use in Ireland across modalities that reflect the delivery of care in Ireland. More specifically, the objectives were:

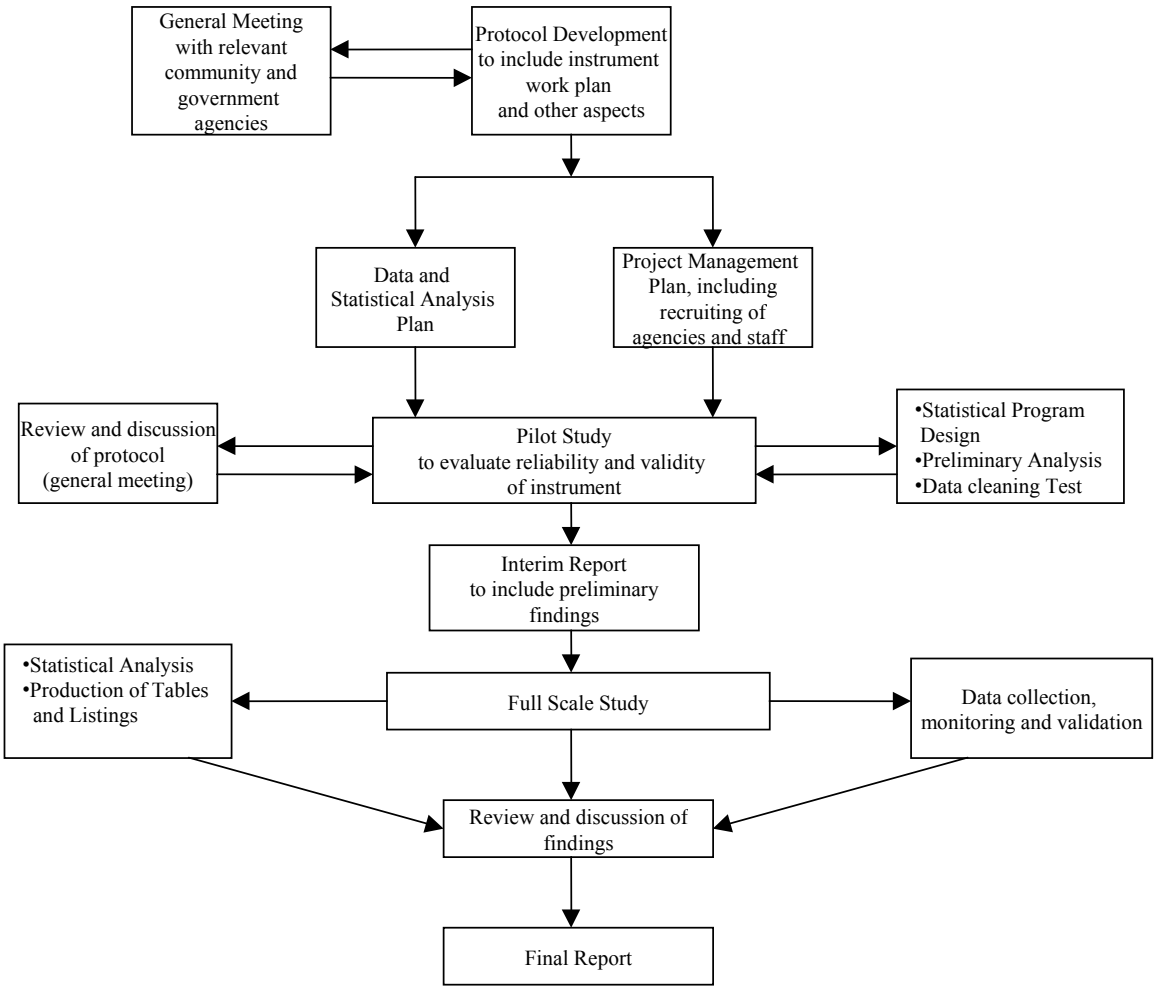
1. To develop a research model, instrument and study based on the National Treatment Outcome Study (NTORS) (http://www.dtors.org.uk/NTORS.aspx) and the Maudsley Addiction Profile Questionnaire[9].
2. To define, derive and measure a set of demographic and drug using life history measures at national level for opiate users.
3. To define, derive and measure a set of treatment outcome measures for opiate users.
4. To present findings in order to highlight current opiate treatment outcomes.
5. To compare findings at international level.

[8] Farrell M., Marsden J., Ogborne A., Rush B. International guidelines for the evaluation of treatment services and systems for psychoactive substance use disorders 2000: WHO, UNDCP & EMCDDA.
[9] Marsden J, Gossop M, Stewart D, Best D, *et al*. The Maudsley Addiction Profile (MAP): A brief instrument for assessing treatment outcome. *Addiction* 1998: 93:12:1857-1868.

2.2.2 Design Overview

In order to realise the study aims (as set out on page 3), the design of the ROSIE study is longitudinal and prospective in nature. It is a cohort study comparing within treatment effectiveness in different treatment modalities in a range of treatment settings. Pre-treatment/post-treatment comparisons were made without a control group. From a statistical perspective, it would have been desirable to compare treatment group versus control group. However, due to ethical considerations, the control group was omitted, as their inclusion would have meant that the opiate users within this group would not have or only belatedly received treatment. In order to measure improvements within a treated group, changes from baseline figures were analysed. Accordingly with the ROSIE study, opiate users were recruited and interviewed within one month of a new treatment episode. Participants were then interviewed on two subsequent occasions at 6 months and at twelve months following recruitment. Following the twelve month interviews, the study was extended and participants were interviewed again at thirty six months post-intake. An overview of the study execution process is given in **Figure 2.1**.

Figure 2.1 Overview of the study execution process.



2.2.3 Limitations

The main limitation of the ROSIE study and similar observational study designs is the inability to definitively conclude any observed changes were brought about as a result of the treatment of interest. This is because they do not adopt a randomised control study design. Such a design randomly allocates participants to either a control or treatment group. Any changes observed within the treatment group can then be attributed to the treatment they received with observational studies on opiate use. It is deemed unethical to deny a participant treatment and therefore the control group must be omitted.

A further limitation of this type of study design is that opiate users were recruited within the first month of a new treatment episode and as such it could be argued that the baseline data does not truly reflect the opiate users pre-treatment behaviour. In order to control for this bias, it is usual in observational studies to define and measure the recruited opiate users behaviour in the three months prior to the intake interview. New research suggests that the greatest changes occur within the first month of treatment (private communication, Dr Michael Farrell, Kings College, London)

In addition, as opiate users were grouped and assessed initially according to their respective baseline modality, there may exist limitations in the interpretation of the 1 year data. The longitudinal nature of the study does not account for various treatment pathways which the opiate user may have undertaken during this period and consequently the basic descriptive and inferential outcome tables may not be reflective of this. For example, an opiate user would normally progress from detox modality to abstinence modality. However, as the treatment pathway of each opiate user was collected the possible effect of a change of modality on outcome may be statistically modeled and reported on in a more detailed technical report.

In spite of the limitations of observational studies, these studies can and are used to show if the desired client outcome is achieved and to identify which clients change most or least. Observational studies can also show quite successfully how outcomes vary with the amount or type of treatment received. These types of studies are recommended by the EMCDDA, the WHO (http://www.who.int/en/) and the UNDCP (http://www.unodc.org/unodc/undcp.html) but they have been excluded from Cochrane reviews on the basis of the lack of a control group (http://www.cochrane.org/index.htm).

2.3 Treatment Effectiveness

2.3.1 Operational Research Questions

The key operational question of the study was to assess if opiate users are better off after a treatment episode than before that episode. More specifically we asked:

1. Have opiate users' drug use reduced after a treatment episode?
2. Have opiate users' physical and mental health improved after a treatment episode?
3. Have opiate users' crime levels reduced after a treatment episode?
4. Have opiate users' opiate related harm reduced after a treatment episode?
5. Have opiate users' living, social and family circumstances improved after a treatment episode?

2.3.2 Measurable Outcome Criteria

In order to answer these questions and realise the study aims, a range of measurable outcome criteria were defined. These criteria are detailed in the original ROSIE Statistical Analysis Plan (SAP), submitted to the NACD. As the study evolved, minor changes were made in the implementation of the plan but the core plan remained unchanged. The main outcome measures were variables on substance use, health risk behaviour, physical and mental health, criminal activity and personal and social functioning (see Section 2.6.3. for details).

2.4 Treatment

2.4.1 Definition of Index Treatments

ROSIE participants were recruited within residential and out-patient community settings. Three residential or in-patient settings were included and these were hospitals, rehabilitation programmes and prisons. Three out-patient settings were selected and these were local community based clinic services, health board out-patient clinics and General Practitioners (GP's). Four modalities of treatment intervention were selected on the basis that these modalities reflected the treatment intervention available at a national level. These were methadone (maintenance and reduction), structured detoxification, abstinence programmes, counselling and needle exchange.

The provision of methadone, a long-acting opiate agonist, under medical supervision, is the main pharmacological substitution intervention for opiate users in Ireland. Initially, a low commencing dose (usually between 10-40 mls) is prescribed, aimed at achieving a level of comfort while reducing the likelihood of overdose. By the end of six weeks of treatment, the individual is usually stabilised on an appropriate therapeutic dose. Methadone maintenance is a long-term treatment option of no fixed duration, usually forming part of a wider process of assisting an individual to reduce various forms of drug-related-harm and to address social, legal and financial problems until the person is ready and willing to withdraw from the drug substitution therapy. There are different models of maintenance prescribing, ranging from highly structured regimes to low-threshold programmes.

The methadone modality within ROSIE includes methadone maintenance and methadone reduction. At the start of the study when treatment centres were contacted, it was observed that many of the clinics, while aspiring to offer methadone reduction, there were in fact offering mostly methadone maintenance. The Rosie Advisory Group (RAG) believed that by including the two as one modality we would capture this dichotomy from the client and provider perspective.

Structured detoxification is a process whereby individuals are systematically and safely withdrawn from opiates, under medical supervision. The most common method of opiate detoxification in Ireland is to use methadone and slowly taper the individual down from the usual dose to zero over a period of time. Structured detoxification programmes are provided in both in-patient and out-patient facilities and can vary in duration from approximately 4-12 weeks.

ROSIE recruited where detoxification was part of a treatment programme over a specific period of time up to a maximum of twelve weeks. This differentiates from the 10-15 day detoxification that occurs in the prison context, for example, without the additional supports, which is not aimed at delivering treatment but instead at managing acute withdrawal from opiates on arrival in prison.

Within ROSIE, the abstinence modality is defined as being any structured programme which required individuals to be drug-free (including free from any pharmacological intervention) in order to participate in, and remain on, the programme. Such programmes provide intensive psychological support and a structured programme of daily activities which participants are required to attend. Treatment can occur in an in-patient (often referred to as residential rehabilitation) or an out-patient (i.e. structured drug-free day programmes) setting. In-patient abstinence-based treatment programmes can differ markedly in their underlying philosophy, programme structure, intensity and duration. Programmes may be either short-term (usually between four and twelve weeks) or long-term (usually between three and twelve months). ROSIE study participants were recruited from the three main types of residential rehabilitation programmes identified in the international literature; 12-step/Minnesota model programmes, Christian houses and a therapeutic community.

Finally, some clients were recruited within needle exchange services. While needle exchange is not a treatment modality, it was desirable to capture the journey of those coming into needle exchange and their progress through the services.

With regard to counselling for opiate users, there was a view that counselling was really a component of treatment and therefore not valuable to consider as a treatment modality. However, given that most of the opiate services are in Dublin and that there are a growing numbers of opiate users outside of Dublin, it was felt to be worth considering this aspect of counselling. Addiction counsellors are the backbone of most drug services in the regional health boards and as such counselling is the treatment modality for them and would be included as a separate modality. Subsequently during recruitment it was found that very few opiate users were offered counselling only, therefore, the RAG took the decision to omit this modality. This decision reflected changes in the delivery of opiate treatment in Ireland with the expansion of methadone places as part of the NDS.

2.4.2 Site Selection

All agencies providing treatment to opiate users in Ireland were contacted and informed of the ROSIE study. Information was sought from services regarding the nature of the organisation, and the range of services provided. Thereafter, all methadone clinics within the Greater Dublin Area, in Ireland which had the capacity to facilitate 'new treatment intakes' over the recruitment period, were included in the site selection process. Study recruitment was eventually carried out in nineteen such clinics. Many clinics outside Dublin were full to capacity and unable to facilitate new clients over the study period. Nevertheless, study recruitment was undertaken in seven 'out of Dublin' clinics. In addition, all GP's prescribing under the Methadone Protocol were informed of the research, and their assistance in study recruitment requested. General Practitioners contacted via the Central Treatment List and followed up with phone calls and letters resulted in thirty GP's participating in the study and assisting the study with access to clients for study recruitment. All residential drug treatment facilities in the country that worked with an opiate using clientele were included in the selection process. Interviews were undertaken in nine such facilities. Finally, baseline study recruitment was carried out in the three main in-patient facilities in the country and in one out-patient facility.

2.4.3 Coverage

ROSIE was not designed as a randomised control trial with specific numbers of clients allocated to a treated or control group within certain geographical locations. Rather, the study reflects the availability and distribution of treatment service provision nationally. Ideally, it would be preferable if all health regions were included in some capacity. However, not all treatment modalities are available within all regions. Therefore, we included regions where opiate services were available. Consequently, ROSIE reflects the availability and distribution

of existing services nationally. Hence, we may say national coverage is not compromised in the study. Rather, the study reflects or models national treatment service provision in 2003, the time of recruitment.

Recruitment to the ROSIE study began in March 2003 with enrolment of 20 clients to the pilot study. The majority of the 404 clients were however recruited between September 2003 and July 2004. All clients were defined as a new treatment episode (see Section 2.5.1). At national level, a database on all treatment episodes in a calendar year is maintained by the National Drug Treatment Reporting System (NDTRS) at ADRU, the Alcohol and Drug Research Unit of the Health Research Board, Dublin, Ireland. Compliance with the NDTRS requires that one form be completed for each person who receives treatment for problematic drug use at each treatment centre in a calendar year. Service providers at drug treatment centres throughout Ireland collect data on each individual treated for drug misuse. At national level, the staff of the NDTRS compiles anonymous, aggregated data.

In order to provide some information on the coverage of the treated population by the ROSIE study, we compare, where possible, the ROSIE recruitment figures with those of the NDTRS for 2003. The NDTRS reports that there were 4,900 cases that commenced or recommenced treatment for problem drug use in 2003 giving ROSIE a national coverage rate of approximately 8.2% of all new treatments. In addition to the 4,900 NDTRS clients, 1,265 commenced or recommenced methadone maintenance. Within the ROSIE study, 215 clients were recruited within the methadone modality giving the study a coverage rate of approximately 17% of all new methadone treatments at national level. The NDTRS also reports that of the 4,900 clients treated nationally, 682 commenced a detoxification programme. Within the ROSIE study, 81 clients were recruited from the detoxification modality, giving this modality a national coverage rate of approximately 12%. However, when computing these rates it must be noted that NDTRS figures are based on a calendar year and data for 2004 is at present unavailable (private communication, J. Long, NDTRS). Given this limitation, the data provides some information on the scale of the ROSIE study. The coverage rates within the ROSIE study are well in excess of other national treatment outcome studies where coverage rates are seldom published but are estimated to be in single figures and below 5% (*private communication, N. McKeganey, DORIS, Drug Research Outcome Study in Scotland*).

2.5 Subjects

2.5.1 Case Definition and Inclusion Criteria

In terms of client eligibility, only those opiate users defined as presenting for a 'new treatment episode' were recruited to the study, where ‘new treatment episode’ was defined as incorporating those who had never presented for treatment before, those who had presented for this type treatment previously but were not now in receipt of this type of treatment within the last 6 months and those who had presented for other types of treatment previously. Following detailed discussions with the NACD treatment subcommittee and the RAG, it was decided that ‘new treatment episode’ clients were a pragmatic choice of subject given the possible lack of availability of ‘first treatment’ clients. In addition, if opiate users who were currently in treatment had been chosen, the comparability of baseline data between clients would have been compromised. However, this choice of client definition as opposed to clients in treatment did impose the added limitation that such clients could, in some circumstances, be difficult to find and recruit due to a possible lack of availability of treatment places.

Inclusion criteria for clients of the study included (a) to be over 18 years of age, (b) starting a new treatment episode as defined above, (c) to have used opiates, (d) to be prepared to consent to the tracking/follow-up procedures and (e) to be prepared to provide a range of

locator information. Involvement in the study was voluntary and it was made clear to potential participants that refusal to participate would in no way affect the treatment received. Participants were told that they could, at anytime, withdraw from the study if they so wished. Confidentiality was ensured and individuals were informed that all answers and comments provided would remain anonymous. The baseline interview took approximately one hour, interviews took place in a variety of settings (treatment services, prisons, café's, participants' homes) and participants were not paid or financially reimbursed in any way for completing a baseline interview. Trained ROSIE fieldworkers carried out all baseline interviews.

2.5.2 Recruitment and Interview

At the study planning stage, it was initially anticipated that 600 opiate users new to treatment would be recruited. In order to ensure adequate sample sizes within the various modalities a basic power analysis was conducted and as a result, it was decided that the minimum sample size within all settings and modalities would be 50 clients, with the exception of needle exchange and the prison setting which would have 25 clients each. Further details of this power analysis and decisions relating to sample sizes are available within the original study protocol 'The project objectives document' from the NACD. The distributions chosen did not reflect the exact percentage distribution of treatment setting and modality at national or local level, rather the planned distributions were chosen to broadly reflect the known distribution of treatment settings and modalities, while providing adequate numbers and sufficient sample size to perform comparisons within modalities. In terms of age and gender profiles of recruited clients, it was expected that a ratio of 3:1 males to females would be recruited to the study, i.e one quarter of the clients recruited would be female. The male to female ratio recruited to the study would then reflect the gender ratio observed in treatment.

2.5.3 Sample Achieved

An estimated 60 different services provided by approximately 43 separate agencies and/or organisations participated in the ROSIE study baseline recruitment. These agencies provide treatment/rehabilitation services to opiate users in both in-patient and out-patient settings. Agencies across all former health board areas (Eastern Regional Health Authority, the South-Eastern, Mid-Western, Western, Midlands and North-Eastern Health Boards) were included with the exception of the Southern and North-Western Health Board areas, where participants residing in these areas were interviewed.

Table 2.1 Baseline Study Recruitment by Modality and Treatment Setting

Modality	Setting		Numbers	
Structured Detoxification	In-patient	Hospital	33	**81**
		Prison	14	
		Community	12	
	Out-patient	Health Board*	22	
Abstinence Based programmes	In-patient		70	**82**
	Out-patient		12	
Methadone Programmes	Out-patient	G.P's	54	**215**
		Community	48	
		Health Board*	108	
	Prison		5	
Needle-Exchange	Out-patient	Community	17	**26**
		Health Board*	9	
Total				404

*A new agency, the Health Service Executive (HSE), as part of the Irish Government's Health Service Reform Programme, assumed responsibility for the health service in the Republic of Ireland on January 1, 2005. As part of the Irish government's Health Service Reform Programme, the functions of the former Health Boards have transferred to the HSE.

2.6 Research Instruments

The ROSIE baseline research instrument was adapted from the Maudsley Addiction Profile (MAP) and the DORIS instrument. The MAP is a brief, interviewer administered questionnaire for treatment outcome research applications that measures problems in the four domains of substance use, health risk behaviour, physical and psychological health and personal/social functioning (Marsden et al, 1998). The DORIS instrument is an extension of the MAP and includes extra quantitative and qualitative components (Private communication, Neil McKeganey and Gordon Hay, Centre for Drug Misuse Research, University of Glasgow, 2002).

2.6.1 Selection and Development

The MAP and DORIS instruments were chosen for use with the ROSIE study. Every question within the DORIS baseline instrument was scrutinised and edited by the senior project management team to ensure its suitability and rationale for the ROSIE projects aims and objectives. The phrasing and time frame of each question was checked to ensure the question captured the required data from the correct time reference. Prior to the execution of the full ROSIE survey, the newly developed ROSIE instrument was approved by the RAG and was piloted in a range of settings.

2.6.2 Outline of Contents

The baseline survey instrument contained several sections. These included

- Locator Information: To facilitate follow-ups at the six and twelve month stages, the following information was sought from participants at baseline interview; full-name, nicknames/street names, current address, participants' phone numbers (mobile and landline), name, address and phone number of parent (or other family member), name and address of treatment referrer, name and address of GP, name and address of social worker, name and address of key worker/drug worker who would be able to contact

participant.

- Demographic Characteristics: Demographic variables included age, gender, country of birth, nationality, ethnic origins, age left school, highest level of educational qualifications, current employment status, usual occupation over previous six months, employment status over last three months, ways participants financially supported themselves over preceding three months, current accommodation, accommodation over previous three months, any housing problems, who they lived with, any problems in the area where they resided, marital status, contact/conflict with family/friends, whether they had children under 18 years and number of children in their care.

- The Index Treatment: Participants were asked a number of questions in relation to their index treatment including type of index treatment participants were receiving, type of treatment they wanted, reasons for coming to index treatment, duration of index treatment, length of time attending index treatment at the time of baseline interview, time expected to be in index treatment, whether they were on a waiting list prior to commencing index treatment and how long they spent on a waiting list.

- Drug Treatment History: Participants were asked whether they ever had previous treatment for their drug and/or alcohol use, what this treatment was and at what age they had the treatment. In addition, participants were asked whether they had ever been on a methadone programme (age first time on methadone, number of episodes, treatment setting and longest period on methadone) had ever had a supervised detoxification (age first time, in-patient/out-patient setting, how many detoxification episodes, did participants complete detoxification programme) had ever been in residential drug treatment (age first time, how many times, did participants complete treatment, how long was the programme) had ever had one-to-one counselling (age first time, how many counsellors have participants seen, setting, longest period of regular attendance) had ever been to Narcotics Anonymous (age first time) and had ever been to Alcoholics Anonymous (age first time). Participants were also asked whether they had commenced any form of treatment, excluding their index treatment, in the six months prior to interview.

- Drug Use: Participants were asked to provide a detailed drug using history. To this end, participants were asked whether they had ever used a list of twelve substances (heroin, 'street' methadone, other opiates, benzodiazepines, cocaine, crack, amphetamines, ecstasy, LSD, cannabis, tobacco and alcohol), age of first use, whether they ever considered their use a problem, and age they first thought use was a problem. In addition, for all twelve substances, participants were asked to report on their frequency of use over the preceding three months, the typical amount used in a day and the usual route of administration. Participants were asked to identify what drug they would consider their 'main' drug over the previous three months, and what drug has caused them the most problems in that time period. Participants were also asked about their drug use in the previous three days and about their prescribed medication over the previous four weeks (including frequency and dose). This section also contained questions regarding lifetime history of non-fatal overdose and frequency of overdose in the previous three months.

- Injecting-Related Health: Participants were asked about their drug injecting history (ever injected, age first injected, frequency of injecting over the previous three months, and frequency of injecting on an average injecting day). Participants were also asked to identify all drugs they had injected over the preceding three months. This section also examined, in detail, the injecting risk behaviour of the participants, by asking if participants had ever engaged in a range of risk behaviours (used needle/syringe that had been used by somebody else, passed on their used injecting equipment to others, re-used own injecting equipment, used filter/spoon/flush water used by somebody else) and about the frequency of such behaviour over the preceding three months. Finally, participants were asked about needle-exchange attendance (age first

attended and frequency of attendance over last six months).

- Physical & Mental Health: Participants were asked to rate their general health. In addition, individuals were presented with a 10-item physical health and a 10-item mental health assessment, and asked to report the frequency with which they suffered each symptom over the preceding three months. Additional questions in the health section were concerned with suicidal ideation, suicide attempts and sleeping and eating patterns. Participants were also asked an open-ended question about any specific health problems they may have had over the preceding month.

- Contact with Family, Social Care and Other Services: Participants were asked about the frequency of contact and conflict with family members, attendance at a range of social care services (stayed over night in hospital, hospital accident and emergency departments, GP, social services, employment/training services, housing services and church/religious groups) over two time periods, in the twelve months prior to the baseline interview and in the preceding three months. Participants were also asked whether they ever had HIV, HCV and HBV tests, when their last test was taken and what the outcomes of the tests were.

- Criminal Activity: Participants were asked whether they had ever committed a list of offences (including drug dealing, acquisitive crime, assault, fraud/forgery/deception, soliciting and criminal damage) and how frequently they committed these crimes in the preceding three months. Participants also were asked if they had ever been arrested for any of the aforementioned crimes and frequency of arrest over the preceding three months. Participants were asked whether they had a prison history, the total length of time they had spent in custody, if they had any legal issues at the time of baseline interview, if they had any contact with the criminal justice system in the preceding three months, and if they had been the victim of a crime in the same time period.

2.6.3 Key Outcome Measures

The key outcome measures from the baseline instrument used in the follow up interview and outcome analysis were

a) Substance use

1) Frequency of use of opiate drugs (including heroin and similar).
2) Intensity of daily consumption of opiate drugs.
3) Number of days of use in the last three months.
4) Amount used on a typical day.
5) Frequency of use of all other drugs (non opiate and including alcohol).
6) Intensity/quantity of daily consumption of all secondary drugs.
7) For each other drugs (non opiate and including alcohol):
    I. Number of days of use in the last three months.
    II. Amount used on a typical day.

b) Risk behaviour

1) Frequency of needle sharing.
2) Daily frequency of injection.
3) Number of days injected in the last three months.
4) Typical number of times injected in one day.
5) Number of times used or passed a used needle in the past month.
6) Frequency of unsafe injecting behaviour (excluding needle sharing).
7) Frequency of unsafe sexual behaviour.
8) Number of days used someone else's filter/spoon/flush water in the last month.
9) Frequency of unprotected sex in the last three months.
10) Number of accidental overdoses in the past three months.

c) Physical and psychological health

1) Frequency of physical and psychological health symptoms (including, anxiety, depression and suicidal behaviour).
2) Number of times attempted suicide in the past three months.
3) Number of days experienced physical health symptoms in the past three months.
4) Number of days experienced psychological health symptoms in the past three months.
5) Number of times attempted suicide in the last six months.
6) Number of days in treatment (including hospital, accident and emergency, GP and community treatment) for a medical condition.

d) Personal/social functioning

1) Frequency of criminal behaviour (including selling drugs, shoplifting and others).
2) Number of times crime committed in the last three months.
3) Number of weeks of non-criminal employment in the past three months.
4) Contact with dependent, partner, family/relatives and friends.
5) Type of relationship with your children.
6) Number of days conflict with partner (if any) in the last three months.
7) Number of days conflict with relatives in the last three months.
8) Number of days conflict with friends in the last three months.

2.7 Data Processing and Analysis

2.7.1 Ethics, Confidentiality and Security

The ROSIE study received ethical approval from the National University of Ireland Maynooth. In addition, data protection procedures for the ROSIE study were developed according to the Data Protection Act. NUI Maynooth is a fully registered organization with the Data Protection Commissioner of Ireland and approval of compliance to their rules were sought and gained.

Information was given and an Informed Consent Form was obtained from each client at the beginning of the interview. The interviewer explained the meaning, purpose and requirements of the study to the client before starting the interview and provided full contact details for the ROSIE Project.

Name and contact details of each client were recorded at first visit on a separate sheet. The list of names and contact details of all clients were kept separate from the client files and access to such a list and combining client numbers was restricted to the Project Manager and project administrator. One hard copy of this list was stored in the main project office in NUI Maynooth.

Hard copies of client files were stored in the main project office at NUI Maynooth. Access to this office and to the computers allocated to the project was permitted only to authorized personnel. The electronic copy of the client file was stored on a secure server connected by internal network to the relevant terminals. Access to the network was password protected.
A backup system was in place involving regular back-up of the data. All details of the original data management plan for the ROSIE study are with the NACD.

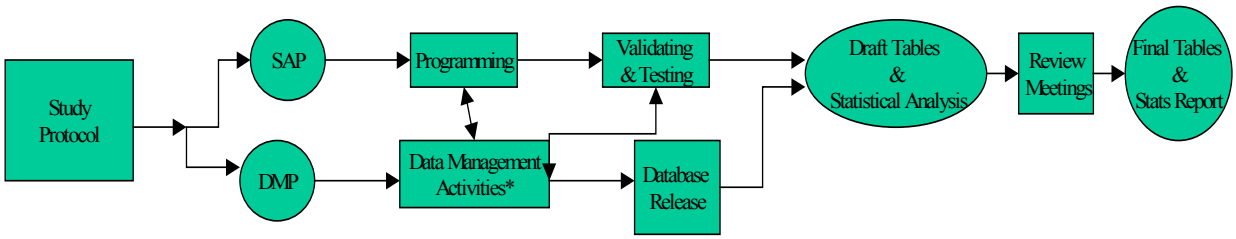
2.7.2 Data Management

A written and electronic file for every client participating in the study was kept. This file contains the interviewing questionnaire and any available demographic and medical information of a client. A randomized list of client numbers was generated and a unique random number was assigned to each client file. All documents contained a client number and a treatment site number and were filed by client number. The Project Manager or administrator ensured that the confidential details of each client were removed from the file and stored safely in the project office and that the questionnaire and any other documents contained no mention of any client names.

Data collectors entered the information required by the protocol in the printed questionnaire during the interview with the client. Interviews were held at treatment sites. If such locations were not suitable, an agreement was made between the client and the data collector for a more suitable meeting location. Details of interviewing time and location were recorded on the appropriate forms and held in the main project office. Interviews would last approximately one hour.

After completion of the interviews, the forms were then forwarded to the main project office where the appropriate research assistants checked accuracy and completeness. Only the original copy of the form was available at all times. No copies were ever made of any part of the form, once completed. Data from the forms were entered into the study database using single entry with verification. Text items (for example, comments) were entered and checked manually against the original form. A codebook was available, which contained all coding procedures for data entry. The data management process flowchart is displayed in Figure 2.2.

Figure 2.2 The data management process flowchart



The information entered into the database was systematically checked by the data management staff (data collectors, research assistants and Project Manager) using the following validation system.

- The number of clients in the datasets was to match the number of unique interviews completed or partially completed.
- Acceptable ranges of values were to be set for appropriate variables and regular checks performed.
- The number of variables and sub-variables entered per client was to match the number of questions and sub-questions completed by the same client during interview.

If errors occurred after validation, a query form was entered and the Project Manager or Data Manager signed details of the error(s) and correction(s).

2.7.3 Data Quality Audit

Quality control procedures were put in place to check the following:

- The number of clients in the datasets was to match the number of unique interviews completed
- Acceptable ranges of values were to be set for appropriate variables
- Appropriate coding of medical and non-medical terms, consistent units of measures and interpretation of verbatim data were to be entered and regularly checked according to the codebook.
- The number of variables and sub-variables entered per client was to match the number of questions and sub-questions completed by the same client during interview.

To check the completeness and correctness of the data, tables and listings were run for a set of variables. The methods were

Population size:

- It was crucial to ensure all data had been entered for all clients. Each client was to have one record and one client number. Client numbers were unique. A frequency distribution of patient numbers was to be derived and presented on a table to confirm that there no clients had the same ID number.
- The number of questionnaires completed or partially completed and returned to the office was to match the number of records entered in the database.
- The number of patients in the derived datasets was to match the number of unique interviews completed for that derived section of the questionnaire.

Missing values:

- Missing values were to be coded with a uniquely identifying number that could not be confused with any other value in the database. The interpretation of missing values was to follow the procedures outlined in the codebook and a clear representation of missing/not valid/not appropriate values were to be presented in all the tables.
- The frequency of missing values was to be derived and presented on a table for some key variables. Abnormalities in the frequency distribution were to be reviewed and presented by the Project Manager in the monthly reports.

Ranges and units of measurement:

- Acceptable ranges were to be set for appropriate variables (for example, age, visit date (applicable to follow-up), dosage for medication, amount of illegal drug taken).
- Units of measurement were to be coded uniformly (for example, weight in fraction/multiple of grams, length of time in fraction/multiple of months and so on).

A quality assurance audit was run on a regular basis following these procedures.

2.7.4 Data Analysis

The current report focuses on baseline data. Firstly, data is presented for the study population as a whole, and, secondly, for each modality within the appendices. Descriptive statistics throughout the results section will include proportion, means and standard deviations for various baseline characteristics. When the data is highly skewed, medians are presented. All analysis was conducted using SPSS for Windows, Version 11.0 or 12.0. However, the key question of the ROSIE study is 'Is treatment effective?' Hence, the null hypothesis of the study states that treatment has no effect on outcomes. It is the aim of the study to make a decision on whether or not to reject this null hypothesis, hence providing an answer to the key question. The outcome results described within this report provide the first part of the data required to answer this question. In addition, when answering this question cases with missing values were excluded.

2.8 Conclusion

The study design was developed from a consultative, evolving process. An initial outline was presented within the original tender brief. This brief was developed further within the tender submission. Following the awarding of the tender, a Research Advisory Group (RAG) was consulted on an ongoing basis regarding details of the study design. This consultative process culminated in the writing of the study protocol by the Principal Investigator and the formal acceptance of this protocol by the RAG and the NACD. As the study progressed, any deviations from this protocol were presented to the RAG for consideration, advice and approval. This process ensured that all interested stakeholders had an input into the design and execution of the study.

Glossary of Statistical Terms [10]

Mean – the average of a collection of values calculated by adding up all the values and dividing by the total number of observations.

Median – the value that when the observations are arranged in ascending or descending order of magnitude they fall into two equal groups, the middle value is the median. Thus it can be said that 50% of the population under study fall above or below a mid-point value.

Standard Deviation – a measure of the average dispersion of values around their central value. It shows how closely the individual values in the distribution are dispersed around the central value. The greater the spread of values in a particular distribution, the greater the value of the standard deviation.

Normal distribution - a continuous probability distribution that is bell shaped and symmetric, with different distributions distinguished by their mean and standard deviation.

Skewed medians - A distribution is skewed if the right side of the histogram (containing the half of the observations with larger values) extends much farther out than the left or if the left side of the histogram extends much farther out than the right.

Descriptive statistics - Methods for organizing and summarizing statistics.

Statistical significance- An observed effect so large that it would rarely occur by chance is called statistically significant.

T-tests-
One sample: Suppose that a simple random sample of size n is drawn from a normal population with mean μ and standard deviation σ. Then the one-sample statistic $t = \frac{\bar{x} - \mu}{s/\sqrt{n}}$, where s is the sample standard deviation and $\bar{x}$ is the sample mean, has the t-distribution with n-1 degrees of freedom.

Two sample: Suppose that a simple random sample of size n_1 is drawn from a normal population with unknown mean μ_1 and that an independent simple random sample of size n_2 is drawn from another normal population with unknown mean μ_2. To test the hypothesis $\mu_1=\mu_2$, compute the two sample t-statistic $t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{s_1^2/n_1 + s_2^2/n_2}}$ and use critical values for the t-distribution, where the degrees of freedom are the minimum of n_1-1 and n_2-1.

Chi square- a measure of how far the observed counts in a two-way table are from the expected counts.

ANOVA (analysis of variance) - tests whether several populations have the same mean by comparing how far apart the sample means are with how much variation there is within the samples.

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[10] Daly, L.E., Bourke, G.J., McGilvray, J. 1992 4th Ed . Interpretation and Uses of Medical Statistics. Oxford. ISBN 0-632-02911-0

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CHAPTER 3: RESULTS FOR THE STUDY POPULATION AT BASELINE

Background to Treatment

3. 1 Index Treatment

Within this chapter and the appendices, the results are first provided on the lifetime experiences of the cohort followed by results of outcome measures at baseline. The order of the results is in line with the measures discussed in Chapter Two, Section 2.6.3. It is these outcome measures that will be followed up and reported on at six, twelve and thirty six months and will be used to evaluate treatment within modality. **Table 3.1(a)** shows that one quarter of the cohort were female (n=102). This male to female gender ratio of 3:1 is reflective of the overall treatment population. The mean age for study participants was 27.9 years (median 27) for male participants and 27.6 years (median 25.5) for female participants.

Baseline study recruitment was carried out across the three main treatment options available to opiate users in Ireland; methadone programmes, structured detoxification programmes and abstinence-based treatment programmes. In addition, a sample of individuals was recruited within needle-exchanges throughout the city. Chapter two provides details and definitions for these modalities. **Table 3.1(b)** illustrates that over half the cohort of opiate users were recruited from methadone programmes, one fifth were commencing a structured detoxification programme, an additional 20% were in drug free treatment and 6% were attending needle-exchanges.

Opiate users were also recruited across a range of treatment settings. As illustrated in **Table 3.1(b)**, over one quarter of the cohort were recruited from in-patient settings including nine residential drug treatment programmes (n=70) and three detoxification programmes (n=45). Over half the cohort were recruited from out-patient settings. More specifically, four drug-free day programmes (n=12), two detoxification programmes (n=22), ten community-based clinics (n=65), sixteen health board clinics (n=117) and thirty GP's, prescribing under the methadone protocol (n=54). Finally, 5% of the cohort was recruited in a prison setting (n=19) for both the methadone and detoxification modality.

Table 3.1(a) Gender and Age of Study Population

	n	%
Gender		
Male	302	74.8
Female	102	25.2

	Mean (sd)	Median
Age		
Age of male study participants (years)	27.9(6.1)	27.0
Age of female study participants (years)	27.6(6.7)	25.5

Table 3.1(b) Treatment Modality and Setting for the Study Population

	n	%
Treatment Modality		
Methadone programmes	215	53.2
Detoxification programmes	81	20.0
Abstinence-based programmes	82	20.3
[a] Needle-exchange	26	6.4
Treatment Setting		
In-patient treatment	115	28.5
Out-patient treatment	270	66.8
Prison based treatment	19	4.7

[a] Attendance at needle exchange is not considered treatment.

Table 3.1(c) illustrates that average length of time opiate users were in their index treatment at baseline interview was 26.9 days (median 21 days). Not all respondents reported having to wait for treatment (39.3%, n=154). However, looking at the sub-sample of those who waited (60.7%, n=238), the average lengths of time participants spent waiting for entry into their index treatment was 14.7 weeks (median 6 weeks). However, the majority of participants (86%, n=338) stated that they were receiving the type of treatment they wanted, with 10% (n=41) explicitly stating they had wanted another type of treatment to that they were commencing.

Table 3.1(c) Time in Index Treatment at Baseline and Time Waiting for Treatment

	Mean (sd)	Median
[a] Time in baseline treatment (days)	26.9 (19.4)	21
[b] Length of time waiting for treatment (weeks)	14.7(21.3)	6

[a] Excluding individuals in needle-exchange and participants on methadone in prison as all were not new to index treatment.

[b] Includes only those on waiting lists for treatment.

3.2 Treatment History

Treatment history variables for the study population are provided in **Table 3.2(a).** This shows the majority of study participants (87.3%) engaged in some form of formal treatment prior to commencing their index treatment. Here, formal treatment excludes self-detoxification (in both the community and prison) and needle-exchange attendance, that is, only 12.7% of ROSIE study participants were engaging in treatment for the first time.

Table 3.2(a) Treatment History at Baseline: Previous Treatment Received

	n	%
Percentage in previous treatment		
Previous treatment received	352	87.3
No previous treatment received	51	12.7

	n	%
[a] *Previous types of formal treatment*		
One-to-one counselling	243	69.6
Prescribed methadone	236	67.4
Structured/supervised detoxification	205	59.2
Residential drug treatment	127	36.6
[b] Needle exchange	229	65.2

[a] These categories are not mutually exclusive. Percentages are for those who previously attended treatment

[b] Attendance at needle-exchange is not considered 'treatment'.

From **Table 3.2(b),** the analysis indicates that the cohort first sought formal treatment for their drug use at an average of 21 years (median 20 years). With the average age of first heroin use being 18 years, the population had been using heroin for an average of 3 years before seeking treatment for the first time. The average age participants first received methadone treatment was 22 years (median 20 years) with respondents reporting an average of two previous episodes of methadone treatment. Individuals were on average 23 years (median 22 years) when they first entered residential treatment, with respondents reporting an average of two such treatment episodes. The average age respondents first attended needle-exchange was 21 years, with 16% presented before the age of 17 years and 46% before 20 years**.** In addition, the duration of the time from first opiate use prior to first entering treatment was computed (n = 332), where relevant, and found to have a mean of 3.7 (3.9) years.

Table 3.2(b) Details of Previous Treatment

	Mean (sd)	Median
Age first sought treatment (years)	21.3 (5.5)	20
Age first attending counselling (years)	21.9 (5.6)	21
Number of counsellors	2.9 (2.8)	2
Longest period of regular attendance (months)	11.0 (14.3)	6
Age first on methadone/physeptone (years)	22.1 (5.7)	20
Number of episodes	2.2 (2.0)	2
Longest period of attendance (months)	29.4 (33.0)	24
Age first on supervised detoxification (years)	22.5 (5.2)	22
Number of episodes	2.4 (2.4)	2
Age first in residential treatment (years)	23.2 (5.1)	22
Number of episodes	2.0 (1.7)	1

Having analysed the treatment history of the cohort we look now at the lifetime experiences of the participants.

Lifetime Measures

3.3 Substance use

Table 3.3(a) illustrates that the vast majority of study participants reported lifetime use of heroin. The overwhelming majority of participants also reported lifetime use of cannabis (97%), tobacco (95%), alcohol (93%), cocaine (92%) and ecstasy (90%).

In addition, **Table 3.3(a)** illustrates that high proportions of respondents reported lifetime use of [11]benzodiazepines (87%), [12] Non-prescribed methadone (86%) and amphetamines (80%). Just under three quarters of respondents reported having ever used LSD, 64% reported having used other opiates (such as DF118 and morphine sulphate tablets) and 58% of participants reported lifetime use of crack cocaine.

Table 3.3(a) Drug Using History: Ever Used

	n	%
Drugs ever used		
Heroin	398	98.8
Cannabis	375	96.9
Tobacco	379	95.2
Alcohol	352	92.9
Cocaine	348	91.8
Ecstasy	314	90.5
[a] Benzodiazepines	324	87.1
Non-Prescribed Methadone	335	85.9
Amphetamine	278	80.3
LSD	237	72.9
Other opiates	232	64.1
Crack	212	58.4

[a] benzodiazepine use refers to both the non-prescribed use of the drug and the misuse of prescribed benzodiazepines.

Table 3.3(b) reveals that, on average, the smokers in the population first started smoking tobacco at 13 years. The average age for first use of alcohol and cannabis was 14 years. Participants reported that, on average, they first began using heroin and benzodiazepines at 18 years. The mean age participants reported first using cocaine and methadone was 20 years and the mean age of first crack cocaine use was 23 years.

[11] Throughout the document, 'benzodiazepine use' refers to both the non-prescribed use of the drug and the misuse of prescribed benzodiazepines.
[12] At baseline, individuals were asked about their non-prescribed methadone use.

Table 3.3(b) Drug Using History: Age First Used

	Mean (sd)	Median
Age first smoked tobacco (years)	13.2 (3.2)	13
Age first used alcohol (years)	13.7 (2.3)	14
Age first used cannabis (years)	14.4 (3.3)	14
Age first used LSD (years)	16.3(2.8)	16
Age first use amphetamine (years)	17.5 (3.6)	16
Age first used ecstasy (years)	17.6 (4.6)	16
Age first used heroin (years)	18.3 (4.7)	17
[a]Age first used benzodiazepines	18.6 (5.0)	18
Age first used other opiates (years)	19.6 (4.9)	18
Age first used cocaine (years)	19.7 (4.5)	18
Age first used non-prescribed methadone (years)	20.5 (5.4)	19
Age first used crack (years)	22.6 (4.8)	21

[a] benzodiazepine use refers to both the non-prescribed use of the drug and the misuse of prescribed benzodiazepines.

Participants were asked whether they ever considered their use of each type of drug a problem. Of those that smoked tobacco, the majority (62%, n=202) considered their smoking a problem. Whereas 38% of those who had taken alcohol reported their use as being a problem (n=112). Regarding illicit drugs, the majority (92.4%, n=355) of heroin users reported their use as being problematic. **Table 3.3(c)** illustrates that the average age respondents first considered their heroin use a problem was 20 years. Respondents were less likely to consider their use of other substances as problematic; less than half of those who have ever used benzodiazepines (41.5%, n=120), 38% of those who ever used cocaine (n=123), 37% of those who ever used ecstasy (n=103), 32% of those who ever used non-prescribed methadone (n=96), 30% of cannabis users (n=102), 29% of crack smokers (n=55) and 30% of users of 'other' opiates (n=60) believed their drug use to be problematic.

In addition, **Table 3.3(c)** illustrates the average lifetime use of each type of drug for those respondents who reported using each substance. For example, it shows that when participants were interviewed at treatment intake they had been using heroin on average 9.4 years. On the other hand, participants had been using crack cocaine for on average 5.3 years. It should be noted that the data above may overestimate participants average lifetime use of drugs, as it is calculated on the basis of age first used, rather than age commenced 'regular' use.

Table 3.3(c) Drug Using History: Problem Drug Use

	Mean (sd)	Median
Age cannabis use became a problem	17.6 (5.4)	16
Duration since first use of cannabis (years)	13.2(5.9)	
Age heroin use became a problem	20.3 (4.9)	19
Duration since first use of heroin (years)	9.4 (5.5)	
Age benzodiazepine use first became a problem	20.5 (4.5)	20
Duration since first use of benzodiazepine(years)	8.8(6.3)	
Age methadone use first became a problem	22.0 (6.0)	20
Duration since first use of methadone (years)	7.1(5.0)	
Age other opiate use first became a problem	20.5 (5.9)	19
Duration since first use of other opiates (years)	8.9(6.0)	
Age Cocaine use became a problem	22.0 (4.2)	22
Duration since first use of cocaine (years)	8.1(5.6)	
Age crack use became a problem	22.3 (4.3)	21
Duration since first use of crack (years)	5.3(4.5)	

3.4 Health Risk Behaviour

Table 3.4(a), and **(b)** summarises a number of injecting-related health variables. Analysis revealed that the majority of the study population (77%, n=308) reported that they had injected a drug. **Table 3.4(a)** illustrates the average age participants first injected was 20 years. Notably, 17% of injectors had intravenously administered a drug before the age of 17 years and 44% had done so before the age of 19 years. With participants accessing needle-exchange at an average of 21 years, individuals were injecting for seven months, on average, before utilising the services of a needle-exchange programme. **Table 3.4(a)** also shows that of those who reported having injected (n=308) the majority stated that they had, at some point in time, used another user's needles/syringes (63%), passed their used needles/syringes to others (53%) and shared filters/spoons/flush water (63%). In addition, a high proportion of respondents stated that they had reused their own injecting equipment (88%).

Table 3.4(a) Injecting-Related Health Variables

	n	%
Percentage injected		
Ever injected	308	76.6
[a] *Ever shared injecting equipment*		
Ever used needle after someone	178	62.7
Somebody ever used needle after you	152	53.3
Ever reused own injecting equipment	250	87.7
Ever shared filter/spoons/flush water	179	63.5
	Mean (sd)	**Median**
[a]Age first injected	20.4 (4.7)	19

[a]Percentages for those who have ever injected

Table 3.4(b) shows that over half the study population (55%) reported never having had an overdose. While 13% of the cohort reported having had one overdose, 7% had more than five overdoses in their lifetime. Analysis also revealed that injectors were significantly more likely then non-injectors to report ever having had an overdose (54% vs. 19%, $\chi^2_1=34.3$; $p< 0.001$).

Table 3.4(b) Overdose Rates

	n	%
Proportion of participants ever overdosed		
Never overdosed	214	54.7
Overdosed once	52	13.3
More than 1 but maximum of 3 times	66	16.9
More than 3 but maximum of 5 times	30	7.7
Overdosed more than 5 times	29	7.4

3.5 Physical and Psychological Health

Table 3.5(a) presents the data for lifetime experiences of suicidal thoughts of the cohort. Analysis revealed that one third of the respondents had attempted suicide in their lifetime and over half had thought seriously of committing suicide.

Table 3.5(a) Suicidal Thoughts and Attempts

	n	%
Suicide		
Seriously thought of ever committing suicide	199	51.6
Ever attempted suicide	127	32.8

Table 3.5(b) illustrates the HIV, HBV and HCV status of study participants. It illustrates that 4% of the cohort who had tested for HIV were positive with one fifth having never been tested. Similarly, 18% of the population at baseline had never been tested for HCV. Of those that were tested (n=305) 50% were reportedly HCV positive. Only 17% (n=20) of the participants who self-identified as HCV positive were receiving treatment for their hepatitis.

Table 3.5(b) HIV, HBV and HCV Status

	HIV Status		HBV Status		HCV Status	
	n	%	n	%	n	%
Ever tested	297	80.3	296	80.4	305	81.6
Negative*	231	86.2	233	87.9	122	43.3
Positive*	12	4.5	9	3.4	140	49.6
Awaiting results*	25	9.3	23	8.7	20	7.1

*Of those ever tested

3.6 Personal and Social Functioning

Table 3.6(a) summarises a number of educational demographic variables for the study population. The majority of participants (59%) left school in lower secondary levels either before or just after the Junior Certificate. On average, participants reported leaving school at 15.1 years. However, analysis revealed that 28% of the study population had left school before the age of 15.

Table 3.6(a) Demographics: Education

	Mean (sd)	Median
Age left school (years)	15.1(1.8)	15

	n	%
Highest Educational Level		
No formal education	12	3.0
Primary	68	16.9
Lower secondary	236	58.7
Upper secondary	65	16.2
Third level	21	5.2
Highest Educational Qualification		
No qualifications	133	32.9
Junior cert/basics skills/ NVCA level 1	198	49.0
Leaving cert	43	10.6
Apprenticeship	5	1.2
National cert./dip./NCEA	20	5.0
Third level	5	1.2

The majority (56.3%, n=216) of respondents reported having children under the age of 18 years. These respondents were parents of, in total, 370 children (under 18 years). **Table 3.6(b)** shows that over half (57%, n=122) of the participants who had children did not have their children in their care. Just over one fifth of the parents had one child in their care and a similar proportion had two or more children in their care. In addition, eleven female participants, and ten males participants (5.6%) reported that they or their partner were expecting a baby.

Table 3.6(b) Demographics: Children

	n	%
Have children under 18 years		
No	168	43.8
Yes	216	56.3
Parents: Number of children in care of participant		
None	122	57.0
One	45	21.0
Two or more	47	22.0

3.7 Criminal Activity

The vast majority of the study population (90.2%, n=339) reported that they had committed some form of crime in their lifetime (excluding drug possession, and traffic related offences). Only 37 (9.8%) respondents reported not having previously committed crime. **Table 3.7(a)** illustrates the self-reported rates of all individual offences. It illustrates, for example, that over half the population (54.8%) reported having ever committed theft from a person with self-reporting rates of theft from a commercial property higher at 73%. Later in this chapter, evidence will be presented showing levels of self-reported recent crime (last three months) were substantially lower across all crime categories.

Table 3.7(a) also illustrates the proportions of respondents who reported ever committing the main categories of offences. It illustrates that 70% of the population reported having dealt drugs in their lifetime.

Table 3.7(a) Types of Crime Ever Committed

	n	%
Crime committed		
Selling/supply drugs	243	70.4
Theft from a person	182	54.8
Theft from house/home	136	41.0
Theft from shop/commercial property	247	72.6
Theft from a vehicle	173	52.4
Theft of a vehicle	170	51.2
Handling stolen goods	262	76.4
Fraud/forgery/deception	171	51.4
Assault	163	49.7
Criminal damage	177	54.3
Soliciting	28	8.6
Breach of the peace	176	53.7

Over three quarters of the cohort (75.6%, n=285) reported having ever been arrested for an offence. **Table 3.7(b)** illustrates the proportion of study participants who were ever arrested for each category of offence. For example, 31.4% of respondents were arrested for supplying drugs. We shall see presently that only 4% were arrested in the preceding three months for this offence.

Table 3.7(b) Arrests by offence

	Ever arrested	
	n	%
Crime committed		
Selling/supply drugs	107	31.4
Theft from a person	91	29.6
Theft from house/home	61	21.1
Theft from shop/commercial property	158	48.0
Theft from a vehicle	77	25.3
Theft of a vehicle	96	31.5
Handling stolen goods	92	27.5
Fraud/forgery/deception	52	17.0
Assault	104	34.4
Criminal damage	114	37.4
Soliciting	8	3.1
Breach of the peace	133	44.3

Finally, **Table 3.7(c)** illustrates the prison experience of the study population. Sixty five percent of participants reported having been in prison (n=253) at some point in time. These participants spent on average 41.2 months in custody (SD 50.3 months) and in total account for approximately 844 years in prison. A total of 63% of the cohort reported having previously been remanded in custody and half the study participants reported having received a custodial sentence.

Table 3.7(c) Prison Experience

	n	%
Imprisonment		
Ever been in prison	253	64.9
Ever remanded in custody	243	62.6
Ever received custodial sentence	193	49.7

Having analysed the lifetime experiences of the study participants, we provide below an analysis of the baseline outcome measures. It is these outcomes that will be followed up at six, twelve and thirty six months. The comparison of the baseline outcome measures with the future measures will be used to assist with the evaluation of treatment outcomes.

Key Outcome Measures at Baseline

3.8 Substance Use

Tables 3.8(a), (b) and **(c)** illustrate the current drug use (last 3 months) of the study population at baseline interview. The results show that over three quarters of the population (77%) had used heroin in the three months prior to interview. Most of the study cohort had smoked cigarettes (93%) and high proportions reported recent cannabis (64%) and alcohol (54%) use. In addition, rates of cocaine, benzodiazepine and non-prescribed methadone use were relatively high with just under half of the respondents reporting consumption in the preceding three months. Lower rates of current use of other opiates (10%) and amphetamines (4%) were reported.

Table 3.8(a) Drug Use in Last Three Months: Percentage Used

	n	%
Drug use in last three months		
Tobacco	359	93.0
Heroin	306	76.9
Cannabis	243	64.1
Alcohol	204	53.8
Cocaine	179	44.3
Benzodiazepines	174	44.3
Non-Prescribed methadone	162	40.6
Crack cocaine	59	14.6
Ecstasy	46	12.2
Other opiates	39	9.9
Amphetamine	17	4.5

Table 3.8(b) illustrates the average number of days on which participants used each substance for the population as a whole and for those participants who reported having used each class of drug in the three months prior to baseline interview. The results show that participants who used tobacco were smoking on average 87.5 out the previous 90 days. Heroin users took the drug on an average of 52 days of the last 90, while those who took cannabis did so on an average of 61 of the last 90 days. Cocaine use was less frequent with those who took the drug doing so on an average of 17 days in the previous three months.
Analysis also revealed that 95% (n=342) of cigarette smokers were daily consumers and half (50%, n=121) of the cannabis users smoked daily. Over one-quarter of those that used heroin in the last three months (28%, n=87) and 22.4% (n=39) of benzodiazepine users, were daily consumers. Patterns of consumption of other substances were somewhat different. For example, only 9% (n=19) of those that consumed alcohol and methadone (10%, n=16) in the last three months did so on a daily basis. Substantially lower rates of cocaine use were apparent with 2.3% (n=4) of participants who reported using cocaine powder and 3.4% (n=2) of those who smoked crack cocaine in the last three months, doing so on a daily basis.

Table 3.8(b) Drug Use in Last Three Months: Mean Days Used

	Population		Sub-sample Used in Last Three Months	
	Mean	sd	Mean	sd
Mean days used in last three months				
Tobacco	81.4	25.1	87.5	11.9
Heroin	40.1	35.8	52.3	32.2
Cannabis	39.0	40.1	60.8	34.3
Benzodiazepines	15.5	29.1	35.0	35.0
Non-Prescribed Methadone	11.6	23.2	28.6	29.0
Alcohol	13.3	23.7	24.8	27.5
Cocaine	7.6	17.3	17.2	22.7
Crack cocaine	2.1	9.9	14.5	22.5
Ecstasy	0.7	4.5	5.8	11.8
Other opiates	1.9	10.3	19.5	27.5
Amphetamine	0.3	3.0	7.2	12.6

Table 3.8(c) shows the average amount of each substance consumed on a typical using day for the population as a whole and for those participants who used each type of drug in the three months prior to interview. On average, 20 cigarettes were smoked a day by those who used tobacco. Cannabis users smoked on average 12 joints a day. For those participants who used heroin in the three months prior to baseline interview, 0.7 gram was the average amount consumed daily. Levels of benzodiazepine use were high; with those reporting use in the last three months, taking on average 116.7 mgs a day. Cocaine users reported using an average of 2.3 grams a day. We should also note that 76% (n=308) of the cohort reported the recent use of two or more substances and were therefore engaging in polydrug use.

Table 3.8(c) Drug Use in Last Three Months: Mean Amount used

	Population		Sub-sample used in last 3 mts	
	Mean	sd	Mean	sd
Mean amount used in a day in last three months				
Tobacco (cigarettes)	18.3	13.0	19.6	12.5
[b]Heroin (grams)	0.6	0.8	0.7	0.8
Cannabis (joints)	7.7	16.5	12.0	19.1
Alcohol (units)	9.1	15.2	16.9	17.0
Cocaine (grams)	0.9	2.4	2.3	3.3
Non-Prescribed Methadone (mls)	23.3	37.7	58.9	38.6
Benzodiazepines (mgs)	41.9	105.5	116.7	149.6

[a] Crack Cocaine was excluded due to the inconsistency in how the data was reported.
[b]These figures were based on 1 bag of heroin containing on average 0.25grams at the time of fieldwork

3.9 Health Risk Behaviour

Analysis revealed that over half of those who have injected did so in the three months prior to interview (44.0%, n=177), with these individuals reporting on average 47.3 injecting days over the previous three months. **Table 3.9(a)** shows the levels of recent (last three months) self-reported injecting *risk* behaviour. Only 11.8% (n=20) of the injecting population reported using needles/syringes after someone else in this time period, 10.2% (n=17) passed their used injecting equipment onto others and the same proportion had used filters/spoons/flush water that had been used by others. However, a higher proportion of participants reported reusing their own injecting equipment (38.6%, n=51).

Table 3.9(a) Injecting-Related Health Variables in Last Three Months

	n	%
Percentage who injected in last three months	177	44.0
Frequency of injecting in last three months		
Infrequent (1-9 days)	40	23.5
Frequent (10 –24 days)	19	11.2
Very frequent (25-79 days)	65	38.2
Daily (80-90 days)	46	27.1
Used needle after someone in last month		
No times	150	88.2
One time	11	6.5
More than once	9	5.3
Someone used needle after you in last month		
No times	150	89.8
One time	9	5.4
More than once	8	4.8
Reused own needles in last month		
No times	81	61.4
One time	2	1.5
More than once	49	37.1
Used filter/spoons/flush water/ after someone		
No times	137	89.0
One time	6	3.9
More than once	11	7.1

	Mean (sd)	Median
[a]Days injected in last three months	47.3 (33.8)	49.5
[a]Times injected on typical day last three months	4.0 (4.8)	3

[a] relates to those who have injected in the last three months

Table 3.9(b) shows that 6.6% of study participants reported having had an overdose in the preceding three months (n=26).

Table 3.9(b) Overdose Rates in Last Three Months

	n	%
Overdose in last three months		
Zero	366	93.4
One or more times	26	6.6

Table 3.9(c) shows the sexual history of the participants. In the last three months, 83% (n=203) were having sex with a regular partner and 33% (n=76) were having sex with someone other than a regular partner. With regards to condom use, 37 % (n=23) of those having sex with someone other than a regular partner in the last three months stated that they never used a condom, while another 17% (n=11) stated that they only use a condom sometimes.

Table 3.9(c) Frequency of Unsafe Sex in the Last Three Months

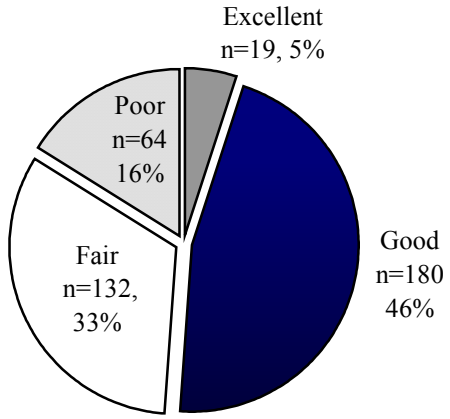
	n	%
Sexual history in last three months		
Participants having sex	261	68.1
Participants not having sex	122	31.9
[ab] *Sexual partners in last three months*		
Having sex with a regular partner	203	82.5
Having sex with someone other than regular partner	76	33.2
[b]*Condom use with regular partner*		
Always used condom	47	24.4
Sometimes used condom	19	9.8
Never used condom	127	65.8
[b]*Condom use with someone other than a regular partner*		
Always used condom	29	46.0
Sometimes used condom	11	17.5
Never used condom	23	36.5

[a]These categories are not mutually exclusive.
[b] This is only of those who had sex in the last three months

3.10 Physical and Psychological Health

Participants were asked to assess their own physical health at baseline interview. **Figure 3.1** below shows that just less than half of the respondents (46%, n=180) reported that their health was good, an additional 5% (n=19) stated that it was excellent. One third of the study population reported their health as being fair (n=132) and 16% felt that it was poor (n=64).

Figure 3.1 Participants self assessment of health (n=395)



In addition to rating their own health, participants were asked to complete a short health assessment. **Table 3.10(a)** and **(b)** presents the data for a range of physical health symptoms. **Table 3.10(a)** shows the average number of days respondents reported suffering from each physical health symptom for the population as a whole and for those participants who suffered each category of symptom, over the three months prior to interview. It illustrates that, on average, the population reported having a poor appetite 47 of the previous 90 days. However, **Table 3.10(b)** shows that not all respondents reported these symptoms whilst also illustrating the number of participants from the study population that reported experiencing each physical health symptom.

Table 3.10(a) Physical Health Symptoms: Mean Days Experienced in Last Three Months

	Population		Sub-sample	
	Mean	(sd)	Mean	(sd)
Physical health symptoms over previous three months				
Poor appetite	47.3	(38.6)	66.0	(29.0)
Tiredness/fatigue	43.0	(38.5)	60.1	(32.2)
Nausea (feeling sick)	14.2	(27.2)	35.6	(33.2)
Stomach pains	14.5	(26.6)	36.4	(31.4)
Difficulty breathing	13.4	(28.6)	47.4	(35.9)
Chest pains	8.2	(21.4)	36.3	(31.6)
Joint/bone pains	13.4	(27.7)	37.3	(35.2)
Muscle pains	9.8	(22.1)	30.0	(29.8)
Numbness/tingling	8.5	(22.6)	37.7	(34.1)
Tremors/shakes	10.2	(23.5)	35.4	(32.2)

Table 3.10(b) Physical Health Symptoms: Percentages Experienced in Last Three Months

	n	%
Poor appetite in last three months		
Experienced	269	71.7
Didn't experience	106	28.3
Tiredness/fatigue in last three months		
Experienced	268	71.5
Didn't experience	107	28.5
Nausea (feeling sick) in last three months		
Experienced	148	39.8
Didn't experience	224	60.2
Stomach pains in last three months		
Experienced	148	39.8
Didn't experience	224	60.2
Difficulty breathing in last three months		
Experienced	105	28.2
Didn't experience	267	71.8
Chest pains in last three months		
Experienced	85	22.7
Didn't experience	289	77.3
Joint/bone pains in last three months		
Experienced	135	36.0
Didn't experience	240	64.0
Muscle pains in last three months		
Experienced	122	32.7
Didn't experience	251	67.3
Numbness/tingling in last three months		
Experienced	84	22.6
Didn't experience	288	77.4
Tremors/shakes in last three months		
Experienced	105	28.7
Didn't experience	261	71.3

Table 3.10 (c) and **(d)** presents the data for mental health symptoms. **Table 3.10(c)** shows the mean number of days respondents reported suffering from the mental health symptoms for the population as a whole and for those participants who suffered from each category of symptom over the preceding three months. For example, the study population reported having suicidal thoughts on an average of 8 days of the previous 90. However, **Table 3.10(d)** illustrates that the majority of participants (75%) did not have suicidal thoughts. Adjusting the data for this, **Table 3.10(c)** illustrates that those with suicidal thoughts, reported having them on an average of 32 days of the previous 90 days. **Table 3.10(d)** shows that not all respondents reported these symptoms and illustrates how many of the study population reported experiencing each mental health symptom.

Table 3.10(c) Mental Health Symptoms: Mean Days Experienced in Last Three Months

	Population		Sub-sample	
	Mean	(sd)	Mean	(sd)
Mental health symptoms over last three months				
Feeling Tense	36.8	(38.0)	56.4	(33.2)
Suddenly scared for no reason	15.5	(29.7)	43.6	(35.5)
Feeling fearful	19.6	(31.7)	46.2	(33.8)
Nervous/shaking inside	19.8	(32.3)	46.6	(34.7)
Spells of terror/panic	9.0	(23.0)	36.8	(33.9)
Feeling hopeless about future	29.6	(37.0)	53.1	(34.8)
Feelings of worthlessness	28.6	(37.1)	54.1	(35.0)
Feeling no interest in things	31.1	(36.7)	54.2	(33.0)
Feeling lonely	32.7	(37.8)	57.0	(33.2)
Thoughts of ending your life	8.1	(22.3)	31.9	(34.6)

Table 3.10(d) Mental Health Symptoms: Percentages Experienced in Last Three Months

	n	%
Feeling tense in last three months		
Experienced	234	65.2
Didn't experience	125	34.8
Suddenly scared for no reason in last three months		
Experienced	129	35.6
Didn't experience	233	64.4
Feeling fearful in last three months		
Experienced	149	42.3
Didn't experience	203	57.7
Nervousness or shaking inside in last three months		
Experienced	153	42.6
Didn't experience	206	57.4
Spells of terror or panic in lastthree3 months		
Experienced	90	24.5
Didn't experience	277	75.5
Feeling hopeless about the future in last three months		
Experienced	196	55.8
Didn't experience	155	44.2
Feelings of worthlessness in last three months		
Experienced	188	52.8
Didn't experience	168	47.2
Feeling no interest in things in last three months		
Experienced	206	57.4
Didn't experience	153	42.6
Feeling lonely in last three months		
Experienced	202	57.4
Didn't experience	150	42.6
Thoughts of ending you life in last three months		
Experienced	88	25.4
Didn't experience	259	74.6

In addition to the mental health questions above, **Table 3.10(e)** illustrates that 25% (n=95) of respondents reported having suicidal thoughts over the six months prior to baseline interview and 10.2% (n=39) attempted suicide in the six months before baseline interview.

Table 3.10(e) Suicidal Thoughts and Attempts in Last Six Months

	n	%
Suicide		
Seriously thought of committing suicide in last six months	95	25.3
Attempted suicide in the last six months	39	10.2

3.11 Personal and Social Functioning

Table 3.11(a) shows that 53.8% of the participants reported they had not worked in the six months prior to baseline interview. One quarter of the cohort reported being in employment either full-time or part-time (including CE Schemes) over the same time period. However, levels of current employment were substantially lower with 16% of respondents employed at the time of baseline interview. The main source of income for the majority of study participants (77%) was social welfare payments (including disability). One quarter of respondents reported drug dealing as a main source of income over the preceding three months. In addition, involvement in 'other' crime was cited by 36% of respondents. Twenty eight percent of participants stated that 'family' provided a source of income.

Table 3.11(a) Recent Employment and Income Status

	n	%
Occupation over last six months		
Not working	211	53.8
Working (FT/PT)	99	25.3
In prison	41	10.5
Disability	36	9.2
In treatment	5	1.3
[a]*Recent employment*		
Employed last 3 months	84	21.3
Currently employed	64	16.0
[a]*Main sources of income in last three months*		
Wage/salary	83	20.9
Family/friends	113	28.3
Social welfare	309	77.4
Drug dealing	101	25.3
Other crime	142	35.7

[a]These categories are not mutually exclusive.

Table 3.11(b) shows that just less than one third of the cohort reported living in the family home and 25% reported living in their own or rented house/flat at baseline interview. At recruitment, 29% of participants were in a drug treatment residence and 5% were in prison. Recognising the transient nature of accommodation for many problem drug users, participants were asked to identify everywhere they had stayed in the preceding three months. This analysis revealed higher levels of imprisonment and homelessness among the study population with 12% (n=49) of the cohort reported having spent some time in prison and 18% (n=70) reported having a period of homelessness over the three months prior to baseline interview. This included participants who reported staying in a hostel/B&B, and those who reported having no fixed abode.

At baseline, 38% of participants reported that they usually lived with their parents and an additional 4% were living with their parents and their children. Nineteen percent of participants reported usually living with their partner, over half of these were also living with their children resulting in a total of 24% (n=93) of the study population reporting living with their children. Twelve percent of respondents reported living alone and 19% reported 'other', which included participants who were in prison (n=19), participants who were living with friends (n=11) and participants in residential treatment (n=20).

Table 3.11(b) Recent Accommodation Status

	n	%
Current accommodation		
Family home	118	29.7
Drug treatment residence	115	29.0
Own house/flat or rental	101	25.4
Hostel/shelter/B&B	24	6.0
Prison	19	4.8
Home of friends	11	2.8
No Fixed Abode	9	2.3
[a]*Accommodation over last three months*		
Family home	182	46.8
Drug treatment residence	120	30.2
Own house/flat or rental	134	33.8
Hostel/shelter/B&B	45	11.4
Prison	49	12.4
Home of friends	40	10.2
No Fixed Abode	25	6.3
Usually lives with		
Partner/spouse	30	7.6
Parents	148	37.7
Alone	47	12.0
[b] Children	32	8.1
[b] Parents and children	17	4.3
[b] Partner and children	44	11.2
Other	75	19.1

[a]These categories are not mutually exclusive.
[b] Includes children over the age of 18 years.

We saw earlier the treatment history of the respondents. In terms of recent treatment, **Table 3.11(c)** illustrates the proportions of participants who commenced any formal treatment in the 6 months prior to starting their index treatment for the ROSIE study.

Table 3.11(c) Treatment Over Last Six Months: Previously Treated Cohort

	n	%
Treatment in last six months		
Structured/supervised detoxification	45	13.3
One-to-one counselling	44	13.2
Group work	30	9.0
Residential drug treatment	20	5.9
Prescribed methadone	18	5.6

The number of times participants attended services for medical treatment is outlined in **Table 3.11(d)** and the mean number of times they attended these services is outlined in **Table 3.11(e).** The mean number of days spent overnight in hospital in the last three months was 6.3 (8.7), while the mean number of visits to an Accident and Emergency department was 1.3 (0.8).

Table 3.11(d) Treatment Received for a Medical Condition in the Last Three Months

	n	%
Treatment received in last three months		
Attended hospital and stayed overnight	34	8.7
Attended an A&E	67	17.4
Visited a GP (not methadone G.P.)	124	33.6
Visited an out-patient department /received community treatment	49	12.7

Table 3.11(e) Mean Number of Times in Treatment for a Medical Condition in the Last Three Months

	Mean (sd)	Median
[a]*Number of times attended service*		
Number of days overnight stay in hospital	6.3 (8.7)	2.25
Number of visits to A&E	1.3 (0.8)	1.0
Number of visits to a GP (not methadone G.P.)	3.7 (4.1)	2.0
Numbers of visits for out-patient appointment/community treatment	4.2 (7.4)	1.0

[a] Of those who attended these services in the last three months

In **Table 3.11(f),** the mean number of days contact participants had with a partner, if relevant, mother, father, siblings and friends is displayed. This table also illustrates the mean number of days conflict participants had with each of these people.

Table 3.11(f) Frequency of Contact and Conflict with Partner, Family/Relatives and Friends (Days)

	Mean (sd)	Median
Number of days contact in last three months with		
Partner	75.5 (26.4)	90
Mother	54.1 (37.5)	69
Father	43.4 (39.6)	36
Siblings	44.9 (39.1)	36
Friends	41.6 (39.1)	31.25
Number of days conflict in last three months with		
Partner	10.1 (21.6)	0.5
Mother	8.2 (19.9)	0.0
Father	8.2 (20.8)	0
Siblings	5.2 (18.1)	0
Friends	2.0 (9.4)	0

Table 3.11(g) illustrates the self-reported quality of parent's relationships with their children. We can see that the over half of the participants, who were parents, (56.9%) reported their relationship as very good while 11% reported their relationship as very poor.

Table 3.11(g) Quality of Relationship with Children

	n	%
Type of relationship with children		
Very good	119	56.9
Good	41	19.6
Okay/alright	19	9.1
Poor	7	3.3
Very poor	23	11.0

3.12 Criminal Activity

Table 3.12(a) illustrates the self-reported rates of all individual offences. Comparing Table 3.12(a) with Table 3.7(a), it is apparent levels of self-reported recent crime (last three months) were substantially lower than lifetime measures across all crime categories.

Table 3.12 (a) also illustrates the proportions of respondents who reported committing the main categories of offences in the three months prior to baseline interview. It illustrates that 30% of the respondents reported having dealt drugs in the 3 months prior to the baseline interview.

Table 3.12(a) Crimes Committed in the Last Three Months

	n	%
Crime committed		
Selling/supply drugs	109	30.0
Theft from a person	39	10.8
Theft from house/home	23	6.3
Theft from shop/commercial property	63	17.5
Theft from a vehicle	22	6.1
Theft of a vehicle	22	6.0
Handling stolen goods	91	25.3
Fraud/forgery/deception	40	11.2
Assault	29	8.1
Criminal damage	26	7.2
Soliciting	14	3.9
Breach of the peace	24	6.7

Table 3.12(b) presents the mean number of self-reported crimes committed in the last three months for the population as a whole and for the sub-sample of participants who reported having ever committed each category of offences. For example, it illustrates that the population reported dealing drugs on an average of 12 days of the previous 90. However, as illustrated above, 30% of the cohort reported dealing in the previous three months doing so on average 46 days of the previous 90. Similarly, the 14 individuals who reported soliciting did so on average 50 out of the last 90 days.

Table 3.12(b) Mean Days Crimes Committed in Last Three Months

	Population		Sub-sample committed last three months	
	Mean	**(sd)**	**Mean**	**(sd)**
Frequency of crime in last three months				
Selling/supply drugs	12.4	(26.3)	45.7	(32.3)
Theft from a person	0.9	(6.2)	9.7	(18.7)
Theft from house/home	0.5	(4.4)	10.7	(17.2)
Theft from shop/commercial property	5.0	(22.6)	32.6	(49.4)
Theft from a vehicle	0.4	(4.0)	8.2	(16.1)
Theft of a vehicle	0.1	(0.7)	2.5	(1.7)
Handling stolen goods	5.9	(23.2)	26.7	(43.5)
Fraud/forgery/deception	1.8	(9.6)	17.7	(25.7)
Assault	0.1	(0.7)	1.9	(1.9)
Criminal damage	0.3	(1.9)	4.0	(6.8)
Soliciting	1.9	(12.0)	50.1	(37.7)
Breach of the peace	0.3	(2.9)	7.3	(13.4)

We saw earlier that over three quarters of the cohort (75.6%, n=285) reported having ever been arrested for an offence and now we see that 18.3% (n= 69) reported having been arrested in the three months prior to baseline interview. **Table 3.12(c)** illustrates the proportion of study participants arrested over the three months prior to baseline interview. For example, it illustrates that although we saw previously that 31% of respondents were arrested for drug supply, only 4% were arrested in the preceding three months for this offence.

Table 3.12(c) Arrests by Offence in Last Three Months

	n	**%**
Crime committed		
Selling/supply drugs	14	4.1
Theft from a person	7	2.3
Theft from house/home	4	1.3
Theft from shop/commercial property	20	6.2
Theft from a vehicle	2	0.6
Theft of a vehicle	4	1.3
Handling stolen goods	9	2.7
Fraud/forgery/deception	4	1.3
Assault	8	2.6
Criminal damage	11	3.6
Soliciting	3	1.1
Breach of the peace	11	3.6

Finally, at baseline interview participants were asked whether they had any legal problems. **Table 3.12(d)** illustrates that just over half the cohort reported having no legal issues (to their knowledge). However, 10% were serving a probation or community service order at the time of interview. In addition, over one fifth of participants were on bail, either awaiting a trial or sentencing.

Table 3.12(d) Current Legal Status

	n	%
[a]*Current legal problem*		
None	199	51.6
On probation/community service	37	9.8
Serving a sentence in prison	20	5.3
On bail – awaiting trial/hearing	60	16.0
On bail – awaiting sentencing	24	6.4
On temporary release	10	2.7
Outstanding warrants	46	12.2
Outstanding fines	22	5.9

[a] Categories are not mutually exclusive.

In this chapter, we have documented in detail the cross sectional results of the cohort of opiate users recruited to the ROSIE study. They provide a comprehensive and detailed snapshot of such users entering treatment in a single year. In the following chapter, we discuss these results in an international comparative context and we also discuss the implications these results have for policy makers. However, it is the results of the outcome variables at one and subsequent years that will provide some evidence towards the measurement of effectiveness in Ireland of treatment for opiate use.

CHAPTER 4: CONCLUSION

4.1 Introduction

The primary aim of the ROSIE study is to evaluate treatment for opiate use in Ireland. This report on population characteristics and outcome measures at treatment intake provides the first step in that evaluation. Within this short chapter, we highlight and summarise the key information on outcome variables at baseline and provide a brief discussion of the results in an international context, we reiterate the hypothesis being tested and methodological challenges faced and we conclude by providing a statement on future research needs.

4.2 Summary of Key Outcome Measures at Baseline

Key outcome variables are measured across five domains, substance use, health risk behaviour, physical and mental health, personal and social functioning and crime.

We found that with regard to the outcome variable current drug use, over three quarters of the study population had used heroin in the three months prior to interview. These participants reported using the drug on an average of 52 of the previous 90 days and consumed on average 0.7 grams of heroin a day. Forty-two percent of the study population (n=170), or over half of those that ever injected (56%), reported having done so in the three months prior to baseline interview. These individuals reported injecting on average 47 of the previous 90 days, with 15% of the recent injectors (n=46) having done so on a daily basis. In terms of physical and mental health, participants reported suffering from a range of physical and metal health complaints to varying degrees. For example, 72% (n=269) of the population reported suffering from a poor appetite over the three months prior to interview. These respondents reported this symptom on average 66 days out of the previous 90.

Analysis revealed that current levels of employment were low, with only 16% of the population employed (either full-time or part-time) at baseline interview, while 21% had been employed over the three months prior to baseline interview. The main source of income for the majority of participants (77%) was social welfare payments. Less than one third of the cohort were living in the family home at the time of the baseline interview and 25% were in their own or rented accommodation. Eight percent of the study population were homeless at baseline interview, where homeless was defined as having no fixed abode or being resident in a hostel, shelter or B&B.

Finally, in terms of crime outcomes, we found that in the three months prior to baseline interview 30% (n=109) reported having dealt drugs during that time period. In addition, 18% (n=69) reported being arrested in the three months preceding baseline interview. Although levels of recent arrest were relatively low, almost half the cohort reported having legal problems at the time of treatment intake (48%, n=219).

4.3 ROSIE in an International Context

While the vast majority of study participants were opiate users and reported problematic heroin use, polydrug use was usual among the cohort, with 76% (n=308) reporting the recent use of two or more substances. This is comparable to the rates of polydrug use (81%) reported in NTORS[13]. A relatively high proportion of ROSIE study participants reported recent (last 90 days) cocaine use (44%, n=179). This was substantially higher than the proportions reporting recent cocaine use in the DORIS[14] study, where only 27% of the cohort reported using the drug over the same time period at treatment intake[15]. While 59% of the NTORS cohort reported recent stimulant use, only 18% had used powder cocaine. However, 35% reported recent crack cocaine use, compared with only 14% of the ROSIE cohort (n=48). Over half the cohort (54%, n=204) reported recent alcohol use, which was markedly less than the 68% in the NTORS sample who reported drinking alcohol during the three months prior to treatment. But as with NTORS, the exploratory analysis of the data suggests that drinking patterns among ROSIE participants tend to be dichotomous, with relatively high proportions of non-drinkers (46%) and heavy drinkers (42%).

In the three months prior to interview, we saw that ROSIE study participants reported suffering from a range of physical and mental health problems. In addition, one quarter of the population reported having thoughts of suicide in the six months prior to treatment intake, slightly less then the 29% reported in NTORS[5]. One-third of the cohort reported having attempted suicide in the past, and 10% (n=39) attempted suicide in the 6 months prior to baseline interview. Such findings are relevant to the elevated death rates among drug addicts and should be taken into account when interpreting death rates among addicts.

The analysis of the ROSIE baseline data highlights that Irish treatment services are facing broadly the same challenges identified in many countries, namely high levels of poly-drug use (including cocaine, benzodiazepines, alcohol and cannabis), frequent though often petty crime, frequent low-level drug-dealing, a high incidence of somatic and mental health problems and extensive histories of contact with a range of agencies and treatment services.

4.4 Key Question and Hypothesis

The key question of the ROSIE study is 'Is treatment effective?' Hence, the null hypothesis of the study is that treatment has no effect on outcomes. It is the aim of the study to make a decision on whether or not to reject this null hypothesis and hence provide an answer to the key question. The outcome variables described within this report provide the first part of the data required to answer this question. The hypothesis itself will be tested when results at six, twelve and thirty six months are available. However, while the question and hypothesis are easy to pose, we may see in future reports that these are not easy to answer. As we have seen within this report, there are considerable differences at treatment intake in the profile of clients entering different treatment modalities. This results in different patterns of behaviour change over the six, twelve and thirty six month follow-ups, not only in terms of changes from baseline but also within and between modalities. If over the follow-up period clients also have different patterns of utilisation of their index treatment and differing degrees of contact with other agencies, then interpretation of treatment outcomes and the decision on how best to answer our key question will be very complex. Given the cyclical, often relapsing pattern that characterises the lives of many opiate users and given the extensive and overlapping histories of other treatments and agency contacts, it is likely to be difficult to draw clear conclusions

[13] http://www.dtors.org.uk/NTORS.aspx
[14] http://www.gla.ac.uk/drugmisuse/DORIS.html

regarding the effectiveness of one modality compared to another and the key question may change to 'What factors are associated with 'successful outcomes'?'

4.5 Future Research

As we have said earlier, this baseline report presents a detailed snapshot of opiate users entering treatment in Ireland but this is just the first step in the projects' key aim of opiate drug treatment evaluation in Ireland. In order to realise this aim, we have shown within the methodology section that there are a range of key outcome variables across the five domains of drug use, crime, health, risk and social functioning. Variables within these five domains will be measured again and compared with the baseline measures provided in this report. The hypothesis will be revisited, clarified and tested and evidence towards a conclusive answer to the key question will be sought from observations in how these variables have changed.

Finally, the remit of the design for the ROSIE study is to measure outcomes at six, twelve and thirty six months and compare these outcomes with the baseline observations. However, future research, as indicated previously, may wish to model outcomes in a more comprehensive way by addressing questions on which factors, whether personal, programme or process, are associated with successful outcomes. It is anticipated that future publications from the ROSIE team will address these questions and that these results along with the ROSIE Findings Series 1,2,3 and 4 on outcomes will give service providers and policymakers the necessary evidence to make informed decisions for all opiate users and their communities.

Finally, the data presented in this report provides a wealth of information on opiate users presenting for treatment in Ireland. The results presented here provide, for the first time, a depth and breadth of information to assist services providers, policy makers and researchers involved in the planning and implementing of drug service provision throughout the country.

APPENDIX 1: RESULTS FOR METHADONE GROUP AT BASELINE

Background to Treatment

a1. 1 Index Treatment

Over half of the ROSIE study population (53%, n=215) were recruited from methadone programmes throughout the country. In Ireland, methadone is provided in the three main settings of health board clinics (including satellite clinics), community-based clinics and General Practitioner surgeries. In addition, individuals in certain prisons in the State are eligible to receive methadone maintenance. Study participants were recruited across all these four settings[16]. To this end, 48 individuals were interviewed in ten community-based clinics in Dublin City, 108 individuals were recruited from 16 health board clinics throughout the country, 54 participants were recruited from 31 GP's prescribing under the Methadone Protocol and 5 participants were interviewed in prison. This index presents data on the methadone group as a whole, while the next index examines differences within the methadone cohort, across setting.

Table a1.1 (a) Gender and Age of Methadone Group

	n	%
Gender		
Male	147	68.4
Female	68	31.6

	Mean	Median
Age		
Age of male study participants (years)	28.5(6.5)	28.0
Age of female study participants (years)	28.4(6.8)	27.0

Table a1.1 (b) Time in Index Treatment and Time Waiting for Treatment

	Mean (sd)
[a]Time in baseline treatment (days)	30.1(22.1)
[b]Length of time waiting for treatment (weeks)	20.4 (27.0)

[a] Excluding participants on methadone in prison, as all were not new to index treatment.
[b] Includes only those on waiting lists for treatment.

[16] Accessing prisons in Ireland, for both baseline study recruitment and subsequent follow-up interview, involved a lengthy process of obtaining ethical approval from the Irish Prison Service, gaining security clearance for fieldworkers and negotiating access with individual prison governors. Consequently, recruitment in this setting did not commence until June 2004. Unfortunately, at this time there was a doctors' strike in the prisons and as a result new inmates were not placed on methadone programmes. As access had already been negotiated, the fieldworkers went into Mountjoy Prison and interviewed five people on methadone. However, these inmates were not 'new to treatment'. The decision was made not to return to the prison setting until the strike was resolved, which did not occur before the end of baseline study recruitment.

a1.2 Treatment History

Table a1.2(a) Treatment History for Methadone Group: Previous Treatment Received

	n	%
Percentage in previous treatment		
Previous treatment received	177	82.7
No previous treatment received	37	17.3

	Population		Sub-sample previously treated	
	n	%	n	%
[a]*Previous types of formal treatment*				
One-to-one counselling	113	53.1	113	64.2
Prescribed methadone	123	57.7	123	69.9
Structured/supervised detoxification	91	43.1	91	52.3
Residential drug treatment	46	21.8	46	26.4
[b]Needle exchange	128	61.0	112	63.6

[a]These categories are not mutually exclusive.
[b]Attendance at needle-exchange is not considered treatment.

Table a1.2(b) Details of Previous Treatment

	Previously treated Mean (sd)
Age first sought treatment (years)	21.5 (5.5)
Age first attended counselling (years)	22.5 (6.2)
Number of counsellors	2.0 (1.5)
Longest period of regular attendance (months)	10.5 (12.9)
Age first on methadone/physeptone (years)	22.4 (6.1)
Number of episodes	2.2 (2.3)
Longest period of attendance (months)	25.0 (24.2)
Age first on supervised detoxification (years)	22.5 (5.6)
Number of episodes	2.4 (3.1)
Age first in residential treatment (years)	23.5 (5.8)
Number of episodes	1.8 (2.0)

a1.3 Substance Use

Table a1.3(a) Drug Using History: Ever Used

	n	%
Drugs ever used		
Heroin	213	99.1
Tobacco	205	97.2
Cannabis	195	96.5
Alcohol	183	92.9
Cocaine	178	90.8
Non-Prescribed methadone	183	87.6
Benzodiazepines	166	85.6
Ecstasy	158	90.8
Amphetamine	134	77.5
Other opiates	125	67.9
LSD	110	66.7
Crack cocaine	110	60.1

Table a1.3(b) Drug Using History: Age First Used

	Mean (sd)
Age first smoked tobacco (years)	13.4 (3.0)
Age first used alcohol (years)	14.2 (2.2)
Age first used cannabis (years)	14.6 (3.4)
Age first used LSD (years)	16.3 (3.0)
Age first used ecstasy (years)	17.9 (4.3)
Age first use amphetamine (years)	17.8 (3.5)
Age first used heroin (years)	18.7 (5.0)
[a]Age first used benzodiazepines	19.2 (5.5)
Age first used other opiates (years)	19.8 (5.5)
Age first used cocaine (years)	20.1 (4.5)
Age first used non-prescribed methadone (years)	20.7 (5.3)
Age first used crack (years)	23.2 (5.0)

[a] benzodiazepine use refers to both the non-prescribed use of the drug and the misuse of prescribed benzodiazepines.

Table a1.3(c) Drug Using History: Problem Drug Use

	Mean (sd)
Age cannabis use became a problem	17.8 (5.9)
Duration since first use of cannabis (years)	13.5 (6.2)
Age heroin use became a problem	20.9 (5.4)
Duration since first use of heroin (years)	9.7 (5.8)
Age benzodiazepine use first became a problem	21.0 (4.8)
Duration since first use of benzodiazepine (years)	8.7 (6.6)
Age cocaine use became a problem	21.7 (4.1)
Duration since first use of cocaine (years)	8.3 (6.4)
Age other opiate use first became a problem	21.1 (7.3)
Duration since first use of other opiate (years)	9.1 (6.7)
Age methadone use became a problem	21.7 (5.9)
Duration since first use of methadone (years)	7.0 (5.5)
Age crack use became a problem	23.2 (4.8)
Duration since first use of crack (years)	5.4 (4.5)

a1.4 Health Risk Behaviour

Table a1.4(a) Injecting-Related Health Variables

	n	%
Percentage injected		
Ever injected	164	77.0
[a]*Ever shared injecting equipment*		
Ever used needle after someone	82	52.6
Somebody ever used needle after you	74	47.1
Ever reused own injecting equipment	136	86.6
Ever shared filter/spoons/flush water	85	54.8

	Mean (sd)
[a]Age first injected	21.0(5.2)

[a]Percentages for those who have ever injected.

Table a1.4(b) Overdose Rates

	n	%
Proportion of participants ever overdosed		
Never overdosed	117	57.6
Overdosed once	28	13.8
More than 1 but maximum of 3 times	31	15.3
More than 3 but maximum of 5 times	11	5.4
Overdosed more than 5 times	16	7.9

a1.5 Physical and Psychological Health

Table a1.5(a) Suicidal Thoughts and Attempts

	n	%
Suicide		
Seriously thought of committing suicide ever	95	47.3
Ever attempted suicide	65	32.0

Table a1.5(b) HIV, HBV, HCV Status

	HIV Status		HBV Status		HCV Status	
	n	%	n	%	n	%
Ever tested	157	82.6	157	83.1	162	83.9
Negative*	114	79.2	118	83.7	67	44.1
Positive*	8	5.6	4	2.8	66	43.4
Awaiting results*	22	15.3	19	13.5	19	12.5

*Of those ever tested

a1.6 Personal/Social Functioning

Table a1.6(a) Demographics: Education

	Mean (sd)	
Age left school (years)	15.11 (1.70)	
Highest Educational Level	n	%
No formal education	5	2.3
Primary	28	13.1
Lower secondary	145	68.1
Upper secondary	26	12.2
Third level	9	4.2
Highest Educational Qualification		
No qualifications	85	39.5
Junior cert/basic skills/ NVCA level 1	102	47.4
Leaving cert	15	7.0
Apprenticeship	1	0.5
National cert./dip./NCEA	9	4.2
Third level	3	1.4

Table a1.6(b) Demographics: Children

	n	%
Have children under 18 years		
No	74	36.3
Yes	130	63.7
Parents - number of children under care		
None	65	50.8
One	29	22.7
Two or more	34	26.6

a1.7 Criminal Activity

Table a1.7(a) Types of Crime Ever Committed

	n	%
Crime committed		
Selling/supply drugs	107	62.6
Theft from a person	66	41.8
Theft from house/home	51	32.5
Theft from shop/commercial property	105	63.3
Theft from a vehicle	65	41.4
Theft of a vehicle	66	42.0
Handling stolen goods	112	67.1
Fraud/forgery/deception	66	42.0
Assault	59	37.8
Criminal damage	62	40.5
Soliciting	15	9.7
Breach of the peace	67	42.4

Table a1.7(b) Arrests by Offence

	Ever Arrested	
	n	%
Crime committed		
Selling/supply drugs	45	25.6
Theft from a person	33	21.0
Theft from house/home	26	17.3
Theft from shop/commercial property	68	40.5
Theft from a vehicle	27	17.2
Theft of a vehicle	33	20.8
Handling stolen goods	29	17.0
Fraud/forgery/deception	20	12.7
Assault	37	24.2
Criminal damage	45	29.4
Soliciting	5	3.5
Breach of the peace	46	29.7

Table a1.7(c) Prison Experience

	n	%
Imprisonment		
Ever been in prison	123	60.0
Ever remanded in custody	118	58.1
Ever received custodial sentence	94	46.3

Key Outcome Measures

a1.8 Substance Use

Table a1.8(a) Drug Use in Last Three Months: Percentage Used

	n	%
Drug use in the last three months		
Tobacco	193	94.1
Heroin	175	81.8
Cannabis	135	66.5
Alcohol	108	54.0
Benzodiazepines	95	45.0
Non-prescribed methadone	95	44.4
Cocaine	87	40.5
Crack cocaine	32	14.9
Ecstasy	26	12.9
Other opiates	24	11.2
Amphetamine	9	4.5

Table a1.8(b) Drug Use in Last Three Months: Mean Days Used

	Population		Sub-sample used in last three months	
	Mean	(sd)	Mean	(sd)
Mean days used in last three months				
Tobacco	83.6	(22.5)	88.8	(8.7)
Cannabis	42.3	(42.0)	63.6	(36.0)
Heroin	47.3	(36.6)	57.8	(32.1)
Non-prescribed methadone	13.6	(24.6)	30.7	(29.0)
Benzodiazepines	16.9	(31.8)	37.5	(38.5)
Alcohol	12.1	(22.3)	22.4	(26.4)
Cocaine	5.0	(12.8)	12.4	(17.8)
Crack cocaine	2.4	(11.2)	16.1	(25.1)
Other opiates	2.1	(11.3)	18.5	(29.4)
Ecstasy	0.3	(1.0)	2.2	(2.0)
Amphetamine	0.1	(0.9)	2.6	(3.6)

Table a1.8(c) Drug Use in Last Three Months: Mean Amount Used

	Population		Sub-sample used in last three months	
	Mean	(sd)	Mean	(sd)
Mean amount used in a day in last three months				
Tobacco (cigarettes)	19.5	(14.2)	20.6	(13.7)
[b]Heroin (grams)	0.6	(0.8)	0.7	(0.9)
Cannabis (joints)	6.0	(12.9)	9.4	(15.2)
Alcohol (units)	8.1	(14.1)	15.2	(16.6)
Cocaine (grams)	0.7	(2.3)	2.0	(3.5)
Non-Prescribed Methadone (mls)	29.8	(43.3)	69.2	(40.3)
Benzodiazepines (mgs)	40.1	(95.0)	113.8	(131.8)

[a] Crack cocaine was excluded due to the inconsistency in the way data was reported.
[b]These figures were based on 1 bag of heroin containing on average 0.25grams at the time of fieldwork

a1.9 Health Risk Behaviour

Table a1.9(a) Injecting-Related Variables in the Last Three Months

	n	%
Percentage who injected in last three months	93	43.7
Frequency of injecting in last three months		
Infrequent (1-9 days)	17	19.3
Frequent (10 –24 days)	9	10.2
Very frequent (25-79 days)	31	35.2
Daily (80-90 days)	31	35.2
Used needle after someone in last month		
No times	83	92.2
One time	3	3.3
More than Once	4	4.4
Someone used needle after you in last month		
No times	79	88.8
One time	5	5.6
More than once	5	5.6
Reused own needles in last month		
No times	38	58.5
One time	0	0
More than once	27	41.5
Used filter/spoons/flush water/ after someone		
No times	70	88.6
One time	3	3.8
More than once	6	7.6

	Mean (sd)
[a]Days injected in last three months	53.1 (33.9)
[a]Times injected on typical day	3.4 (2.2)

[a]Relates to those who have injected in last three months

Table a1.9 (b) Overdose Rates in the Last Three Months

	n	%
Overdose in last three months		
None	187	91.7
One or more times	17	8.3

Table a1.9(c) Frequency of Unsafe Sex in the Last Three Months

	n	%
Sexual history in last three months		
Participants having sex	150	74.6
Participants not having sex	51	25.4
[ab] *Sexual partners in last three months*		
Having sex with a regular partner	124	87.9
Having sex with someone other than regular partner	32	25.4
[b]*Condom Use with regular partner*		
Always used condom	27	23.1
Sometimes used condom	12	10.3
Never used condom	78	66.7
[b]*Condom use with someone other than a regular partner*		
Always used condom	13	54.2
Sometimes used condom	5	20.8
Never used condom	6	25.0

[a]These categories are not mutually exclusive
[b] This is only of those who had sex in the last three months

a1.10 Physical and Psychological Health

Figure a1.1 Participants Self-Assessment of Health

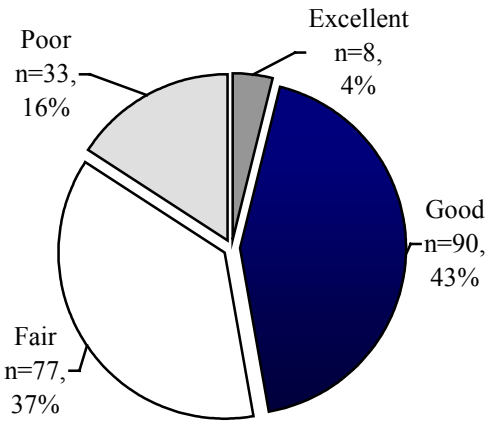


Table a1.10(a) Physical Health Symptoms: Mean Days Experienced in Last Three Months

	Population		Sub-sample	
	Mean	(sd)	Mean	(sd)
Physical health symptoms over previous three months				
Poor appetite	52.9	(39.1)	73.1	(25.2)
Tiredness/fatigue	42.7	(39.5)	64.9	(30.3)
Nausea (feeling sick)	16.3	(31.2)	45.9	(37.2)
Stomach pains	14.0	(27.9)	44.1	(33.7)
Difficulty breathing	14.1	(30.7)	58.0	(36.3)
Chest pains	7.1	(21.6)	42.3	(36.4)
Joint/bone pains	11.2	(27.3)	47.1	(38.2)
Muscle pains	7.2	21.1)	34.7	(34.7)
Numbness/tingling	7.1	(21.6)	41.3	(36.4)
Tremors/shakes	9.1	(23.2)	40.8	(33.6)

Table a1.10(b) Physical Health Symptoms: Percentages Experienced in Last Three Months

	n	%
Poor appetite in last three months		
Experienced	140	72.5
Didn't experience	53	27.5
Tiredness/Fatigue in last three months		
Experienced	127	65.8
Didn't experience	66	34.2
Nausea (feeling sick) in last three months		
Experienced	68	35.6
Didn't experience	123	64.4
Stomach Pains in last three months		
Experienced	61	31.8
Didn't experience	131	68.2
Difficulty breathing in last three months		
Experienced	47	24.4
Didn't experience	146	75.6
Chest pains in last three months		
Experienced	32	16.8
Didn't experience	159	83.2
Joint/Bone pains in last three months		
Experienced	46	23.7
Didn't experience	148	76.3
Muscle pains in last three months		
Experienced	40	20.8
Didn't experience	152	79.2
Numbness/tingling in last three months		
Experienced	33	17.2
Didn't experience	159	82.8
Tremors/shakes in last three months		
Experienced	42	22.3
Didn't experience	146	77.7

Table a1.10(c) Mental Health Symptoms: Mean Days Experienced in the Last Three Months

	Population		Sub-sample	
	Mean	(sd)	Mean	(sd)
Mental health symptoms over last three months				
Feeling tense	32.0	(37.5)	57.5	(32.5)
Suddenly scared for no reason	13.7	(29.3)	51.7	(35.7)
Feeling fearful	16.0	(30.6)	54.1	(33.3)
Nervous/shaking inside	15.6	(30.3)	50.7	(34.8)
Spells of terror/panic	7.9	(22.1)	40.5	(34.9)
Feeling hopeless about future	26.1	(35.9)	50.8	(35.5)
Feelings of worthlessness	23.8	(35.3)	51.8	(35.5)
Feeling no interest in things	27.5	(35.8)	51.7	(34.1)
Feeling lonely	29.3	(37.4)	59.5	(32.1)
Thoughts of ending your life	7.0	(20.8)	32.3	(34.7)

Table a1.10(d) Mental Health Symptoms: Percentages Experienced in Last Three Months

	n	%
Feeling tense in last three months		
Experienced	104	55.6
Didn't experience	83	44.4
Suddenly scared for no reason in last three months		
Experienced	50	26.5
Didn't experience	139	73.5
Feeling fearful in last three months		
Experienced	55	29.6
Didn't experience	131	70.4
Nervousness or shaking inside in last three months		
Experienced	58	30.7
Didn't experience	131	69.3
Spells of terror or panic in last three months		
Experienced	37	19.5
Didn't experience	153	80.5
Feeling hopeless about the future in last three months		
Experienced	94	51.4
Didn't experience	89	48.6
Feelings of worthlessness in last three months		
Experienced	85	45.9
Didn't experience	100	54.1
Feeling no interest in things in last three months		
Experienced	101	53.2
Didn't experience	89	46.8
Feeling lonely in last three months		
Experienced	90	49.2
Didn't experience	93	50.8
Thoughts of ending you life in last three months		
Experienced	39	21.5
Didn't experience	142	78.5

Table a1.10(e) Suicidal Thoughts and Attempts in Last Six Months

	n	%
Suicide		
Seriously thought of committing suicide in last six months	44	22.8
Attempted suicide in the last six months	23	11.4

a1.11 Personal and Social Functioning

Table a1.11(a) Recent Employment and Income Status

	n	%
Occupation over last six months		
Not working	132	63.8
Working (FT/PT)	45	21.7
In prison	15	7.2
Disability	15	7.2
In treatment	0	0.0
[a]*Recent Employment*		
Employed in last three months	44	21.3
Currently employed	38	18.1
[a]*Main sources of Income last three months*		
Wage/salary	41	19.3
Family/friends	61	28.6
Social welfare	172	80.8
Drug dealing	36	16.9
Other crime	63	29.7

[a] These categories are not mutually exclusive.

Table a1.11(b) Recent Accommodation Status

	n	%
Current Accommodation		
Family home	90	43.3
Own house/flat or rental	79	38
House/home of friends	9	4.3
Hostel/shelter/B&B	19	9.1
Prison	5	2.4
No Fixed Abode	6	2.9
[a]*Accommodation - over last three months spent time in*		
Family home	90	44.3
Own house/flat or rental	76	36.5
Hostel/shelter/B&B	23	11.1
Prison	17	8.2
Home of friends	21	10.1
No Fixed Abode	13	6.3
Usually lives with		
Partner/spouse	20	9.6
Parents	74	35.4
Alone	25	12.0
[b]Children	23	11.0
[b]Parents and children	11	5.3
[b]Partner and children	28	13.4
Other	28	13.4

[a]These categories are not mutually exclusive
[b]Includes children over the age of 18 years

Table a1.11(c) Treatment Over Last Six Months: Previously Treated Cohort

	Sub-sample n	%
Treatment in the last six months		
Structured/supervised detoxification	13	7.5
One-to-one counselling	15	8.8
Residential drug treatment	3	1.8
Prescribed methadone	7	4.3
Group work	7	4.1

Table a1.11(d) Treatment Received for a Medical Condition in Last Three Months

	n	%
Treatment in last three months		
Attended hospital and stayed overnight	21	10.0
Attended an A&E	38	18.9
Visited a GP (not methadone G.P.)	62	32.0
Visited an out-patient department /received community treatment	22	11.1

Table a1.11(e) Mean Number of Times in Treatment for a Medical Condition in Last Three Months

	Mean (sd)
[a]*Number of times attended service*	
Number of days overnight stay in hospital	9.0 (10.3)
Number of visits to Accident and Emergency	1.4 (1.1)
Number of visits to a GP (not methadone GP)	4.2 (4.9)
Numbers of visits for out-patient appointment/community treatment	5.3 (8.7)

[a] Of those who attended these services in the last three months

Table a1.11(f) Frequency of Contact and Conflict with Partner, Family/Relatives and Friends

	Mean (sd)
Number of days contact with	
Partner	83.2 (19.0)
Mother	54.7 (38.4)
Father	47.4 (40.6)
Siblings	45.8 (40.9)
Friends	42.1 (40.9)
Number of days conflict with	
Partner	8.3 (20.4))
Mother	7.4 (19.0)
Father	8.0 (22.3)
Siblings	5.9 (19.7)
Friends	1.4 (9.4)

Table a1.11(g) Quality of Relationship with Children

	n	%
Type of relationship with children		
Very good	74	58.7
Good	26	20.6
Okay/alright	9	7.1
Poor	6	4.8
Very poor	11	8.7

a1.12 Criminal Activity

Table a1.12(a) Crime Committed in Last Three Months

	n	%
Crime committed		
Selling/supply drugs	42	22.5
Theft from a person	15	8.0
Theft from house/home	9	4.8
Theft from shop/commercial property	36	19.3
Theft from a vehicle	9	4.8
Theft of a vehicle	9	4.8
Handling stolen goods	40	21.7
Fraud/forgery/deception	15	8.2
Assault	9	4.9
Criminal damage	9	4.9
Soliciting	10	5.3
Breach of the peace	12	6.5

Table a1.12(b) Means Days Crimes Committed in Last Three Months

	Population		Sub-sample	
	Mean	(sd)	Mean	(sd)
Frequency of crime in last three months				
Selling/supply drugs	8.7	(23.9)	48.8	(35.4)
Theft from a person	0.6	(6.0)	9.7	(24.3)
Theft from house/home	0.3	(2.6)	9.8	(12.2)
Theft from shop/commercial property	5.6	(26.8)	34.0	(59.1)
Theft from a vehicle	0.09	(0.5)	2.4	(1.4)
Theft of a vehicle	0.1	(0.7)	2.6	(1.8)
Handling stolen goods	5.0	(26.5)	28.6	(58.8)
Fraud/forgery/deception	0.7	(5.0)	11.5	(17.1)
Assault	0.04	(0.27)	1.3	(0.8)
Criminal damage	0.2	(1.4)	5.4	(6.1)
Soliciting	2.6	(13.7)	51.0	(35.6)
Breach of the peace	0.2	(1.7)	5.3	(7.0)

Table a1.12(c) Arrest by Offence in Last Three Months

	n	%
Crime Committed		
Selling/supply drugs	7	4.0
Theft from a person	4	2.5
Theft from house/home	3	1.9
Theft from shop/commercial property	12	7.2
Theft from a vehicle	2	1.2
Theft of a vehicle	2	1.2
Handling stolen goods	2	1.2
Fraud/forgery/deception	2	1.2
Assault	2	1.3
Criminal damage	5	3.2
Soliciting	2	1.3
Breach of the peace	4	2.5

Table a1.12(d) Current Legal Status

	n	%
[a]*Current legal problem*		
None	117	58.2
On probation/community service	13	6.7
Serving a sentence in prison	4	2.1
On bail – awaiting trial/hearing	29	15.2
On bail – awaiting sentencing	8	4.2
On temporary release	4	2.1
Outstanding warrants	16	8.3
Outstanding fines	8	4.2

[a] Categories are not mutually exclusive.

APPENDIX 2: RESULTS FOR DETOXIFICATION GROUP AT BASELINE

Background to Treatment

a2. 1 Index Treatment

Twenty percent (n=81) of the ROSIE Study baseline population were recruited from detoxification programmes. To this end, participants were recruited from the two main statutory in-patient detoxification facilities in the country. These two facilities are located within a hospital setting, the first a purpose built detoxification unit (providing a six week structured programme) and the second in a ward off the psychiatric wing of a large city hospital. These units provide a medically supervised detoxification programme delivered by a psychiatrist and a nursing team. The third in-patient detoxification facility was a non-statutory in-patient unit located outside Dublin city. A multi-disciplinary team delivers this in-patient programme, and the individual's detoxification is usually supervised by their own prescribing GP. Recruitment was also carried out in a community-based out-patient facility, which provides a structured, supervised detoxification programme. This programme, run by a multi-disciplinary team, lasts twelve weeks and requires morning attendance by participants. Finally, recruitment occurred in the detoxification programme provided within Mountjoy Prison – the Medical Unit. In short, ROSIE interviews were carried out in all the main detoxification programmes in the country.

Table a2.1 (a) Gender and Age of Detoxification Group

	n	%
Gender		
Male	62	76.5
Female	19	23.5

	Mean	Median
Age		
Age of male study participants (years)	26.9(6.0)	26.0
Age of female study participants (years)	24.3(5.6)	23.0

Table a2.1 (b) Time in Index Treatment at Baseline and Time Waiting for Treatment

	Mean (sd)
[a]Time in baseline treatment (days)	21.4 (14.1)
[b] Length of time waiting for treatment (weeks)	9.4 (10.9)

[a] Excluding participants on methadone in prison as all were not new to index treatment.
[b] Includes only those on waiting lists for treatment.

a2.2 Treatment History

Table a2.2(a) Treatment History at Baseline for Detoxification Group: Previous Treatment Received

	n	%
Percentage in previous treatment		
Previous treatment received	77	95.1
No previous treatment received	4	4.9

	Population		Sub-sample – previously treated	
	n	%	n	%
[a]*Previous types of formal treatment*				
One-to-one counselling	61	75.3	61	79.2
Prescribed methadone	52	65.0	52	68.4
Structured/supervised detoxification	51	63.8	51	67.1
Residential drug treatment	27	33.3	27	35.1
[b]Needle exchange	53	65.4	52	67.5

[a]These categories are not mutually exclusive.
[b]Attendance at needle-exchange is not considered treatment

Table a2.2(b) Details of Previous Treatment

	Previously treated Mean (sd)
Age first sought treatment (years)	20.9 (6.0)
Age first attending counselling (years)	20.6 (4.4)
Number of counsellors	3.0 (2.2)
Longest period of regular attendance (months)	11.2 (15.7)
Age first on methadone/physeptone (years)	21.4 (5.8)
Number of episodes	2.1 (1.2)
Longest period of attendance (months)	34.0 (34.0)
Age first on supervised detoxification (years)	22.3 (4.5)
Number of episodes	2.2 (1.8)
Age first in residential treatment (years)	21.9 (3.8)
Number of episodes	1.7 (1.1)

a2.3 Substance Use

Table a2.3(a) Drug Using History: Ever Used

	n	%
Drugs ever used		
Heroin	80	98.8
Tobacco	73	91.3
Cannabis	76	95.0
Alcohol	75	92.6
Cocaine	70	89.7
Non-prescribed methadone	68	87.2
Benzodiazepines	68	88.3
Ecstasy	67	85.9
Amphetamine	60	77.9
Other opiates	42	53.8
LSD	54	76.1
Crack cocaine	41	51.9

Table a2.3(b) Drug Using History: Age First Used

	Mean (sd)
Age first smoked tobacco (years)	12.4 (2.3)
Age first used alcohol (years)	13.2 (1.9)
Age first used cannabis (years)	13.9 (3.7)
Age first used LSD (years)	16.0 (2.8)
Age first used ecstasy (years)	16.6 (4.8)
Age first use amphetamine (years)	16.8 (3.9)
Age first used heroin (years)	17.2 (3.3)
Age first used benzodiazepines	17.3 (3.8)
Age first used other opiates (years)	19.4 (4.5)
Age first used cocaine (years)	19.0 (5.1)
Age first used methadone (years)	20.3 (5.7)
Age first used crack (years)	21.8 (4.5)

Table a2.3(c) Drug Using History: Problem Drug Use

	Mean (sd)
Age cannabis use became a problem	15.8 (3.8)
Duration since first use of cannabis (years)	12.4 (5.5)
Age heroin use became a problem	19.4 (3.8)
Duration since first use of heroin (years)	8.8 (5.0)
Age benzodiazepine use first became a problem	20.1 (3.9)
Duration since first use of benzodiazepine (years)	8.4 (5.9)
Age cocaine use became a problem	21.2 (4.4)
Duration since first use of cocaine (years)	7.1 (3.8)
Age other opiate use first became a problem	21.0 (5.7)
Duration since first use of other opiate (years)	8.2 (5.3)
Age methadone use became a problem	23.1 (7.3)
Duration since first use of methadone (years)	6.6 (4.2)
Age crack use became a problem	20.1 (2.7)
Duration since first use of crack (years)	4.2 (2.9)

a2.4 Health Risk Behaviour

Table a2.4(a) Injecting-Related Health Variables

	n	%
Percentage injected		
Ever injected	62	76.5
[a]*Ever shared injecting equipment*		
Ever used needle after someone	40	71.4
Somebody ever used needle after you	28	50.0
Ever reused own injecting equip.	48	85.7
Ever shared filter/spoons/flush water	38	69.1
	Mean (sd)	
Age first injected	19.4 (3.7)	

[a]Percentages for those who have ever injected.

Table a2.4(b) Overdose Rates

	n	%
Proportion of participants ever overdosed		
Never overdosed	51	63.0
Overdosed once	8	9.9
More than 1 but maximum of 3 times	9	11.1
More than 3 but maximum of 5 times	8	9.9
Overdosed more than 5 times	5	6.2

a2.5 Physical and Psychological Health

Table a2.5(a) Suicidal Thoughts and Attempts

	n	%
Suicide		
Seriously thought of committing suicide ever	42	51.9
Ever attempted suicide	21	26.3

Table a2.5(b) HIV, HBV, HCV Status

	HIV Status		HBV Status		HCV Status	
	n	%	n	%	n	%
Ever tested	66	82.5	66	83.5	67	83.8
Negative*	50	89.3	49	89.1	24	44.1
Positive*	4	7.1	3	5.5	33	56.9
Awaiting results*	2	3.6	3	5.5	1	1.7

*Of those ever tested

a2.6 Personal/Social Functioning

Table a2.6(a) Demographics: Education

	Mean (sd)	
Age left school (years)	14.95 (2.25)	
Highest Educational Level	n	%
No formal education	5	6.2
Primary	21	25.9
Lower secondary	33	40.7
Upper secondary	17	21.0
Third level	5	6.2
Highest Educational Qualification		
No qualifications	18	22.2
Junior cert/basic skills/ NVCA level 1	44	54.3
Leaving cert	14	17.3
Apprenticeship	2	2.5
National cert./dip./NCEA	3	3.7
Third level	0	0

Table a2.6(b) Demographics: Children

	n	%
Have children under 18 years		
No	41	52.6
Yes	37	47.4
Parents - number of children under care		
None	23	62.2
One	10	27.0
Two or more	4	10.8

a2.7 Criminal Activity

Table a2.7(a) Types of Crime Ever Committed

	n	%
Crime committed		
Selling/supply drugs	56	72.7
Theft from a person	48	62.3
Theft from house/home	31	40.3
Theft from shop/commercial property	64	83.1
Theft from a vehicle	52	67.5
Theft of a vehicle	47	60.3
Handling stolen goods	65	84.4
Fraud/forgery/deception	42	55.3
Assault	42	56.0
Criminal damage	45	59.2
Soliciting	6	8.0
Breach of the peace	50	66.7

Table a2.7(b) Arrests by Offence

	Ever Arrested	
	n	%
Crime committed		
Selling/supply drugs	25	34.2
Theft from a person	26	36.6
Theft from house/home	13	18.8
Theft from shop/commercial property	44	60.3
Theft from a vehicle	24	33.8
Theft of a vehicle	30	43.5
Handling stolen goods	26	35.1
Fraud/forgery/deception	11	16.4
Assault	31	44.9
Criminal damage	30	44.1
Soliciting	2	3.1
Breach of the peace	42	61.8

Table a2.7(c) Prison Experience

	n	%
Imprisonment		
Ever been in prison	55	69.6
Ever remanded in custody	51	64.6
Ever received custodial sentence	45	57.0

Key Outcome Measures

a2.8 Substance Use

Table a2.8(a) Drug Use in Last Three Months: Percentage Used

	n	%
Drug use in the last three months		
Tobacco	72	90.0
Heroin	61	75.3
Cannabis	52	65.8
Alcohol	46	56.8
Benzodiazepines	41	51.3
Non-prescribed methadone	37	46.3
Cocaine	40	49.4
Crack cocaine	11	13.6
Ecstasy	10	12.5
Other opiates	5	6.2
Amphetamine	4	5.1

Table a2.8(b) Drug Use in Last Three Months: Mean Days Used

	Population		Sub-sample used in last three months	
	Mean	(sd)	Mean	(sd)
Mean days used in last three months				
Tobacco	77.5	(29.2)	86.1	(14.0)
Cannabis	38.3	(38.6)	58.1	(33.2)
Heroin	34.7	(32.6)	46.1	(29.8)
Non-prescribed methadone	12.3	(24.6)	26.5	(30.6)
Benzodiazepines	17.8	(28.7)	34.8	(31.9)
Alcohol	13.0	(21.4)	22.8	(24.2)
Cocaine	10.3	(21.2)	20.8	(26.4)
Crack cocaine	1.5	(5.5)	11.1	(11.1)
Other opiates	1.9	(9.9)	30.2	(30.0)
Ecstasy	0.5	(1.6)	4.2	(2.5)
Amphetamine	0.08	(0.39)	1.5	(1.0)

Table a2.8(c) Drug Use in Last Three Months: Mean Amount Used

	Population		Sub-sample used in last three months	
	Mean	(sd)	Mean	(sd)
Mean amount used in a day in last three months				
Tobacco (cigarettes)	15.6	(11.0)	17.4	(10.2)
[b]Heroin (grams)	0.5	(0.58)	0.6	(0.6)
Cannabis (joints)	8.2	(15.3)	11.8	(16.8)
Alcohol (units)	8.1	(10.0)	14.4	(9.2)
Cocaine (grams)	1.2	(3.0)	2.5	(3.9)
Non-Prescribed Methadone (mls)	19.6	(29.3)	44.3	(29.2)
Benzodiazepines (mgs)	44.0	(80.2)	96.1	(95.4)

[a] Crack cocaine was excluded due to the inconsistency in how data was reported

[b]These figures were based on 1 bag of heroin containing on average 0.25grams at the time of fieldwork

a2.9 Health Risk Behaviour

Table a2.9(a) Injecting-Related Variables in Last Three Months

	n	%
Percentage who injected in last three months	38	46.9
Frequency of injecting in last three months		
Infrequent (1-9 days)	13	34.2
Frequent (10 –24 days)	3	7.9
Very frequent (25-79 days)	15	39.5
Daily (80-90 days)	7	18.4
Used needle after someone in last month		
No times	33	91.7
One time	2	5.6
More than once	1	2.8
Someone used needle after you in last month		
No times	32	88.9
One time	3	8.3
More than once	1	2.8
Reused own needles in last month		
No times	21	65.6
One time	1	3.1
More than once	10	31.2
Used filter/spoons/flush water/ after someone		
No times	30	85.7
One time	2	5.7
More than once	3	8.6

	Mean (sd)
[a]Days injected in last three months	37.9 (32.6)
[a]Times injected on typical day	4.6 (5.3)

[a]Relates to those who have injected in last three months.

Table a2.9(b) Overdose Rates in Last Three Months

	n	%
Overdose in last three months		
None	78	96.3
One or more times	3	3.7

Table a2.9(c) Frequency of Unsafe Sex in Last Three Months

	n	%
Sexual history in last three months		
Participants having sex	46	61.3
Participants not having sex	29	38.7
[ab]*Sexual partners in last three months*		
Having sex with a regular partner	32	71.1
Having sex with someone other than regular partner	16	36.4
[b]*Condom use with regular partner*		
Always used condom	7	22.6
Sometimes used condom	1	3.2
Never used condom	23	74.2
[b]*Condom use with someone other than a regular partner*		
Always used condom	10	66.7
Sometimes used condom	1	6.7
Never used condom	4	26.7

[a]These categories are not mutually exclusive.
[b] This is only of those who had sex in the last three months

a2.10 Physical and Psychological Health

Figure a2.1 Participants Self-Assessment of Health

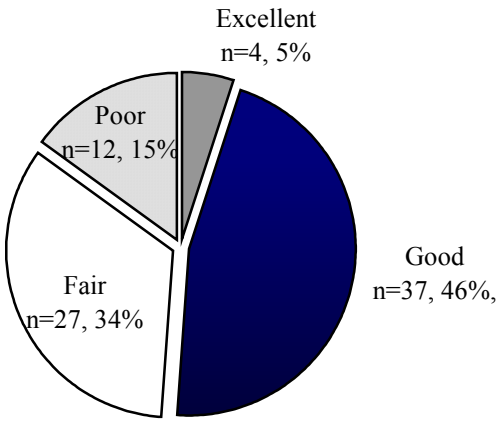


Table a2.10(a) Physical Health Symptoms: Mean Days Experienced in Last Three Months

	Population		Sub-sample	
	Mean	(sd)	Mean	(sd)
Physical health symptoms over last three months				
Poor appetite	47.8	(37.6)	60.6	31.8
Tiredness/fatigue	40.0	(36.3)	53.1	32.3
Nausea (feeling sick)	11.5	(21.5)	26.6	26.0
Stomach pains	15.8	(26.1)	28.5	29.5
Difficulty breathing	13.4	(26.0)	37.4	31.7
Chest pains	13.6	(24.7)	34.5	28.9
Joint/bone pains	15.1	(26.5)	28.4	30.8
Muscle pains	11.4	(22.4)	26.4	27.8
Numbness/tingling	12.1	(27.2)	37.1	37.1
Tremors/shakes	9.5	(23.1)	30.9	33.0

Table a2.10(b) Physical Health Symptoms: Percentages Experienced in Last Three Months

	n	%
Poor appetite in last three months		
Experienced	63	78.8
Didn't experience	17	21.3
Tiredness/Fatigue in last three months		
Experienced	61	75.3
Didn't experience	20	24.7
Nausea (feeling sick) in last three months		
Experienced	35	43.2
Didn't experience	46	56.8
Stomach Pains in last three months		
Experienced	45	55.6
Didn't experience	36	44.4
Difficulty breathing in last three months		
Experienced	29	35.8
Didn't experience	52	64.2
Chest pains in last three months		
Experienced	32	39.5
Didn't experience	49	60.5
Joint/Bone pains in last three months		
Experienced	43	53.1
Didn't experience	38	46.9
Muscle pains in last three months		
Experienced	35	43.2
Didn't experience	46	56.8
Numbness/tingling in last three months		
Experienced	26	32.5
Didn't experience	54	67.5
Tremors/shakes in last three months		
Experienced	25	30.9
Didn't experience	56	69.1

Table a2.10(c) Mental Health Symptoms: Mean Days Experienced in Last Three Months

	Population		Sub-sample	
	Mean	(sd)	Mean	(sd)
Mental health symptoms over last three months				
Feeling tense	38.7	(37.7)	53.4	(34.2)
Suddenly scared for no reason	16.1	(29.3)	36.9	(34.7)
Feeling fearful	18.9	(30.1)	39.3	(33.0)
Nervous/shaking inside	19.9	(30.3)	37.0	(32.7)
Spells of terror/panic	12.6	(26.8)	38.4	(34.9)
Feeling hopeless about future	28.8	(35.5)	49.5	(33.8)
Feelings of worthlessness	28.8	(36.8)	50.5	(35.7)
Feeling no interest in things	33.0	(36.3)	54.4	(31.7)
Feeling lonely	31.8	(36.9)	52.7	(33.8)
Thoughts of ending your life	7.3	(21.2)	28.3	(34.2)

Table a2.10(d) Mental Health Symptoms: Percentages Experienced in Last Three Months

	n	%
Feeling tense in last three months		
Experienced	58	72.5
Didn't experience	22	27.5
Suddenly scared for no reason in last three months		
Experienced	35	43.8
Didn't experience	45	56.3
Feeling fearful in last three months		
Experienced	38	48.1
Didn't experience	41	51.9
Nervousness or shaking inside in last three months		
Experienced	42	53.8
Didn't experience	36	46.2
Spells of terror or panic- last 3 months		
Experienced	26	32.9
Didn't experience	53	67.1
Feeling hopeless about the future in last three months		
Experienced	46	58.2
Didn't experience	33	41.8
Feelings of worthlessness in last three months		
Experienced	45	57.0
Didn't experience	34	43.0
Feeling no interest in things in last three months		
Experienced	48	60.8
Didn't experience	31	39.2
Feeling lonely- last 3 months		
Experienced	47	60.3
Didn't experience	31	39.7
Thoughts of ending you life in last three months		
Experienced	20	26.0
Didn't experience	57	74.0

Table a2.10(e) Suicidal Thoughts and Attempts in Last Six Months

	n	%
Suicide		
Seriously thought of committing suicide in last six months	18	22.2
Attempted suicide in the last six months	5	6.4

a2.11 Personal and Social Functioning

Table a2.11(a) Recent Employment and Income Status

	n	%
Occupation over last six months		
Not working	36	44.4
Working (FT/PT)	21	25.9
In prison	14	17.3
Disability	9	11.1
In treatment	1	1.2
[a]*Recent Employment*		
Employed in last three months	12	14.8
Currently employed	8	9.9
[a]*Main sources of Income last three months*		
Wage/salary	14	17.7
Family/friends	26	32.9
Social welfare	58	73.4
Drug dealing	26	32.9
Other crime	33	41.8

[a] These categories are not mutually exclusive.

Table a2.11(b) Recent Accommodation Status

	n	%
Current Accommodation		
Family home	15	18.5
Drug treatment residence	45	55.6
Own house/flat or rental	4	4.9
House/home friend	1	1.2
Hostel/shelter/B&B	1	1.2
Prison	14	17.3
No Fixed Abode	1	1.2
[a]*Accommodation - over last three months spent time in*		
Family home	41	51.3
Drug treatment residence	45	55.6
Own house/flat or rental	20	25.0
Hostel/shelter/B&B	7	8.8
Prison	15	18.8
Home of friends	8	10.0
No Fixed Abode	4	5.0
Usually lives with		
Partner/spouse	2	2.6
Parents	37	47.4
Alone	5	6.4
[b]Children	6	7.7
[b]Parents and children	3	3.8
[b]Partner and children	5	6.4
Other	20	25.6

[a]These categories are not mutually exclusive.
[b]Includes children over the age of 18 years.

Table a2.11(c) Treatment Over Last Six Months: Previously Treated Cohort

	Sub-sample n	%
Treatment in the last six months		
Structured/supervised detoxification	15	19.5
One-to-one counselling	11	14.3
Residential drug treatment	3	3.9
Prescribed methadone	6	7.9
Group work	9	11.7

Table a2.11(d) Treatment Received for a Medical Condition in Last Three Months

	n	%
Treatment in last three months		
Attended hospital and stayed overnight	5	6.4
Attended an A&E	15	19
Visited a GP (not methadone G.P.)	26	34.2
Visited an out-patient department /received community treatment	10	12.3

Table a2.11(e) Mean Number of Times in Treatment for a Medical Condition in Last Three Months

	Mean (sd)
[a]*Number of times attended service*	
Number of days overnight stay in hospital	1.9 (0.9)
Number of visits to Accident and Emergency	1.2 (0.6)
Number of visits to a GP (not methadone GP)	3.8 (3.7)
Numbers of visits for out-patient appointment/community treatment	4.4 (7.5)

[a] Of those who attended these services in the last three months

Table a2.11(f) Frequency of Contact and Conflict with Partner, Family/Relatives and Friends

	Mean (sd)
Number of days contact with	
Partner	62.7 (33.8)
Mother	61.3 (36.5)
Father	46.7 (39.9)
Siblings	47.2 (38.0)
Friends	44.9 (37.8)
Number of days conflict with	
Partner	9.1 (20.5)
Mother	8.4 (19.2))
Father	9.3 (21.0)
Siblings	4.2 (15.3))
Friends	1.3 (4.7)

Table a2.11(g) Quality of Relationship with Children

	n	%
Type of relationship with children		
Very good	23	63.9
Good	4	11.1
Okay/alright	5	13.9
Poor	0	0
Very poor	4	11.1

a2.12 Criminal Activity

Table a2.12(a) Crime Committed in Last Three Months

	n	%
Crime committed		
Selling/supply drugs	30	40.0
Theft from a person	9	12.2
Theft from house/home	4	5.3
Theft from shop/commercial property	12	16.4
Theft from a vehicle	7	9.2
Theft of a vehicle	9	11.8
Handling stolen goods	20	27.0
Fraud/forgery/deception	6	8.0
Assault	5	6.8
Criminal damage	5	6.8
Soliciting	3	4.0
Breach of the peace	5	6.8

Table a2.12(b) Means Days Crimes Committed in Last Three Months

	Population		Sub-sample	
	Mean	(sd)	Mean	(sd)
Frequency of crime in last three months				
Selling/supply drugs	18.5	(30.1)	46.2	(31.5)
Theft from a person	0.4	(1.4)	3.5	(2.9)
Theft from house/home	0.3	(1.7)	6.3	(4.8)
Theft from shop/commercial property	4.1	(16.0)	25.4	(33.4)
Theft from a vehicle	1.3	(8.0)	13.9	(24.5)
Theft of a vehicle	0.3	(0.8)	2.1	(1.6)
Handling stolen goods	7.9	(21.3)	29.6	(33.0)
Fraud/forgery/deception	2.1	(10.3)	25.8	(28.8)
Assault	0.1	(0.5)	1.5	(1.1)
Criminal damage	0.07	(0.3)	1.0	(0.0)
Soliciting	1.4	(10.4)	34.2	(48.5)
Breach of the peace	0.06	(0.4)	2.0	(1.4)

Table a2.12(c) Arrest by Offence in Last Three Months

	n	%
Crime Committed		
Selling/supply drugs	3	4.1
Theft from a person	0	0
Theft from house/home	0	0
Theft from shop/commercial property	2	2.9
Theft from a vehicle	0	0
Theft of a vehicle	1	1.5
Handling stolen goods	3	4.1
Fraud/forgery/deception	0	0.0
Assault	1	1.5
Criminal damage	2	2.9
Soliciting	1	1.4
Breach of the peace	2	3.0

Table a2.12(d) Current Legal Status

	n	%
[a]*Current legal problem*		
None	33	41.8
On probation/community service	9	11.5
Serving a sentence in prison	14	17.7
On bail – awaiting trial/hearing	9	11.5
On bail – awaiting sentencing	2	2.6
On temporary release	2	2.6
Outstanding warrants	12	15.4
Outstanding fines	6	7.7

[a] Categories are not mutually exclusive.

APPENDIX 3: RESULTS FOR ABSTINENCE GROUP AT BASELINE

Background to Treatment

a3. 1 Index Treatment

One fifth of the ROSIE study population (20.3%, n= 82) were recruited from abstinence-based treatment programmes. Baseline study recruitment was carried out in twelve abstinence-based treatment settings, nine of which were residential drug treatment programmes, with the remaining three non-residential facilities. The residential programmes were provided by a number of different organisations and were based on different ideologies, for example, 12-Step and Minnesota Model-type treatment, a therapeutic community and Christian-based programmes. Treatment length within these programmes varied from short term (four weeks) to long term (over one year).

Table a3.1(a) Gender and Age of Abstinence Group

	n	%
Gender		
Male	73	89.0
Female	9	11.0

	Mean (sd)	Median
Age		
Age of male study participants (years)	27.4(5.2)	27.0
Age of female study participants (years)	26.6(4.4)	25.0

Table a3.1(b) Time in Index Treatment at Baseline and Time Waiting for Treatment

	Mean (sd)
[a]Time in baseline treatment (days)	24.3 (14.6)
[b] Length of time waiting for treatment (weeks)	7.6(8.5)

[a] Excluding participants on methadone in prison as all were not new to index treatment.
[b] Includes only those on waiting lists for treatment.

a3.2 Treatment History

Table a3.2(a) Treatment History at Baseline for Abstinence Group: Previous Treatment Received

	n	%
Percentage in previous treatment		
Previous treatment received	75	91.5
No previous treatment received	7	8.5

	Population		Sub-sample – previously treated	
	n	%	n	%
[a]*Previous types of formal treatment*				
One-to-one counselling	55	67.1	55	73.3
Prescribed methadone	42	51.2	42	56.0
Structured/supervised detoxification	49	60.5	49	66.2
Residential drug treatment	47	58.0	47	63.5
[b]Needle exchange	47	57.3	44	58.7

[a]These categories are not mutually exclusive.
[b]Attendance at needle-exchange is not considered treatment.

Table a3.2(b) Details of Previous Treatment

	Previously treated Mean (sd)
Age first sought treatment (years)	21.7 (5.3)
Age first attending counseling (years)	22.5 (5.5)
Number of counselors	4.0 (4.3)
Longest period of regular attendance (months)	9.7 (13.0)
Age first on methadone/physeptone (years)	22.3 (5.2)
Number of episodes	2.1 (2.0)
Longest period of attendance (months)	24.2 (25.2)
Age first on supervised detoxification (years)	23.0 (5.5)
Number of episodes	2.4 (1.9)
Age first in residential treatment (years)	23.7 (5.1)
Number of episodes	2.1 (1.8)

a3.3 Substance Use

Table a3.3(a) Drug Using History: Ever Used

	n	%
Drugs ever used		
Heroin	79	97.5
Tobacco	76	93.8
Cannabis	80	100.0
Alcohol	76	98.7
Cocaine	77	96.3
Non-prescribed methadone	64	81.0
Benzodiazepines	71	91.0
Ecstasy	76	97.4
Amphetamine	72	93.5
Other opiates	49	64.5
LSD	61	83.6
Crack cocaine	47	60.3

Table a3.3(b) Drug Using History: Age First Used

	Mean (sd)
Age first smoked tobacco (years)	13.3 (3.9)
Age first used alcohol (years)	13.4 (2.8)
Age first used cannabis (years)	14.3 (3.1)
Age first used LSD (years)	16.4 (2.9)
Age first used ecstasy (years)	17.8 (4.5)
Age first use amphetamine (years)	17.5 (3.7)
Age first used heroin (years)	18.6 (5.2)
Age first used benzodiazepines	18.6 (4.4)
Age first used other opiates (years)	18.8 (3.7)
Age first used cocaine (years)	19.3 (4.0)
Age first used methadone (years)	20.0 (4.7)
Age first used crack (years)	22.2 (4.2)

Table a3.3(c) Drug Using History: Problem Drug Use

	Mean (sd)
Age cannabis use became a problem	18.6 (5.9)
Duration since first use of cannabis (years)	13.0 (5.2)
Age heroin use became a problem	19.6 (4.4)
Duration since first use of heroin (years)	8.8 (4.6)
Age benzodiazepine use first became a problem	20.7 (4.4)
Duration since first use of benzodiazepine (years)	8.5 (5.2)
Age cocaine use became a problem	23.1 (4.0)
Duration since first use of cocaine (years)	8.0 (4.3)
Age other opiate use first became a problem	19.9 (3.8)
Duration since first use of other opiate (years)	8.4 (4.9)
Age methadone use became a problem	21.7 (5.3)
Duration since first use of methadone (years)	7.4 (3.8)
Age crack use became a problem	23.3 (4.4)
Duration since first use of crack (years)	5.2 (4.5)

a3.4 Health Risk Behaviour

Table a3.4(a) Injecting-Related Health Variables

	n	%
Percentage injected		
Ever injected	56	68.3
[a]*Ever shared injecting equipment*		
Ever used needle after someone	39	84.8
Somebody ever used needle after you	34	73.9
Ever reused own injecting equipment	42	91.3
Ever shared filter/spoons/flush water	38	82.6

	Mean (sd)
Age first injected	20.0 (3.8)

[a]Percentages for those who have ever injected

Table a3.4(b) Overdose Rates

	n	%
Proportion of participants ever overdosed		
Never overdosed	35	43.2
Overdosed once	10	12.3
More than 1 but maximum of 3 times	20	24.7
More than 3 but maximum of 5 times	9	11.1
Overdosed more than 5 times	7	8.6

a3.5 Physical and Psychological Health

Table a3.5(a) Suicidal Thoughts and Attempts

	n	%
Suicide		
Seriously thought of committing suicide ever	48	58.5
Ever attempted suicide	29	35.4

Table a3.5(b) HIV, HBV, HCV Status

	HIV Status		HBV Status		HCV Status	
	n	%	n	%	n	%
Ever tested	56	70.9	55	69.6	56	70.9
Negative*	51	98.2	53	96.4	27	49.1
Positive*	0	0.0	1	1.8	28	50.9
Awaiting results*	1	1.8	1	1.8	0	0

*Of those ever tested

a3.6 Personal and Social Functioning

Table a3.6(a) Demographics: Education

	Mean (sd)
Age left school (years)	15.37 (1.40)
Highest Educational Level	**n** **%**
No formal education	1 1.2
Primary	11 13.4
Lower secondary	48 58.5
Upper secondary	16 19.5
Third level	6 7.3
Highest Educational Qualification	
No qualifications	17 20.7
Junior cert/basic skills/ NVCA level 1	43 52.4
Leaving cert	11 13.4
Apprenticeship	2 2.4
National cert./dip./NCEA	8 9.8
Third level	1 1.2

Table a3.6(b) Demographics: Children

	n	%
Have children under 18 years		
No	40	52.6
Yes	36	47.4
Parents - number of children under care		
None	28	77.8
One	3	8.3
Two or more	5	13.9

a3.7 Criminal Activity

Table a3.7(a) Types of Crime Ever Committed

	n	%
Crime committed		
Selling/supply drugs	69	87.3
Theft from a person	57	72.2
Theft from house/home	45	57.0
Theft from shop/commercial property	65	82.3
Theft from a vehicle	49	62.8
Theft of a vehicle	47	59.5
Handling stolen goods	71	89.9
Fraud/forgery/deception	52	65.0
Assault	54	68.4
Criminal damage	61	77.2
Soliciting	6	7.6
Breach of the peace	52	65.8

Table a3.7(b) Arrests by Offence

	Ever Arrested	
	n	%
Crime committed		
Selling/supply drugs	32	43.2
Theft from a person	29	45.3
Theft from house/home	21	37.5
Theft from shop/commercial property	40	58.0
Theft from a vehicle	22	35.5
Theft of a vehicle	26	42.6
Handling stolen goods	32	44.4
Fraud/forgery/deception	17	25.8
Assault	30	46.2
Criminal damage	34	49.3
Soliciting	0	0.0
Breach of the peace	40	63.5

Table a3.7(c) Prison Experience

	n	%
Imprisonment		
Ever been in prison	58	71.6
Ever remanded in custody	57	70.4
Ever received custodial sentence	42	51.9

Key Outcome Measures

a3.8 Substance Use

Table a3.8(a) Drug Use in Last Three Months: Percentage Used

	n	%
Drug use in last three months		
Tobacco	72	92.3
Heroin	45	57.7
Cannabis	37	50.0
Alcohol	41	54.7
Benzodiazepines	28	35.0
Non-prescribed methadone	25	30.9
Cocaine	37	45.1
Crack cocaine	14	17.1
Ecstasy	10	13.2
Other opiates	7	9.2
Amphetamine	4	5.2

Table a3.8(b) Drug Use Last Three Months: Mean Days Used

	Population		Sub-sample used in last three months	
	Mean	(sd)	Mean	(sd)
Mean days used in last three months				
Tobacco	78.5	(28.1)	85.0	(17.2)
Cannabis	27.8	(34.1)	55.6	(27.8)
Heroin	25.6	(32.0)	45.0	(30.3)
Non-prescribed methadone	8.28	(20.3)	26.8	(29.3)
Benzodiazepines	10.5	(21.1)	30.1	(26.2)
Alcohol	17.9	(29.1)	32.8	(32.7)
Cocaine	10.7	(19.8)	24.0	(23.8)
Crack cocaine	2.4	(11.3)	15.0	(25.5)
Other opiates	1.9	(9.5)	20.6	(26.0)
Ecstasy	2.3	(9.7)	17.1	(22.2)
Amphetamine	1.2	(6.4)	23.5	(18.7)

Table a3.8(c) Drug Use in Last Three Months: Mean Amount Used

	Population		Sub-sample used in last three months	
	Mean	(sd)	Mean	(sd)
Mean amount used in a day in last three months				
Tobacco (cigarettes)	18.0	(12.0)	19.6	(11.5)
[b]Heroin (grams)	0.6	(0.9)	1.1	(1.0)
Cannabis (joints)	11.8	(25.2)	23.3	(31.1)
Alcohol (units)	14.3	(21.8)	25.6	(23.1)
Cocaine (grams)	0.9	(1.6)	2.1	(1.8)
Non-Prescribed Methadone (mls)	13.2	(27.7)	43.3	(35.3)
Benzodiazepines (mgs)	48.3	(154.4)	171.6	(256.1)

[a] Crack cocaine was excluded due to the inconsistency in how data was reported.
[b]These figures were based on 1 bag of heroin containing on average 0.25grams at the time of fieldwork

a3.9 Health Risk Behaviour

Table a3.9(a) Injecting-Related Variables in Last Three Months

	n	%
Percentage who injected in last three months	24	29.3
Frequency of injecting in last three months		
Infrequent (1-9 days)	5	21.7
Frequent (10 –24 days)	3	13.0
Very frequent (25-79 days)	14	60.9
Daily (80-90 days)	1	4.3
Used needle after someone in last month		
No times	16	72.7
One time	4	18.2
More than once	2	9.1
Someone used needle after you in last month		
No times	21	95.5
One time	0	0
More than once	1	4.5
Reused own needles in last month		
No times	13	68.4
One time	0	0
More than once	6	31.6
Used filter/spoons/flush water/ after someone		
No times	18	94.7
One time	0	0
More than once	1	5.3

	Mean (sd)
[a]Days injected in last three months	42.9 (31.3)
[a]Times injected on typical day	4.2 (3.0)

[a]Relates to those who have injected in last three months.

Table a3.9 (b) Overdose Rates in the Last Three Months

	n	%
Overdose in last three months		
None	79	97.5
One or more times	2	2.5

Table a3.9(c) Frequency of Unsafe Sex in Last Three Months

	n	%
Sexual history in last three months		
Participants having sex	45	55.6
Participants not having sex	36	44.4
[ab]*Sexual partners in last three months*		
Having sex with a regular partner	29	69.0
Having sex with someone other than regular partner	22	52.4
[b]*Condom use with regular partner*		
Always used condom	5	33.3
Sometimes used condom	3	20.0
Never used condom	7	46.7
[b]*Condom use with someone other than a regular partner*		
Always used condom	5	26.3
Sometimes used condom	2	10.5
Never used condom	12	63.2

[a]These categories are not mutually exclusive.
[b] This is only of those who had sex in the last three months

a3.10 Physical and Psychological Health

Figure a3.1 Participants Self-Assessment of Health

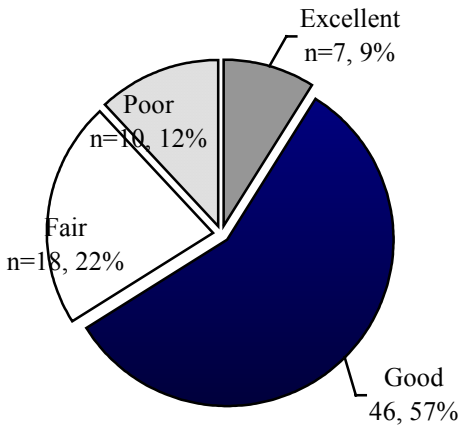


Table a3.10(a) Physical Health Symptoms: Mean Days Experienced in Last Three Months

	Population		Sub-sample	
	Mean	(sd)	Mean	(sd)
Physical health symptoms over previous three months				
Poor appetite	33.8	(34.8)	54.5	28.7
Tiredness/fatigue	45.2	(38.1)	56.6	34.1
Nausea (feeling sick)	13.2	(23.5)	27.9	27.5
Stomach pains	13.9	(23.6)	32.2	26.6
Difficulty breathing	12.2	(26.5)	39.6	34.9
Chest pains	6.3	(16.4)	26.8	24.8
Joint/bone pains	17.4	(29.8)	35.2	34.4
Muscle pains	13.4	(22.5)	27.5	24.9
Numbness/tingling	8.4	(18.2)	29.9	23.3
Tremors/shakes	15.5	(26.7)	34.1	30.5

Table a3.10(b) Physical Health Symptoms: Percentages Experienced in Last Three Months

	n	%
Poor appetite in last three months		
Experienced	49	62.0
Didn't experience	30	38.0
Tiredness/fatigue in last three months		
Experienced	63	79.7
Didn't experience	16	20.3
Nausea (feeling sick) in last three months		
Experienced	37	47.4
Didn't experience	41	52.6
Stomach pains in last three months		
Experienced	34	43.0
Didn't experience	45	57.0
Difficulty breathing in last three months		
Experienced	24	30.8
Didn't experience	54	69.2
Chest pains in last three months		
Experienced	19	23.5
Didn't experience	62	76.5
Joint/bone pains in last three months		
Experienced	39	49.4
Didn't experience	40	50.6
Muscle pains in last three months		
Experienced	39	48.8
Didn't experience	41	51.3
Numbness/tingling in last three months		
Experienced	22	28.2
Didn't experience	56	71.8
Tremors/shakes in last three months		
Experienced	35	45.5
Didn't experience	42	54.5

Table a3.10(c) Mental Health Symptoms: Mean Days Experienced in Last Three Months

	Population		Sub-sample	
	Mean	(sd)	Mean	(sd)
Mental health symptoms over previous three months				
Feeling tense	50.5	(37.1)	58.7	(33.3)
Suddenly scared for no reason	19.1	(31.1)	38.7	(34.7)
Feeling fearful	31.5	(35.0)	44.6	(33.9)
Nervous/shaking inside	31.3	(36.9)	50.7	(34.9)
Spells of terror/panic	9.7	(23.4)	31.5	(33.3)
Feeling hopeless about future	38.8	(40.5)	64.7	(32.3)
Feelings of worthlessness	40.7	(40.0)	64.0	(31.8)
Feeling no interest in things	38.6	(38.1)	58.3	(32.1)
Feeling lonely	42.6	(38.4)	56.3	(34.2)
Thoughts of ending your life	10.8	(25.0)	32.4	(34.6)

Table a3.10(d) Mental Health Symptoms: Percentages Experienced in Last Three Months

	n	%
Feeling tense in last three months		
Experienced	62	86.1
Didn't experience	10	13.9
Suddenly scared for no reason in last three months		
Experienced	36	49.3
Didn't experience	37	50.7
Feeling fearful in last three months		
Experienced	48	70.6
Didn't experience	20	29.4
Nervousness or shaking inside in last three months		
Experienced	45	61.6
Didn't experience	28	38.4
Spells of terror or panic in last three months		
Experienced	24	30.8
Didn't experience	54	69.2
Feeling hopeless about the future in last three months		
Experienced	45	60.0
Didn't experience	30	40.0
Feelings of worthlessness in last three months		
Experienced	47	63.5
Didn't experience	27	36.5
Feeling no interest in things in last three months		
Experienced	49	66.2
Didn't experience	25	33.8
Feeling lonely in last three months		
Experienced	56	75.7
Didn't experience	18	24.3
Thoughts of ending you life in last 3 months		
Experienced	24	33.3
Didn't experience	48	66.7

Table a3.10(e) Suicidal Thoughts and Attempts in Last Six Months

	n	%
Suicide		
Seriously thought of committing suicide in last six months	27	33.8
Attempted suicide in the last six months	8	9.8

a3.11 Personal and Social Functioning

Table a3.11(a) Recent Employment and Income Status

	n	%
Occupation Over Last Six Months		
Not Working	31	38.8
Working (FT/PT)	27	33.8
In Prison	12	15.0
Disability	6	7.5
In treatment	4	5.0
[a]*Recent Employment*		
Employed in last three months	23	28.4
Currently employed	13	15.9
[a]*Main Sources of Income in Last Three Months*		
Wage/salary	25	30.5
Family/friends	17	20.7
Social welfare	57	69.5
Drug dealing	29	35.4
Other crime	33	40.2

[a] These categories are not mutually exclusive.

Table a3.11(b) Recent Accommodation Status

	n	%
Current Accommodation		
Family home	4	4.9
Drug treatment residence	70	85.4
Own house/flat or rental	7	8.5
Hostel/shelter/B&B	1	1.2
Prison	0	0.0
No Fixed Abode	0	0.0
[a]*Accommodation - over last three months spent time in*		
Family home	39	48.8
Drug treatment residence	75	91.5
Own house/flat or rental	26	31.7
Hostel/shelter/B&B	10	12.2
Prison	16	19.5
Home of friends	9	11.1
No Fixed Abode	5	6.1
Usually lives with		
Partner/spouse	4	5.0
Parents	30	37.5
Alone	14	17.5
[b]Children	3	3.8
[b]Parents and children	2	2.5
[b]Partner and children	6	7.5
Other	21	26.2

[a]These categories are not mutually exclusive.
[b]Includes children over the age of 18 years.

Table a3.11(c) Treatment Over Last Six Months: Previously Treated Cohort

	Sub-sample	
	n	%
Treatment in the last six months		
Structured/supervised detoxification	17	26.2
One-to-one counselling	16	25.4
Residential drug treatment	14	20.9
Prescribed methadone	5	7.8
Group work	12	19.0

Table a3.11(d) Treatment Received for a Medical Condition in Last Three Months

	N	%
Treatment in last three months		
Attended hospital and stayed overnight	5	6.3
Attended an A&E	9	11.1
Visited a GP (not methadone G.P.)	27	34.6
Visited an out-patient department /received community treatment	14	17.5

Table a3.11(e) Mean Number of Times in Treatment for a Medical Condition in Last Three Months

	Mean (sd)
[a]*Number of times attended service*	
Number of days overnight stay in hospital	2.2 (1.8)
Number of visits to Accident and Emergency	1.0 (0)
Number of visits to a GP (not methadone GP)	2.4 (2.3)
Numbers of visits for out-patient appointment/community treatment	3.1 (6.0)

[a] Of those who attended these services in the last three months

Table a3.11(f) Frequency of Contact and Conflict with Partner, Family/Relatives and Friends

	Mean (sd)
Number of days contact with	
Partner	62.0 (30.2)
Mother	46.2 (33.3)
Father	31.7 (34.0)
Siblings	36.2 (33.0)
Friends	36.4 (34.5)
Number of days conflict with	
Partner	13.8 (21.0)
Mother	8.3 (19.0)
Father	8.1 (17.7)
Siblings	3.9 (15.8)
Friends	3.2 (11.9)

Table a3.11(g) Quality of Relationship with Children

	n	%
Type of relationship with children		
Very good	15	44.1
Good	8	23.5
Okay/alright	4	11.8
Poor	1	2.9
Very poor	6	17.6

a3.12 Criminal Activity

Table a3.12(a) Crime Committed in Last Three Months

	n	%
Crime committed		
Selling/supply drugs	30	38.0
Theft from a person	13	16.3
Theft from house/home	8	10.0
Theft from shop/commercial property	12	15.0
Theft from a vehicle	4	5.1
Theft of a vehicle	4	4.9
Handling stolen goods	23	28.4
Fraud/forgery/deception	15	19.0
Assault	14	17.3
Criminal damage	10	12.5
Soliciting	0	0
Breach of the peace	5	6.3

Table a3.12(b) Means Days Crimes Committed in Last Three Months

	Population		Sub-sample	
	Mean	(sd)	Mean	(sd)
Frequency of crime in last three months				
Selling/supply drugs	15.5	(26.6)	42.2	(28.4)
Theft from a person	2.3	(9.3)	14.2	(19.6)
Theft from house/home	1.3	(8.3)	15.0	(25.7)
Theft from shop/commercial property	5.8	(19.5)	38.9	(36.9)
Theft from a vehicle	0.5	(3.4)	9.7	(13.6)
Theft of a vehicle	0.2	(0.8)	3.0	(2.2)
Handling stolen goods	7.2	(19.0)	27.3	(28.9)
Fraud/forgery/deception	3.2	(12.7)	17.6	(26.2)
Assault	0.4	(1.3)	2.4	(2.4)
Criminal damage	0.7	(3.5)	5.3	(9.1)
Soliciting	0.0	(0.0)	0.0	(0.0)
Breach of the peace	0.7	(5.7)	14.0	(24.0)

Table a3.12(c) Arrest by Offence in Last Three Months

	n	%
Crime Committed		
Selling/supply drugs	4	5.3
Theft from a person	3	4.7
Theft from house/home	1	1.7
Theft from shop/commercial property	6	8.8
Theft from a vehicle	0	0.0
Theft of a vehicle	1	1.6
Handling stolen goods	3	4.1
Fraud/forgery/deception	1	1.4
Assault	4	5.9
Criminal damage	3	4.5
Soliciting	0	0.0
Breach of the peace	4	6.3

Table a3.12(d) Current Legal Status

	n	%
[a]*Current legal problem*		
None	36	44.4
On probation/community service	13	16.0
Serving a sentence in prison	2	2.5
On bail – awaiting trial/hearing	15	18.5
On bail – awaiting sentencing	13	16.0
On temporary release	4	4.9
Outstanding warrants	15	18.5
Outstanding fines	8	9.9

[a] Categories are not mutually exclusive.

APPENDIX 4: RESULTS FOR NEEDLE EXCHANGE GROUP AT BASELINE

Background to Treatment

a4. 1 Index Treatment

A sample of individuals was recruited from needle exchanges (6.4%, n=26). The majority of these participants were recruited within the Greater Dublin Area. To this end, fieldworkers conducted the interviews in four needle exchanges in Dublin city, and one in the Wicklow area. As no needle exchanges were in operation in other health board areas, recruitment was solely in the Eastern Regional Health Authority area.

Table a4.1(a) Gender and Age of Needle Exchange Group

	n	%
Gender		
Male	20	76.9
Female	6	23.1

	Mean (sd)	Median
Age		
Age of male study participants (years)	29.0(5.5)	29.0
Age of female study participants (years)	31.3(8.5)	27.5

a4.2 Treatment History

Table a4.2(a) Treatment History at Baseline for Needle Group: Previous Treatment Received

	n	%
Percentage in previous treatment		
Previous treatment received	23	88.5
No previous treatment received	3	11.5

	Population		Sub-sample – previously treated	
	n	%	n	%
[a]*Previous types of formal treatment*				
One-to-one counseling	14	58.3	14	66.7
Prescribed methadone	19	73.1	19	82.6
Structured/supervised detoxification	14	56.0	14	63.6
Residential drug treatment	7	28.0	7	31.8
[b]Needle Exchange	24	92.3	21	91.3

[a]These categories are not mutually exclusive.
[b]Attendance at needle-exchange is not considered treatment.

Table a4.2(b) Details of Previous Treatment

	Previously Treated Mean (sd)
Age first sought treatment (years)	19.6 (4.5)
Age first attending counselling (years)	21.4 (5.1)
Number of counsellors	4.2 (3.1)
Longest period of regular attendance (months)	20.4 (22.3)
Age first on methadone/physeptone (years)	22.2 (4.9)
Number of episodes	2.5 (1.8)
Longest period of attendance (months)	55.9 (69.6)
Age first on supervised detoxification (years)	21.7 (5.1)
Number of episodes	2.8 (2.0)
Age first in residential treatment (years)	21.9 (5.0)
Number of episodes	3.3 (2.1)

a4.3 Substance Use

Table a4.3(a) Drug Using History: Ever Used

	n	%
Drugs ever used		
Heroin	26	100.0
Cannabis	24	96.0
Tobacco	25	96.2
Alcohol	18	75.0
Cocaine	23	92.0
Benzodiazepines	19	82.6
Non-prescribed methadone	20	83.3
Ecstasy	13	76.5
Amphetamine	12	63.2
LSD	12	75.0
Other opiates	16	66.7
Crack cocaine	14	60.9

Table a4.3(b) Drug Using History: Age First Used

	Mean (sd)
Age first smoked tobacco (years)	13.9 (3.6)
Age first used alcohol (years)	13.6 (1.3)
Age first used cannabis (years)	14.4 (2.3)
Age first used amphetamine (years)	16.4 (2.0)
Age first used LSD (years)	16.6 (1.4)
Age first used ecstasy	19.0 (6.5)
Age first used heroin (years)	18.4 (3.9)
Age first used benzodiazepines	18.0 (5.2)
Age first used cocaine (years)	19.8 (4.2)
Age first used other opiates (years)	21.1 (5.6)
Age first used methadone (years)	20.6 (6.1)
Age first used crack (years)	22.5 (6.1)

Table a4.3(c) Drug Using History: Problem Drug Use

	Mean (sd)
Age cannabis use became a problem	17.9 (3.4)
Duration since first use of cannabis (years)	15.1(6.2)
Age heroin use became a problem	20.2 (4.3)
Duration since first use of heroin (years)	11.2(6.3)
Age benzodiazepine use first became a problem	14.0 (5.7)
Duration since first use of benzodiazepine (years)	12.3(7.7)
Age cocaine use became a problem	21.1 (4.0)
Duration since first use of cocaine (years)	10.4 (6.9)
Age methadone use became a problem	18.5 (1.3)
Duration since first use of methadone (years)	9.4 (5.5)
Age crack use became a problem	19.3 (0.6)
Duration since first use of crack (years)	8.2(6.4)

a4.4 Health Risk Behaviour

Table a4.4(a) Injecting-Related Health Variables

	n	%
Percentage injected		
Ever injected	26	100.0
[a]*Ever shared injecting equipment*		
Ever used needle after someone	17	65.4
Somebody ever used needle after you	16	61.5
Ever reused own injecting equipment	24	92.3
Ever shared filter/spoons/flush water	18	69.2
	Mean (sd)	
Age first injected	19.5 (4.1)	

[a]Percentages for those who have ever injected.

Table a4.4(b) Overdose Rates

	n	%
Proportion of participants ever overdosed		
Never overdosed	11	42.3
Overdosed once	6	23.1
More than 1 but maximum of 3 times	6	23.1
More than 3 but maximum of 5 times	2	7.7
Overdosed more than 5 times	1	3.8

a4.5 Physical and Psychological Health

Table a4.5(a) Suicidal Thoughts and Attempts

	n	%
Suicide		
Seriously thought of committing suicide ever	14	63.6
Ever attempted suicide	12	54.5

Table a4.5(b) HIV, HBV, HCV Status

	HIV Status		HBV Status		HCV Status	
	n	%	n	%	n	%
Ever tested	18	85.7	18	85.7	20	90.9
Negative*	13	100.0	13	92.9	4	23.5
Positive*	0	0.0	1	7.1	13	76.5
Awaiting results*	0	0	0	0	0	0

*Of those ever tested

a4.6 Personal and Social Functioning

Table a4.6(a) Demographics: Education

	Mean (sd)
Age left school (years)	15.10 (1.46)
Highest Educational Level	**n %**
No formal education	1 3.8
Primary	8 30.8
Lower secondary	10 38.5
Upper secondary	6 23.1
Third level	1 3.8
Highest Educational Qualification	
No qualifications	13 50.0
Junior cert/basic skills/ NVCA level 1	9 34.6
Leaving cert	3 11.5
Apprenticeship	0 0.0
National cert./dip./NCEA	0 0.0
Third level	1 3.8

Table a4.6(b) Demographics: Children

	n	%
Have children under 18 years		
No	13	50.0
Yes	13	50.0
Parents – number of children in care of participant		
None	6	46.2
One	3	23.1
Two or more	4	30.8

a4.7 Criminal Activity

Table a4.7(a) Types of Crime Ever Committed

	n	%
Crime committed		
Selling/supply drugs	11	61.1
Theft from a person	11	61.1
Theft from house/home	9	47.4
Theft from shop/commercial property	13	72.2
Theft from a vehicle	7	38.9
Theft of a vehicle	10	55.6
Handling stolen goods	14	70.0
Fraud/forgery/deception	11	55.0
Assault	8	44.4
Criminal damage	9	50.0
Soliciting	1	6.3
Breach of the peace	7	43.8

Table a4.7(b) Arrests by Offence

	Ever Arrested	
	n	%
Crime committed		
Selling/supply drugs	5	27.8
Theft from a person	3	20.0
Theft from house/home	1	7.1
Theft from shop/commercial property	6	31.6
Theft from a vehicle	4	28.6
Theft of a vehicle	7	43.8
Handling stolen goods	5	27.8
Fraud/forgery/deception	4	26.7
Assault	6	40.0
Criminal damage	5	33.3
Soliciting	1	8.3
Breach of the peace	5	35.7

Table a4.7(c) Prison Experience

	n	%
Imprisonment		
Ever been in prison	17	68.0
Ever remanded in custody	17	68.0
Ever received custodial sentence	12	48.0

Key Outcome Measures

a4.8 Substance Use

Table a4.8(a) Drug Use in Last Three Months: Percentage Used

	n	%
Drug use in last three months		
Tobacco	22	95.7
Heroin	25	100.0
Cannabis	19	82.6
Alcohol	9	39.1
Benzodiazepines	10	45.5
Cocaine	15	57.7
Non-prescribed methadone	5	20.8
Crack cocaine	2	7.7
Ecstasy	0	0.0
Other opiates	3	13.0
Amphetamine	0	0.0

Table a4.8(b) Drug Use Last Three Months: Mean Days Used

	Population		Sub-sample used in last three months	
	Mean	(sd)	Mean	(sd)
Mean days used in last three months				
Tobacco	86.1	(18.8)	90.0	(0.0)
Cannabis	48.2	(40.6)	58.3	(37.3)
Heroin	42.3	(35.1)	42.3	(35.1)
Non-Prescribed Methadone	2.9	(7.1)	13.8	(10.0)
Benzodiazepines	11.8	(26.6)	26.0	(35.3)
Alcohol	10.8	(22.4)	27.7	(29.2)
Cocaine	11.0	(24.6)	19.7	(30.6)
Crack cocaine	0.4	(1.5)	5.5	(0.7)
Other opiates	0.9	(3.1)	7.0	(6.6)
Ecstasy	0	0.0	0	0.0
Amphetamine	0	0.0	0	0.0

Table a4.8(c) Drug Use in Last Three Months: Mean Amount Used

	Population		Sub-sample used in last three months	
	Mean	(sd)	Mean	(sd)
Mean amount used in a day in last three months				
Tobacco (cigarettes)	18.27	(11.2)	18.5	(10.9)
[b]Heroin (grams)	0.5	(0.5)	0.5	(0.5)
Cannabis (joints)	6.6	(7.9)	8.5	(8.3)
Alcohol (units)	4.8	(10.1)	9.7	(7.1)
Cocaine (grams)	1.8	(2.7)	3.2	(3.0)
Non-Prescribed Methadone (mls)	12.9	(25.8)	48.4	(22.6)
Benzodiazepines (mgs)	25.6	(44.6)	76.7	(45.3)

[a] Crack cocaine was excluded due to the inconsistency in the way data was reported.
[b]These figures were based on 1 bag of heroin containing on average 0.25grams at the time of fieldwork

a4.9 Health Risk Behaviour

Table a4.9(a) Injecting-Related Variables in Last Three Months

	n	%
Percentage who injected in last three months	22	84.6
Frequency of injecting in last three months		
Not injected		
Infrequent (1-9 days)	5	23.8
Frequent (10 –24 days)	4	19.0
Very frequent (25-79 days)	5	23.8
Daily (80-90 days)	7	33.0
Used needle after someone in last three months		
No times	18	81.8
One time	2	9.1
Two or more times	2	9.1
Someone used needle after you in last three months		
No times	18	90.0
One time	1	5.0
Two or more times	1	5.0
Reused own needles in last three months		
No times	9	56.3
One time	1	6.3
Two or more times	6	37.5
Used filter/spoons/flush water/ after someone		
No times	19	90.5
One time	1	4.8
Two or more times	1	4.8

	Mean (sd)
[a]Days injected in last three months	44.8 (35.4)
[a]Times injected on typical day	5.0 (10.4)

[a]Relates to those who have injected in last three months.

Table a4.9 (b) Overdose Rates in Last Three Months

	n	%
Overdose in last three months		
None	22	84.6
One or more times	4	15.4

Table a4.9(c) Frequency of Unsafe Sex in Last Three Months

	n	%
Sexual history in last three months		
Participants having sex	20	76.9
Participants not having sex	6	23.1
[ab] *Sexual partners in last three months*		
Having sex with a regular partner	18	100
Having sex with someone other than regular partner	6	35.3
[b]*Condom use with regular partner*		
Always used condom	5	33.3
Sometimes used condom	3	20.0
Never used condom	7	46.7
[b]*Condom use with someone other than a regular partner*		
Always used condom	1	20.0
Sometimes used condom	3	60.0
Never used condom	1	20.0

[a]These categories are not mutually exclusive.
[b] This is only of those who had sex in the last three months

a4.10 Physical and Psychological Health

Figure a4.1 Participants Self-Assessment of Health

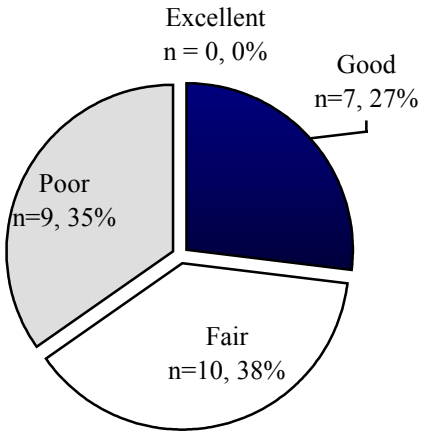


Table a4.10(a) Physical Health Symptoms: Mean Days Experienced in Last Three Months

	Population		Sub-sample	
	Mean	(sd)	Mean	(sd)
Physical health symptoms over previous three months				
Poor appetite	45.2	(40.5)	61.1	(34.9)
Tiredness/fatigue	47.9	(40.5)	62.0	(35.1)
Nausea (feeling sick)	8.5	(20.1)	23.4	(28.6)
Stomach pains	16.1	(28.7)	40.3	(33.5)
Difficulty breathing	10.9	(27.7)	43.6	(43.1)
Chest pains	5.4	(20.1)	57.0	(46.7)
Joint/bone pains	12.8	(27.0)	38.5	(35.8)
Muscle pains	13.5	(27.5)	33.8	(35.5)
Numbness/tingling	8.3	(26.4)	61.0	(50.2)
Tremors/shakes	1.8	(5.6)	12.0	(10.8)

Table a4.10(b) Physical Health Symptoms: Percentages Experienced in Last Three Months

	n	%
Poor appetite in last three months		
Experienced	17	73.9
Didn't experience	6	26.1
Tiredness/fatigue in last three months		
Experienced	17	77.3
Didn't experience	5	22.7
Nausea (feeling sick) in last three months		
Experienced	8	36.4
Didn't experience	14	63.6
Stomach pains in last three months		
Experienced	8	40.0
Didn't experience	12	60.0
Difficulty breathing in last three months		
Experienced	5	25.0
Didn't experience	15	75.0
Chest pains in last three months		
Experienced	2	9.5
Didn't experience	19	90.5
Joint/bone pains in last three months		
Experienced	7	33.3
Didn't experience	14	66.7
Muscle pains in last three months		
Experienced	8	40.0
Didn't experience	12	60.0
Numbness/tingling in last three months		
Experienced	3	13.6
Didn't experience	19	86.4
Tremors/shakes in last three months		
Experienced	3	15.0
Didn't experience	17	85.0

Table a4.10(c) Mental Health Symptoms: Mean Days Experienced in Last Three Months

	Population		Sub-sample	
	Mean	(sd)	Mean	(sd)
Mental health symptoms over previous three months				
Feeling tense	24.2	(35.2)	48.3	(36.3)
Suddenly scared for no reason	17.5	(32.1)	43.6	(38.7)
Feeling fearful	14.2	(27.8)	33.8	(35.2)
Nervous/shaking inside	18.0	(32.7)	42.8	(39.3)
Spells of terror/panic	3.0	(7.4)	19.7	(5.1)
Feeling hopeless about future	31.1	(35.1)	39.5	(35.2)
Feelings of worthlessness	26.9	(36.2)	44.0	(37.4)
Feeling no interest in things	29.1	(39.0)	58.1	(36.4)
Feeling lonely	30.3	(39.6)	57.3	(37.5)
Thoughts of ending your life	12.1	(29.8)	41.0	(45.4)

Table a4.10(d) Mental Health Symptoms: Percentages Experienced in Last Three Months

	n	%
Feeling tense in last three months		
Experienced	10	50.0
Didn't experience	10	50.0
Suddenly scared for no reason in last three months		
Experienced	8	40.0
Didn't experience	12	60.0
Feeling fearful in last three months		
Experienced	8	42.1
Didn't experience	11	57.9
Nervousness or shaking inside in last three months		
Experienced	8	42.1
Didn't experience	11	57.9
Spells of terror or panic in last three months		
Experienced	3	15.0
Didn't experience	17	85.0
Feeling hopeless about the future in last three months		
Experienced	11	78.6
Didn't experience	3	21.4
Feelings of worthlessness in last three months		
Experienced	11	61.1
Didn't experience	7	38.9
Feeling no interest in things in last three months		
Experienced	8	50.0
Didn't experience	8	50.0
Feeling lonely in last three months		
Experienced	9	52.9
Didn't experience	8	47.1
Thoughts of ending you life in last three months		
Experienced	5	29.4
Didn't experience	12	70.6

Table a4.10(e) Suicidal Thoughts and Attempts in Last Six Months

	n	%
Suicide		
Seriously thought of committing suicide in last six months	6	27.3
Attempted suicide in the last six months	3	13.6

a4.11 Personal and Social Functioning

Table a4.11(a) Recent Employment and Income Status

	n	%
Occupation Over Last Six Months		
Not working	12	50.0
Working (FT/PT)	6	25.0
In prison	0	0.0
Disability	6	25.0
In treatment	0	0.0
Employed last three months	5	
Currently employed	5	
Wage/salary	3	
Family/friends		36.0
Social welfare	22	88.0
Drug dealing	10	40.0
Other crime	13	

[a] These categories are not mutually exclusive.

Table a4.11(b) Recent Accommodation Status

	n	%
Current Accommodation		
Family home	9	34.6
Own house/flat or rental	11	42.3
Hostel/shelter/B&B	3	11.5
Prison	0	0.0
Home of friends	1	3.8
No Fixed Abode	2	7.7
[a]*Accommodation - Over last three months spent time in*		
Family home	12	46.2
Drug treatment residence	0	0.0
Own house/flat or rental	12	46.2
Hostel/shelter/B&B	5	19.2
Prison	1	3.8
Home of friends	2	7.7
No Fixed Abode	3	11.5
Usually lives with		
Partner/spouse	4	15.4
Parents	7	26.9
Alone	3	11.5
[b]Children	0	0.0
[b]Parents and children	1	3.8
[b]Partner and children	5	19.2
Other	6	23.1

[a]These categories are not mutually exclusive.
[b]Includes children over the age of 18 years.

Table a4.11(c) Treatment Over Last Six Months: Previous Treated Cohort

	Sub-sample n	%
Treatment in the last six months		
Structured/supervised detoxification	0	0.0
One-to-one counselling	2	8.7
Residential drug treatment	0	0.0
Prescribed methadone	0	0.0
Group work	2	8.7

Table a4.11(d) Treatment Received for a Medical Condition in Last Three Months

	n	%
Treatment in last three months		
Attended hospital and stayed overnight	3	11.5
Attended an A&E	5	20.8
Visited a GP (not methadone G.P.)	9	42.9
Visited an out-patient department /received community treatment	3	11.5

Table a4.11(e) Mean Number of Times in Treatment for a Medical Condition in Last Three Months

	Mean (sd)
[a]*Number of times attended service*	
Number of days overnight stay in hospital	1.8 (0.8)
Number of visits to A&E	1.2 (0.5)
Number of visits to a GP (not methadone G.P.)	3.0 (3.5)
Numbers of visits for out-patient appointment/community treatment	1.0 (0.0)

[a] Of those who attended these services in the last three months

Table a4.11(f) Frequency of Contact and Conflict with Partner, Family/Relatives and Friends

	Mean (sd)
Number of days contact with	
Partner	83.9 (17.8)
Mother	51.2 (42.3)
Father	32.8 (40.7)
Siblings	58.3 (42.7)
Friends	42.3 (44.1)
Number of days conflict with	
Partner	19.8 (33.9)
Mother	14.7 (32.6)
Father	2.2 (5.3)
Siblings	7.3 (24.9)
Friends	6.7 (16.9)

Table a4.11(g) Quality of Relationship with Children

	n	%
Type of relationship with children		
Very good	7	53.8
Good	3	23.1
Okay/alright	1	7.7
Poor	0	0
Very poor	2	15.4

a4.12 Criminal Activity

Table a4.12(a) Crime Committed in Last Three Months

	n	%
Crime committed		
Selling/Supply drugs	7	31.8
Theft from a person	2	9.5
Theft from house/home	2	9.1
Theft from shop/commercial property	3	15.8
Theft from a vehicle	2	9.5
Theft of a vehicle	0	0.0
Handling stolen goods	8	38.1
Fraud/forgery/deception	4	20.0
Assault	1	4.8
Criminal damage	2	9.5
Soliciting	1	5.0
Breach of the peace	2	10.0

Table a4.12(b) Means Days Crimes Committed in Last Three Months

	Population		Sub-sample Committed last three months	
	Mean	(sd)	Mean	(sd)
Frequency of crime in last three months				
Selling/supply drugs	11.0	(28.2)	43.8	(44.5)
Theft from a person	0.0	(0.0)	0.0	(0.0)
Theft from house/home	0.2	(1.0)	4.5	(0.0)
Theft from shop/commercial property	0.06	(0.2)	1.0	(0.0)
Theft from a vehicle	0.2	(0.7)	3.0	(0.0)
Theft of a vehicle	0.0	(0.0)	0.0	(0.0)
Handling stolen goods	1.6	(2.8)	5.2	(2.7)
Fraud/forgery/deception	4.9	(20.1)	24.5	(43.7)
Assault	0.1	(0.4)	2.0	(0.0)
Criminal damage	0.1	(0.3)	1.0	(0.0)
Soliciting	4.5	(20.1)	90.0	(0.0)
Breach of the peace	0.0	(0.0)	0.0	(0.0)

Table a4.12(c) Arrest by Offence in Last Three Months

	Arrested last three months	
	n	%
Crime committed		
Selling/supply drugs	0	0.0
Theft from a person	0	0.0
Theft from house/home	0	0.0
Theft from shop/commercial property	0	0.0
Theft from a vehicle	0	0.0
Theft of a vehicle	0	0.0
Handling stolen goods	1	5.6
Fraud/forgery/deception	1	7.1
Assault	1	6.7
Criminal damage	1	6.7
Soliciting	0	0.0
Breach of the peace	1	6.7

Table a4.12(d) Current Legal Status

	n	%
[a]*Current legal problem*		
None	13	52.0
On probation/community service	2	7.7
Serving a sentence in prison	0	0.0
On bail – awaiting trial/hearing	7	26.9
On bail – awaiting sentencing	1	3.8
On temporary release	0	0.0
Outstanding warrants	3	12.0
Outstanding fines	0	0.0

[a] Categories are not mutually exclusive.