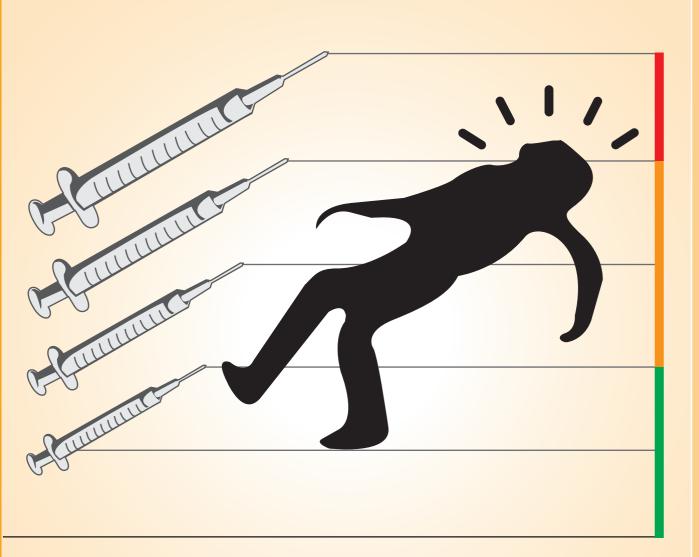


## Understanding the contexts and response related to overdose

among Injecting Drug Users



Project HIFAZAT: Strengthen the capacity, reach and quality of IDU harm reduction services

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# Operational research understanding the contexts and response related to overdose among Injecting Drug Users

"Currently 'Injecting Drug Users' (IDUs) are referred to as 'People Who Inject Drugs' (PWID). However, the term 'Injecting Drug Users' (IDUs), has been used in this document to maintain consistency with the term used presently in National AIDS Control Program".

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## **Preface**

In India, Targeted Interventions (TIs), under the National AIDS Control Programme (NACP) framework, is one of the core strategies for HIV prevention amongst injecting drug users (IDUs). Apart from providing primary health services that include health education, abscess management, treatment referrals, etc., the TIs have also designated centres for providing harm reduction services such as Needle Syringe Exchange Program (NSEP) and Opioid Substitution Therapy (OST). The services under the TIs are executed through a peer based outreach as well as a static premise based approach, i.e., through Drop-In Centres (DIC) which in turn serve as the nodal hubs for the above activities to be executed.

To further strengthen these established mechanisms under the NACP and to further expand the reach to vulnerable IDUs, The United Nations Office on Drugs and Crime (UNODC) in India provides technical assistance to the National AIDS Control Organisation (NACO) through the Global Fund Round 9 Project (i.e., Project Hifazat), amongst others. In doing so, UNODC supports NACO through technical assistance to undertake the following:

- 1. Conduct Operational Research
- 2. Develop Quality assurance SOPs
- 3. Develop Capacity Building/ Training materials
- 4. Training of Master Trainers

It is in this context, that a study, "Operational Research on Understanding the Contexts and Response Related to Overdose among Injecting Drug Users" has been conducted. The study aims analyze the contextual factors associated with overdose among IDUs, and document the existing mechanisms to respond to the overdose among IDUs.

In the context of India, the pattern of drug use, especially via injecting route, and its correlation with overdose among IDUs is not well studied even though injecting drug use as a problem is well established. While heroin and brown sugar injecting is predominant in the north eastern region as well as the metropolitan cities, injection of pharmaceutical opioids (in combination with other depressants) is found in other parts of the country. The pharmacological differences of the different types of opioids being injected may play an important role in determining the extent to which overdose occurs. Some of the very well-known risks of overdose include factors such as mixing different depressants together, or resuming previous doses of drugs after a period of abstinence (especially among those who have recently released from drug treatment centres or prisons). Apart from these factors, the existing structural responses for management of overdose, the capacity of the staff to manage overdose and the overall legal and policy environment are important in determining the occurrence and outcome of overdose.

This study therefore, has been conducted with a vision to serve as an invaluable tool to provide decision makers and programme implementers the necessary basis in the form of scientific information to establish the local context of the overdose problem especially amongst IDUs. It is also expected that the study would help evolve strategies and introduce actions aimed at overdose prevention and management among injecting drug users in India. This study was possible, thanks to the collective efforts of a number of experts, agencies and members from the drug using community. Contributions from the Technical Working Group of Project Hifazat, which included representatives from NACO, Project Management Unit (PMU) of Project Hifazat, SHARAN, Indian Harm Reduction Network and Emmanuel Hospital Association was critical towards articulating and consolidating the study.

## Acknowledgement

The UN office on Drugs and Crime, Regional Office for South Asia (UNODC ROSA) in partnership with national government counterparts from the drugs and HIV sectors and with leading non-governmental organizations in the countries of South Asia is implementing a project titled "Prevention of transmission of HIV among drug users in SAARC countries" (RAS/H13).

As part of this regional initiative UNODC is also engaged in the implementation of the Global Fund Round 9 IDU-HIV Project (i.e., HIFAZAT). Project HIFAZAT aims to strengthen the capacities, reach and quality of harm reduction among IDUs in India. It involves providing support for scaling up of services for IDUs through the National AIDS Control Programme.

We would like to acknowledge the invaluable feedback and support received from various stakeholders, who include NACO, Project Management Unit (PMU) of Project HIFAZAT, Emmanuel Hospital Association (the Principal Recipient of the grant "Global Fund to Fight AIDS, Tuberculosis and Malaria- India HIV-IDU Grant No. IDA-910-G21-H"), SHARAN, Indian Harm Reduction Network and individual experts who have contributed significantly in the development of this document.

We would also like to thank co-lead consultants Mr. C. Bangkim, Mr. Brijesh Dash, Mr. Richard Francis, Ms. Kanudeep Kaur and Mr. Shiva kumar, as well as to all the NGOs from where the data was collected.

Special thanks are due to the UNODC Project H13 team for its persistent and meticulous efforts in conceptualizing and consolidating this document.

## **Abbreviations**

AIDS Acquired Immuno Deficiency Syndrome

ART Anti-Retroviral Therapy

BCC Behaviour Change Communication

CPR Cardio Pulmonary Resuscitation

DIC Drop-In Centre

DOTS Directly Observed Treatment Short Course

FGD Focus Group Discussion

FIDU Female Injecting Drug User

HBV Hepatitis B Virus

HCV Hepatitis C Virus

HIV Human Immunodeficiency Virus

HR Harm Reduction

ICTC Integrated Counselling and Testing Centre

IDI In-Depth Interview

IDU Injecting Drug User

IDU-TIS Injecting Drug User Targeted Interventions

IEC Information Education and Communication

MOH&FW Ministry of Health and Family Welfare

MMT Methadone Maintenance Treatment

MSJ&E Ministry of Social Justice and Empowerment

MSM Men who have Sex with Men

NACO National AIDS Control Organisation

NACP National AIDS Control Programme

NGO Non-Governmental Organisation

NSEP Needle Syringe Exchange Program

OD Overdose

OST Opioid Substitution Treatment

PE Peer Educator

PLWA People Living with AIDS

PUD People who Use Drugs

SP Spasmoproxyvon

TB Tuberculosis

TI Targeted Intervention

UNODC United Nations Office on Drugs and Crime

UNODC-ROSA United Nations Office on Drugs and Crime-Regional Office for South Asia

VCT Voluntary Counselling and Testing

VCCT Voluntary Confidential Counselling and Testing

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## **Executive Summary**

# Operational Research: Understanding the Contexts and Response Related to Overdose among Injecting Drug Users Objectives

A qualitative study, it explored the contextual factors in overdose risk that are relevant to the development of appropriate prevention and management interventions.

- To describe the various contexts in which overdose occurs among injecting drug users (IDUs)
- To analyze the contexts and document some common factors associated with overdose among IDUs
- To document and analyze the existing mechanisms and processes for management of overdose in the context of targeted interventions (TIs)

#### **Methods**

The methods employed to gather information were:

- In-depth interviews (IDIs) with injecting drug users
- In-depth interviews with key staff members
- Focus group discussions (FGDs) with men (male IDUs) and women (female IDUs).

Using a purposive sampling strategy, a total of 166 IDUs (83 who have experienced overdose and 83 IDUs who have witnessed overdose episodes) were recruited for IDIs across India: Southern India (Cochin and Calicut, Kerala; Hyderabad, Andhra Pradesh); Western India (Pune, Maharashtra); Eastern India (Bhubaneswar, Odisha; Kolkata, West Bengal); North-east India (Imphal, Manipur; Dimapur, Nagaland; Aizawl, Mizoram); Central India (Narsinghpur, Madhya Pradesh); North India (Amritsar and Tarn Taran, Punjab; Faridabad, Haryana; Delhi; Lucknow, Uttar Pradesh). In addition, a total of 18 key staff members were interviewed and 18 FGDs were conducted with IDUs. In-depth interviews and FGDs among female IDUs were carried out in Aizawl (Mizoram), Imphal (Manipur) and Dimapur (Nagaland).

### **Findings**

Injecting drug users were at risk of overdose due to several contributing factors.

- For most IDUs, the key risk of overdose was from injecting drugs, at times excessively and due to variations in the purity levels of the street drugs resulting in dose escalation.
- Injecting a combination of drugs (lethal combinations included alcohol and other licit pharmaceutical drugs and injections) significantly increased their vulnerability.
- Overdose was relatively common after a period of abstinence and reduction in dose.
- Overdose was pronounced in experienced drug users who have shifted to injecting after having been on non-injecting drugs for a long period.
- Drug users had insufficient information related to overdose prevention and management.

- Overdose was not taken seriously in the belief that this relatively common occurrence could be resolved spontaneously with rest.
- Only drug using peers responded to an overdose incident and the general community was extremely reluctant to respond to an overdose victim due to the high stigma and discrimination.
- Specific measures such as mouth-to-mouth breathing, cardiopulmonary resuscitation and recovery positions were attempted in only a few settings.
- Knowledge of naloxone and its use was limited in the country with use reported mainly from Manipur and Dimapur.
- In almost all the places, ambulance services were not utilized for transporting overdose victims.
- There was reluctance to take the overdose victims to the hospitals as the prevailing opinion was that the hospital staff members were not sensitive to the drug using community and discriminated against them.
- Advocacy with police as well as hospital staff members was considered critical for better services for overdose victims in the future.
- Most TIs did not offer overdose related information to the IDUs.
- Respondents desired overdose information from the TIs.
- Drug users expressed a desire to get trained in overdose prevention/management that is participatory, practical and conducted periodically.

#### **Challenges**

#### Drug use behaviour

- Norms surrounding the use of a combination of drugs.
- Knowledge, myths and misconceptions surrounding overdose.
- Current responses to overdose reluctance to seek medical assistance.
- Police victimization as overdose is a medico-legal issue.
- Attitude of the hospital staff members.
- Unavailability of naloxone in emergency services.
- Stigma and discrimination by the general community.
- Capacity of the TIs to offer and organize overdose related information and training.

#### Recommendations

#### Individual level interventions

Information, education and communication (IEC) materials on overdose targeting drug users; pictorial information for illiterate drug users; outreach based overdose related messages.

#### Interpersonal level interventions

- Educate the drug using community about the signs and symptoms of overdose and the significance of early recognition for effective intervention.
- Developing norm changing strategies that target "poly drug use choices" by the drug using community.
- Address the issue of widespread drinking amongst the IDU community.
- Posters, leaflets and IEC materials, verbal communication by the outreach team, role play and street theatre to address myths and misconceptions.
- Norm changing strategies to improve health seeking behaviour amongst the IDUs.

#### Structural interventions

- Advocacy with the ambulance services and health care system.
- Ensure the free availability of naloxone in the regular health care system.
- Advocacy with the police to remove the obstacles and barriers faced while seeking help at the hospital.
- Collaborative relationship between the TI and hospital staff members.
- Participatory training programs to increase the capacity of TI staff on overdose related issues.
- Scale up of 'quality assured' OST services that provide adequate doses to the clients.
- Defeating stigma and discrimination related to drug use by the general community.

## **Background**

The National Household Survey (Ray, 2004) has estimated that there are 2 million opioid users in India and injecting drug use prevalence at 0.1 per cent of the adult male population. Transition from non-injecting heroin use to injecting pharmaceutical preparations has facilitated the diffusion of injecting drug use across the country. People who inject drugs are at high risk for acquiring and transmitting the HIV infection, and according to the National AIDS Control Organisation (NACO) sentinel surveillance, at present injecting drug users (IDU) is the group with highest prevalence of HIV (9.2 per cent) amongst the high risk groups (NACO, 2010). HIV infection and overdose are linked to each other in a number of ways. It is seen that overdose is a significant cause of mortality among IDUs who are HIV positive. Conversely, it is also true that HIV infection puts IDUs at greater risk of overdose (due to systemic disease, and also liver damage associated with HIV infection). Even nonfatal overdose may exacerbate HIV related diseases. For example, non-fatal overdose may lead to pneumonia, pulmonary oedema, acute renal failure, physical injury, etc., which may be made worse by HIV infection or may lead to HIV related complications. Overdose prevention and management services can be easily linked to HIV prevention services, as the modality of service provision is similar. Finally, prevention and management of overdose episodes enhances the accessibility of IDUs to HIV prevention services.

Opioid overdose is the chief cause of mortality among opioid injectors in several parts of the world. A study conducted in Chennai, India, documented a higher mortality rate among IDUs as compared to the general population; the leading cause of mortality was overdose followed by AIDS and tuberculosis (Solomon *et al.*, 2009). It is estimated that IDUs have an annual mortality rate of 2 per cent, a rate six to 20 times higher than their non-drug using peers (Sporer, 1999). Apart from the burden of overdose mortality, IDUs frequently experience non-fatal opioid overdoses. The lifetime prevalence of non-fatal overdose among heroin users is very high; for example, in Australia, more than two thirds of heroin users suffered non-fatal overdose (Darke *et al.*, 1996). As overdose occurrence is predicted by the previous history of overdose, screening for recent overdose experience appears justified to identify those at greatest risk of subsequent overdose (Darke *et al.*, 2007).

Risk factors for non-fatal overdose have been identified in literature – they include heroin injection, use of benzodiazepines, polydrug use, binge drug use, alcohol use, and withdrawal symptoms (Coffin et al.., 2007; Kerr *et al.*, 2007). Longer duration of heroin use and a severe degree of heroin dependence is linked to non-fatal overdose (Darke *et al.*, 1996). Other risk factors include lifetime or recent incarceration experience, homelessness and syringe sharing (Seal *et al.*, 2001; Ochoa *et al.*, 2005; Kerr *et al.*, 2007).

The risk of dying from overdose is determined not only by factors precipitating overdose, but also the appropriateness of response when it occurs. Social and structural factors can also influence drug users' ability to prevent overdose, respond effectively, and reduce the likelihood of fatality (Latkin, 2004). For example, in Russia, the distrust of medical institutions arising from mistreatment, fear of police, and perceived ineffectiveness deterred people from seeking medical help (Sergeev *et al.*, 2003). The risk environment is constituted by the interplay of physical, social, economic, and policy factors, which influences the overdose related risks and may determine intervention effectiveness

(Kerr, Kimber & Rhodes, 2007). Death from opioid overdose rarely occurs instantaneously, but rather over the course of a few hours, allowing sufficient time for providing life-saving measures (Sporer, 2003). It is possible to train outreach workers in effective overdose management techniques (Seal *et al.*, 2004).

In this operational study we aimed to uncover the contextual factors contributing to overdose among opioid injectors in India that would assist the development of appropriate overdose prevention/management interventions.

## 2 Aim and Objectives

It is proposed that operational research is conducted to document and analyze the factors related to the occurrence of overdose among IDUs as well as the existing mechanisms for responding to overdose in TI settings.

#### 2.1 Aim

To analyze the contextual factors associated with overdose among IDUs, and document the existing mechanisms to respond to overdose among IDUs.

### 2.2 Objectives

- To describe the various contexts in which overdose occurs among IDUs.
- To analyze the contexts and document some common factors associated with the occurrence of overdose among IDUs.
- To document and analyze the existing mechanisms and processes for the management of overdose in the context of TIs.

### 3.1 Methodological Approach

In-depth interviews and FGDs were conducted as part of the operational research to investigate the various contexts in which overdose occurs among IDUs, to understand the common factors associated with overdose among IDUs, and to analyze the existing mechanisms and processes for the management of overdose in the context of TIs.

## 3.2 Data Collection and Analysis

The primary means of data collection was one-to-one in-depth qualitative interviews and FGDs with IDUs recruited from selected sites in the country where the TIs for IDUs are operational. In addition, IDIs were conducted with the key program staff member of the selected TI. The data was collected from January 2012 to March 2012.

### 3.2.1 In-depth interviews with injecting drug users

Interviews were semi-structured and undertaken using a topic guide. The consultant along with the team members of the UNODC ROSA H-13 developed the topic guide for IDIs through a participatory process. The team identified areas related to overdose that need to be probed and the level of detail required to fill in the gaps in existing knowledge. Specific questions were drafted and ordered based on the selected areas for probe. Two sets of IDI schedules were developed, one for injecting drug users who had experienced an overdose and one for injecting drug users who had witnessed an overdose (See Annexure).

A team of five researchers who have had experience in conducting IDIs in the past were selected to collect the data. In addition, they were provided training in conducting IDIs by the consultant. The training emphasized the following: listening skills, allowing time for interviewees to think and answer, ways of probing sensitive subjects, use of reflections, checking with respondents to clarify and summarizing key issues at the end of the interview. The interviews generally lasted between 45 minutes and one hour. All interviews were completed with informed consent and later transcribed, and then translated into English.

### 3.2.2 In-depth interviews with key staff members

In addition, IDIs with the key staff member of the TIs were conducted. A topic guide was developed by the consultant and the UNODC ROSA H13 team (See Annexure).

### 3.2.3 Focus group interviews

Separate FGDs were carried out with men (male IDUs) and women (female IDUs) and the interviews were done at the selected TIs. As the aim was to learn the range of opinions, knowledge, attitude and behaviour among the IDUs about overdose, participants for the FGDs were selected to represent a broad range of IDUs with varying risk profiles, drug use patterns and networks. The TI outreach

team recruited participants for the FGDs. A discussion guide was developed by the consultant and the UNODC ROSA H13 team through a consultative process (See Annexure). The researcher led the discussion with the IDUs in the local language. The researchers had previous experience conducting FGDs, and they received additional training prior to the start of this project. Techniques were employed to involve all the participants in the discussions and to ensure that no one participant dominated the group. Participants were informed of their right to refuse to answer any particular question or to terminate the discussion at any point of time, and their anonymity was assured. None of the participants expressed discomfort or embarrassment during the discussions, and all the discussions were lively, with active participation by all the participants. As compensation, participants were offered coffee/soft drinks during the session and given transportation expenses. A total of 18 FGDs with IDUs (two with female IDUs) were conducted.

## 3.2.4 Problems encountered during the in-depth interviews and focus group discussions

The peer educators (PEs) and outreach workers of the TI fixed appointments with the IDUs for the IDIs and the FGDs. Except in some places, most of the individual interviews were conducted as scheduled. As data was to be collected during specified dates at the selected sites, all the IDIs could not be completed as scheduled. Overall, of the 180 IDIs with IDUs planned during the study period, 166 interviews (92 per cent) were completed. All FGDs (N = 18) were held as scheduled.

## 3.3 Sampling and Recruitment

The study population was (1) current IDUs and (2) key programme staff of the selected TI. The study population of IDUs was recruited directly from the community by the outreach team of the TI Recruitment, and data collection took place in selected places. The IDU epidemiological data of the country was the guiding basis for the selection of sites. Sites were selected from all the regions of the country; Southern India (Cochin and Calicut, Kerala; Hyderabad, Andhra Pradesh); Western India (Pune, Maharashtra); Eastern India (Bhubaneswar, Odisha; Kolkata, West Bengal); North-east India (Imphal, Manipur; Dimapur, Nagaland; Aizawl, Mizoram); Central India (Narsinghpur, Madhya Pradesh); North India (Amritsar and Tarn Taran, Punjab; Faridabad, Haryana; Delhi; Lucknow, Uttar Pradesh). In-depth interviews and FGDs with female IDUs were carried out in Aizawl (Mizoram), Imphal (Manipur) and Dimapur (Nagaland).

A purposive sampling strategy allowed adequate representation on account of drugs injected, including experience of heroin, injectable heroin, buprenorphine, pentazocine, Proxyvon alone or with other pharmaceutical preparations; geographical areas of residence; socio-economic status; employment status and age.

The interviews took place in settings that offered privacy and were conducted after obtaining informed consent from the participants. Sample recruitment was monitored regularly by the UNODC ROSA H13 team.

### 3.4 Analysis of the Data

The content of interviews with IDUs and key program staff members was catalogued manually using a coding frame derived from the interview topic guide, and the content analyzed thematically for

Table 1: Sampling

Site	No. of IDIs with IDUs who have experienced overdose		No. of IDIs with IDUs who have witnessed overdose		No. of IDIs with TI programme staff	No. of Focus group discussions
	Males	Females	Males	Females		with IDUs
Calicut, Kerala	5		5		1	1
Cochin, Kerala	4		2		1	1
Delhi	5		5		1	1
Dimapur, Nagaland	5	5	5	5	2	2
Haryana	2		3		1	1
Hyderabad, Andhra Pradesh	5		5		1	1
Imphal, Manipur	5	5	5	5	2	2
Aizawl, Mizoram		5		5	1	1
Narasinghpur, Madhya Pradesh	5		5		1	1
Bhubaneswar, Odisha	5		5		1	1
Patna, Bihar	5		5		1	1
Pune, Maharashtra	5		5		1	1
Amritasar, Punjab	4		5		1	1
Tarn Taran, Punjab	5		4		1	1
Lucknow, Uttar Pradesh	3		4		1	1
Kolkata, West Bengal	5		5		1	1
Total	68	15	68	15	18	18

distinct factors associated with overdose among IDUs. Focus group discussions were organized around the themes found in the discussion guide.

## 3.5 Sample Characteristics

Of the 166 IDUs interviewed for the IDIs, the accurate age was entered for 161 participants and the median age was 34 years (N =161; range: 20-65 years;  $34 \pm 8.5$  years). The median age of male IDUs was 35 years (N =134; range: 20-65 years;  $35.7 \pm 8.7$  years) and the median age of female IDUs was 30 years (N = 27; range: 21-45 years;  $31.1 \pm 5.8$  years). These sample characteristics are broadly similar to other studies of drug injectors in the country.

### 3.6 Ethics and Consent

All interviewees were undertaken in confidence and interviews were only recorded subject to informed consent. All participants provided written informed consent before being interviewed and interviewees participated on a voluntary basis. No personal or identifying information was retained within the transcripts.

## 4.1 CALICUT, KERALA

## 4.1.1 Findings from the Respondents Who Have Experienced Overdose

#### **Demographics**

The mean age of the respondents is 45 years (median: 50; mean: 45.2; SD: 8.9) and all five of them are males.

#### Drug use patterns

All of the respondents were brown sugar (heroin) users; three individuals consumed sedatives; three consumed alcohol; two persons consumed cannabis; and two consumed opium. Of the injectable preparations, three persons injected brown sugar (heroin); one injected morphine; one injected opium; and two injected Phenargan.

#### Last overdose

Three of the five respondents experienced overdose in their drug use settings, in the presence of other drug using friends and strangers; two respondents reported overdosing at home. The overdose episodes mostly occurred in the day, in well lit places. Heroin (brown sugar) was the drug used in all the overdose episodes. In four of the five cases, heroin was mixed with other drugs notably, sedatives (nitrazepam), opium, alcohol and cannabis. Interpersonal difficulties with the family, homelessness, financial problems and suicidal tendencies triggered the overdose episode in a participant. One of the respondents overdosed two days after he had been released from prison where he had stayed for six months and abstained from opioids. A sudden increase in the amount of injected heroin, combined with sedative drugs and alcohol was also cited as the reason for overdose. Two of the respondents were not regular injectors and they had an overdose episode on the day that they injected themselves. While people who overdosed at home were managed without any help/assistance and made a spontaneous recovery, people in the vicinity attempted to help the overdose victims in the drug using venues. Mouth-to-mouth breathing was done for one person by a friend; two persons were taken to the hospital; and the one taken to medical college hospital was given naloxone.

A majority of the people who have experienced overdoses have been registered with the TI. Four of them desired information from the TI and three of them have received verbal information about overdosing. Though all were registered with opioid substitution treatment (OST) centres, one had stopped the medication and two were irregular in treatment. Three individuals were receiving support from the TI at the time of the overdose. Though most of the respondents have been to abstinence oriented treatment centres, they were not provided with overdose related information while undergoing treatment there.

## 4.1.2 Findings from the Respondents Who Witnessed the Overdose Episode

#### **Demographics**

The mean age of the respondents is 42 years (median: 42; mean: 41.8; SD: 7.5) and all five of them are males.

#### Last witnessed overdose

All witnessed overdose episodes were by close friends with whom they had been injecting drugs for several months/years. All respondents witnessed the overdose in drug using places near the south beach, under the railway bridge, etc. The overdoses occurred during the day in the presence of drug using friends and strangers. While the strangers were reluctant to help the overdose victim, friends did not hesitate to help them. Heroin was the drug used in all the witnessed overdose episodes and some of these victims were not regular injectors. They were chasing heroin regularly and on that particular day they decided to inject heroin and overdosed. The combination with sedatives, purity of the drug and sudden escalation of dose were cited by witnesses as other reasons for overdosing.

#### Help following overdose

Except in one case where nothing was done to intervene, in the other four cases action was initiated by the witnesses. Most actions initiated by the friends were positive.

"I gave mouth-to-mouth breathing and did not know whether that was helpful; then I put him in an auto and took him to government hospital, but they refused him admission there. Subsequently I took him to Medical College Hospital where he was admitted and the doctors and nurses were good."

A 48-year-old male who witnessed the overdose episode, Calicut, Kerala

"I informed the police and they took him to the hospital."

A 50-year-old male who witnessed the overdose episode, Calicut, Kerala

"Called TI staff."

A 37-year-old male who witnessed the overdose episode, Calicut, Kerala

A witness believed in the myth of injecting salt to overcome the overdose.

"I boiled water with salt, once the salt dissolved well, I loaded the salt water in the syringe and then I injected the overdosed person with the solution."

A 32-year-old male who witnessed the overdose episode, Calicut, Kerala

All the persons who had witnessed the overdose episode had been registered with the TI; three of them had received information verbally about overdoses. All were registered with the opioid substitution treatment (OST) centre, one was irregular with the OST and the rest were attending the OST regularly. Though most of the respondents had been to abstinence oriented treatment centres, they were not provided with overdose related information while undergoing treatment there.

None of the witnesses or overdose victims had adequate information related to overdose such as signs and symptoms and steps to be taken in case of an overdose. Of the ten respondents, only one had heard about naloxone as he was administered naloxone in the Medical College Hospital, where it is available. In the government hospital, naloxone was not available and the staff's attitude to overdose victims was indifferent whereas in the Medical College Hospital, the hospital staff members were empathetic. Four of the witnesses opined that they needed overdose training; two of them had received overdose related information; and three of them requested for overdose training.

## 4.1.3 In-depth Interview with Targeted Intervention Program Staff

The interview with the TI counsellor confirmed and validated most of the findings obtained through IDU interviews. According to him, the IDUs are unaware of which hospital to take the overdose victim to; they are unaware about naloxone and first aid for persons who have overdosed. In addition, they are afraid of police action in case they respond to the needs of the overdose victims. Police advocacy is important to address this fear amongst the drug using community. To ensure overdose victims are adequately and appropriately provided treatment, advocacy with the hospital staff is needed.

### 4.1.4 Focus Group Discussion with IDUs

Focus group discussion with the IDUs further validated the findings of the IDIs with IDUs. The following are the risk factors for overdoses identified through FGDs:

- Purity and quality of the drug
- Concurrent use of alcohol, sedatives
- Escalation in the dose of heroin
- Use following periods of abstinence (incarceration, treatment).

Table 2: The Discussions Identified the Signs and Symptoms of Overdose; and Actions to be Initiated

Signs and symptoms of overdose	Action to be taken	Challenges
<ul> <li>Falls down after injecting</li> <li>Cannot stand up after injecting</li> </ul>	<ul><li>First aid</li><li>Call ambulance</li><li>Take to a hospital</li></ul>	<ul> <li>Most drug users are not knowledgeable about first aid</li> <li>Availability of ambulance; services to rural/remote areas</li> <li>Sensitization of hospital staff</li> <li>Fear of police</li> </ul>

The FGDs indicate that information on overdose can be provided through videos and verbal communication. It is necessary to train outreach workers on overdose prevention and management.

### 4.2 COCHIN, KERALA

### 4.2.1 Findings from the Respondents Who Have Overdosed

#### **Demographics**

The mean age of the respondents is 41 years (median: 37; mean: 40.8; SD: 12) and all of four of them are males.

#### Drug use patterns

All respondents consumed cannabis; one of them was a brown sugar (heroin) user; two consumed sedatives; and two of them consumed alcohol. Of the injectable preparations, all respondents injected buprenorphine; one injected morphine; one injected pentazocine; three of them injected diazepam; half of them injected Avil; and, one person injected Phenargan.

#### Last overdose

All the four respondents who had overdosed were synthetic opioid users. Whereas one respondent overdosed on morphine, the rest of them overdosed on buprenorphine. Three of them had the overdose in drug use settings during the day whereas one of them overdosed at home in the night. Two of the three persons who overdosed on buprenorphine had been in police lock-up and had abstained for sometime before they used and overdosed on buprenorphine. None of them required assistance or medical help. They all recovered spontaneously.

All the persons who had overdosed had been registered with the TI; most had not received any information about overdoses. Three of them had been registered with the OST centre, one was regular for OST and two were irregular for OST. None of the respondents had been to abstinence oriented treatment centres. All of them required information on overdose and of these, only one individual received information from the TI. None of the persons were receiving support from the TI at the time of the overdose episode.

## 4.2.2 Findings from the Respondents Who Witnessed the Overdose Episode

#### **Demographics**

The mean age of the respondents is 32 years (median: 31.5; mean: 31.4; SD: 0.7) and both of them are males.

#### Last witnessed overdose

One person overdosed at home during the night and the other one overdosed at the drug using hotspot during the day. In both cases buprenorphine was the injected drug. In one case, the person injected buprenorphine following a short period of abstinence and in the other buprenorphine was injected with other injectable drugs (diazepam, Phenargan). In the overdose at home, the witnesses misinterpreted the overdose as "fits" and gave him an iron rod to hold, in the erroneous belief that an iron rod would help to stop the seizures. In both instances the witnesses did not believe that medical assistance was necessary and expected the victims to recover after some rest.

#### "Assuming it was fits we gave an iron rod and believed he will recover soon."

A 31-year-old male who witnessed the overdose episode, Cochin, Kerala

Both the persons who witnessed the overdose episode have been registered with the TI; neither of them received any information about overdose. They were registered with the OST centre even before they witnessed the overdose episode. None of the witnesses or overdosed persons has adequate information related to overdose such as signs and symptoms and actions to be taken. None of the respondents have heard about naloxone or other specific treatments for overdose. All the respondents requested training in overdose related issues.

## 4.2.3 In-depth Interview with Targeted Intervention Program Staff

The interview with the TI project manager confirmed the findings emerging from the IDU qualitative interviews. According to him, the IDUs overdosed due to the following reasons: short-term abstinence from opioid use and use of multiple injectable drugs and concurrent alcohol use. He opined that the drug users were unable to recognize opioid overdose and initiate appropriate action, even though most overdose cases were witnessed by their friends. He insisted on comprehensive overdose prevention and management training. Lack of information, education and communication (IEC) material on overdose needs to be addressed.

Action Overdose related information for IDUs Verbal communication, leaflets, and videos Overdose related information for family members Overdose related information during house visits and family counselling sessions Overdose related training for IDUs Training for IDUs on site Participatory learning techniques Training on first aid and cardiopulmonary resusci-Training for all staff members tation (CPR) Periodic training Sensitizing the hospital staff for empathetic man-Advocacy with the hospital staff agement of overdose victims

Table 3: Issues and Actions

### 4.2.4 Focus Group Discussion with IDUs

Focus group discussion with the IDUs further validated the findings of the IDIs with IDUs. The discussions identified the signs and symptoms of overdose as follows:

- Unable to respond after injecting the drug
- Inability to talk to others after injection
- Fits are relatively common among persons who inject pharmaceutical drugs.

The FGDs indicated that information on overdose could be provided through videos and verbal communication. It is necessary to train outreach workers and TI staff on overdose prevention and management in the local language.

#### 4.3 DELHI

## 4.3.1 Findings from the Respondents Who Have Overdosed

#### **Demographics**

The mean age of the respondents is 39 years (median: 37; mean: 38.8; SD: 18.3) and all five of them are males.

#### Drug use patterns

All respondents consumed alcohol; all of them used cannabis; four of them were brown sugar (heroin) users; one used opium; and four individuals consumed sedatives. Of the injectable preparations, three of them injected buprenorphine; three persons injected brown sugar (heroin); all respondents injected Avil; and one injected diazepam.

#### Last overdose

All the five respondents had experienced the overdose episode in their usual drug using places during the day. While two of them were alone when they overdosed, the other three had witnesses. Heroin in combination with Avil was the drugs used on the day of the overdose episode in three cases and in one case buprenorphine had been used in combination with Avil and nitrazepam. In one case of overdose, friends observed "fits" (convulsions) during the state of intoxication. One of the respondents had diverted the prescribed medication, namely the opioid substitution medication (sublingual buprenorphine) for injection and administered it along with Avil.

"I injected Norphine with Avil and smoked ganja the previous day; had half bottle of alcohol (rum) the previous night and in the morning dissolved the OST tablet with Avil and injected the mixture. Later I could feel my eyes were not opening and I was semi-conscious. My friends took me to one side of the gully and made me lie down. They threw water on my face and tried to revive me. I could hear some sound but could not respond."

A 65-year-old male who had overdosed, Delhi

None of the people who had overdosed were given any assistance or medical attention. All were left to recover on their own. Though all respondents were registered with a TI, none had received any information related to overdose prevention or management from the TI. Four of them wanted to get information related to overdose from the TI. Three of them were attending the Needle Syringe Exchange Program (NSEP) and receiving needles and syringes from the TI; one of them had been receiving both OST medication and needles/syringes; and one respondent was registered with the OST and receiving substitution medication. At the time of the overdose episode, only one person received support from the TI.

## 4.3.2 Findings from the Respondents Who Have Witnessed Overdose Episodes

#### **Demographics**

The mean age of the respondents is 43 years (median: 47; mean: 42.6; SD: 9.5) and all five of them are males.

#### Last witnessed overdose

Of the five respondents, four had witnessed the injecting of heroin or heroin in combination with Avil and diazepam; in addition the people who had overdosed had consumed alcohol, sedatives and Proxyvon. It is important to note that three of the overdoses that had been witnessed were fatal and the other two were left unattended in the street and house. Four of them were not provided appropriate first aid, medical assistance or transferred to a hospital for care. The primary reasons for the reluctance to provide care for the persons who had overdosed were fear of police arrest, fear of being blamed for the episode and a belief that no one cares for a dying IDU. Multiple factors – individual and contextual – operate together increasing the risk of dying from an overdose.

"He had taken sedatives (N-10, nitravate) before and then injected brown sugar and Avil with us. Before he could withdraw the syringe he fell down and started having convulsions. Tried to shake him and make him conscious again. Lots of people and other users gathered around. We shook him for a long time but he did not respond. We were afraid of the police and the consequences, so we left him there and the rest of us ran away. They know we are all drug users so nobody cares. A friend told me that after some time the police came and took him to a hospital.... Got to know from other users that he had died."

A 50-year-old male who witnessed the overdose episode, Delhi

"I came to know in the morning that he was found dead. I think a fellow cycle rickshaw puller, 55 years, overdosed because he used to inject a lot of brown sugar and also drink. He must have become unconscious and with the cold in the night, must have died."

A 28-year-old male who witnessed the overdose episode, Delhi

All the persons who had witnessed the overdose episode were registered with the TI; none of them had received any information about overdose prevention and management. Four of them were registered with the OST centre even before they witnessed the overdose. None of the witnesses or overdose victims had adequate information related to overdose such as signs and symptoms and action to be taken in case of an overdose. None of the respondents had heard about naloxone or other specific treatments for overdose cases. All persons expressed the need for overdose related information and all desired to be trained in overdose management.

## 4.3.3 In-depth Interview with Program Targeted Intervention Staff

The project manager of the TI profiled the characteristics of overdose victims as homeless, unemployed or unskilled, illiterate and recently incarcerated persons. Injecting heroin concurrently with pharmaceuticals such as Phenargan, Avil, diazepam and use of alcohol increased the risk of an overdose. There was general apathy towards the IDUs and indifference prevailed in case of an IDU overdosing on the street. There was virtually no attempt made to save his life and except for calling the police, no other action was generally initiated. Even the staff members were ignorant about the signs and symptoms of an overdose and the response in case of an overdose. There is an urgent need to train the TI staff on overdose prevention and management. Further advocacy with police as well as hospital staff would help in a better response to overdose cases in the future.

## 4.3.4 Focus Group Discussion with IDUs

Focus group discussion with the IDUs further validated the reasons for overdose and the combination of drugs that facilitate the likelihood of it occurring. The discussions identified the signs and symptoms of overdose, actions to be initiated and the challenges.

Signs and symptoms of overdose	Action to be taken	Challenges
<ul> <li>Loss of consciousness</li> <li>Does not respond to anything</li> </ul>	<ul> <li>Shake the overdosed person</li> <li>Throw water on the person</li> <li>Call the TI</li> </ul>	<ul> <li>Afraid of police intimidation / arrest</li> <li>The helper gets blamed for the overdose</li> <li>Nobody cares for the life of a drug user</li> </ul>

The FGD indicated that information on overdose can be provided through peers and staff members of the TI.

## 4.4A DIMAPUR, NAGALAND: MALE INJECTING DRUG USER TARGETED INTERVENTION

### 4.4A.1 Findings from the Respondents Who Had Overdosed

#### **Demographics**

The mean age of the respondents is 36 years (median: 36; mean: 36.4; SD: 2.5) and all five of them are males.

#### Drug use patterns

Three of them were heroin users and two were brown sugar (adulterated heroin) users; four of them used sedatives; four consumed alcohol; four smoked cannabis; and two had consumed opium. Of the injectable preparations, four persons injected Proxyvon; two injected heroin; two injected brown sugar (heroin); one injected buprenorphine; and two individuals injected diazepam.

#### Last overdose

Four of the five overdose episodes occurred in the presence of others and most episodes occurred during the day. In all the cases, Spasmoproxyvon (SP) was the injected drug and the users who had overdosed felt that on the day of the overdose they had injected more than their usual dose. The response by the others to an overdose includes throwing water on the head, throwing water on the private parts, putting salt water in the mouth, body massage and mouth-to-mouth breathing. Except for one, all of the other overdose victims did not require medical assistance. There is general discrimination against the drug user in health care centres

"I think they provided mouth-to-mouth breathing and body massage to me, but it did not work, so they took me to the private clinic in a hired auto. They did not call an ambulance, as they did not know that the ambulance service is available in this area. They took me to the private clinic and at the clinic they provided medical assistance. But I do not know what kind of medicine was provided to me. My cousin told me after the incident that medical staff delayed in providing the medical service, one of the nurses who is also from our locality said 'you drug addict you better die'. Till today my cousin is angry remembering the words uttered by the nurse. They did not provide any information on overdose, when I became conscious. They asked to pay the fee and leave the clinic. They charged 1700 rupees."

A 37-year-old male who overdosed, Dimapur, Nagaland

Most of the respondents have been treated in abstinence oriented drug rehabilitation centres for three to six months, and despite repeat admissions, all of them relapsed following their stay in such facilities. All the respondents were registered at the TI. Three of the respondents were not registered at the OST clinic; one dropped out as he did not feel comfortable with the OST medication; and one person is registered with OST and receiving the drug. All respondents wanted information about overdosing and only three of them were ever provided with information. Though some information was provided by peers about overdose, all of them felt that the information needs to be enhanced and specific. Discussions, leaflets, posters, videos and overdose related training are all required for the IDUs as overdose is common among SP users.

## 4.4A.2 Findings from the Respondents Who Had Witnessed the Overdose Episode

#### **Demographics**

The mean age of the respondents is 29 years (median: 30; mean: 30.2; SD: 4.2) and all five of them are males.

#### Last witnessed overdose

All witnessed overdoses were among relatives or friends with whom they had been injecting. All respondents witnessed the episode of overdose in drug using places or home settings. The majority of the overdoses witnessed occurred during the day in the presence of drug using friends. Friends and relatives who witnessed an overdose episode had no hesitation in helping the overdose victims. Spasmoproxyvon was the drug injected in all the overdose episodes witnessed and in one case the additional use of alcohol was reported by the witness. The witnesses were not sure whether the overdose victims had taken anything else without their knowledge.

#### Help following overdose

In all cases action was initiated by the witnesses. In one case, the individual was taken to a private clinic and in another to the civil hospital. In three cases the witnesses helped the individuals with measures such as body massage, letting them rest, and mouth-to-mouth breathing. Ambulance services were not called for to provide medical assistance; most of the witnesses were not skilled at providing specific measures of intervention for the overdose. Most witnesses expressed that the common practice was to administer salt orally to recover from the overdose.

"We do not have any idea about where we can get the ambulance facilities from and we are also afraid of the police. So in most of the cases we never call for any help. Apart from this we have very limited knowledge in dealing with the issue. Common practice followed by IDUs is putting salt water in the mouth, body massage and mouth-to-mouth breathing etc."

A 27-year-old male who witnessed an overdose episode, Dimapur, Nagaland

All of the persons who have witnessed overdose episodes were registered with the TI; two were registered with OST and one of them had dropped out of OST. Some of them had received verbal information about overdoses. None of the witnesses or people who had overdosed had adequate information related to overdose such as signs and symptoms and actions to be taken in case of an overdose. They wanted the information to be disseminated through outreach based activities. Naloxone was administered in the city hospital, where it is available. All of them opined that they needed training in overdose management; one had received training through the learning centre project.

"It will be good if we could be provided information and education by outreach based communication – through flip chart and also leaflets in local languages."

A 26-year-old male who witnessed an overdose episode, Dimapur, Nagaland

"We immediately took him to the Dimapur Civil Hospital. We did not call an ambulance. Since they have a vehicle (car) at home so we went by that. After reaching the hospital, I

think they administered Naloxone. We stayed there for three hours as they kept him for observation after the medicine was administered so we waited till they discharged him."

A 26-year-old male who witnessed an overdose episode, Dimapur, Nagaland

Recently I got training on overdose management, which is provided at the learning sites. It is a classroom session provided by the learning sites staff, slide show and videos, etc. I think it was useful to me, as now I know more about overdose management and where to get help etc.

A 29-year-old male who witnessed an overdose episode, Dimapur, Nagaland

## 4.4A.3 In-depth Interview with Program Targeted Intervention Staff

The interview with the project manager revealed that the response to overdoses is inadequate. In the background of discrimination against IDUs, there was no organized assistance for helping overdose victims. Ambulance services were unavailable to overdose victims in remote areas. Naloxone availability was not assured in many hospital settings and it was only available in limited settings such as the Dropin-Centre (DIC) and Dimapur Civil Hospital. Sensitization of the general community, advocacy with the police and health care providers are all important for better overdose response. The myths such as putting salt in the mouth and injecting salt have to be addressed and the prevention/management messages have to be disseminated to the drug using communities through role play, street theatre and media. Information can be spread through outreach based communication, leaflets, posters and videos. Overdose prevention/management training is essential for the TI staff and the training has to be participatory; the content should include signs and symptoms of overdose; risk factors, recovery position, first aid and CPR.

### 4.4A.4 Focus Group Discussion with IDUs

The FGD identified the signs and symptoms of overdose, actions to be initiated and the challenges.

Signs and symptoms of overdose	Action to be taken	Challenges
<ul> <li>Changes in complexion</li> <li>Dark lips</li> <li>Rapid breathing or unable to breath</li> <li>Saliva drooling</li> <li>Unconscious</li> </ul>	<ul> <li>Help or support the victim in breathing (only few persons know about recovery position)</li> <li>Injecting salt is very common practice among the injectors and among the oral users putting salt water in the mouth is common</li> <li>Putting limewater in the mouth</li> <li>First aid such as CPR - Many of them do not know about this</li> <li>Refer them to NGO or hospital (But hospital in rare cases)</li> </ul>	<ul> <li>They have no experience of calling an ambulance in their setting</li> <li>Attitude of the hospital staff is not good - they do not respond immediately</li> <li>Another problem is calling staff of DIC as shooting sites are far away from the DIC. If overdose happens during the night it is really difficult</li> <li>Many of the IDUs do not know how to provide immediate response</li> <li>IDUs do not know whether NGO has the overdose medicine or not</li> </ul>

The FGD identified the following as the risk factors for overdose: taking an excessive amount of drugs, reduced tolerance to drugs, multiple drug use and cocktails containing SP/alcohol/diazepam/nitrazepam, reuse following periods of abstinence and varying purity levels of the street drug.

The FGDs indicated that information on overdose could be provided through peers and other staff of the TI. The IDUs desired overdose management training that was for a shorter duration and was conducted in local settings and the DIC in the local language.

## 4.4B DIMAPUR, NAGALAND: FEMALE INJECTING DRUG USERS TARGETED INTERVENTION

### 4.4B.1 Findings from the Respondents Who Had Overdosed

#### **Demographics**

The mean age of the respondents is 30 years (median: 33; mean: 30.4; SD: 5.5) and all of them are females.

#### Drug use patterns

All of them used alcohol and usually also consumed oral SP. Of the injectable preparations, all of them injected Proxyvon; and two of them had injected heroin in the past. The transition from using oral SP to injecting of Proxyvon was relatively common; two of them had shifted from injecting heroin to injecting Proxyvon.

"I have been using SP for the last six to seven years. Initially I started with oral for two years and shifted to injection. So I have been injecting for the last five years. Sometimes I also inject brown sugar but as it is expensive and very time consuming to prepare the drugs I do not inject often. But I always drink alcohol. Initially I started taking one or two tabs orally; gradually I also increased my doses. At present I only inject SP."

A 34-year-old female who had overdosed, Dimapur, Nagaland

#### Last overdose

All respondents had overdosed in familiar settings in the presence of their drug using friends during the day. Spasmoproxyvon was the drug used in all the incidents of overdose and injecting SP was often combined with alcohol.

"Before that last injection in which I overdosed, I had already injected twice; in those injections I had taken three pills each. But when I injected for the last time I took five pills of SP. I had also taken two pegs of local alcohol on that day."

A 30-year-old female who had overdosed, Dimapur, Nagaland

"On that day I consumed locally made alcohol before injecting and meeting my friend, I mean before the overdose incident. I think I took nearly half bottle of it. After drinking at the local booze joints – two hours later I met my friend and injected myself at her place. I injected five tablets of SP on that day."

A 34-year-old female who had overdosed, Dimapur, Nagaland

#### Help following overdose

Putting salt water, lemon water in the mouth, body massage, mouth-to-mouth breathing were some of the actions usually taken by the friends who witnessed the overdose episodes. The friends were helpful and as one person remarked:

"I'm alive today because of my friends."

A 34-year-old female who had overdosed, Dimapur, Nagaland

None of them were taken to a hospital and the respondents did not know of any ambulance service to take the overdose victims to hospital in their areas.

All of them were registered with the TI and the only overdose related information that they had received was from their peers.

"Not from TI but I got some information on overdose from the drug using peers, just a verbal communication."

A 33-year-old female who had overdosed, Dimapur, Nagaland

All of them believed that the information was inadequate; they required more detailed information and formal training on overdose prevention and management. None of the respondents had been registered for OST. As there are no women drug users' treatment centres, none of the women have been for drug use treatment.

## 4.4B.2 Findings from the Respondents Who Have Witnessed an Overdose Episode

#### **Demographics**

The mean age of the respondents is 29 years (median: 30; mean: 28.8; SD:4.8) and all of them are females

#### Last witnessed overdose

All of the overdoses that were witnessed occurred during the day. While four of them were witnessed by friends, one of them was observed by a relative. The overdose incidents happened in familiar settings where other drug injectors were present.

"It is in the local booze joint hotel in the bazaar area. This is a familiar setting for us as the hotel owner is also an injector and she is also our friend. Most of the time we also inject at her place."

A 34-year-old female who witnessed an overdose episode, Dimapur, Nagaland

"It is in the slum area (deserted houses). It is a common injecting place for us. As this particular area is huge. Many drug users go to this place to take drugs since police and other people do not come there. On that day the two of us were injecting in this area. Apart from us there was no one in that place at that time."

A 21-year-old female who witnessed an overdose episode, Dimapur, Nagaland

#### Help following overdose

All the individuals who had overdosed were helped by the witnesses by measures such as slapping the person on the face, making the person sit up, making the person walk, oral administration of salt, salt water or lemon water, body massage and mouth-to-mouth breathing. Naloxone administration was not mentioned; no medical assistance was provided to any of them and ambulance services were not utilized.

"Soon after she finished injecting we came to know that she had overdosed. As she fell down to the ground, she was unable to respond to anything we said/asked her. Apart from this, her teeth were clenched and she was also having difficulty breathing. The immediate reaction is that we always try to wake the person up by slapping the face. It is very common practice; we do it if any one over doses among us. Normally we try to give body massage and also we pull the person up and make her walk. If it does not work then we put salt water in the mouth, sometimes we also put water on the body. If she does not respond to anything sometimes we also give mouth-to-mouth breathing, most of the time it is really helpful. But we do not know recovery position. We only know to keep the person in a comfortable position where she is able to breathe properly."

A 30-year-old female who witnessed an overdose, Dimapur, Nagaland

Though all the witnesses were registered at the TI, none were registered for OST. Also, though all the respondents had received overdose related information from the TI, they opined that the information received was very basic and the content and quality needed to be improved. None of them had received any overdose related training and all of them wanted it.

# 4.4B.3 In-depth Interview with Target Intervention Program Staff

The IDI with the project manager confirmed the findings obtained from interviews with FIDUs. She opined that the FIDU community was unaware of the signs and symptoms of overdose and this knowledge needs to be disseminated to them for easy recognition and management. None of the respondents or the project manager was aware of naloxone and its benefits. Given the high levels of discrimination, it is important to sensitize the general community about drug use and overdose. Training for the staff members on the signs and symptoms of overdose, risk factors, prevention, first aid and management is critical.

## 4.4B.4 Focus Group Discussion with IDUs

The FGDs identified the signs and symptoms of overdose, actions to be initiated, and the challenges.

Signs and symptoms of overdose	Action to be taken	Challenges
<ul> <li>Changes in complexion on the lips</li> <li>Unable to breathe</li> <li>Unconscious</li> <li>Saliva drip down and teeth tighten (some time they put spoon on their teeth)</li> <li>Unable to respond</li> <li>Some fall down on the floor</li> </ul>	<ul> <li>Putting salt water and fresh limewater in the mouth</li> <li>Obtain naloxone and inject it</li> </ul>	<ul> <li>Nobody cares for the life of a drug user in the community</li> <li>Due to distance, there is challenge in informing or calling NGO staff</li> <li>They never approach or get help from NGO or hospital</li> <li>Most do not have the knowledge of ambulance service</li> <li>At hospital health care provider often discriminates and says 'you are drug addict' and there is always delay in getting treatment</li> </ul>

The FGDs validated the findings from the IDIs. The risk factors identified include use of multiple drugs such as SP along with heroin, alcohol, oral nitrazepam; combining oral and injectable SP; increased injecting frequency; reuse after stopping drugs for sometime; and the varying purity of the street drug. Since many of the FIDUs were engaged in sex work, drinking was the norm as they often consume alcohol with the clients.

IEC materials on overdose prevention and management are necessary. In addition, posters and leaflets carrying overdose prevention/management messages may be beneficial. A technically sound resource person may conduct the overdose training for peers and it is desirable that the training be conducted in the local language for a shorter duration (up to 2 hours) through participatory learning, discussions, role play and video clippings.

### 4.5 HARYANA

## 4.5.1 Findings from the Respondents Who Had Overdosed

### **Demographics**

The two respondents were males aged 52 and 23 years.

#### Drug use patterns

Both of the respondents who had overdosed inject pharmaceutical opioids; one of them injects pentazocine along with Avil and the other injects buprenorphine in combination with Avil. They have also been using other drugs such as alcohol, opium, heroin and cannabis.

#### Last overdose

Whereas one overdose episode happened at home in the presence of a friend, the other occurred in the hotspot and the respondent's elder brother was present. In one case, the individual took the usual dose of pentazocine and Avil while he had fever and in the other instance, the person injected a larger amount of buprenorphine and Avil than usual and had also consumed alcohol. Both were helped by the persons who witnessed the overdose episode and were given mouth-to-mouth breathing, their hands and feet were rubbed and the individuals were placed in the recovery position. No medical assistance was sought for them and they recovered after a while.

Both were registered with the TI, but had not received any information related to overdose prevention or management from the TI. They have not been registered for opioid substitution treatment (OST). Both are keen to receive overdose related information from the TI and the methods preferred include verbal communication, leaflets, role play and videos.

# 4.5.2 Findings from the Respondents Who Witnessed the Overdose Episodes

### **Demographics**

The three respondents who reported witnessing the overdose episode are aged 22, 54 and 52 years respectively

#### Drug use patterns

All the three respondents were pentazocine users. They also used other drugs such as Avil, Phenargan and diazepam.

#### Last overdose

All of them witnessed overdose episodes among their own friends. In two of the three cases, the combination with alcohol was cited as the prime reason for the overdose; in the third case, the overdose was probably linked to the fact that the person took the injection after a long period of abstinence. All the witnesses helped the overdose victims using some of the following actions: rubbing hands and feet of the victims, mouth-to-mouth breathing and recovery positions. None of them was provided medical assistance and an ambulance service was not called. The reasons for not calling the ambulance were the fear of police harassment and worry that the ambulance driver

would demand money for fuel. None of the respondents were knowledgeable about the signs and symptoms of overdose; they had not heard of any specific treatment for overdose nor had they heard of naloxone. The respondents had not received any overdose related information from the TI and they are keen to receive information through verbal communication, leaflets, role play and videos.

# 4.5.3 In-depth Interview with Target Intervention Program Staff

The interview with the project manager validated the findings of the IDU interviews. It was revealed that whereas the drug using community is very helpful to each other in case of an overdose, the general community usually discriminates against them and they are reluctant to help overdose victims fearing medico-legal issues. In general, there was also an unwillingness to calling ambulance services for fear of the police and having to pay for it. Private doctors were preferred for medical assistance as drug users were not sure of the hospital services. The respondent believed that advocacy with the police and hospital staff is necessary if they have to be approached in case of an overdose. There is need to enhance overdose related information from TIs and outreach through leaflets primarily with pictures to help the illiterate.

## 4.5.4 Focus Group Discussion with IDUs

The FGD indicated that overdose related training is required for peers, outreach workers, counsellors and some clients and the training should include practice sessions. The FGD identified the signs and symptoms of an overdose, action to be initiated and the challenges.

Signs and symptoms of overdose	Action to be taken	Challenges
<ul> <li>Breathing difficulties</li> <li>Not able to walk or stand</li> <li>Not able to speak properly</li> </ul>	Can take to hospital but never call the ambulance	<ul> <li>People are reluctant to call for an ambulance</li> <li>Every drug user is not capable of recognizing whether a person is suffering from the overdose or not.</li> <li>No capacity for first aid</li> </ul>

### 4.6 HYDERABAD

## 4.6.1 Findings from the Respondents Who Had Overdosed

### **Demographics**

The mean age of the respondents is 33 years (median: 33; mean: 32.8; SD: 5.1) and all five of them are males.

#### Drug use patterns

Four of them consumed alcohol; four smoked cannabis; and two used sedatives. Of the injectable preparations, four individuals injected pentazocine, four injected Avil and four injected diazepam.

#### Last overdose

All the overdose episodes were witnessed by their friends and these occurred in familiar, drug using venues. In four of the five reported cases of overdose, the prime drug that was injected was pentazocine along with other pharmaceutical drugs such as Avil and in two cases, diazepam too. In four cases alcohol was consumed along with the injectable opioid and Avil. None of the victims were staying with their family and were homeless so they were living on the streets of Hyderabad. Friends helped all of them and three of them were referred for medical assistance; two were admitted in hospital and one was seen by a private doctor. None of them knew of any specific treatment such as naloxone. All of them were registered with the TI, but had no access to OST. All of them had received some information related to overdose from the TI outreach staff through verbal communication. Four of them wanted overdose related information and one sought the TI's support at the time of the overdose episode.

# 4.6.2 Findings from the Respondents Who Had Witnessed the Overdose Episodes

#### **Demographics**

The mean age of the respondents is 34 years (median: 35; mean: 34; SD: 5.5) and all five of them are males.

#### Last overdose

The respondents witnessed the overdose episodes in the usual drug using venues among their own friends and acquaintances. The majority of respondents opined that family conflicts contributed to the overdose. When the overdose occurred, four of them responded by taking the overdose victims for medical assistance to hospitals where all of them felt that the hospital staff were empathetic and responsive. Two of them called the ambulance for assistance and medical aid was provided in the ambulance itself during transportation. One of the respondents mentioned that due to fear of police harassment, he did not call an ambulance and instead engaged an auto to transport the patient to the hospital. Two of them mentioned the signs and symptoms of overdose as non-responsive and having red eyes. None of the respondents had any knowledge about naloxone. All of the respondents were registered at the TI; all of them requested overdose related information and three of them have received some information about overdose through verbal communication. All of them emphasized

the need for comprehensive information on overdose prevention and management through verbal communication, leaflets and videos. All the respondents requested overdose related training.

# 4.6.3 In-depth Interview with Targeted Intervention Program Staff

The outreach worker with the TI opined that overdose is relatively common with at least two cases being reported every month. The reluctance to help the overdose victims was usually due to police harassment and lack of money for transportation. There is a need for overdose prevention/management training for peers and outreach staff which should focus on providing information about overdose and its practical management in the field. Role play facilitates learning and the training should be conducted at the DIC; training has to be conducted periodically as an ongoing activity. One advocacy meeting each with hospital staff and police had been conducted by the TI.

## 4.6.4 Focus Group Discussion with IDUs

The findings from IDU interviews were validated in the FGD with the IDUs. The key reason for occurrence of overdose is the combination of injectable opioid with alcohol consumption. The FGDs identified the signs and symptoms of overdose action to be initiated, and the challenges.

Signs and symptoms of overdose	Action to be taken	Challenges
<ul> <li>Blackout once drugs are injected</li> <li>Loss of consciousness</li> <li>No response to others</li> <li>No blinking of eyes</li> <li>Body parts become stiff</li> </ul>	<ul> <li>Providing first aid (recovery position)</li> <li>Call the ambulance</li> <li>Take to hospital</li> </ul>	<ul> <li>Fear of facing legal action</li> <li>Police file the case against witnessed person</li> <li>Lack of money</li> <li>Blaming witnessed person</li> </ul>

## 4.7A IMPHAL, MANIPUR: MALE TARGETED INTERVENTION

## 4.7A.1 Findings from the Respondents Who Had Overdosed

### **Demographics**

The mean age of the respondents is 35 years (median: 35; mean: 35; SD: 5.6) and all of them are males.

#### Drug use patterns

All of the respondents were heroin (grade IV) users; three individuals consumed sedatives, three consumed cannabis, two consumed alcohol and one consumed opium. Of the injectable preparations, all respondents injected heroin, two injected Proxyvon and one injected diazepam.

#### Last overdose

One overdose happened in a drug using venue along with friends during the day. Heroin was involved in all the overdose cases and the other drugs that were combined with heroin were injectable Proxyvon, oral SP, nitrazepam, cannabis and alcohol.

"It happened during this Holi season. In the morning I took SP and N-10 tabs and then I went around with my friends to enjoy Holi in Imphal town, as many youth used to take drugs during the Holi season. I could not remember properly how many tabs I had taken on that day. After going here and there I went back late in the evening around 7.30 pm. My parents kept on calling me as my 12th class exam was also going on during this time. So when I went back home, I bought some heroin from a friend; I do not know exactly how much (may be for 100 rupees). After reaching home I injected alone in the toilet and overdosed. I think it was around 8 at night."

A 26-year-old male who experienced an overdose episode, Imphal, Manipur

Overdose episodes also occurred when people injected themselves after a period of shifting to chasing heroin.

"Normally I inject but during that overdose incident I was chasing, as I wanted to stop taking drugs, I was trying to reduce my dose by chasing. But on that day I took drugs with two of my friends, they are injectors. Since the three of us were coming back after getting the drug from Khetrigao, they decided to inject on highway road side. I refused and told them that I could not chase at the road side (on both sides of main road, there are paddy fields) but they insisted so they injected me."

A 38-year-old male who experienced an overdose episode, Imphal, Manipur

### Help after overdose

All the overdose victims were attended by friends/family members. Four of the five cases were administered with naloxone – two by the NGO worker and two who were taken to hospitals. The other measures such as mouth-to-mouth breathing and massages were also attempted before the NGO worker was called or they were taken to the hospital. The drug users who witnessed were familiar with overdose, recognized the symptoms and took effective intervention measures to save the lives of the drug users.

It appeared that naloxone was highly priced in Imphal and families of drug users have spent a lot of money in procuring the naloxone ampoules from private pharmacies.

"During last incident (of overdose), I attended the hospital. My sister's husband told me that doctor has asked to get medicine (naloxone) from the pharmacy and it costs 3500 rupees. Apart from this they also informed the police. The police came, asked for money and threatened to put me in jail if money was not given. So again he paid around 2500 rupees to them."

A 41-year-old male who had overdosed, Imphal, Manipur

Though most of the respondents have been to drug use treatment centres once or more, this has not helped them to stay abstinent. Four of them are registered with the TI, one is irregular with OST, and another has dropped out from OST. They had not received overdose related information from the TI and any information that they had was primarily obtained from verbal interactions with other drug users in Imphal.

# 4.7A.2 Findings from the Respondents Who Witnessed the Overdose Episode

### **Demographics**

The mean age of the respondents is 34 years (median: 34; mean: 35; SD: 4.2) and all of them are males.

#### Last witnessed overdose

All the overdoses that were witnessed occurred during the day. Two of the episodes occurred in home settings, two in drug using locations and in one case the overdosed person was brought to the DIC for intervention by the TI staff. While three of the witnesses were IDUs who were injecting along with the person who overdosed, one was an ex-injector and one an outreach worker.

#### Help following overdose

All the witnesses helped the overdose victims. Three of them called the NGO worker to bring naloxone and administer it to the overdose victims and two were taken to the DIC for naloxone. Naloxone was the key in managing overdose in Manipur and they could get it from the NGO. While waiting for the naloxone to arrive some of them provided first aid to the overdose victims.

"So instead of calling an ambulance I called the NGO worker to come with naloxone and inject him at his home. I think in my State, health care facilities are really poor; we need a series of advocacy with the government officials to have good facilities. Besides, parents have very limited knowledge about overdose."

A 32-year-old male who witnessed an overdose episode, Imphal, Manipur

"Taking help from the NGO is very common in this area but people do not call an ambulance. I think we need to have educational programs among the user community."

A 32-year-old male who witnessed an overdose episode, Imphal, Manipur

"As soon as he was brought to the DIC, our Staff Nurse monitored his pulse and then injected him with naloxone. After getting one shot of Naloxone he slowly regained consciousness."

A 28-year-old male who witnessed an overdose episode, Imphal, Manipur

Three of the respondents had not received any information pertaining to overdose from the TI. Two of them have received training but desired more practical sessions using demonstrations, slides and videos. Information in the form of leaflets and simple educational materials was required.

# 4.7A.3 In-depth Interview with Targeted Intervention Program Staff

The project manager validated the findings of the IDU interviews. As overdose is a common occurrence among IDUs in Imphal, it is necessary to sensitize the general community on overdose management in order that an effective response be carried out in community settings in case of an emergency. In Imphal, ambulance services are not available for overdose victims. Given the negative attitude of the hospital staff and the intimidation by the police, advocacy with these two groups is important. The NGO has naloxone available in the DIC but this could only be administered to overdose victims during the day. Overdose related prevention messages need to be disseminated through the media, street theatre, skits and role play. The staff members of the TI need to build their capacity related to overdose prevention/management that would result in better dissemination of knowledge and skills to the IDU clients.

## 4.7A.4 Focus Group Discussion with IDUs

The FGD confirmed the findings from IDU interviews and also identified the signs and symptoms of overdose, actions to be initiated, and the challenges.

Signs and symptoms of overdose	Action to be taken	Challenges
<ul> <li>Changes in complexion</li> <li>Rapid breathing</li> <li>Unable to breath</li> <li>Unconscious</li> <li>Small eyelid</li> </ul>	<ul> <li>Help or support the victim in breathing (recovery position)</li> <li>Sometimes use salt (inject) and a local plant/herb called HONGU (widely grown in every locality) [inject its fluid]</li> <li>Make a call to NGO for help</li> <li>Refer them to NGO or hospital (But hospital in rare cases)</li> </ul>	<ul> <li>Hospital: Specially the attitude of the service provider (Health care provider); many times, there is delay in treating the patient.</li> <li>Medical personnel inform the police. So, we need to wait for the police formalities and sometimes they demand money for that (Rs. 2000/ or 3000/-)</li> <li>No ambulance facility available in Imphal</li> <li>Overdose medicine (naloxone) not available freely at the hospital and often pharmacy charge huge amount Rs. 3000 to Rs. 5000/-</li> </ul>

## 4.7B IMPHAL, MANIPUR: FEMALE TARGETED INTERVENTION

## 4.7B.1 Findings from the Respondents Who Have Overdosed

### **Demographics**

The mean age of the respondents is 28 years (median: 30; mean: 28.2; SD: 4.3) and all of them are females.

#### Drug use patterns

Of the injectable preparations, all respondents injected heroin; one injected buprenorphine. Four of the respondents were heroin (grade IV) users; all of them consumed alcohol; and two consumed sedatives.

#### Last overdose

All of the episodes happened in drug using venues such as common injecting locations, hotel rooms and toilets during the day. Heroin was involved in all the overdose cases and some respondents had combined alcohol with heroin at the time of the overdose episode. Some of the respondents overdosed following a period of abstinence.

"Actually during that time I had stopped heroin for nearly a week, and I had been drinking for the last one week; but on that day I was so tired that I really wanted to inject the drug. On that particular day I drank one quarter of liquor (I couldn't remember the actual brand). After drinking that I desperately wanted to inject heroin so I got some heroin for Rs. 100/and did it alone in the toilet."

A 30-year-old female who had overdosed, Imphal, Manipur

"As I mentioned, on that day I came out of the rehab centre after staying there for some time. Before injection I didn't drink alcohol. I only injected heroin. I injected one piece @Rs. 100/-. Normally this Rs.100 dose is my usual one time dose. So, before my injection I didn't take any other drugs."

A 21-year-old female who had overdosed, Imphal, Manipur

### Help following overdose

All the overdose victims were attended to by friends. One of the five cases was provided with naloxone by the NGO worker. None of them were taken to the hospital or provided any other medical assistance. The ambulance service was not called in any of the cases. The measures that were carried out as a response to the overdose episodes included injecting salt, throwing water on the body and mouth-to-mouth breathing. Calling the NGO worker for naloxone was considered the best option.

"I was lucky that morning as some of my friends were also injecting in the same room, they helped me. Apart from that I did not overdose for very long (only for 20 minutes). I could not remember anything but they told me afterwards that they injected me with salt water. And they also mentioned that they tried to massage my body. I think they also put water on my body. They did the mouth-to-mouth breathing on me."

A 30-year-old female who had overdosed, Imphal, Manipur

"After I collapsed, I couldn't remember anything. Actually the other friends with me helped. They called the NGO worker who came and injected the medicine. They told me that they injected me with three ampoules of naloxone that day."

A 32-year-old female who overdosed, Imphal, Manipur

Only one of the respondents had been registered for OST. The respondents had not received any information on overdose; they have basic information on overdose through informal exchanges with the PEs and the outreach team. They expressed keen interest in receiving enhanced and appropriate information related to overdose management. All respondents requested overdose related information through the TIs. They opined that overdose related messages can be effectively distributed to drug user networks through verbal communication by the outreach team, leaflets, role play and videos.

# 4.7B.2 Findings from the Respondents Who Had Witnessed the Overdose Episodes

### **Demographics**

The mean age of the respondents is 32 years (median: 33; mean: 32.4; SD: 4.9) and all of them are females.

#### Last overdose

Except one, all the overdose episodes occurred during the day in the presence of other drug users and in familiar settings. All the overdoses witnessed were due to injecting heroin.

"Only the two of us were there. We were injecting together and it was inside the hotel toilet. The toilet room was so small so I injected first. After I had finished she went there (inside) to inject. I was waiting outside and she took very long to come out, so I opened the door and found that she had fallen on the floor of the toilet."

A 26-year-old female who witnessed the overdose, Imphal, Manipur

In one unfortunate incident, even though the witness was sleeping next to the overdose victim, she was completely unaware of what happened to the person.

"She injected herself alone but we were in the same room. I think she did not do any other drug apart from heroin as she injected after dinner was over around 10.30 that night. Unfortunately, when I woke up in the next morning I found her dead in her bed. I only came to know that when I woke up in the morning, and I found injecting equipment lying beside her so she might have injected herself at night. Next morning when the hotel owner arrived on the scene we decided not to disclose it to anyone except to tell other people that she got a heart attack. We have requested some church people to do her last rites."

A 38-year-old female who witnessed the overdose, Imphal, Manipur

The drug users who witnessed an overdose were able to recognize the signs and symptoms of the overdose easily and assisted them.

"Most of the overdose cases I know (the symptoms) are not able to respond, unable to open eyes, saliva falling from the mouth, unable to breathe properly, changes in body colour etc. My biggest concern is slow heartbeat."

A 36-year-old female who witnessed the overdose, Imphal, Manipur

The knowledge level about responding to the overdose was also high among the drug using respondents who were interviewed. Naloxone was administered to individuals who had overdosed with the help of NGO workers and before the naloxone could be administered, most helped the overdose victims by giving body massage, mouth-to-mouth breathing and by keeping them in the recovery position.

"So after I reached there I put her in the recovery position then I asked someone to provide mouth-to-mouth breathing. While other people were helping during that time, I called the NGO service provider as they always have naloxone in their DIC. During that incident many of those around were from the drug user community so everyone was trying to help. Before my friend from the NGO came with naloxone, we gave body massage and placed her in the recovery position. Soon the NGO worker came with the medicine – then we injected her with the medicine. We gave two naloxone injections, as she did not respond after one shot".

A 29-year-old female who witnessed the overdose, Imphal, Manipur

"The best way to disseminate information would be through one-on-one interaction and in small groups both at the outreach and DIC. Apart from this SACS also needs to develop leaflets, flip charts and posters in the local language. So far we don't have any of these except a leaflet that a few NGOs provide which is also in English. For family and DUs it will be good to create awareness through the media and public awareness campaigns and also leaflets, poster etc."

A 33-year-old female who witnessed the overdose, Imphal, Manipur

# 4.7B.3 In-depth Interview with Targeted Intervention Program Staff

The project manager opined that alcohol use is prevalent among the female IDUs who primarily inject heroin that differs in purity/quality at varying times making them vulnerable to overdoses. The common response to overdose by the drug using community includes injecting salt, throwing water on the body, making them walk, mouth-to-mouth breathing and calling the NGO worker. As discrimination is high the general community needs to be sensitized about overdose, advocacy with the police and health care providers is critical and ensuring free availability of naloxone in government hospital settings is a priority. The capacity of the TI staff has to be enhanced so that they effectively disseminate overdose prevention/treatment messages to the drug using community.

## 4.7B.4 Focus Group Discussion with IDUs

The findings from the FIDU interviews are validated by the FGDs. The discussions identified the signs and symptoms of overdose, actions to be initiated and the challenges.

Signs and symptoms of overdose	Action to be taken	Challenges
<ul> <li>Unable to breathe</li> <li>Face and lips becoming dark</li> <li>Unable to talk and not responding while asking something</li> </ul>	<ul> <li>Injecting salt</li> <li>Putting water on the body</li> <li>Wake them walk</li> <li>Injecting a plant which grows locally called HONGU by extracting the liquid from that plant and injecting</li> <li>Mouth-to-mouth breathing</li> <li>Get naloxone from the DIC or call health worker from the DIC to give naloxone</li> </ul>	<ul> <li>If overdose occurs late in the evening or in the night it is a big challenge to get help</li> <li>Calling ambulance is not possible as there are no facilities for this</li> <li>Health care provider attitude may be negative towards drug users</li> <li>At the hospital overdose case is registered as medicolegal case</li> <li>Naloxone is not available freely in the hospital</li> <li>At pharmacy they charge huge amount Rs. 3000 to 5000.</li> </ul>

## 4.8 MIZORAM

## 4.8.1 Findings from the Respondents Who Had Overdosed

### **Demographics**

The mean age of the respondents is 31 years (median: 30; mean: 31.2; SD: 5.4) and all five of them are females.

#### Drug use patterns

Four of them were heroin users; one consumed Proxyvon; all the respondents consumed alcohol; two used sedatives; and one used dendrite. Of the injectable preparations, all respondents injected Proxyvon; four of them injected heroin; and one injected Avil.

#### Last overdose

Of the five overdose cases, three occurred at drug using venues, one in the rest room of a shopping mall and one in a friend's house; four of the episodes took place during the day; and all the incidents were witnessed by friends. Three of them had injected heroin that day and two had injected Proxyvon. Combining other drugs such as nitrazepam, alprazolam and alcohol was common. The reasons described for the overdose were a combination of drugs and alcohol and abstinence from drugs for sometime before reusing opioids. All the respondents live with their families.

### Help following overdose

In two overdose incidents friends helped by placing the victims in recovery positions and in one case, resuscitation was also attempted. One was taken to hospital after there was a delay in recognizing the overdose case in the rest room of a mall; the hospital staff's attitude towards the overdosed person was not negative. No medico-legal case was registered against any of the overdose victims.

All of them were registered with the TI but three of them did not receive any information related to overdose management from the TI. The two persons who had received overdose information from the TI admitted that the information received was basic. Only one of them was registered for OST for the previous four months. Four respondents were keen to receive overdose related information and three had received some basic information from the TI. They prefer to receive overdose related information through leaflets, role play and verbal communication. One person was supported by the TI at the time of the overdose episode.

# 4.8.2 Findings from the Respondents Who Had Witnessed the Overdose Episodes

### **Demographics**

The mean age of the respondents is 35 years (median: 39; mean: 35; SD: 9.3) and all five of them are females.

#### Last witnessed overdose

In the last witnessed overdose, four of them were friends and one was a stranger; two of them were females. Three of the incidents were witnessed in familiar drug use settings, one at home and one on

the road. Apart from the one at home, all other overdoses were witnessed during the day. The reasons for the overdose were stated as increased dose of drug, mixing of drugs and use after a period of abstinence.

All the overdose victims were helped by friends and even passers-by assisted in the process. The measures that were tried included pouring water on the head; making the person drink salt water; recovery position; mouth-to-mouth breathing; and cardiopulmonary resuscitation (CPR). The ambulance services were not called for in any case and none of them were admitted to a hospital. In all the cases the family members were informed of the incident. The overdose was recognized because of the following symptoms: unconsciousness, not able to walk properly, not able to speak properly, not completely aware, body shakes, no coordination in speech and actions and experience of physical weakness.

All respondents were registered with the TI, four were registered with OST and none of them received any overdose related information from the TI. All the persons who witnessed the overdose episode requested for information through outreach based communication, pictorial handouts, leaflets, role play, demonstration and practice sessions. The family members also have to be educated about overdose management through public awareness campaigns, the media and leaflets. All respondents needed overdose related information as well as overdose related training and only one had been provided with information. At the time of the overdose, only one participant was supported by the TI.

# 4.8.3 In-depth Interview with Program Targeted Intervention Staff

The IDI with the project manager and the FGDs confirmed the findings obtained from the qualitative interviews with the FIDUs.

Signs and symptoms of overdose	Action to be taken	Challenges
<ul> <li>Body shakes rapidly</li> <li>Some make strange sound from their throat-cannot speak properly</li> <li>Some sleep continuously</li> <li>Fall down</li> <li>Dropping of eyes</li> </ul>	<ul> <li>Push on their chest to give breath</li> <li>Mouth-to-mouth breathing</li> <li>Massage their arms, hands and feet</li> <li>Call their name aloud</li> <li>If water is nearby usually wet their head</li> <li>Loosen their clothes</li> <li>Recovery positions</li> </ul>	<ul> <li>They are mostly afraid because people will come around and it might lead to disclosure of their drug use status</li> <li>Police might come and harass them</li> <li>Their injecting behaviour is exposed in the public</li> <li>They do not call for ambulance-only private hospitals have it</li> <li>They do not call for any medical assistance or take the person to the hospital.</li> <li>Taxi do not wish to take the overdosed victim fearing the person might die on the way</li> <li>Nurses are not trained well to deal with overdose. The hospital staff members do not know overdose management. Usually drug users prefer to manage the overdose themselves</li> </ul>

The discussions identified the signs and symptoms of overdose, actions to be initiated, and the challenges.

## 4.8.4 Focus Group Discussion with IDUs

The FGDs identified that leaflets with pictures related to recovery positions and first aid for overdose victims need to be widely distributed to drug users. It should be emphasized that overdose management can be done by any trained person and could save a life. The message must try and reduce the stigma associated with drug use and overdose. The content should include signs and symptoms of overdose that would facilitate early recognition of overdose. Finally, the overdose management steps should be outlined and after care must be stressed. All TI staff members, some members of the drug using community and some family members need to be trained in overdose prevention and management.

## 4.9 NARSINGHPUR, MADHYA PRADESH

# 4.9.1 Findings from the Respondents Who Had Overdosed

### **Demographics**

The mean age of the respondents is 36 years (median: 38; mean: 35.8; SD: 5) and all five of them are males.

#### Drug use patterns

Three of them used brown sugar (adulterated heroin); one used heroin; two persons used opium; all respondents smoked cannabis; and all used sedatives. Of the injectable preparations, all respondents injected pentazocine; one injected brown sugar (heroin) and one injected Avil.

#### Last overdose

Four of the overdose cases happened during the day in the hotspots and one occurred at home in the evening. In all five cases pentazocine was the primary drug that was injected; in one case the person had consumed oral nitrazepam in addition and in another the individual had used both heroin and pentazocine. An excessive dose of pentazocine and mixing of pentazocine with a sedative or heroin were cited as reasons for the overdose. Four of the overdoses were witnessed and were helped by friends/relatives.

"They poured water on me, shook me and slapped me."

A 32-year-old male who had overdosed, Narsinghpur, Madhya Pradesh

"My friend was shouting something but I could not hear properly. He threw water on me and massaged my chest."

A 40-year-old male who had overdosed, Narsinghpur, Madhya Pradesh

In none of the cases was an ambulance called nor was medical assistance of any type provided. The overdose victims were not administered naloxone or typical first aid measures such as mouth-to-mouth breathing, nor were recovery positions attempted. Except for one, they were registered with the TI-NSEP, but none of them were registered for OST. All of them required overdose related information; none of them had received any information related to overdose from the TI. At the time of the overdose none were receiving support from the TI.

# 4.9.2 Findings from the Respondents Who Witnessed the Overdose Episodes

### **Demographics**

The mean age of the respondents is 36 years (median: 38; mean: 35.8; SD: 5) and all five of them are males.

#### Last witnessed overdose

Except for one, all were witnessed in a hotspot. In all cases pentazocine was involved and an excessive dose of pentazocine was given as the most important reason for overdose occurrence. The witnesses were able to recognize the symptoms of overdose.

"Vomiting, not able to breathe are the symptoms of overdose."

A 40-year-old male who witnessed the overdose episode, Narsinghpur, Madhya Pradesh

Friends and relatives helped the person. The responses included shouting the person's name, slapping the person to arouse him and throwing water on him. It did not include mouth-to-mouth breathing, putting the person in a recovery position and CPR.

"We slapped him on his face, kept calling his name. He did not respond so we threw water on him. After a little time he opened his eyes."

A 42-year-old male who witnessed an overdose episode, Narsinghpur, Madhya Pradesh

None of the persons were transported by ambulance or given any medical assistance. There was no mention of naloxone by any of the respondents. All were registered with the TI-NSEP but none were registered for OST as it is not available in Narsinghpur. None of them were provided with any overdose related information by the TI and all of them desired to get adequate information through the outreach workers, PEs and the TI staff. Overdose prevention and management training is desired by all. At the time of overdose, none were receiving support from the TI.

# 4.9.3 In-depth Interview with Targeted Intervention Program Staff

The interview with the project manager confirms the findings from the IDU interviews. The symptoms of overdose identified by him include changes in the pupils, fainting, sweating and anxiety. Training is needed for TI staff on overdose prevention and management.

## 4.9.4 Focus Group Discussion with IDUs

The FGD indicated the following as reasons for overdose, excessive use of pentazocine (e.g., double the usual dose), mixing with Avil, and the consumption of alcohol and cannabis after injecting pentazocine. The discussions identified the signs and symptoms of overdose, actions to be initiated, and the challenges.

Signs and symptoms of overdose	Action to be taken	Challenges
<ul><li>Vomiting</li><li>Cannot breathe</li><li>Chest pain</li></ul>	<ul><li>Pour water on face</li><li>Rub/press the chest of the overdosed person</li></ul>	<ul> <li>Do not know what to do ("we do what we know")</li> <li>No knowledge about ambulance</li> </ul>
'	Bring the person to TI	services

The IDUs require pamphlets on overdose management, information from the project manager/counsellor/PE will be useful as many of them are registered with the TI.

## 4.10 BHUBANESWAR, ODISHA

## 4.10.1 Findings from the Respondents Who Had Overdosed

### **Demographics**

The mean age of the respondents is 35 years (median: 33; mean: 34.6; SD: 4.5) and all five of them are males.

#### Drug use patterns

All respondents had used brown sugar (adulterated heroin); three used opium; all respondents smoked cannabis; four of them had consumed alcohol; and four used sedatives. Of the injectable preparations, all respondents injected buprenorphine; three injected pentazocine; two injected morphine; all respondents injected Avil; one injected Phenargan; and one injected diazepam.

#### Last overdose

One overdose occurred at the familiar drug using place and one at home. Three of the overdoses occurred during the night, one late in the afternoon and one in the evening. Pharmaceutical opioids were involved in all the overdose episodes and in all a combination of various drugs had been used-pentazocine and Avil, buprenorphine and Avil, pentazocine and buprenorphine and a combination of all the three. Alcohol was also consumed in one case and possibly contributed to the overdose.

"I had some money so I had alcohol alone...after alcohol, I had the injection – 10 ml of Avil and 20 ml of Fortwin. I think it's due to the alcohol. I felt very light. Everything was getting dark in front of my eyes. Could not see the details of what was happening around me."

A 30-year-old male who had overdosed, Bhubaneswar, Odisha

One of the persons wanted to commit suicide before the overdose.

"Two months earlier, my mother had expired. Always thought about committing suicide after my mother's death"

A 30-year-old male who had overdosed, Bhubaneswar, Odisha

In another case, a close friend had died of an overdose and the overdose victim was significantly worried about this. Sometimes the victims overdosed because they wanted to quit and so used an excessively large dose.

"On the day I overdosed, I had decided that that's going to be my last day of taking drugs, so I thought I should have to my heart's fill and then quit. I am always under pressure from myself and my family to quit drugs."

A 42-year-old male who had overdosed, Bhubaneswar, Odisha

Often the individuals who had overdosed were not given any attention and they were allowed to recover on their own. None of them received specific medical attention and naloxone was not used in any of the cases. Ambulance services were not utilized and only one person was taken to a drug rehabilitation centre by a relative in his private car. Family members were the ones who took care of the overdose victims at home and they allowed them to rest and recover at home.

"I just remember that I was going to wash my face and the fits started and I fell down and then I don't remember anything. Somebody from my family realized that I was missing and so they came out to see me and saw me having fits. Then some other members were called in and I was first made to smell the rubber slipper (flip flops) and then I was taken to my house and made to rest. I woke up the next day."

A 35-year-old male who had overdosed, Bhubaneswar, Odisha

All of them were registered with the TI, one person is on OST, two persons have discontinued OST and two have not registered for OST. None of them have received any information related to overdose from the TI. All respondents needed information on overdose management.

# 4.10.2 Findings from the Respondents Who Had Witnessed the Overdose Episodes

### **Demographics**

The mean age of the respondents is 38 years (median: 39; mean: 38.3; SD: 3.1) and all five of them are males.

#### Last witnessed overdose

While three of the overdoses that were witnessed occurred during the day, two occurred at night. All witnessed overdoses were in drug using places and were attended to by friends and relatives. In all cases a pharmaceutical opioid such as pentazocine and/or buprenorphine was involved in combination with Avil and/or alcohol and/or cannabis. The reasons for overdose were excessive use and the combination of pharmaceutical drugs and/or alcohol and/or cannabis.

"(It happens) if one takes in more than the required of dose; if someone injects different drugs; if the body is weak or if it's a new type of drug".

A 34-year-old male who witnessed an overdose episode, Bhubaneswar, Odisha

Witnesses believed that they could easily recognize an overdose case.

"He can't walk straight, he can't talk properly, he doesn't respond appropriately when called and he shivers."

A 38-year-old male who witnessed an overdose episode, Bhubaneswar, Odisha

Most opined that overdose episodes did not require calling an ambulance and providing medical assistance. They stressed that they could manage the overdose and most overdose victims recovered spontaneously after a period of rest. A few of the individuals had attended the training program on overdose and hence could list the recovery position as one of the responses for overdose management. Some of the responses for managing overdose included splashing water on the face of the individual. In cases, where fits (convulsions) occurred, the response was asking the person to smell a rubber slipper or physically stimulating the person.

"He was alright when he was injecting. As soon as the injection was done, he stood up and immediately fell down. Again he tried to stand up but could not. That's when we realized he

had overdosed. We splashed water on his face and helped him to sit. He was not responding to our questions. And then he vomited."

A 29-year-old male who witnessed an overdose episode, Bhubaneswar, Odisha

"I could not find anything there except a bamboo stick. I took the bamboo stick and hit his toes very hard. I think that helped in stopping the fits."

A 41-year-old male who witnessed an overdose episode, Bhubaneswar, Odisha

None of them had ever received overdose related information from the TI and would desire information from the TI staff, particularly, outreach workers and peer workers. One of them opined that role play and videos would be useful to disseminate information related to overdose awareness and management. All of them wanted overdose related training to be provided to them. One of them had received support from the TI at the time of the overdose.

# 4.10.3 In-depth Interview with Targeted Intervention Program Staff

The TI project manager corroborated the findings of the IDU interviews related to reasons for the overdose, symptoms of the overdose and the response to overdose incidents. No medical assistance was proposed and instead he observed:

"They just ask the person to lie down and sleep and increase their water intake".

He was knowledgeable about the use of naloxone.

## 4.10.4 Focus Group Discussion with IDUs

The FGD identified the signs and symptoms of overdose, actions to be initiated, and the challenges.

Signs and symptoms of overdose	Action to be taken	Challenges
<ul> <li>Cannot talk properly</li> <li>Eyes become constricted</li> <li>Does not respond to questions</li> <li>Loose balance and fall</li> <li>Severe rigor and shiver</li> <li>Hands and legs swell</li> </ul>	<ul> <li>Splash water</li> <li>Make him sit in a shade</li> <li>Let him take rest and sleep</li> <li>Inform the family members of the victims. Some know recovery position</li> </ul>	<ul> <li>Why should we help others?</li> <li>Afraid of the family members of the victim</li> <li>Fearful of the police and medical staff</li> <li>What if someone dies, then what will happen to the helper</li> <li>Reluctance to take him to the hospital</li> <li>IDUs do not have the money to bear the medical expenses</li> </ul>

The IDUs require overdose information through role play, drama, practical training, one-to-one counselling and IEC booklets. The overdose training should be provided at the DIC as it is a safe place for IDUs.

## 4.11 PATNA, BIHAR

# 4.11.1 Findings from the Respondents Who Had Overdosed

### **Demographics**

The mean age of the respondents is 34 years (median: 35; mean: 34.2; SD: 7.8) and all five of them are males.

#### Drug use patterns

All respondents used smack (adulterated heroin); all smoked cannabis; two persons had consumed alcohol; and one had used sedatives. Of the injectable preparations, all respondents injected buprenorphine, four injected pentazocine, two injected morphine and one injected Phenargan.

#### Last overdose

Except for one, all overdoses occurred at drug using places; three of the overdoses occurred during the day and two in the late evening around 7 pm. All the users had injected a combination of buprenorphine and pentazocine at the time of the overdose; one had also injected Phenargan and consumed cannabis; one had consumed alcohol and heroin in addition to the injections. All the persons who had overdosed had been injected by two doctors who administer the injections for a price.

"I take injections at Sunita's Jhopdi- Sunita is also like Dr. Anil who injects people at a cost of Rs. 5 per injection. She is around 30 – 35 years old."

A 25-year-old male who had overdosed, Patna, Bihar

Four of the five persons who overdosed had been grief-stricken over the death of a close relative, such as wife and child, father, brother and niece before the occurrence of the incident.

"My father had died three months earlier and I was not feeling good about it. And the loan I had taken had been used for his treatment and funeral."

A 44-year-old male who had overdosed, Patna, Bihar

Once the overdose occurred, friends nearby always helped the individual. In one incident the individual was taken by an auto to a private doctor who administered saline; in another incident which occurred at home, the person was allowed to rest and he recovered; and in the other three episodes, the individuals were helped by friends who splashed water on their faces.

"As I said, everything was black in front of my eyes and I could not see anything. My head was reeling and I fell down. After one hour when I got up, my friend told me that I had fallen down and that they helped me to get up and they made me sit and splashed water on my face."

A 25-year-old male who had overdosed, Patna, Bihar

The ambulance services were not utilized in any of the cases; hospital help was not sought; no one mentioned specific attempts at help such as mouth-to-mouth breathing, recovery positions, CPR and naloxone. None of the victims were harassed by the police. Though most have been registered with a TI, none of them have received any information pertaining to overdose prevention and management from the TI. Three respondents were receiving support from the TI at the time of the overdose episode.

# 4.11.2 Findings from the Respondents Who Had Witnessed the Overdose Episodes

## **Demographics**

The mean age of the respondents is 36 years (median: 35; mean: 36.8; SD: 6.4) and all five of them are males.

#### Last witnessed overdose

Except for one, all the overdose episodes witnessed occurred during the day. A combination of pharmaceutical opioids (buprenorphine plus pentazocine) was used in all cases; combination with heroin (chasing), cannabis and alcohol was not uncommon and often contributed to the overdose.

"We had alcohol and ganja. We had taken alcohol before injecting and ganja after injecting Lepogesic and Fortwin. I think it was alcohol and ganja which caused the overdose. The minute he said that he was not feeling good, I realized that it was because of too much of drugs and could be an overdose."

A 36-year-old male who witnessed an overdose episode, Patna, Bihar

The overdoses were recognized and the responses included splashing water on the face, asking the individual to smell a lime stone, making the person drink lime water, allowing him to rest and taking him home. The overdose victims were not given any medical assistance and ambulance services were not utilized for transportation. Specific measures such as mouth-to-mouth breathing, CPR, recovery position and naloxone were not mentioned by anyone.

"He fell down while walking back to Dr. Anil for another dose of injection after he took ganja – he had already had one dose of injection. One of the IDUs brought a white stone from the nearby barber's place and gave it to me so that I could make him smell the stone – lime stone. That's what we know will arrest the overdose."

A 28-year-old male who witnessed an overdose episode, Patna, Bihar

"The symptoms of overdose are senselessness, can't walk properly, can't talk properly and can't respond. Things will get alright. We experience this always. I would wait with him for him to get better, but if things go out of hand then I would take him to his house."

A 44-year-old male who witnessed an overdose episode, Patna, Bihar

None of the persons who witnessed the overdose incident was ever provided information related to overdose prevention and management by the TI. They opined that information from the TI staff, particularly the outreach team through verbal face-to-face communication would help the drug using community. All respondents required and desired overdose related training.

# 4.11.3 In-depth Interview with Targeted Intervention Program Staff

The TI project manager stated that multiple reasons are responsible for the occurrence of overdose incidents.

"The reasons for overdose are depression, if a person takes in more than his capacity, if the drug is mixed with different drugs/cocktails, if friends are together and force each other to have more drugs, and at times (if) these guys have more money, then they consume more drugs."

A 50-year-old male, project manager, Patna, Bihar

In his opinion overdose related training for the staff is very important.

"First of all, we need to have adequate information about overdose management. Then we can pass on the information to the IDUs through various IEC related activities."

## 4.11.4 Focus Group Discussion with IDUs

The FGD identified the following combinations that were often associated with an overdose.

- Brown sugar (heroin) + injection of pharmaceutical opioids
- Lepogesic (buprenorphine) + Fortwin (pentazocine)
- Injection of pharmaceutical opioids + ganja (cannabis) + alcohol
- Calmpose (diazepam) + Phenargan (promethazine) + Lepogesic (buprenorphine)

The FGD identified the signs and symptoms of overdose, actions to be initiated, and the challenges.

Signs and symptoms of overdose	Action to be taken	Challenges
<ul> <li>Cannot talk properly</li> <li>Eyes become constricted</li> <li>Does not respond to questions</li> <li>Looses balance and fall</li> <li>Feels very thirsty</li> </ul>	<ul> <li>Just splash water</li> <li>Make him sit in a shade</li> <li>Let him take rest and sleep</li> <li>Make him smell limestone</li> <li>Make him drink tamarind or any bitter liquid</li> </ul>	<ul> <li>Fear of family members</li> <li>Fear of police</li> <li>If they die, then helpers will be at risk</li> <li>Do not have adequate information or training to help the overdosed persons</li> </ul>

The IDUs require information and training about overdose prevention and management through role play, film shows, drama, practical training and one-to-one counselling. The training should be provided at the DIC as it is a safe place for the drug using community.

## 4.12 PUNE, MAHARASHTRA

## 4.12.1 Findings from the Respondents Who Had Overdosed

### **Demographics**

The mean age of the respondents is 29 years (median: 28; mean: 29.2; SD: 7.3) and all five of them are males.

#### Drug use patterns

All of the respondents were brown sugar (heroin) users; all respondents consumed sedatives, alcohol and cannabis. Of the injectable preparations, all respondents injected brown sugar (heroin) and Avil.

#### Last overdose

All but one overdose occurred during the day and were witnessed by friends; one episode happened during late evening and this was noticed by others. While four of the overdose episodes took place under the flyover or in a public toilet, one occurred in the victim's own room. In all the cases the combination of brown sugar (heroin) and Avil was a likely cause of overdose.

"I took brown sugar and Avil. I injected twice too close together. When I took the first fix, I did not feel anything so I made a second fix and this made me too high. I don't know about the overdose but I started feeling very high and could not keep my eyes open."

A 21-year-old male who had overdosed, Pune, Maharashtra

Three of the respondents were homeless, one lived in a slum with his family and the other stayed alone in a rented room. Some of the respondents had significant medical problems.

"One leg was amputated due to a train accident and my mobility is very restricted."

A 32-year-old male who had overdosed, Pune, Maharashtra

"I get fits on and off but have not taken any treatment for it."

A 40-year-old male who had overdosed, Pune, Maharashtra

None of the persons had undergone any drug use treatment for their dependence on drugs. When they overdosed the symptoms were noticeable to other people and except in one case, all overdose victims were helped.

"After I injected I started to shiver and I felt like vomiting. I felt giddy and could not breathe properly. I was like this for maybe one hour. My friend was shaking me but I could not reply to him."

A 40-year-old male who overdosed, Pune, Maharashtra

None of them were taken in an ambulance and no medical assistance was provided to any of them. Two of them were taken to the DIC for help. There was no discussion or mention related to specific responses for overdose such as CPR, mouth-to-mouth breathing, recovery position and naloxone.

Two of the respondents were registered with OST and the remaining three were receiving needles and syringes from the TI. None of them had received any information related to overdose from the TI. All of them were keen to receive overdose related information. At the time of overdose, only one individual received support from the TI.

# 4.12.2 Findings from the Respondents Who Had Witnessed Overdose Episodes

### **Demographics**

The mean age of the respondents is 30 years (median: 26; mean: 29.8; SD: 7.5) and all five of them are males.

#### Last witnessed overdose

All the witnessed overdoses occurred during the day in drug using places under the flyover or in public toilets. In three of the witnessed episodes, close friends had overdosed and in another a friend but not a close one was involved; in one a person who is known to be a drug user and taking OST was involved. The reasons cited for overdose included using too large an amount of drugs, using multiple types of drugs and drinking after using injections. Injecting immediately after taking OST can also contribute to an overdose.

"He takes OST from the centre. He was also injecting and smoking brown sugar. He also drank alcohol. I think because of all this he overdosed."

A 25-year-old male who witnessed an overdose episode, Pune, Maharashtra

The witnesses recognized the overdose symptoms and in four cases they responded by helping the overdosed persons. In one unfortunate case, a drug user consumed a large quantity of alcohol after injecting himself and fell off the bridge and died. None of the victims were taken to hospitals for medical assistance and ambulance services were not utilized. Some of the victims were taken to the DIC as it is generally believed to be the best place to get help for drug using communities.

"I know the person cannot see, hear or speak properly and he is not conscious. If it is too much it can also lead to death. I would help him to gain his consciousness and take him to the centre."

A 32-year-old male who witnessed an overdose episode, Pune, Maharashtra

"I did not know about the ambulance and had no idea where to get the ambulance from. Moreover no one helps drug users in Pimpri."

A 42-year-old male who witnessed an overdose episode, Pune, Maharashtra

Three of the witnesses obtained basic information about overdose from the counsellor at the TI and they wanted training and detailed information through videos and meetings with the DIC staff.

# 4.12.3 In-depth Interview with Targeted Intervention Program Staff

The project manager of the TI observed that most people were reluctant to offer help to an overdose victim because of the stigma and discrimination against drug users prevailing in the general

community. He was unaware of the availability of naloxone in Pune. Though some basic information about overdose is being provided to drug users through small group discussions in the hotspots, the staff members need adequate training to disseminate information related to overdose. All respondents desired overdose related training. IEC material related to overdose prevention and management is urgently required.

# 4.12.4 Focus Group Discussion with IDUs

The FGD identified the signs and symptoms of overdose, and the challenges.

Signs and symptoms of overdose	Challenges
Becomes unconscious	The witnesses are many so they do not know
• Does not respond when shaked or when water is	what to do
thrown on him	Do not know how to call ambulance
Cannot breathe properly	Public never helps IDUs, only friends do

## 4.13 AMRITSAR, PUNJAB

## 4.13.1 Findings from the Respondents Who Had Overdosed

### **Demographics**

The mean age of the respondents is 34 years (median: 33; mean: 33.5; SD: 9.1) and all four of them are males.

#### Drug use patterns

One person used brown sugar (adulterated heroin); two individuals used opium; one smoked cannabis; and three of them consumed alcohol. Of the injectable preparations, three persons injected buprenorphine; one injected heroin; and all respondents injected Avil.

#### Last overdose

Of the four who had overdosed, one had injected a combination of heroin and Avil; the other three had injected a combination of buprenorphine and Avil. Three of the overdose episodes occurred during the day and one during the night. Two episodes happened at drug using hotspots and one each in the victim's house and a friend's house respectively. Whereas one episode was witnessed by a brother who is also an injector, the other three were witnessed by friends. One person injected heroin and Avil and three injected a combination of buprenorphine and Avil. In addition to injections, three persons consumed alcohol. Varying purity of heroin, excessive consumption of alcohol and a combination of drugs were cited as reasons for the overdose. Most realized that they were experiencing an overdose by symptoms such as excessive sleepiness, collapsing suddenly and things spinning in front of the individual.

All of them were helped during the overdose episode by friends and relatives. None of them was given any medical assistance; ambulance services were not used; and no specific measures such as mouth-to-mouth breathing, CPR and placing in recovery position were carried out. Except for one, none of them were registered for OST. None of them have received any overdose related information from the TI. They would prefer to receive information through verbal communication, leaflets, role play and videos. At the time of the overdose none was receiving support from the TI.

# 4.13.2 Findings from the Respondents Who Had Witnessed an Overdose Episode

## **Demographics**

The mean age of the respondents is 38 years (median: 38; mean: 38.2; SD: 7.9) and all five of them are males.

#### Last witnessed overdose

Of the five witnessed overdoses, four were among friends and a relative; while one episode happened at the victim's home, the rest occurred in drug using settings. Four of the episodes occurred during the day and one happened at night. The consumption of sedative pills following injections, consumption of alcohol, combination of drugs, excessive administration of injected drugs and using drugs on an

empty stomach were cited as reasons for the overdose by the witnesses. The witnesses were able to recognize the overdose easily and responded with simple measures.

"The body shakes badly, the person loses consciousness, is not able to walk or stand."

A 32-year-old male who witnessed an overdose episode in Amritsar, Punjab

"Realized when he did not respond to my query and when I tried to shake him he fell off. Gave him water to drink and rubbed his hands and feet."

A 47-year-old male who witnessed an overdose in Amritsar, Punjab

None of witnesses attempted any specific measures for overdose management, no ambulance service was used, and no medical help was sought for any of the overdose victims.

As a response to overdose, two mentioned the recovery position and one spoke about mouth-to-mouth breathing. None of them have obtained any information on overdose prevention and management from the TI and they would like to receive such information. They opined that verbal communication, leaflets and videos could be utilized to disseminate the information. All respondents desired overdose related training.

# 4.13.3 In-depth Interview with Targeted Intervention Program Staff

The TI project manager believed that the symptoms of overdose included fits and hence people require training about managing fits among drug users. Currently the responses to managing fits include putting pressure on the feet of the person, making them smell a leather belt, and placing a piece of leather around the neck if the fits recur. He observed that peers were the only people who would respond to an overdose episode and they need proper education and training related to overdose recognition and management. The reluctance of the general community to help victims is due to the pervasive discrimination and stigma surrounding drug use. Though initially, the police were harsh with drug users their attitude about the drug using community changed subsequent to advocacy.

## 4.13.4 Focus Group Discussion with IDUs

The FGD validated the findings from the IDU interviews. The FGD identified the signs and symptoms of overdose, actions to be initiated and the challenges.

Signs and symptoms of overdose	Actions to be taken	Challenges
<ul> <li>Everything is wavy; not fullyconscious</li> <li>Body starts shaking</li> <li>Person is not able to walk</li> <li>Feels dizzy</li> <li>Not able to speak properly</li> </ul>	<ul> <li>They always try to help the one suffering from overdose but rarely take him to the hospital</li> <li>The ambulance does not respond quickly</li> <li>Do not have faith in hospitals as they think that they are not able to handle the cases efficiently</li> </ul>	<ul> <li>Stigma and discrimination surrounding drug users</li> <li>People look down upon the drug users and therefore everyone is scared of coming forward to help the victims</li> <li>People do not recognize that a person is suffering from overdose</li> <li>They do not call for ambulance as service is really poor.</li> </ul>

Operational research understanding the contexts and response related to overdose among Injecting Drug Users

The IDUs require overdose information, pictorial representations of the recovery positions and video clips. The training should be given to all the peers and also some of the clients who have a say in the community. More practical knowledge needs to be imparted to the peers.

## 4.14 TARAN TARN, PUNJAB

## 4.14.1 Findings from the Respondents Who Had Overdosed

### **Demographics**

The mean age of the respondents is 29 years (median: 28; mean: 28.6; SD: 5.8) and all five of them are males.

#### Drug use patterns

One person used heroin; four used opium; and four had consumed alcohol. Of the injectable preparations, all respondents had injected buprenorphine and Avil.

#### Last overdose

All the persons who had overdosed have been injecting a combination of buprenorphine and Avil. While three of the episodes happened in drug using settings, one occurred at home and one in the OST centre subsequent to taking the OST dose. Four overdose episodes took place during the day and one towards late evening. Except for the one that occurred at home all the others were witnessed by others such as friends. While one person had consumed Proxyvon capsules on an empty stomach before taking the OST medication, another had consumed alcohol in addition to the injections. Excessive dose of injected drugs, a combination of Proxyvon with OST medication and injections combined with alcohol were cited as possible reasons for the overdose.

Four of the overdose victims were given help. The one that occurred in the OST centre was provided mouth-to-mouth breathing and was admitted in the emergency room and the attitude of the hospital staff was very positive. In the other three cases, the friends were helpful, but no specific measures were taken, an ambulance was not called for, and no medical help was provided. All of them were registered with TI and three were receiving OST. Before the overdose incident, none of them had received any information related to overdose prevention or management from the TI. They would like to receive information from the TI through verbal communication, leaflets, role play, street plays and videos. At the time of the overdose, none of the persons had received support from the TI.

# 4.14.2 Findings from the Respondents Who Had Witnessed the Overdose Episode

### **Demographics**

The mean age of the respondents is 27 years (median: 28.5; mean: 26.5; SD: 4.4) and all four of them are males.

#### Last witnessed overdose

Of the four overdose episodes that were witnessed, two incidents happened among friends, one was in the company of an acquaintance and one in the presence of a stranger. Three overdose episodes were witnessed in a drug using setting or familiar place and the overdose observed by a stranger was on the road side. Three overdoses that were witnessed occurred during the day and one during late evening but in a well lit area. Excessive use of drugs or a combination of drugs with alcohol was perceived as the reason for the overdose episodes. The overdose episodes were recognized easily by the witnesses.

"Body (was) shaking, he fell down, biting (his) lips and tongue – I realized immediately that it is an overdose."

A 29-year-old male who witnessed the overdose episode in Taran Tarn, Punjab

The responses to overdose included making the person lie sideways, making him smell leather, removing shoes and rubbing the feet, mouth-to-mouth breathing and putting the person in a recovery position. The ambulance was not called and medical assistance was not sought in three cases. One case was taken to a local medical doctor; in general there was a reluctance to take people to hospitals as there was discrimination by the hospital staff against drug users.

"The hospital was right there but no one took him there. He himself was in a hurry and others also didn't help. People are scared to help - what if a person dies."

A 28-year-old male who witnessed the overdose episode in Taran Tarn, Punjab

Two of the witnesses registered with the OST subsequent to witnessing the overdose. None of them have received any overdose related information from the TI and they opined that the best way to spread information is through verbal communication, leaflets, role play and videos. All of them would like to be trained in overdose prevention and management.

# 4.14.3 In-depth Interview with Targeted Intervention Program Staff

The project manager of the TI observed that significant discrimination against drug users was a challenge in Taran Tarn. People were reluctant to seek help from hospitals fearing discrimination as well as police harassment in medico-legal cases. They preferred that quack doctors deal with overdose victims. The knowledge about overdose among peers could be enhanced through participatory, practical trainings in Punjabi and these should be conducted at periodic intervals given the high turnover of PFs.

## 4.14.4 Focus Group Discussion with IDUs

The FGD identified the signs and symptoms of overdose, actions to be initiated and the challenges.

Signs and symptoms of overdose	Action to be taken	Challenges
<ul> <li>It takes some time to identify that whether a person is suffering from an overdose or he is having seizures/fits</li> <li>Body shakes</li> <li>Person falls all of a sudden</li> <li>Not able to walk properly</li> <li>Not able to speak properly-not able to coordinate his speech</li> </ul>	<ul> <li>Generally people do not even come closer to an overdosed person</li> <li>They usually call the family member(s) of the person to help them</li> <li>Peers generally try to help the person</li> <li>Place in recovery positions</li> <li>Put pressure on the chest</li> <li>Rub hands and feet</li> <li>Make him smell some leather</li> <li>Never give him water</li> </ul>	<ul> <li>None from the general community is willing to come forward to help the victim</li> <li>Recently the Punjab Govt. has launched a helpline number for ambulance service. IDUs are aware but have never availed the service till date</li> <li>Rarely take the victims to the hospital unless and until some family member of the person has come</li> <li>The hospital team seem to be trained. They know how to deal with the overdose patient but the problem is that most of the time, the families hide the fact that the person has suffered from the overdose or is taking drugs</li> </ul>

The IDUs participating in the FGD opined that information related to overdose should be available in the DIC.

"It should be displayed on the walls of the DIC – the recovery positions and how to give first aid to the person. Most of the target population is illiterate; therefore verbal communication along with some pictorial messages will help."

## 4.15 LUCKNOW, UTTAR PRADESH

## 4.15.1 Findings from the Respondents Who Had Overdosed

### **Demographics**

The mean age of the respondents is 32 years (median: 33; mean: 32.3; SD: 11) and all three of them are males.

#### Drug use patterns

Two used heroin; two had consumed alcohol; one had used opium; and one had used sedatives. Of the injectable preparations, two persons had injected heroin; and one person had injected buprenorphine.

#### Last overdose

Of the three persons who had overdosed, two had injected heroin, one buprenorphine; and all of them had combined injectable Avil with the opioids. On the day of the overdose, all of them had also consumed alcohol. Two episodes happened during the day and one towards late evening. All three overdose episodes occurred in drug using or familiar settings and all the episodes were witnessed by friends or relatives. An excessive dose of buprenorphine, use after a period of abstinence and combining it with a large quantity of alcohol were given as contributing factors for the overdose. The IDUs realized that they were experiencing an overdose episode.

"Was not able to stand and speak. Was losing control over myself so this made me realize that something is wrong with me."

A 21-year-old male who overdosed in Uttar Pradesh

All persons who overdosed were helped by their friends in the following ways: placing the person in a bed, rubbing their hands and feet, mouth-to-mouth breathing and the recovery position. None of them were provided medical assistance and ambulance services were not used. None of them were registered with OST and none had received any overdose related information from the TI. At the time of the overdose, no one received support from the TI.

# 4.15.2 Findings from the Respondents Who Had Witnessed an Overdose Episode

## **Demographics**

The mean age of the respondents is 37 years (median: 37.5; mean: 37; SD: 5.7) and all four of them are males.

#### Last witnessed overdose

Three of the overdoses that were witnessed were among friends and one occurred in the presence of a stranger. Whereas one episode occurred in a drug using place, two happened at home and one near the railway line on the outskirts of the town. All overdose episodes occurred during the day. An excessive dose, combined with alcohol were thought to be the possible reason for the overdose. All of them could easily recognize the signs of overdose and friends responded with actions such as

making the person drink water, rubbing his feet and hands, giving chest massage, placing in a recovery position and mouth-to-mouth breathing.

"It was easy to make out as he fell unconscious on the floor. Immediately he was put on a bed and first aid was given. His hands and feet were rubbed and mouth-to-mouth breathing was given."

A 35-year-old male, who witnessed an overdose episode in Uttar Pradesh

None of the overdose victims were taken by ambulance and none received any medical assistance. None of the witnesses had received information or training related to overdose prevention and management from the TI. They opined that drug users can be educated about overdose management through verbal communication and leaflets. The families could be educated about overdose management through role play, videos and interactive family counselling sessions. All four respondents desired training on overdose prevention and management.

# 4.15.3 In-depth Interview with Targeted Intervention Program Staff

The TI project manager observed that the combination of heroin or buprenorphine with alcohol was the prime reason for overdose episodes among the IDUs. He cited the challenges in responding to the overdose as fear of the police and unnecessary harassment by them; a lack of money to take the client to the hospital; and the fear of their drug habit being exposed. He emphasized advocacy with the general community, hospital team members, police and training on overdose management for the TI staff including peers as key in overdose prevention services. IEC material on overdose prevention and management targeting the drug using community is urgently needed.

## 4.15.4 Focus Group Discussion with IDUs

The FGD identified the signs and symptoms of overdose, actions to be initiated and the challenges.

Signs and symptoms of overdose	Action to be taken	Challenges
<ul> <li>Becomes little lazy</li> <li>Will lie down</li> <li>Drop in BP and heart beat</li> <li>Becomes unconscious</li> <li>Feels less energetic</li> </ul>	<ul> <li>Sprinkle water on the face</li> <li>Try to revive the person</li> <li>Put the person in a recovery position</li> </ul>	<ul> <li>Fear of disclosing their drug use status</li> <li>Police might come and they harass them unnecessarily</li> <li>Have to shell out money for admitting a person</li> <li>If the person dies on the way to hospital, it will be a big trouble for the person carrying the victim to the hospital</li> <li>They do not call for ambulance</li> <li>Discrimination at the hospital</li> </ul>

The IDUs participating in the FGDs opined that information/help related to overdose management should be available at the TI.

Operational research understanding the contexts and response related to overdose among Injecting Drug Users

"Some pictorial representations on how to manage the overdose should be available, should be given some medicine to overcome the overdose from the TI, and hospital staff members also need to be trained to handle such issues."

## 4.16 KOLKATA, WEST BENGAL

## 4.16.1 Findings from the Respondents Who Had Overdosed

## **Demographics**

The mean age of the respondents is 44 years (median: 48; mean: 43.6; SD: 10.6) and all five of them are males.

## Drug use patterns

Four used brown sugar (adulterated heroin), three had consumed alcohol and cannabis, one person used opium, and one used sedatives. Of the injectable preparations, all of them injected buprenorphine; one person injected brown sugar (heroin); two injected pentazocine; one injected morphine; four injected Avil; three injected Phenargan; and three injected diazepam.

#### Last overdose

Two overdoses occurred at home, two at familiar drug using places and one by the roadside. While the episode by the roadside happened at 11 pm and was not witnessed by anybody, the other episodes were witnessed by friends and relatives. In all the cases buprenorphine had been injected along with Phenargan and/or diazepam and/or Avil and/or alcohol and/or cannabis and/or chasing heroin. The two episodes at home were seen by relatives and in one instance the wife allowed the victim to sleep off and he recovered spontaneously after a long sleep; in another case, the daughters brought the victim to the DIC and the doctor referred him to the medical college as he had tuberculosis. The responses to the overdoses occurring outside the home were varied. In one instance, the individual fainted and slept by the roadside; in one case the individual was robbed of his money after he fainted; and in another case, friends helped the victim.

"I took ganja, phenargan and norphine. I went to the petrol pump but there was no one there. As I was coming back I just blacked out and fell on the roadside. I woke up the next morning by the roadside."

A 38-year-old male who had overdosed, Kolkata, West Bengal

"Other injectors were there but they were just people I knew, not friends. I took Tidigesic, Phenargan and Calmpose. I felt like I will fall down and my head was reeling. I fainted. I had Rs.900 with me which was stolen when I fainted."

A 28-year-old male who had overdosed, Kolkata, West Bengal

"I had chased brown sugar, and had 10 tabs of nitrazepam and alcohol. Then I took Tidigesic and Avil injection. I was with friends playing carom. While playing carom, I felt severe rigor and collapsed. Friends splashed water on my face and took me home where I was made to sleep."

A 48-year-old male who had overdosed, Kolkata, West Bengal

None of the overdose victims were taken in an ambulance, none received medical assistance, and no one was helped with specific measures such as CPR, recovery position, mouth-to-mouth breathing and naloxone. Though all of them were currently registered for OST, none of them had received

any information related to overdose management from the TI. At the time of the overdose no one received support from the TI.

## 4.16.2 Findings from the Respondents Who Witnessed the Overdose Episode

## **Demographics**

The mean age of the respondents is 34 years (median: 35; mean: 34; SD: 8.2) and all five of them are males.

### Last witnessed overdose

All the five overdose episodes that were witnessed occurred at the DIC. All the respondents gave almost similar responses to all the queries related to the overdose. The possible reasons for the witnessed overdoses included excessive intake of drugs and use of a combination of drugs.

"The factors that contribute to overdose are tension, more intake of drugs, family tension and problems, weakness in the body and a cocktail of drugs."

A 26-year-old male who witnessed an overdose episode, Kolkata, West Bengal

The witnesses could recognize the symptoms of the overdose and the responses included splashing water on the face and making the person lie down and rest. No specific measures such as mouth-to-mouth breathing, placing in recovery positions, CPR, naloxone and medical assistance were used in any of the reported cases.

The usual symptoms are,

"Can't walk properly, will not respond, will fall down, have fits. I splashed water on his face and then made him rest. If things are beyond my control then I will call the PE or take him to the DIC."

A 38-year-old male who witnessed an overdose episode, Kolkata, West Bengal

Face-to-face counselling for drug users was the best method of disseminating overdose related information to the drug using community and role play and leaflets for families were considered essential. All respondents desired to be trained in overdose prevention and management.

## 4.16.3 In-depth Interview with Targeted Intervention Program Staff

The project manager of the TI believed that overdose recognition and management is inadequate and poorly understood by the drug using community. Due to the lack of knowledge, the drug users treat the overdose as a 'normal event' and believe that users will recover without assistance after a period of rest. He proposed the dissemination of overdose related information at the hotspots and suggested periodic training at the DIC, targeting the staff as well as the peers. As ambulances charge a fee, the service was not utilized and it is necessary to link with ambulance and medical services for efficient overdose management.

## 4.16.4 Focus Group Discussion with IDUs

The FGD identified the signs and symptoms of overdose, actions to be initiated, and the challenges.

Signs and symptoms of overdose	Action to be taken	Challenges
<ul> <li>The saliva is very dry</li> <li>One faints or becomes senseless</li> <li>One is unconscious and saliva drips from his mouth</li> <li>Cannot talk, or respond</li> <li>Falls down, red eyes</li> </ul>	<ul> <li>They should be made to sleep</li> <li>Splash water on their face</li> <li>Make them drink bitter water like tamarind juice or lemon juice, or tea.</li> </ul>	<ul> <li>Fear of family members</li> <li>Fear of police</li> <li>Fear of dealing with fits</li> <li>If they die, then we will be at risk</li> <li>IDUs do not have adequate information or training to help the overdose persons</li> </ul>

The IDUs participating in the FGD opined that information/help related to overdose management should be provided at the DIC through one-to-one counselling, role play, videos, drama and practical training.

## **Summary of Key Findings**

The limitations of operational research should be considered when interpreting the data. The sample covered current injectors with a long history of drug use and most of them had been receiving services from the selected TI sites, it may not truly reflect and represent the sample of community based IDUs across the country. However, given the number of interviews conducted across several parts of the country and the fact that the sample included different characteristics such as types of drugs used, age, gender and geographical residence, meaningful conclusions can be derived from this study.

Results indicated that IDUs were at risk of overdose due to several contributing factors. For most IDUs, the key risk of overdose was from injecting drugs, at times excessively and due to changes in purity levels of the street drugs resulting in dose escalation. Many IDUs were engaged in injecting a combination of drugs that significantly increased their vulnerability and more often than not these lethal combinations included alcohol and other licit pharmaceutical drugs and injections. Overdose was relatively common after a period of abstinence and reduction in dose. Overdose episodes were pronounced in experienced drug users who had shifted to injecting after having been on non-injecting drugs for an extended period.

Drug users had insufficient information related to overdose prevention and management; and knowledge on this was not imparted to most of them by the TIs. In most places across the country, overdose was not taken seriously in the belief that this relatively common occurrence would resolve itself spontaneously with rest. The knowledge about recognition of overdose symptoms varied across settings and individuals. Only drug using peers responded to an overdose incident and the general community was extremely reluctant to respond to an overdose victim due to the high stigma and discrimination.

Several myths and misconceptions surrounded the response to overdose by the peers. Only in a few settings, specific measures such as mouth-to-mouth breathing, CPR and recovery positions were attempted; knowledge of naloxone and its use was limited was reported mainly from Manipur and Dimapur. Ambulance services were not utilized in almost all places for transporting overdose victims. There was reluctance to take the overdose victims to the hospitals as the prevailing opinion was that the hospital staff were not sensitive to the drug using community and discriminated against them. In addition, treating overdose as a medico-legal issue at the hospital was an obstacle as most feared police intimidation. Advocacy with police as well as hospital staff was considered critical for better services for overdose victims in the future.

Currently, most targeted interventions did not offer overdose related information to the IDUs. Most of the respondents desired overdose information from the TIs through their outreach staff by verbal communication, pictorial information on overdose management, leaflets containing information on the prevention and management of overdose, videos and role play to demonstrate overdose management techniques. Almost all the respondents expressed a desire to get trained in overdose prevention/management that is participatory, practical and conducted periodically.

Interventions for overdose prevention and management present special challenges, including the drug use behaviour, norms surrounding the use of a combination of drugs, knowledge, myths and misconceptions surrounding overdose, current responses to overdose, reluctance to seek medical assistance, victimization by the police, attitude of the hospital staff, unavailability of naloxone in emergency services, stigma and discrimination by the general community and the limited capacity of the TIs in offering and organizing overdose related information and training. All these issues would need to be addressed comprehensively at different levels to realize the full potential of overdose interventions for IDUs.

# 6

## Recommendations

Overdose prevention and management related behaviour is context dependent. This means that overdose incidents are linked to the specific cultural and social environment in which they occur. The key findings from the operational research indicate the contextual nature of the overdose among the IDUs. The findings highlight that actions to prevent and manage overdose are influenced by a variety of factors, often exogenous to the individuals themselves. These factors are seen to operate at interpersonal, social and structural levels (See Box: Factors operating at different levels that are important for overdose prevention/management).

## 6.1 Individual Level Interventions: Knowledge

Most respondents across the country had inadequate knowledge related to overdose recognition, prevention and management. Information related to overdose is vital for drug using communities as overdose episodes are frequent and contribute to increased mortality amongst IDUs. The messages can be effectively disseminated to the drug users if the outreach team is engaged in providing these at the hotspots through informal communication. Overdose messages need to be incorporated into the outreach staff's everyday conversation with the drug users in the community. IEC materials on overdose targeting drug users are urgently required. Given the high illiteracy levels of the drug users,

## Factors Operating at Different Levels That Are Important for Overdose Prevention/Management

## Individual

Knowledge

#### Interpersonal

Perception about overdose by peers and family members

#### **Norms**

Drug choices

Social acceptance of alcohol

Myths and misconceptions

Health care - Health seeking behaviour

#### Structural

Health care system

Quality and access to services

Medico-legal issue

Attitude of the hospital staff

Targeted interventions

Capacity

Resources

Opioid substitution treatment centres

#### **Broader** issues

Stigma and discrimination

it is important to present pictorial information. Innovative methods can be utilized; and role play and street theatre to spread the information amongst drug users need to be considered.

## 6.2 Interpersonal Level Interventions: Perception about Overdose by Others

Drug users believed that overdose was a common occurrence and often it was difficult for them to differentiate the "high" due to drug use from an overdose. Many thought that the overdosed persons would recover spontaneously by resting for sometime ("sleep it off"). The users are confused between overdose symptoms and convulsions (more common during withdrawal from some drugs and alcohol). It is important to educate the drug using community about the signs and symptoms of overdose and the significance of early recognition for effective intervention. The family members are less knowledgeable about overdose. Given that many overdoses occurred at night and mostly at home, the family members of drug users need to be informed about how to identify an overdose and the appropriate response to it. Videos, educational materials targeting family members, informal communication through outreach staff and street theatre may be employed to disseminate overdose prevention/response messages to the family members.

## 6.3 Norms

## 6.3.1 Drug choices

Many of the overdose episodes were linked to a combination of drugs. Across the country, most people injected a combination of drugs. In several study sites, pharmaceutical opioids (e.g., buprenorphine and/or pentazocine) were used in combination with antihistamines (e.g., Avil and/or Phenargan) and/or diazepam. In some settings heroin (either heroin or adulterated heroin - brown sugar) was used in combination with Avil and/or other injectable preparations. In a few settings a combination of Proxyvon and Avil and/or other injectable preparations was used. It is now well established that across the country, most injectors are polydrug injectors; it is rare to find IDUs who inject only one opioid without combining it with any other preparation. In other words, poly drug use is the norm and is a significant contributing factor to the incidence of overdose. In order to address this issue among the drug using communities, it is necessary to understand the various factors that lead to the use of combination drugs among drug users. Easy availability and affordability of some of the pharmaceutical drugs, particularly, non scheduled injectable preparations such as Avil and Phenargan may be a contributing factor. Often drug users believe that a combination of these drugs will help to purify the street drug or enhance the effect of the opioid and this misconception needs to be addressed. Developing norm changing strategies that target "poly drug use choices" by the drug using community is critical.

## 6.3.2 Social acceptance of alcohol

In several overdose incidents, the users combined the injection with the consumption of alcohol, often in large quantities. Alcohol use is highly prevalent among the drug users across the country and norms surrounding alcohol are favourable as there is a high level of social acceptance for drinking. Apart from educating individual users about the dangers of combining alcohol with injections, it is necessary to address the issue of widespread drinking amongst the IDU community.

## 6.3.3 Myths and misconceptions

A number of myths and misconceptions were prevalent amongst the IDUs and general community. The common responses included asking the person to drink salt water, injecting salt water; stimulating or hitting the person who had fits on the feet; and asking the person to smell leather. It is absolutely essential to dispel these erroneous beliefs amongst the drug using community and educate them about the negative impact of some of these misconceived actions. Posters, leaflets and IEC materials, verbal communication by the outreach team, role play and street theatre should address these misconceptions.

## 6.3.4 Health care - health seeking behaviour

Most drug users who had overdosed were not given any medical assistance. The reluctance to seek medical help amongst the drug using community may be due to several factors. Health seeking behaviour is generally low among the drug users, low self-esteem, low self-efficacy, indifference to health, competing priorities, dependence on drugs are factors that contribute to it. Norm changing strategies should also consider addressing health seeking behaviour amongst the drug users.

## 6.4 Structural Interventions

## 6.4.1 Health care system

## Quality and access to services

Most respondents never used the ambulance services in the city/town/area for transporting the overdosed person. Some of the respondents believed that the hospital staff was not knowledgeable about the management of overdose cases. Some of respondents in the north-eastern region opined that naloxone was not available in the government settings. The quality of service at the regular health system was rated low by some of the respondents and some worried about the inordinate delay in accessing services at the hospitals. Advocacy with the ambulance services and health care system is crucial for better overdose management services. The staff working with hospitals, particularly emergency services, needs to be sensitized about overdose management; some select members may benefit with training. Ongoing advocacy will ensure sustainability of efficient services. Naloxone is a life saving medication for opioid overdose management and its availability is essential at the emergency services. Since naloxone is manufactured in India, it can be made available at all government hospitals located in geographical areas having a high prevalence of opioid drug use. Advocacy with health departments will ensure the free availability of naloxone in the regular health care system.

## Medico-legal issue

Since overdose is treated as a medico-legal issue at the hospital, many respondents were reluctant to take the overdose victims to the hospitals. Instead they preferred private doctors, private nursing homes and quack doctors. Despite having to spend money on private doctors, they preferred this to the government hospital due to fear of intimidation and victimization by the police. Advocacy with the police will certainly help to remove the obstacles and barriers in seeking help at the hospital.

## Attitude of the hospital staff

The respondents often complained about the negative attitude of the hospital staff towards the drug user. Stereotyped viewpoints about drug users can be changed considerably by working with

the hospital staff and a collaborative relationship between the TI and hospital will foster better understanding of drug users.

## 6.4.2 Targeted interventions

## **Capacity**

At present respondents received very little overdose related information from the TIs. On the other hand, most respondents desired to get information chiefly from the TI through their outreach staff and counsellor. Hence, it is extremely important to build the capacity of the TI team on overdose prevention and management. The staff training has to be a participatory process led by a qualified facilitator; importance should be accorded to the practical aspects. The training needs to be periodic with refresher sessions, the content should focus on both prevention and management. In addition, the TI team should be assisted in establishing effective linkages with OST, ambulance services and emergency services at the hospital.

#### Resources

Additional support and resources for the TIs are required for effective inclusion of overdose prevention and management in their routine work. Resources are required for IEC materials, training, linkages with emergency services, advocacy work with the police and hospitals, and making naloxone available at the DIC.

## 6.4.3 Opioid substitution treatment centres

Some of the respondents from one site reported that the overdose happened subsequent to taking OST medication along with injectable preparations and alcohol. In one case, the OST medication was observed to be diverted for injection along with other drugs. It is important to strengthen the supervision of OST medication at the site and the emphasis should be on directly observed treatment (DOT). When an individual receives an adequate dose (around 8 mg), it is likely to suppress further illicit opioid use. A person receiving a small dose of OST medication is likely to have persistent cravings that will lead to further use of illicit opioids. Further, since the dose is small, it is unlikely to suppress the effect of additional opioid use, but produce supplementary opioid effect at times resulting in an overdose. Thus it is imperative to ensure adequate doses for the clients at the OST centres.

## 6.5 Broader Issues: Stigma and Discrimination

In view of the stigma associated with drug use, the general community was reluctant to help the victims of overdose. This affects the drug users as well as their family members. Further, the stigma in the general community is diffused to other key stakeholders such as the police and hospital staff. "Nobody cares for the life of the drug user" was a strong statement made by many respondents and reflected the level of drug use related stigma prevailing in several communities across the country. The stigma attached to drug use is a key obstacle to better care for drug users and to a better quality of life for people who use drugs, their friends and their families. Stigma is pernicious and leads to discrimination, disadvantages, low self-esteem, greater disability and less resistance to fight the stigma. Often the stigmatization process is cyclical and vicious. Yet, there are several opportunities for intervention at different levels. Sensitizing the general community, conceptualizing drug dependence as a brain disorder, science based treatments for drug dependence and drug use related harms and better services for drug users can reduce the stigma at different levels. Working with the media, improvement in care services for drug users, support for users and their families, education and training – all can be helpful in mitigating drug use related stigma.

# 7 Conclusions

The current study is the first study on overdose among IDUs conducted in many settings across the country. Being a qualitative study, it explored the contextual factors in overdose risk that are relevant to the development of appropriate prevention and management interventions. Such interventions are absolutely necessary as they can potentially reduce the risk of overdose among the IDUs in the country as well as decrease the fatality risk among those who have overdosed through correct responses at the community level.

The study has identified several factors at the individual, interpersonal, structural and broader level that can combine together to increase the overdose related risk. The findings suggest that simple behavioural interventions may not be sufficient to reduce overdose related risks and community-based and structural interventions are warranted to effectively reduce the context dependent risk factors. The suggested comprehensive package of interventions includes educating the community based drug users on overdose prevention and response; training drug users to identify opioid overdose; training in CPR, rescue breathing, recovery positions in the community, for drug users, family members, peer educators and outreach workers; training on the prevention/management of overdose for the TI staff members; advocacy tailored specifically for medical, paramedical professionals and law enforcement officials; continuing medical education on overdose, naloxone for medical, paramedical professionals; ambulance services to transport overdosed persons; wide and free availability of naloxone at emergency services in the government hospitals; overdose prevention counselling prior to release from detoxification and drug treatment; and scale-up of OST centres that offer quality care including appropriate dose.

## 7.1 Limitations of the Study

The study has limitations. The study sample was not randomly selected from the community of IDUs. The individuals were selected purposively based on their ability to articulate their experiences. The sample covered current injectors with a long history of drug use and most of them have been receiving services from the selected TI sites; it may not truly reflect and represent the sample of community based IDUs across the country. Further the analysis of the data was done after completion of the data collection and this limited the ability to explore emerging themes as they arose. Yet, the study is important as it targeted a wide range of populations, including urban and semi-urban IDUs across all regions of the country. In addition, the qualitative interviews from twenty female IDUs helped to understand the "risk context" among this hidden population.

There is no single reason why people use drugs; there is no single treatment to help people stop using drugs and similarly there is no single way to stop people from overdosing. We need to build on the study findings to construct a comprehensive response that can effectively address the prevention and management aspects of overdose amongst the drug using communities in India.

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# APPENDIX: TOOLS USED IN OPERATIONAL RESEARCH

## A. Interview Guide for Interview with IDU TI Staff

Interviewer number:
INSTRUCTIONS
Thank you for taking the time to speak with me today.
My name is and I am working with UNODC ROSA on an operational research project called: "Reducing the risk of overdose to the persons who inject drugs".
Through this project, we hope to learn new ways to decrease the risk of overdose. Today, we are interested in learning from you about factors related to occurrence of overdose among IDUs. In addition, we are keen to know from you the existing mechanisms for responding to overdose in the targeted intervention (TI) settings.
The interview takes about 60 minutes. I appreciate you spending this time with me and thank you for your participation.
I would like to tape record the interview in order to make sure that I capture all of the valuable information that you share with me. I may also write things down while we're talking so that I don't forget anything.
Everything you say is confidential, and no one else will hear the tape or see the notes besides the people who are working on this research project.
Before we start, I have to ask you one question:

## **SCREENING QUESTION**

Are you aware of overdose among persons who use drugs?

If YES: continue with the interview

If NO to THIS QUESTION, thank respondent for time, but explain that they are not suitable for this interview.

Do you have any questions before we start?

RISK OF OVERDOSE: INTERVIEW TOPIC GUIDE (TI STAFF)					
Interviewer's initials:	<b>∕</b> wri	ite here			
Date of interview:		Day	Month	Year	
Where is interview being conducted? Geographical Location		1 2 3 4 5	Northeast East North West South		
Where is interview being conducted? Specific State		1 2 3 4 5	State State State State State		

RISK OF OVERDOSE: INTERVIEW TOPIC GUIDE (TI STAFF)	
Where is interview being conducted? Specific Site	1 TI site 2 TI site 3 TI site 4 TI site 5 TI site 6 TI site 7 TI site 8 TI site 9 TI site

	SECTION A: BACKGROUND			
	"I'd like to begin by asking you a few questions about yourself."			
1	What is your age (full years)	P		
2	Sex			
3	Can you tell me about your work in the targeted intervention (TI)?	<ul> <li>What is your position?</li> <li>How long have you been working with this TI?</li> <li>How long have you been working with IDU TIs?</li> <li>How long have you been working with people who use drugs?</li> </ul>		
	SECTION B: KNOWLE	EDGE ABOUT OVERDOSE		
	"I'd like to ask you some questions related	to overdose among persons who inject drugs"		
1.	In your opinion, how common is overdose among IDUs?	<ul><li>How common is overdose?</li><li>How often do you hear about overdose among IDUs?</li></ul>		
2.	Can you describe the profile of the persons whom you know have experienced overdose?	<ul> <li>Who are the persons who have overdosed?</li> <li>Male or female?</li> <li>Age?</li> <li>Homeless?</li> <li>Educational background?</li> <li>Attending TI for a short time or long time?</li> <li>Regular injecting clients or irregular injecting clients?</li> </ul>		
3	Which injectable drugs and other drugs are often reported to be associated with overdose?	<ul> <li>Injectable drugs: Ask them to list all the injectable drugs that are often implicated in overdose</li> <li>Other drugs: Other non-injectable drugs often reported in cases of overdose</li> <li>Alcohol use?</li> <li>Other prescription drugs?</li> </ul>		
4.	Can you tell me some details related to overdose that you have heard of?	<ul> <li>Place: Where did the overdose happen?</li> <li>Injecting venues?</li> <li>Time: What time of the day? Day or night?</li> <li>Well lighted place or dark place?</li> <li>Persons: Who were there with the person?</li> <li>Known friends? Unfamiliar people?</li> </ul>		
5.	What do you think is the reason for the person's overdose?	<ul> <li>Ask him (her) to describe the possible reason(s) for the overdose</li> <li>What factors have contributed to the overdose?</li> <li>Probe every reason provided in detail</li> </ul>		
6.	Any other details related to overdose?	Ask him (her) to describe any other detail(s)  Contd		

	SECTION C: HELP FOR OVERDOSE			
	"I'd now like to ask you about the help that can be provided or organised for the person who overdosed"			
7.	Can drug users in your TI recognise the signs and symptoms of overdose?	What are the signs and symptoms that drug users know to identify the overdose?		
8.	What type of attention is normally given to the person following the overdose?	<ul> <li>What is the immediate reaction of the people around the person who has overdosed?</li> <li>Do they help in any way?</li> </ul>		
9.	What are the various activities people (those around the overdosed person) do to assist the person to overcome overdose?	Describe the various things that are usually done in your settings to help the overdosed individual.		
10.	Do you know of drug users in your setting with knowledge on resuscitation (rescue breathing, mouth-to-mouth breathing, recovery position)?	Do you know about any drug user(s) who have received training on resuscitation (rescue breathing, mouth-to-mouth breathing, recovery position)?		
11.	Is an ambulance available for help in these circumstances in your settings?	<ul> <li>Do people call the ambulance in case of emergency?</li> <li>Do people organise medical assistance? (e.g., taking to a private doctor, clinic, TI)</li> </ul>		
12.	What are the reasons for not responding adequately to the overdose?	<ul> <li>What are the usual reasons why people hesitate to organise any medical assistance?</li> <li>Provide reasons:</li></ul>		
13.	What would help the witnesses to call for ambulance or provide assistance?	<ul> <li>What can be done to make the witnesses to call an ambulance?</li> <li>What would help the witnesses to provide medical or other assistance to overdose victims?</li> </ul>		
14.	Do the people take the overdosed person to a hospital?	<ul> <li>Do people around take the overdosed person to a hospital?</li> <li>What type of medical assistance is provided in the hospital? (ask specifically for Naloxone)</li> </ul>		
15.	Have you ever visited an overdosed client in the hospital?	<ul> <li>What about the attitude of the staff members towards the overdosed person?</li> <li>Their attitude and reaction to treating the drug overdose?</li> <li>At the hospital, how long before the person was given medical attention?</li> </ul>		
16.	Have you heard of police arresting anyone at the overdose(s) site?	<ul><li> Has there been an arrest in the place of overdose?</li><li> What is the attitude of the police to the overdose?</li></ul>		
	SECTION D: TRAINING AND	INFORMATION ON OVERDOSE		
	"I'd now like to ask you about the information and training related to the overdose"			
17.	Have you ever been given any training related to overdose prevention and /or management?	<ul><li>Any training?</li><li>Duration?</li><li>One training or refresher training?</li><li>By whom?</li><li>What is the content covered?</li></ul>		
18.	Do you have adequate information on signs and symptoms of overdose?	<ul> <li>Yes or No</li> <li>If yes, what information on overdose signs? And symptoms?</li> <li>What more is required?</li> </ul>		

	SECTION D: TRAINING AND	INFORMATION ON OVERDOSE
19.	Do you know what actions one needs to take	Yes or No
	in case of an overdose?	If yes, what actions need to be taken?
		What more is required?
20.	Do you know of any specific treatment that	Yes or No
- 0.	is useful to help overdose, specifically opioid	If yes, what specific treatment?
	overdose?	What more is required?
21.	Would you like training on overdose?	• Yes or No
21.	Would you like training on overdose:	If Yes, what type of training?
		What content?
		By whom?
		• When?
	SECTION E: INFORMATION	ON ON OVERDOSE FROM TIS
		formation that can be provided related to
		se from the TIs"
22.	Are you providing any information related to	• Yes or No?
	overdose from the targeted intervention site?	What type of information?
		• How?
		How adequate and relevant is the information?
		Anything could be improved/modified?
23.	Who provides the information? In what form?	• Leaflets, verbal communication, roleplay, videos etc.
24.	How beneficial is the information for the drug	Do drug users benefit from the information?
	users?	What would have been more beneficial? 'Content of'
		information, practical issues, information delivery,
		places for help in case of overdose)
25.	What is the best way to provide overdose	What is the best way to disseminate information
	related information for drug users and their friends?	related to overdose amongst drug users and their friends?
	menas.	Outreach based communication?
		• Leaflets?
		• Posters?
		Others? (please specify)
26.	What is the best way to provide overdose	What is the best way to disseminate information re-
	related information for the families of drug	lated to overdose amongst families of drug users?
	users?	Media?
		• Street theatre?
		Public awareness campaigns?
		• Leaflets?
		• Posters?
		Others? (please specify)
27.	What type of training can be organized for	What type of training is required?
	clientson overdose prevention/management?	Content of training?
		Methodology?
		Venue?
		• Duration?
		Regularity of training sessions?
28.	Is training required for clients on first aid in-	Yes or No
	cluding resuscitation (rescue breathing, mouth-	• If Yes, to whom?
	to-mouth breathing, recovery position etc.)?	How often?
		Part of overdose training?

	SECTION E: INFORMATION	ON ON OVERDOSE FROM TIS
29.	Would advocacy with hospital staff, emergency services staff be helpful to improve overdose management in your settings?	<ul> <li>Yes or No</li> <li>If Yes, what kind of advocacy is needed with the hospital staff?</li> <li>What kind of advocacy is needed with the emergency services staff?</li> </ul>
30.	Would advocacy with police be helpful to address barriers related to responding to overdose incidents?	<ul> <li>Yes or No</li> <li>If Yes, what kind of advocacy is needed with the police?</li> </ul>
31.	What further actions/activities can be done at the TI level to improve overdose related information?	<ul> <li>What more is required to enhance overdose related information for drug users and their families?</li> </ul>
32.	What further actions/activities can be done at the TI level to improve overdose related training?	What more is required to enhance overdose related training for drug users?
33.	What further actions/activities can be done at the TI level to improve the capacity of TI staff on overdose prevention/management?	What more is required to build the capacity of TI staff related overdose?
	SECTION	N F: PROFILE
	"Finally, we would like to asl	c you some structured questions"
34.	Are you providing overdose related information from the TI for persons who use drugs and their families?	res □ No □
35.	Are you providing overdose related training from the TI for persons who use drugs?	res □ No □
36.	How is the overdose related information provid	ed to persons who use drugs?
	✓ Verbal communication Leaflets Role p.	lay Video Others, specify
37.	Would you like to provide new or additional information on overdose to persons who use drugs and their families from the TI?	
38.	Would you like to provide new or additional overdose related training from TI for persons who use drugs?	
39.	How would you like to provide the overdose rel	ated information provided to persons who use drugs?
		lay Video Others, specify
40.	How would you like to provide the overdose rel	ated training for persons who use drugs?
	Theory Role play Video Group sess	cions Others, specify
41.	Have you received any training on overdose prevention/management?	res □ No □
42.	Is the overdose training adequate and relevant?	res □ No □

Operational research understanding the contexts and response related to overdose among Injecting Drug Users

	SECTION F: PROFILE						
43.	Would you like to have training on overdose prevention and/or management?	<b>∕</b> Yes		No			
44.	Is Naloxone provided at your TI?	Yes		No			
45.	If Yes, then who provides Naloxone? Mention cadre of staff.						
46.	If No, then please specify why not?						

THANK YOU FOR COMPLETING THIS INTERVIEW

# B. Focus Group Topic Guide for IDU Clients on Risk of Overdose

	RISK OF OVERDOSE: FOCUS GROUP TOPIC GUIDE (IDUs)
Area Rese	Date (including day of week): rarcher: Time of Day:
	INTRODUCTION FOR FACILITATORS  This instrument will guide you through the focus group discussions for drug injectors.
	The aim of the focus group discussion is to encourage injectors to <i>describe</i> the factors related to occurrence of overdose among IDUs. In addition, information on the existing mechanisms for responding to overdose in the targeted intervention (TI) settings can be gathered.
	FACILITATOR INSTRUCTIONS  While facilitating this focus group, try to learn as much as possible from the participants as they are cultural experts. It is important to build rapport with the participants. This will increase the likelihood of more detailed, truthful answers. Show interest in what they have to say. Probe deeply into what they have to say. A total of 6 to 8 participants will constitute the focus group and choose a venue that is convenient for the participants and where the focus group discussion can be held without interruption.
	STRUCTURE The focus group is split into four sections:
	The focus group is split into four sections:     INTRODUCTION: explanation of the aims and objectives of the focus group
	☐ Focus group discussion: contextual factors in overdose. Things that could be done in TI settings for prevention of overdose
	The focus group discussions should take around 1½ hours to complete.
	RESOURCES
	You will need:
	□ 1 facilitator (1 note-taker is optional)
	☐ Tape recorder, tapes, and spare batteries
	□ Consent forms

#### **INTRODUCTION**

#### Facilitator instructions:

After all of the respondents have read the consent form, or had it read to them, and they have signed it, invite them to eat. When all are finished, move into your introduction.

#### Facilitator suggested text:

"Thank you for taking the time to come and meet us today. My name is \_\_\_\_\_\_ and I am working with UNODC ROSA on a project that is called: "Reducing the risk of overdose to the persons who inject drugs".

Through this project, we hope to learn new ways to decrease the occurrence of overdose.

Today, we are interested in learning from you about the various factors that contribute to overdose. Today, I am especially interested in learning more about all of the things that can be done in TI settings to prevent overdose.

I do not know about overdose in your area that well and your knowledge is very helpful to me. (Researcher: it is very important to establish/fake ignorance so that the participants do not assume that you know many of the important details.)

I want to be sure to capture all of the valuable information that you share with me and would like to use a tape recorder and to write things down while we are talking so that I do not forget anything.

Everything you say is confidential, and no one else will hear the tape besides the people who are working on this project. So, let us begin by introducing ourselves. You can use a nick-name, a fake name or just any name - whatever you feel comfortable with."

#### Reducing the risk of overdose to the persons who inject drugs

### Facilitator: "I'd like to learn about the things that contribute to overdose"

Please tell me all the reasons/factors that contribute to the occurrence of overdose among people who inject drugs

### Facilitator instructions:

List these on the board or paper and probe for additional items until the participants feel that they have provided an exhaustive list. Write things down exactly as they have mentioned them. Local language and terms are especially important. If you do not understand a particular item, word, place, ask the participants.

## Facilitator: After the participants say that the list of reasons is complete, ask 1a:

What type of drugs or combination of drugs influence the likelihood of overdose?

### [PROBES]

- ...in terms of WHAT you inject?
- ...in terms of HOW you COMBINE?
- .....in terms of ALCOHOL USE?

#### Facilitator: "What kind of help is provided to overdose victims?"

2 How do you recognize that a person is experiencing overdose? What actions can be ideally taken if you witnessed an overdose?

## [PROBES]

- ...possible symptoms of overdose
- ...first aid such as CPR?
- ....calling ambulance?
- ...taking to a hospital?

## *Facilitator*: After the participants identify the challenges, ask 2a:

What are the barriers and challenges in providing any assistance (e.g., first aid, medical assistance, calling an ambulance) to the overdose victims?

#### [PROBES]

- …list various challenges in organizing help for overdose victims?
- ...in terms of recognizing that the person is experiencing overdose
- ...in terms of calling ambulance?
- ...in terms of providing medical aid?
- ....in terms of taking to a hospital?

	Facilitator: "What kind of information is available at the TIs related to overdose?"					
3	Please tell us about the information, training related to overdose that is available/provided in the TIs? Is it relevant, useful and adequate?	Facilitator instructions: Note down all that they say.				
	Facilitator: After the participants fi	nish the response, ask 3a-3b:				
3a	What is the information related to overdose that is required in the TIs?	<ul> <li>[PROBES]</li> <li>what kind of information?</li> <li>what content?</li> <li>what form (leaflets, verbal communication, role play, videos etc)?</li> </ul>				
3b	What type of overdose training can be provided at the TIs?	<ul><li>[PROBES]</li><li>what type of overdose training?</li><li>by whom and for whom?</li><li>content of training?</li></ul>				

## C. IDI with IDU Clients for Witnessed Overdose

Interviewer number:
INSTRUCTIONS
Thank you for taking the time to speak with me today.
My name is and I am working with UNODC ROSA on an operational research project called: "Reducing the risk of overdose to the persons who inject drugs".
Through this project, we hope to learn new ways to decrease the risk of overdose. Today, we are interested in learning from you about factors related to occurrence of overdose among IDUs. In addition, we are keen to know from you the existing mechanisms for responding to overdose in the targeted intervention (TI) settings.
The interview takes about 60 minutes. I appreciate you spending this time with me and thank you for your participation.
I would like to tape record the interview in order to make sure that I capture all of the valuable information that you share with me. I may also write things down while we are talking so that I do not forget anything.
Everything you say is confidential, and no one else will hear the tape or see the notes besides the people who are working on this research project.
Before we start, I have to ask you one question:
SCREENING QUESTION

## Have you ever overdosed?

IF YES: continue with interview with "Overdose experienced persons", remembering to do the consent form.

IF NO, ask them:

### Have you ever witnessed an overdose?

IF YES: continue with interview with "Overdose witnessed persons", remembering to do the consent form.

If NO to BOTH QUESTIONS, thank respondent for time, but explain that they are not suitable for this interview(s).

Do you have any questions before we start?

Interviewer's initials:    Date of interview:   Day   Month   Year	RISK OF OVERDOSE: INTERVIEW TOPIC GUIDE (IDUs) Witnessed Overdose						
Date of interview:   Day   Month   Year	Interviewer's initials:						
Where is the interview being conducted?  Geographical Location  Where is the interview being conducted?  Specific State  Where is the interview being conducted?  I State State State  Where is the interview being conducted?  I TI site S State  I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State I State	Date of interview:		lav	Month	Voar		
Where is the interview being conducted?  Geographical Location  Where is the interview being conducted?  Specific State  Where is the interview being conducted?  Specific State  Where is the interview being conducted?  Specific Site  T I State  State  State  State  T State	Date of litterview.		ay	MOTILIT	Teal		
Where is the interview being conducted?  Specific State  Where is the interview being conducted?  Where is the interview being conducted?  Specific Site  To state  To state  State  To st	Where is the interview being conducted?			Northeast			
Where is the interview being conducted?  Specific State  Where is the interview being conducted?  Where is the interview being conducted?  Specific Site  To state  To	Geographical Location	2		East			
Where is the interview being conducted?  Specific State  1		3		North			
Where is the interview being conducted?  Specific State  1		4					
Where is the interview being conducted?  Specific State  1		5		South			
Specific State  2 State 3 State 4 State 5 State  Where is the interview being conducted? Specific Site  1 TI site 2 TI site 3 TI site 4 TI site 5 TI site 6 TI site 7 TI site 8 TI site 9 TI site 9 TI site 9 TI site 9 TI site 1 Private room 2 Public place (e.g., street) 3 TI site 4 Drug treatment clinic							
Where is the interview being conducted?  Specific Site  1 TI site 2 TI site 3 TI site 4 TI site 5 TI site 6 TI site 7 TI site 8 TI site 9 TI site 9 TI site  Where is the interview being conducted? Specify area:				State			
Where is the interview being conducted?  Specific Site  1	Specific State			State			
Where is the interview being conducted?  Specific Site  1		3		State			
Where is the interview being conducted?  Specific Site  1 TI site 2 TI site 3 TI site 4 TI site 5 TI site 6 TI site 7 TI site 8 TI site 9 TI site 9 TI site  Where is the interview being conducted? Specify area:  1 Private room 2 Public place (e.g., street) 3 TI site 4 Drug treatment clinic							
Where is the interview being conducted?  Specific Site  1 TI site 2 TI site 3 TI site 4 TI site 5 TI site 6 TI site 7 TI site 8 TI site 9 TI site  Where is the interview being conducted? Specify area:  1 Private room 2 Public place (e.g., street) 3 TI site 4 Drug treatment clinic		5		State			
Specific Site  2 TI site 3 TI site 4 TI site 5 TI site 6 TI site 7 TI site 8 TI site 9 TI site 9 TI site  1 Private room 2 Public place (e.g., street) 3 TI site 4 Drug treatment clinic							
Where is the interview being conducted?  Specify area:		-					
Where is the interview being conducted?  Specify area:  TI site  TI site  TI site  TI site  Private room  Private room  Public place (e.g., street)  TI site  TI site  Drug treatment clinic	Specific Site						
Where is the interview being conducted?  Specify area:  TI site  TI site  TI site  Private room  Private room  Public place (e.g., street)  TI site  Drug treatment clinic							
Where is the interview being conducted?  Specify area:							
Where is the interview being conducted?  Specify area:  TI site  Private room  Public place (e.g., street)  TI site  Drug treatment clinic							
Where is the interview being conducted?  Specify area:  To private room  Public place (e.g., street)  To prug treatment clinic							
Where is the interview being conducted?  Specify area:							
Where is the interview being conducted?  Specify area:							
Where is the interview being conducted?1Private roomSpecify area:2Public place (e.g., street)3TI site4Drug treatment clinic		9		II site			
Specify area: 2 Public place (e.g., street) 3 TI site 4 Drug treatment clinic	William to the transfer for the						
3 TI site 4 Drug treatment clinic							
4 Drug treatment clinic	Specify area:				.g., street)		
					+ clinic		
S Kespondent's nouse							
6 Others, specify							
o Others, specify		0		others, specify			

	SECTION A: BACKGROUND				
	"I'd like to begin by asking you a few questions about yourself."				
1	What is your age (full years)				
2	Sex				
3	Do you use any drugs? (If no, proceed to question 4.)?  (Use prompt card)	<ul> <li>What are the drugs used by you?</li> <li>How long have you been using each of these drugs?</li> <li>What drugs have you been injecting?</li> <li>How long have you been injecting these drugs?</li> <li>What drugs do you inject currently?</li> </ul>			
4.	Are you engaged in providing services to DU/IDUs?	• If Yes, then what kind of services do you provide and what is your designation?			

## Prompt Card:

	Drug	Tick all that is	annropriate —	How long? Specify in years		
Hor		TICK all that is	αρριοριιατε	now long: Specify in years		
	oin (Brown Sugar, Smack)					
Opi						
	eine (Cough Syrup)					
	nabis (Ganja, Charas, Hashish)					
Alco						
	ative tablets (Sleeping pills, anti- ety drugs, benzodiazepines)					
Ecstasy and other ATS						
Oth	ers, specify					
	Injectable Drug	Tick all that is	appropriate	How long? Specify in years		
Hero	oin (Brown Sugar, Smack)					
Bup	renorphine					
Prox	yvon					
Pent	azocine (Fortwin)					
Diaz	epam					
Avil						
Pror	nethazine (Phenargan)					
Peth	idine or Morphine					
Oth	ers, specify					
		TION B: LAST WITN	IESSED OVERDO	OSE		
	"I'd like to learn about o	erdose that you ha		d like to learn about the		
1.	How long ago did you witness		1	o did you witness the last overdose?		
2.	Who was the person who over		Male or fema			
	with the person with over		Age?			
		• Friend?				
			• Relative?			
			Acquaintance?			
			• Stranger?			
			• If you know h	im/her, how long and how?		
3.	Where did you witness the over	erdose?	• Place: Describ	oe the actual place/ setting, usual		
				ou use drugs		
				ng or unfamiliar setting?		
			•	ere you injected the drugs or any		
1	What time of the day did this	22222	other place?	stual time of the day?		
4.	What time of the day did this	іарреп?	<ul><li>Time: What a</li><li>Day or night?</li></ul>	ctual time of the day?		
				place or dark place?		
5.	Who else was with you?			people who were there		
] .	Will you:			were there with you?		
				s? Unfamiliar people?		
			Tanada in tanana			
6.	If you are a DU/IDU, did you to	ake drugs on the	_	e all the drugs that you have taken		
6.	If you are a DU/IDU, did you to day you witnessed overdose?	ake drugs on the	that day?			
6.		ake drugs on the	that day? • How much of	each of these drugs?		
6.		ake drugs on the	that day? • How much of • Did you cons			
6.		ake drugs on the	that day? • How much of • Did you const beverage?	each of these drugs?		

7.	If you are a DU/IDU, did you take injectable drugs? Did you take on the day you witnessed overdose?	<ul> <li>Injectable drugs: Tell me all the drugs that you have taken that day?</li> <li>How much of each of these drugs?</li> </ul>
_		9
8.	What do you think is the reason for the person's overdose?	Ask him (her) to describe the possible reason(s) for the witnessed overdose
		What factors have contributed to the overdose?
9.	Any other details related to the last witnessed overdose?	Ask him (her) to describe any other detail(s)
	SECTION C: HELP F	OR OVERDOSE
	"I'd now like to ask you about the help that we	as provided to the person who overdosed"
10.	How long after the overdose that you realized that the person had an overdose?	<ul> <li>Did people around recognize that the person was experiencing the overdose?</li> <li>Did he/she communicate to people around you that he/she is experiencing overdose?</li> <li>How long did it take to recognize the overdose?</li> </ul>
		<ul> <li>What are the signs and symptoms that helped to identify the overdose?</li> </ul>
11.	What type of attention was given to the person following the overdose?	<ul> <li>What was the immediate reaction of the people around the person who overdosed?</li> <li>Did they help in any way?</li> </ul>
12.	What are the various things you or people around did to help the person overcome overdose?	Describe the various things that were done by you and the people around to help the overdosed individual
13.	Did you or anyone around attempt to resuscitate the person?	<ul> <li>Did anyone attempt mouth-to-mouth breathing, heart massage, recovery position etc.)?</li> <li>If so, was it beneficial?</li> </ul>
14.	Was any ambulance called? Any medical help given?	<ul> <li>Did you or anyone call the ambulance?</li> <li>Did you or anyone provide any other medical assistance? (e.g., taken to a private doctor, clinic)</li> </ul>
15.	If you did not call an ambulance or provide any kind of medical or other assistance, why? What were the reasons?	<ul> <li>Why did not you call an ambulance or provide medical assistance?</li> <li>Provide reasons:         <ul> <li>Fear of police?</li> <li>Medico-legal issues?</li> <li>Lack of knowledge to deal with overdose?</li> <li>Others?</li> </ul> </li> </ul>
16.	What would help the witnesses to call for ambulance or provide assistance?	<ul> <li>What can be done to make the witnesses call an ambulance?</li> <li>What would help the witnesses to provide medical or other assistance to overdose victims?</li> </ul>
17.	Was the person taken to a hospital?	<ul> <li>Did you or anyone take him/her to a hospital?</li> <li>What type of medical assistance was provided in the hospital? (Specifically ask if naloxone or any other medication was provided)</li> <li>How long did it take before the person was provided medical attention?</li> </ul>
18.	If you accompanied the person to the hospital, what was the attitude of the medical/nursing staff towards you?	What about the attitude of the staff members towards you?
19.	What was the attitude of the medical/nursing staff towards the person who overdosed during your admission for overdose?	<ul> <li>What about the attitude of the staff members towards the overdosed person?</li> <li>What was their attitude and reaction to treating the drug overdose?</li> </ul>

20.	Was any police case registered against you for this incident of overdose?	• If Yes, what happened?
21.	Have the police arrested anyone at the overdose(s) you have witnessed?	<ul><li> Has there been any arrest in the place of overdose?</li><li> What was the attitude of the police to the overdose?</li></ul>
22.	What happened soon after the overdose was managed/treated?	<ul> <li>[Probes]</li> <li>in terms of information given by service providers</li> <li>in terms of using drugs after overdose</li> <li>in terms of seeking treatment for drug use after overdose</li> <li>in terms of high-risk behaviour</li> </ul>
	SECTION D: INFORMAT	
	"I'd now like to ask you about the info	ormation related to the overdose"
23.	What are the various factors that contributed to the overdose?	<ul> <li>Can you list the various factors that contributed to the overdose?</li> <li>Probe every reason provided in detail</li> </ul>
24.	Do you know the signs and symptoms of overdose?	<ul> <li>Signs of overdose</li> <li>Symptoms of overdose</li> <li>What are the signs and symptoms that are of most concern to you?</li> </ul>
25.	Can you tell me what action you would take now if you witnessed an overdose?	Describe the various actions that you would take if you witness an overdose
26.	Have you heard of any specific treatment that is useful to help overdose, specifically opioid overdose?	<ul> <li>Have you heard of specific medicines to treat overdose?</li> <li>Do you know about naloxone?</li> <li>Do you know how it is beneficial for opioid overdose management?</li> </ul>
	SECTION E: INFORMATION	RECEIVED FROM TIS
"	I'd now like to ask you about the information you	received related to the overdose from the TIs"
27.	If you are IDU/DU, are you receiving service from a TI site?	<ul> <li>Are you registered with a TI?</li> <li>If so, for how long?</li> <li>How regular are you in attending the TI services?</li> <li>What types of services do you receive?</li> </ul>
28.	If you are IDU/DU, are you registered for opioid substitution treatment?	<ul> <li>Are you registered for OST?</li> <li>If so, for how long?</li> <li>Are you attending OST regularly?</li> <li>Any other service that you receive apart from OST?</li> </ul>
29.	If you are IDU/DU, did you register for TI or opioid substitution treatment after witnessing the overdose event?	<ul> <li>Did you register for TI or OST after witnessing the overdose?</li> <li>If so, please provide details</li> </ul>
30.	If you are IDU/DU, did you go or attend drug use related treatment services subsequent to witnessing overdose?	<ul> <li>Did you register for drug use treatment?</li> <li>If so, please provide details</li> <li>How long were you there?</li> <li>What type of services?</li> <li>Was information related to overdose presented in the treatment service?</li> </ul>
31.	Did you receive any information from TI related to overdose?	<ul> <li>Did you receive any information on overdose?</li> <li>If so, who provided the information?</li> <li>In what form? (Leaflets, verbal communication, role play, videos, etc)</li> </ul>

	SECTION E: INFORMATION RECEIVED FROM TIS						
32.	If information was provided, how adequate and relevant was the information?	• Wł	nat would informati	nefit from have bee ion, practi aces for he	n more b cal issue	eneficia s, inforn	l? (Content nation
33.	Did you receive any training related to overdose?	tio • If s	n and/or	managen rovided th	nent?		ose preven-
34.	What is the best way to provide overdose related information for drug users and their friends?	relat frien • Ou	ed to ove ds?	est way to rdose am ased comr	ongst dr	ug users	ormation and their
35.	What is the best way to provide overdose related information for the families of drug users?	relat ers? • Me • Pu	ed to ove edia?	est way to rdose amo	ongst fan		
	SECTION F: PROFILE						
	"Finally, we would like to ask you	som	e structu	red quest	tions"		
36.	How many times have you witnessed an overdose	e?				ø	
37.	Were you receiving support for your drug use fro TI at the time of witnessing any overdose?	om a	<b></b>		No		
38.	Have you ever been given any information on preventing overdose?	<b>)-</b>	<b>∕</b> Yes		No		
39.	Would you like to have overdose information from TI?		<b>∕</b> Yes		No		
40.	How would you like the overdose related information to be provided to you?  Verbal communication Leaflets Role play Video Others, specify						
41.	Have you ever been given any training on manag overdose (such as first aid)?	ing	∕Yes		No		
42.	Would you like to have training on overdose man ment from TI?	age-	<b></b> ∕Yes		No		

THANK YOU FOR COMPLETING THIS INTERVIEW

## D. Interview Topic Guide for IDI with IDU Clients for Experienced Overdose

Interviewer number:
INSTRUCTIONS
Thank you for taking the time to speak with me today.
My name is and I am working with UNODC ROSA on an operational research project called: "Reducing the risk of overdose to the persons who inject drugs".
Through this project, we hope to learn new ways to decrease the risk of overdose. Today, we are interested in learning from you about factors related to occurrence of overdose among IDUs. In addition, we are keen to know from you the existing mechanisms for responding to overdose in the targeted intervention (TI) settings.
The interview takes about 60 minutes. I appreciate you spending this time with me and thank you for your participation.
I would like to tape record the interview in order to make sure that I capture all of the valuable information that you share with me. I may also write things down while we are talking so that I do not forget anything.
Everything you say is confidential, and no one else will hear the tape or see the notes besides the people who are working on this research project.
Before we start, I have to ask you one question:

## **SCREENING QUESTION**

## Have you ever overdosed?

IF YES: continue with interview with "Overdose experienced persons", remembering to do the consent form.

IF NO, ask them:

## Have you ever witnessed an overdose?

IF YES: continue with interview with "Overdose witnessed persons", remembering to do the consent form.

If NO to BOTH QUESTIONS, thank respondent for time, but explain that they are not suitable for this interview(s).

Do you have any questions before we start?

RISK OF OVERDOSE: INTERVIEW TOPIC GUIDE (IDUS) EXPERIENCED OVERDOSE					
Interviewer's initials:					
Date of interview:	Day Month Year				
Where is interview being conducted? Geographical Location	1 Northeast 2 East 3 North 4 West 5 South				
Where is interview being conducted? Specific State	1 State 2 State 3 State 4 State 5 State				
Where is interview being conducted? Specific Site	1 TI site 2 TI site 3 TI site 4 TI site 5 TI site 6 TI site 7 TI site 8 TI site 9 TI site				
Where is interview being conducted? Specify area:	1 Private room 2 Public place (e.g. street) 3 TI site 4 Drug Treatment Clinic 5 Respondent's house 6 Others, specify				

SECTION A: BACKGROUND				
"I'd like to begin by asking you a few questions about yourself."				
1	What is your age (full years)			
2	Sex	P		
3	Can you tell me about your drug use?(Use prompt card)	<ul> <li>What are the drugs used by you?</li> <li>How long have you been using each of these drugs?</li> <li>What drugs have you been injecting?</li> <li>How long have you been injecting these drugs?</li> <li>What drugs do you inject currently (in the past one month)</li> </ul>		

## **Prompt Card:**

	Drug	Tick all that is	appropriate	How long? Specify in years	
Her					
Brov	wn Sugar				
Opi	_				
	leine (Cough Syrup)				
	nabis (Ganja, Charas, Hashish)				
Alco	-				
	ative tablets (Sleeping pills, anti- iety drugs, benzodiazepines)				
Ecst	asy and other ATS				
Oth	ers, specify				
	Injectable Drug	Tick all that is	appropriate	How long? Specify in years	
Her	oin				
Brov	wn Sugar				
Bup	renorphine				
	tropropoxyphene (Proxyvon/ smoproxyvon)				
Pen	tazocine (Fortwin)				
Diaz	zepam				
Avil					
Pro	methazine (Phenergan)				
Peth	nidine or Morphine				
Oth	ers, specify				
		SECTION B: LAST	T OVERDOSE		
	"I'd like to learn about o	verdose that you h your last ov		l. I'd like to learn about	
1	When was your last overdose?		How long ago	did the overdose happen?	
2.	2. Where did this happen?		<ul> <li>Place: Describe the actual place/ setting</li> <li>Was it your usual place for drug use?</li> <li>Familiar setting or unfamiliar setting?</li> <li>The place where you injected the drugs or any other place?</li> </ul>		
3	What time of the day did this happen?		<ul><li> Time: What was the actual time of the day?</li><li> Day or night?</li><li> Well lighted place or dark place?</li></ul>		
4	4 Who else was with you?		<ul> <li>Persons:</li> <li>Describe the people who were there</li> <li>Who were there with you?</li> <li>Known friends? Unfamiliar people?</li> </ul>		
What drugs did you take on that day of over-dose?		<ul> <li>Drugs: Tell me all the drugs that you had taken within 24 hrs. before the overdose?</li> <li>How much of each of these drugs?</li> </ul>			
				ume alcohol? What type of alcoholic	
			How much alo	cohol did you consume?	

	SECTION B: LAST	OVERDOSE
6	What injectable drugs did you take on that day	Injectable drugs: Tell me all the drugs that you
	of overdose?	have taken that day?
_	Miles I	How much of each of these drugs?
7	What do you think is the reason for the over- dose?	Ask him (her) to describe the possible reason(s) for the overdose
8	Any other details related to the last overdose?	Ask him (her) to describe any other detail(s)
9	Did you realize you were experiencing over- dose?	• What did you experience? What made you identify/ recognize that you were experiencing overdose?
	SECTION C: LIFE SITUATION A	Γ THE TIME OF OVERDOSE
	"I'd like to learn about your life situation at th	e time the overdose occurred in your life."
10	What type of residential accommodation you	• Did you live with family members? If so with whom?
	had at the time of overdose?	Did you have an accommodation to live? Were you homeless? Where did you stay during the nights?
11	Did you have any serious medical condition	Did you have any serious physical illness?
	before this overdose incident?	If so, what was the nature of the illness?
		Any treatment for the same?
12	Did you suffer from any mental (psychiatric) ill-	Did you have any mental (psychiatric) illness?
	ness before this overdose incident?	• If so, what was the nature of the illness?
		Any treatment for the same?  (Specifically make for specified lides (the scale).)
		(Specifically probe for suicidal idea/thought before the overdose)
13	Did you experience any problems in relation-	• Did you have any problems in relationship (e.g.,
	ship before this overdose incident?	broken relationship)?
		• If so, what was the nature of the problem?
		If married, marital conflicts?
14	Did you have any significant financial debts	Did you have any significant financial debts?
	before this overdose incident?	• If so, what was the nature of the problem? Total debt? To whom?
15	Was there any bereavement before this over-	Did you have bereavement?
	dose incident?	If so, what was the nature of the problem?
16	Did you stop using drugs before this overdose?	If yes, for how long did you stay away from drugs before this overdose?
		What were the reasons for your staying away?
		□ Personal
		☐ Treatment for drug dependence ( If Yes, then go to 17)
		☐ Prison (If Yes, then go to 18.)
		☐ Any other please specify
17	Did you go through abstinence oriented drug	Did you have drug use treatment?
	use related treatment before the overdose?	• If so, how long did you stay off drugs?
		How long after discharge from the treatment     control did this everdose happen?
		centre did this overdose happen?  • How long did you stay off drugs before this
		overdose occurred?
18	Did you go to prison (jail) before the overdose?	Did you go to prison or jail prior to the event of overdose?
		• If so, for how long?
		How long after your release from prison did this
		overdose happen?
19.	Did you have any other significant life situation at the time of overdose?	Did you have any significant problems in life situation?
		If so, what was the nature of the problem?

SECTION D: HELP RECEIVED FOR OVERDOSE					
	"I'd now like to ask you about the help you	received subsequent to the overdose"			
20.	What happened immediately while you were	Were you left alone?			
	experiencing overdose?	Were there any people around you? Were you offered any help?			
21.	What type of attention was given to you following the overdose? Do you know the various things people did to help you overcome overdose?	Describe the various things that were done by people around to help you. Did people recognize that you were experiencing the overdose?    Did   D			
	uose.	Did you communicate to people around you that you are experiencing overdose?			
		What was the immediate reaction of the people around you?			
		Did they help you in any way?			
22.	Did anyone attempt to resuscitate you?	Did anyone attempt mouth-to-mouth breathing, heart massage, recovery position etc.)?			
		If so, who and was it beneficial?			
23.	Was an ambulance called? Any medical help given?	Did anyone call the ambulance?			
	given:	Did you receive any other medical assistance?     (e.g., taken to a private doctor, clinic, TI)			
24.	Were you taken to a hospital?	Did anyone take you to a hospital?			
		What type of medical assistance was provided in the hospital? (Specifically ask if naloxone or any other medication was provided)			
		Was there any delay before you were provided medical attention?			
25.	What was the attitude of the medical/nursing staff towards you during your admission for	What about the attitude of the staff members towards you?			
	overdose?	Their attitude and reaction to treating the drug overdose?			
26.	What happened at the time of discharge from the hospital after completing treatment for	Were you provided any information about overdose at the time of discharge?			
	overdose?	Were you provided any referral to any drug			
		related services at the time of discharge?			
		• Did you get the referral for psychiatric services?			
27.	Was any police case registered against you for this incident of overdose?	• If Yes, what happened?			
28.	Have the police arrested anyone at the	• Has there been an arrest in the place of overdose?			
	overdose(s) you've witnessed?	What was the attitude of the police to the overdose?			
	SECTION E: INFORMATION	RECEIVED FROM TIS			
	"I'd now like to ask you about the information you received related to the overdose from the TIs"				
29.	Are you receiving service from a TI site?	Are you registered with a TI?			
		If so, for how long?			
		How regular are you in attending the TI services?			
		What types of services do you receive?			
30.	Are you registered for opioid substitution treat-	Are you registered for OST?			
	ment?	• If so, for how long?			
		Are you attending OST regularly?  Are you also that you want from OST.			
21	Did Side of the Theory of the Latin of	Any other service that you receive apart from OST?      Did you want to fav Tl on OST of the the community of the Tl on OST of the the community of the Tl on OST of the the community of the Tl on OST of the the community of the Tl on OST of the the community of the Tl on OST of the the community of the Tl on OST of the the the community of the Tl on OST of the			
31.	Did you register for TI or opioid substitution treatment after the overdose event?	Did you register for TI or OST after the occurrence of overdose?			
	dealine area are overwose event.	If so, please provide details			
		, p			

	SECTION E: INFORMATION RECEIVED FROM TIS				
32.	Did you go or attend drug use related treatment services subsequent to overdose?	<ul> <li>Did you register for drug use treatment?</li> <li>If so, please provide details</li> <li>How long were you there?</li> <li>What type of services?</li> <li>Was information related to overdose presented in the treatment service?</li> </ul>			
33.	Did you receive any information from TI related to overdose?	<ul> <li>Did you receive any information on overdose?</li> <li>If so, who provided the information?</li> <li>In what form? (Leaflets, verbal communication, role play, videos etc.)</li> </ul>			
34.	If information was provided, how adequate and relevant was the information?	<ul> <li>Did you benefit from the information?</li> <li>What would have been more beneficial? (Content of information, practical issues, information delivery, places for help in case of overdose)</li> </ul>			
	SECTION F: PROFILE				
	"Finally, we would like to ask you some structured questions"				
35.	How many times have you overdosed?				
36.	Were you receiving support for your drug use at time of the overdose from a TI?	Yes No			
37.	Have you ever been given any information on preventing overdose?	Yes No			
38.	Would you like to have overdose information from TI?	Yes No			
39.	How would like the information to be provided to you?				
		Video Others, specify			

THANK YOU FOR COMPLETING THIS INTERVIEW

