

Overdose

**A Major Cause of Preventable Death
in Central and Eastern Europe
and Central Asia**

Recommendations and overview of the situation
in Latvia, Kyrgyzstan, Romania, Russia, Tajikistan

**Overdose: A Major Cause of Preventable Death
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*Recommendations and overview of the situation in
Latvia, Kyrgyzstan, Romania, Russia and Tajikistan*

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Regional Overview on Overdose Programming

This report was prepared by Philip Coffin for the Harm Reduction Knowledge Hub of Eurasian Harm Reduction Network (EHRN)

The Eurasian Harm Reduction Network (EHRN), formerly the Central and Eastern European Harm Reduction Network is a regional network the mission of which is to support, develop and advocate for harm reduction approaches in the field of drugs, HIV, public health and social exclusion by following the principles of humanism, tolerance, partnership and respect for human rights and freedoms. Currently EHRN unites over 300 individuals and organizations from 27 countries in Central and Eastern Europe and Central Asia. For more information see www.harm-reduction.org.

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INTRODUCTION

Illicit drug overdose is a major cause of morbidity and mortality among drug users, exceeding death from all other causes in many countries. In the United States, drug poisoning has been the second leading cause of accidental death since 2004, with the vast majority of cases due to accidental opiate overdose.(Coffin, Tracy et al. 2007) In the European Union, drug overdose is one of the leading causes of death among young people and the top cause of death among injection drug users (IDUs), exceeding deaths from AIDS-related illnesses. ((EMCDDA) 2007)

Over the past 15 years, overdose has drawn more attention as a preventable cause of death, with subsequent efforts to develop and implement intervention programs. These efforts were initially most visible in Australia, as investigators characterized drug overdose in ways that have proven fairly consistent in other locales. (Darke, Ross et al. 1996; Darke, Ross et al. 1996; Darke, Zador et al. 1997) Based on reviews of medical examiner data, ambulance and emergency center records, and drug user surveys, overdose is believed to be primarily due to opiates, most often injected, with death occurring most often among older users although younger users may have overdose events more frequently.(Darke and Hall 2003)

The most notable risk factors for overdose among active drug users are a prior overdose (Coffin, Tracy et al. 2007), a recent period of abstinence (due to treatment, incarceration, or self-imposed abstinence) (McGregor, Darke et al. 1998; Seaman, Brettle et al. 1998; Darke, Hall et al. 2002; Coffin, Tracy et al. 2007; Farrell and Marsden 2008), and concomitant use of other drugs including depressants (alcohol, benzodiazepines, barbiturates, etc) (Darke, Ross et al. 1996; Zador, Sunjic et al. 1996), stimulants (Coffin, Galea et al. 2003; Ochoa, Davidson et al. 2005), and possibly drugs that alter opiate metabolism such as protease inhibitors. HIV risk behaviors such as borrowing syringes, same sex sexual activity (Ochoa, Hahn et al. 2001), and polydrug use are independently associated with overdose risk (Coffin, Tracy et al. 2007). HIV-positive status is associated with a 2-3 fold increased risk of overdose death; although the mechanism is uncertain, the dominant hypothesis is co-morbid medical disease such as liver, pulmonary, or systemic dysfunction (van Haastrecht, Mientjes et al. 1994; Tardiff, Marzuk et al. 1997; Wang, Vlahov et al. 2005). While drug potency and impurities may contribute to overdose mortality, regional variations appear to account for less than 20% of overdose mortality.(Darke, Hall et al. 1999)

At least two-thirds of opiate injectors will overdose during their lifetime. Out of 100 overdose events, approximately one-half will receive medical attention while the other half will be managed by witnesses; approximately 4 of the total will result in death.(Darke, Mattick et al. 2003) If medical attention is received within a couple of hours of the overdose, most victims survive (McGregor, Darke et al. 1998), although drug users are reluctant to call for help most often due to fear of police or perceived mistreatment by medical personnel.(McGregor, Darke et al. 1998; Sergeev, Karpets et al. 2003; Tracy, Piper et al. 2005) While victims and witnesses may not face legal consequences frequently, those cases can be devastating to an individual and reported in the popular press, thus perpetuating fear among witnesses. (Sorensen, London et al. 1992) Of note, little is known about the epidemiology of stimulant overdose, although data is slowly emerging (Coffin, Galea et al. 2003; Kaye and Darke 2004; Fairbairn, Wood et al. 2008).

In conjunction with research came the development of education and training in overdose prevention, recognition, and management for service providers and drug users. Interventions have included various education materials and curricula, training in rescue breathing or cardio-pulmonary resuscitation, public policy efforts to encourage witnesses to contact emergency medical services (EMS) through collaborations with police and EMS

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as well as laws protecting witnesses from prosecution for low-level offenses, lay distribution of naloxone, a safe, highly effective overdose antidote listed on the World Health Organization's Model List of Essential Medicines for administration by witnesses, expansion of agonist maintenance treatment programs, and the development of safer injection facilities. Research on the effectiveness of these programs is limited due to the nature of overdose death as a statistical "rare event" and a dearth of funding from major public health authorities. There is an association between expanded methadone and buprenorphine maintenance services and reduced overdose on local-regional levels (Caplehorn, Dalton et al. 1996; van Ameijden, Langendam et al. 1999; Niveau, Rougemont et al. 2002; Auriacombe, Fatseas et al. 2004; Welsh, Sherman et al. 2008), a preliminary literature suggesting a similar association between expanding naloxone distribution and reduced overdose mortality in select localities (Maxwell, Bigg et al. 2006; Sporer and Kral 2007), data demonstrating a life-saving effect of training in rescue breathing (Dietze, Cantwell et al. 2002; Seal, Thawley et al. 2005; Galea, Worthington et al. 2006; Piper, Rudenstine et al. 2007), and data demonstrating zero overdose fatalities at safer injection facilities in seven countries (Kerr, Tyndall et al. 2005; Kerr, Stoltz et al. 2006).

Naloxone programs are of particular interest in prevention of overdose death, due to both simplicity of program delivery and the capacity to overcome barriers to medical care noted in prior research. Ample data demonstrate acceptability of naloxone distribution for service providers and drug users (Coffin, Fuller et al. 2003; Seal, Downing et al. 2003; Lagu, Anderson et al. 2006; Worthington, Markham Piper et al. 2006; Beletsky, Ruthazer et al. 2007; Kerr, Dietze et al. 2008). Programs have been shown to be effective at teaching drug users how to prevent and manage overdose (Green, Heimer et al. 2008) and ecological data suggests reduced overdose fatality in some localities during a period of naloxone distribution (Maxwell, Bigg et al. 2006). U.S. programs, which routinely record the number of naloxone kits distributed and the number of returning clients reporting use of the naloxone to save a life, generally report 10-20% of kits resulting in a "save" almost all of which were considered appropriate uses by program staff (Coffin 2007). If we assume approximately 4% of heroin overdoses result in a death (Darke, Mattick et al. 2003), these numbers suggest at least 0.5-1% of naloxone kits distributed result in a life saved that may otherwise have been lost.

Overdose prevention programs are commonly incorporated into HIV prevention programs for drug users, although incorporation into general medical care, drug treatment, and prison programs are other logical options. The link between HIV and overdose prevention is reasonable as both diseases present similar risk factors (e.g. polydrug use including stimulants, unsafe injection behaviors, psychiatric comorbidities) and the programs could mutually enhance uptake, client satisfaction, and provider-client relationships. Furthermore, as overdose is the top cause of death among drug users in many parts of the world, overdose prevention may be the most effective way to reduce mortality among those at risk of or infected with HIV in those countries where injection drug use drives the HIV epidemic. Finally overdose, as a major life event, may be an opportunity for intervention to improve risk behaviors; similar to the LIGHT model for HIV-risk behaviors, in which emergency department nurses implemented risk behavior counseling for HIV-positive IDUs (Andersen, Smereck et al. 1993), this approach was demonstrated to be feasible in Perth, Australia (Davidson 1999).

In this report, conducted for the Eurasia Harm Reduction Network (EHRN) and funded by the World Health Organization, the current situation with regard to overdose epidemiology, services, knowledge, and policies in selected Eurasian is summarized. Given the prevalence of drug use and its role in driving the HIV epidemic in this region, overdose is believed to be a major cause of mortality among people living with HIV and illicit drug

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users alike. Nonetheless, reliable data on drug overdose are difficult to obtain in the best of infrastructural circumstances and may face unique obstacles in this region. Moreover, stigma and drug control efforts may at times conflict with life-saving efforts. The countries surveyed were selected based on varied experience with drug use, geography, overdose programming, and the presence of on-site researchers able to rapidly gather data. The report is based largely on previously collected data and informal interviews with individuals selected by the on-site researcher. The goal is to provide a status report and provide a resource for future regional and state-specific planning.

Data were collected by local researchers based on published and unpublished literature, reports, and databases, interviews with stakeholders and current opinion. Where no source is noted, reader should assume the statement is based on researcher experience or perceived general opinion. As the report was generated rapidly, some information was not available at the time of production and citations were not independently confirmed, thus all citations should be confirmed by researchers utilizing this report. Results for each state are presented separately in alphabetical order and divided into four sections with sources listed at the conclusion of the report:

- A: EPIDEMIOLOGY
- B: SERVICES
- C: KNOWLEDGE AND SKILLS
- D: LOCAL AND NATIONAL POLICY

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MAIN FINDINGS OF THE SURVEY

Drug overdose follows prevalence of drug use, in particular injection drug use (IDU). The epidemiology of drug overdose is fairly well-documented in some and essentially non-existent in other Eurasian countries surveyed. Emergency medical services (EMS) are limited in rural areas and not always prepared to manage drug overdose, while targeted overdose prevention programs are a recent and rare phenomenon. There is little to no policy work regarding overdose, but substantial interest in many communities.

Research and data:

Each country surveyed faces a substantial number of IDUs, although IDU-related HIV epidemics vary. Cause of death among IDUs is poorly documented, but overdose is generally the top cause of death where data or expert opinion is available. Overdose data is minimal, unreliable, and believed to dramatically underestimate the prevalence of overdose due to poor data collection, limited access to toxicological resources, the stigma of drug use and overdose, and concern from witnesses and healthcare providers alike of police involvement in both the western and eastern countries of the region. Many of these issues are major cultural barriers to reliable overdose mortality data. EMS and local hospital databases provide some information and drug user registries were of value in Russian data collection. Moreover, drug user surveys have proven successful in documenting and characterizing drug overdose in Russia and simple questions added to pre-existing national surveys have added important basic information to the understanding of overdose in Latvia. Drug user surveys and focus groups may prove to be of great value throughout the region, in particular if considered in the context of EMS, hospital, and medical examiner data where available.

Based on the limited available information, overdose appears to be a major source of mortality in Russia. Data in the remaining countries is inadequate to draw significant conclusions, although drug overdose may be a more significant cause of mortality in Kyrgyzstan and Tajikistan than in Latvia and Romania. Heroin remains the major source of overdose mortality although other opiates, including oral opiates, have emerged as a notable cause of death in some sites, alcohol is a major co-contributor, and use of amphetamine-type stimulants may be found to be a contributor as the epidemic is further characterized. Most overdoses reportedly happen at home although EMS report most overdoses as being attended to in public settings such as streets or staircases. As in some other regions of the world, young drug users frequently overdose but may often do not suffer a fatal overdose until several years into their drug using careers. Overdoses were frequently noted to occur following release from substance dependence treatment (e.g. Latvia, Russia, Tajikistan) and in relation to incarceration or release from prisons or jails.

Due to extreme limits in data availability, we have speculated possible overdose prevalence based on the previously mentioned evidence that approximately 20% of IDUs overdose each year, and that 49 out of 100 overdoses receive medical attention and 4 out of 100 result in death. The results vary, likely due to limited availability of EMS and of naloxone in ambulances, and thus the following statements are merely exploratory and should not be referenced as scientific estimates:

- In Kyrgyzstan, 25 000 IDUs would be expected to experience about 5 000 overdoses and 200 deaths; the Bishkek EMS attended over 600 overdoses in 2006, suggesting a approximately 100 overdose deaths in Osh in 2006 (57 were recorded).
- In Latvia, an estimated 10 000 IDUs would be expected to experience 2 000 overdoses and 80 deaths; Riga EMS attended over 700 overdoses in 2007, suggesting approximately 56 overdose deaths in Riga in 2007 (17 were recorded).

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- In Romania, an estimated 25 000 IDUs would be expected to experience 5 000 overdoses and 200 deaths; Bucharest EMS attended 178 overdoses in 2006, suggesting approximately 14 overdose deaths in Bucharest in 2007 (21 were recorded).
- In Russia, the 355 568 IDUs registered in Russia in 2006 would have been expected to experience 71 114 overdoses and 2 844 deaths (9 354 were recorded). The estimated 2 000 000 IDUs would be expected to experience 400 000 overdoses and 16 000 deaths.
- In Tajikistan, an estimated 33 000 IDUs would be expected to experience 6 600 overdoses and 264 deaths; Khorog EMS attended 165 overdoses in 2006, suggesting approximately 13 overdose deaths in Khorog in 2007 (27 were recorded).

Services:

EMS and hospital-based overdose care are broadly available in most of the countries surveyed, although availability may be severely limited by distance, mountainous terrain, inadequate number of ambulances, and limited access to naloxone for medical providers. Naloxone availability on ambulances is often restricted to specialized ambulances in major city centers or sometimes not available at all. Overdose programming in Tajikistan has included providing naloxone to EMS and hospital staff, leading to an impressive reduction in mortality among those overdoses attended to by medical professionals in Khorog. Medical services are generally state-funded although in some countries patients often give "tips" for service or have to pay for fuel costs. While ambulance staff in most areas rarely call police in the case of an overdose, this is not universal and the fear of police involvement is a major deterrent to calling for emergency assistance. Some countries, such as Kyrgyzstan and Romania, require witnesses to drug use to contact police, although such policy may not be in place for many EMS programs.

Several overdose prevention programs have emerged in recent years in many of the countries surveyed. Although most programs are based on models including education, rescue breathing training, and distribution of naloxone similar to those piloted in other countries, there are differences. For example, several programs provide naloxone not only for lay administration, but also to medical staff in areas with no registered supply, as well as to families given the frequency with which drug users live with family in Eurasia. Agonist maintenance therapy has varied legality in the region and generally inadequate availability to serve as an overdose prevention intervention.

Naloxone is not a registered medical drug in Romania and Tajikistan and frequently unavailable in Russia and Kyrgyzstan. Naloxone is theoretically available by prescription in pharmacies in Russia and Latvia although this is not accepted practice, and only a handful of low-threshold programs in Russia, Kyrgyzstan, and Tajikistan provide naloxone for lay administration. Cardiamine, also called nikethamide, is often used in several countries surveyed; this medication was remotely used as a respiratory stimulant but its use is contraindicated in patients at risk of seizure, stroke, head injury, asthma, airway obstruction, hypertension, or heart disease, and the risks of convulsion are worsened if sympathomimetic agents (including illicit stimulant drugs) or older anti-depressant medications (MAOIs) are on board.

Knowledge and skills:

Medical personnel are universally trained in basic overdose management, although naloxone availability is limited in many sites and some providers expressed misconceptions

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about the side effects of naloxone (i.e. associated problems like pulmonary edema that are currently believed to be due to opiate overdose rather than its treatment).

Although training on overdose for drug users is rarely available, surveys in some regions demonstrate fair baseline knowledge and attempts at management, including reasonable efforts such as physical stimulation and dangerous efforts such as injecting salt water or other substances.

Policy:

Overdose is briefly noted in selected policy documents but no detailed objectives or explicit means to address the problem are noted. Recent national policy and executive documents in Tajikistan consider overdose as a more prominent component of health and HIV agendas. Latvia is discussing the establishment of overdose as a priority in national HIV planning. The EU Action Plan on Drugs addresses overdose. Nonetheless, laws in some states appear contradictory in that overdose witnesses or medical providers may be legally obligated to report overdose to police while drug users are simultaneously promised access to medical services. No laws exist in any of the countries surveyed to establish overdose prevention programs, protect witnesses who call emergency services, or encourage naloxone distribution.

Table I: Selected Findings by Country

Country	Drug User Prevalence	Overdose (OD) Data Prevalence	Sources	Relation to HIV epidemic
Kyrgyzstan	Estimated 25 000 IDUs	Unknown; EMS Bishkek City recorded 609 OD calls with 57 deaths in 2006	Ambulances; Potential source- Republican Narcology Center	IDU-driven HIV epidemic, OD top cause of death among IDUs
Latvia	15 000 problem drug users, 65% IDUs	17 deaths in 2006; 173 ODs at Toxicology Centre Riga in 2007; 719 EMS calls for "narcotic drug contamination" in 2007	Public Health Authority; drug user survey	IDU-driven HIV epidemic, 42/56 deaths among people with HIV in 2007 were drug users
Romania	16-32 000 heroin IDUs in Bucharest	35 drug-related deaths out of 2 083 autopsies in 2006	National Anti-Drug Agency; Potential source- Ministry of Health, PHARE Project, drug user survey	HIV epidemic not driven by IDU, but increasing prevalence over past 10 years
Russia	Up to 2 000 000 IDUs	6.6 deaths/100 000 general population in 2006; 18.8-20.3% of deaths among drug users	Registry/dispensary data, drug user surveys; Potential source - ambulances	IDU-driven HIV epidemic; OD 2 nd leading known cause of death among drug users
Tajikistan	15-50 000 IDUs	unknown; EMS Khorog recorded 165 OD calls with 21 deaths in 2006	EMS and hospitals; Potential source-drug user survey	IDU-driven HIV epidemic, opiate OD believed to be leading cause of death among IDUs

Table I: Key Findings by Country (continued)

Country	Service limits	Naloxone	Prevention Programs	Policy
Kyrgyzstan	Lack of fuel and vehicles; limited rural service	Prescription only with some program dispensation	Ranar, Sotsium, other programs train in OD and rescue breathing, distribute naloxone; +agonist maintenance	Registry may deter calling EMS, ambulance required to report OD to police but often don't, police may demand money; no laws to support OD prevention
Latvia	Fear of police involvement	prescription-only; used by EMS; no lay distribution	Syringe exchange program leaflets; +agonist maintenance	Registry in place but incomplete; EMS do not call police unless safety risk; no laws to support OD prevention; draft national HIV/AIDS program sets overdose as a priority

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Romania	Police follow ambulance, family stigma, OD considered rare	Unregistered but used in emergency department sometimes in semi-legal status; not by EMS	No specific programs but education on request; +agonist maintenance	Registry to monitor care of drug users; OD mentioned once in national drug strategy; Witnesses required to file police report for witnessing an OD
Russia	Limited rural service, "tips", some police reporting	Narcology ambulances only, several pilot programs dispense to IDUs; in theory available by prescription	3 pilot OD training and naloxone distribution programs currently active; another program works on advocacy of naloxone in healthcare settings	Registry may deter calling EMS but also improves data; some ODs have been arrested; no laws to support OD prevention

RECOMMENDATIONS

Illicit drug overdose should be actively addressed in all countries surveyed. Although available data indicate the most urgent need in Russia, most experts believe overdose to be a major problem in all countries surveyed that is not fully reflected in the current statistics. Improved data collection systems will likely identify problems that are not currently evident but are suspected from interviews with stakeholders. Research is urgently needed throughout the region to assess and characterize overdose, overdose trainings would be of value, and policy efforts may help to coordinate agencies, establish funding streams, and improve access to life-saving care.

Research and data

1) *Further research should include:*

- a. Baseline overdose epidemiology from medical examiners, ambulances, and drug user surveys on local and national levels. Second generation HIV surveillance among IDUs should address overdose. Drug user surveys could serve as assessments of the overdose situation, skills, knowledge, and service availability in the short term while establishing more reliable sources that may require substantial infrastructural investments.
- b. Evaluation of the toxicological capacity for post-mortem examination. Several countries noted limited resources to perform toxicological analysis of decedents in cases of suspected overdose.
- c. Evaluation of overdose prevention programs in the region. The growing number of programs will need well-planned evaluations. Results from other regions of the world may not be comparable, given distinct characteristics of overdose in the region (e.g. poor availability of EMS).
- d. Cost-effectiveness studies of naloxone distribution and other overdose prevention programs. Overdose prevention may prove highly cost-effective per life saved, but a sophisticated analysis is needed.
- e. Ethnographic studies of overdose survivors and prevention program participants. Given the limits of and lack of quantitative data on overdose, qualitative studies are needed to identify, supplement and explore the overdose issue and the role of interventions.

2) *Harmonization of the definition of and standard for identifying and characterizing drug overdose:* Drug overdose is frequently recorded differently by medical examiners, medical services, and governmental agencies. National and international efforts to standardize these data would be of value in understanding the extent of the problem and identifying areas most in need of prevention planning. EMCDDA began these efforts but more work is needed. Preliminary domestic efforts toward this aim have also been made in the United States, coordinated by representatives of the Substance dependence and Mental Health Services Administration of the Department of Health and Human Services, which may be of interest to epidemiologic agencies in Eurasia.

3) *Protocol for local rapid needs assessment:* Given the lack of data in most localities, a method to assess the overdose situation in localities is needed in order to determine the need for overdose prevention programming. In some regions, unpublished data from medical examiners, hospitals, or emergency medical services is available on request, while in other regions surveys or focus groups with drug users may be more useful. A protocol for minimum data and methods of collection would be of great value to narcology/drug treatment clinics, AIDS

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centers, and harm reduction services assessing the extent of overdose and overdose mortality in local communities.

- 4) *Toolkit for service development and evaluation*: Given the undeveloped nature of overdose prevention interventions, guidance on good practices as well as expected process and outcome data would be of value, as would methods of collecting such data. For example, several low-threshold programs have developed simple forms to collect enough data for evaluation while minimizing any deterrent to participation; such templates may be of use to other organizations.
- 5) *Biannual review of overdose epidemiology*: Given the evolving nature of overdose epidemiology and services, national and international agencies should systematically collect data related to overdose epidemiology, knowledge, and service accessibility on a regular basis, similar to procedures for HIV transmission among IDUs, to evaluate local-regional progress and needs.

Services

- 6) *Rapid roll-out of peer-driven overdose education and naloxone distribution*: Drug overdose is documented adequately at this time to support broad expansion in low-threshold services targeting:
 - a. IDUs in general
 - b. Persons with HIV in those countries with an IDU-driven epidemic
 - c. Family and friends of opiate users
 - d. Prison and pre-trial detention inmates
 - e. Substance dependence treatment patients prior to release
- 7) *Education for providers*: selected groups of providers, such as those working in HIV and tuberculosis clinics, would be appropriate targets for overdose prevention and management training given the high prevalence of IDUs in their patient panels and the potential for drug-drug interactions.
- 8) *Universal availability of EMS*: Ambulances should be available in all areas of each country, there should be no charge or "tip" expected, more vehicles and fuel are needed in Kyrgyzstan and Tajikistan, and all vehicles should carry naloxone with providers trained and encouraged to use the medicine.
- 9) *Reduce fear of contacting EMS*: Efforts to collaborate with EMS and police authorities are needed to clarify policy regarding overdose and reporting to police. If authorities agree to policies improving the safety of calling EMS, mass media campaigns would then be needed to inform drug users and improve utilization of medical services.
- 10) *Rescue breathing and cardio-pulmonary resuscitation*: Currently training in rescue breathing is recommended for overdose programs due to the predominance of opiates and simplicity of instruction. However, as amphetamine-type stimulants become more widely used in Eurasia and details of stimulant overdose prevalence and natural history emerge, broader training in cardio-pulmonary resuscitation may be indicated.
- 11) *Post-overdose interventions*: Overdose is a major life event that may present the opportunity for risk behavior modification or enrollment in substance dependence treatment. Another consideration would be prescribing naloxone from ambulances and hospitals.

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- 12) *Provider self-care*: Former and active drug users are often involved in healthcare activities as providers or peers and may be at risk of overdose. Self-care programming, to provide support and mental health services to drug service providers, would be of potential benefit in preventing overdose.
- 13) *Internet resource*: Web resources including overdose research, data, and materials for developing services in multiple languages would be of great utility.
- 14) *Safer injection facilities*: Given the absence of overdose death among participants in safer injection facilities, development would be appropriate in selected environments, although political and legal barriers may be insurmountable in some countries.

Law and Policy

- 15) *Establish priority of overdose*: Overdose is a substantial cause of morbidity and mortality that remains inadequately recognized or addressed. Efforts to establish overdose as a priority in Eurasia are needed, and may be improved by establishing overdose as an indicator in national drug and HIV/AIDS policies.
- 16) *Advocacy to prioritize overdose in the EU agenda*: Current EU strategy, action plan, and service recommendations include overdose as part of drug policy and intervention, yet advocacy to address overdose at the Member State level is needed.
- 17) *Identify responsible agencies*: To adequately address drug overdose, governmental agencies must be identified to take primary responsibility for reducing overdose morbidity and mortality.
- 18) *Financial incentives*: Financial incentives or reimbursements would greatly improve utilization by providers of overdose prevention and management services.
- 19) *Monitoring of and assistance for naloxone access*: *Since Naloxone is listed as a WHO Essential Medicine countries should receive assistance in using Naloxone effectively.*
- 20) *Legislative analysis and advocacy*:
 - a. Advocacy for naloxone registration in Romania and Tajikistan
 - b. Advocacy for non-prescription naloxone throughout the region to improve access for programs and clients (of note, Italy currently permits non-prescription naloxone sales).
 - c. Advocacy for legalization of agonist maintenance treatment in Russia and Tajikistan and expansion throughout the region.
 - d. Development of model legislation: There are many examples of legislation to support overdose prevention (i.e. laws to protect witnesses and victims of overdose from prosecution for minor offenses, laws protecting witnesses who administer naloxone from any hypothetical legal risk, etc). Model legislation such as that produced by the Canadian HIV/AIDS Legal Network, may be extended to support overdose prevention and management programming.

Funding

- 21) *Integration into harm reduction programs:* Overdose can be easily integrated into larger harm reduction programming, at a low cost with substantial potential benefit. Donors should be to take the lead in working with sponsored program to ensure that overdose component is included in the range of interventions and policies funded
- 22) *HIV and harm reduction funding:* Given the prevalence of overdose and the IDU-driven HIV epidemic in many countries in the region, overdose may be a significant cause of death of people living with HIV so local, national, regional, and international HIV and harm reduction funders should appropriate resources to support overdose prevention.
- 23) *Substance dependence treatment and prevention funding:* Given the high rate of overdose death following release from many forms of substance dependence treatment, integration of overdose prevention education and naloxone distribution into such programs would be an important means to maintain the benefit of substance dependence treatment.
- 24) *Prison reform funding:* Given the high rate of overdose death following release from jail or prison, integration of overdose prevention education and naloxone distribution into prison release and pre-trial detention would be important to reduce mortality.
- 25) *First aid and injury prevention funding:* Given the nature of overdose, organizations like the Red Cross may provide appropriate resources for overdose prevention.
- 26) *Exploration of other sources of funding:* As drug overdose has fallen through the cracks, with inadequate attention from traditional health agencies, a coordinated effort to explore alternate sources of funding is needed.

KYRGYZSTAN

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Aug 4, 2008*

SECTION A: EPIDEMIOLOGY

- 1) Data sources for drug overdose:
 - a) There is no central database
 - b) Emergency medical services / ambulance service (EMS) in Bishkek track calls; unclear if other EMS track calls.
 - c) Future data possibilities:
 - i) Drug user surveys
 - ii) Republican Narcology Center (RNC) could develop a data collection system
 - iii) Toxicology departments, ambulance stations, Ministry of Emergency Situations could also develop tracking systems.
 - d) Barriers to data:
 - i) Most death certificates cite 'heart failure' or 'breathing failure' (or sometimes alcohol or psychotropic intoxication) as cause of death because the relatives often request a different cause of death than 'overdose'.
 - ii) Doctors also prefer not to site overdose as cause of death because overdoses (fatal or non-fatal) have to be reported to the police, although an EMS worker interviewed reported that they are not required to call the police even if they know ahead of time that the call is for overdose.
- 2) Drug use prevalence (population 5 284 149 in 2007):
 - a) Kyrgyzstan is on a major drug trafficking route.
 - b) There are 8 454 officially registered drug users, 53.86% are IDUs although United Nations Office of Drugs and Crime (UNODC) estimates the total number of IDUs as about 25 000 (Assessment by UNODC Regional Epidemiology Adviser Kamran Niaz sited in Kyrgyz Global Fund Proposal Round 7).
 - c) Based on the EMCDDA country profile, there were an estimated 44 000 IDUs in Kyrgyzstan in 2005 (EMCDDA Country Profile 2008)
- 3) Top causes of death among:
 - a) Drug users (based on experience at NGO Ranar):
 - i) Opium overdose
 - ii) Tuberculosis
 - iii) Pneumonia
 - iv) Cirrhosis
 - b) Drug treatment program patients: no data provided
 - c) People with HIV: 70% of people with HIV are injection drug users (IDUs), thus the causes of death are believed to be similar to those for drug users.
 - d) Prisoners: TB is the leading cause of death in prisons per British Broadcasting report (<http://news.bbc.co.uk/2/hi/asia-pacific/7307398.stm>), although Kyrgyz Ministry of Health estimated that 80% of the prison population in 2004 and 2005 were IDUs.
- 4) Fatal drug overdose (see Table): 57 fatal overdoses were attended by Bishkek EMS in 2006.
- 5) General drug overdose (see Table):
 - a) The number of overdose calls and fatalities recorded by the Bishkek EMS has increased substantially from 2002-2006. From January to March of 2007 76 overdose calls were made to EMS, with no fatalities.
 - b) On average 3-4 overdose calls per week are made to Bishkek EMS, with periodic increases to 8-10 calls per day. The EMS worker interviewed believed this was due

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to new shipments of heroin.

Frequency of calls to the EMS on overdose (Bishkek City, EMS data)

Year	Number	# Died
2002	162	N/A
2003	161	N/A
2004	357	N/A
2005	341	37
2006	609	57

- 6) Further overdose details (based on experience at Ranar):
 - a) Drugs involved: heroin
 - b) Modes of administration: injection
 - c) Demographics (per EMS worker interview):
 - i) Location of overdose: most overdoses attended by Bishkek EMS were on the streets, in shooting alleys, and in house entryways. Most of the overdose cases happen in the 4 city districts where the drug dealing is highest.
 - ii) Timing of overdose
 - (1) During or soon after drug treatment
 - (2) Mixing of alcohol with other psycho-active substances

SECTION B: OVERDOSE SERVICES

- 1) EMS and hospital services
 - a) Service availability: EMS is available in Bishkek; limited availability in rural areas and suburbs.
 - b) Cost: Average ambulance services charge 100 som (\$2.5 – 3) (1.69 – 2.03EUR) for 1 shot or for gas (under the table). Private ambulance charges from 350 to 500 som (\$10 – 15) (9.78 – 10.16).
 - c) Service barriers:
 - i) lack of gasoline (if the distance is far)
 - ii) limited availability of vehicles (Bishkek with population of 700,000 to 900,000 has 4 state-funded i.e. “free” EMS vehicles)
- 2) Naloxone
 - a) Legal status: Naloxone is registered in the Kyrgyz essential medicines list as a class B substance (i.e. restricted to prescription but not a controlled substance). (August 25 interview with Djanyl Djusupova). Law #91 Article 35 dated 30 April 2003 establishes the medicine list, which has included naloxone since Healthcare Ministry order #268 on 28 June 2002, reconfirmed in decree #759 on 31 October 2006.
 - b) Availability: not officially available for lay purchase, although last year Ranar reported that it could be bought “under the table” for 100 som or about \$3 (2.03 EUR) a pack
 - c) Sales: One company supplies Ukrainian-made naloxone (Unihelp Limited at Tashekntskaya 26)
 - i) Cost is 175,48 (\$5) (3.39EUR) per box when bought in large quantities or 185 som (\$5.28) (3.58 EUR) for a box when bought individually.
 - ii) 100 “packages” (10 ampules of 1mL each at 0.4mg/mL) were imported in 2004-2006; 600 packages in 2007, and 300 packages so far in 2008. (24 August 2008 interview with Republican Narcology Director Ruslan Tokubaev)
 - d) Use: EMS and hospitals use naloxone. Bishkek EMS ambulance starts out shift with 5 vials of naloxone in the medicine case (EMS worker interview). EMS also uses cardiamin (also known as nikethamide).

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- 3) Prevention programs
 - a) NGOs:
 - i) "Ranar" holds education mini-trainings "Overdose" which include:
 - (1) Education
 - (2) Information materials and naloxone distribution when the medication is available
 - (3) Rescue breathing
 - ii) Sotsium holds mini-seminars on overdose prevention
 - iii) Sotsium and other NGOs that operate syringe exchange points also hold overdose seminars
 - iv) Agonist therapy: Two methadone maintenance programs in Osh and Bishkek (81 patient slots) and a pilot program in prisons (Subata & Stuikyte 2007)
 - v) Safer injection facilities: none
 - b) Barriers: Naloxone distribution may be inhibited by article 93 of the Administrative Code which states that production, purchasing and selling of medications involves administrative liability; and in the cases when, because of carelessness, harm is done to a person's health, the liability becomes criminal.
 - c) Program successes: Ranar organized month-long free naloxone campaign during which 100 ampules of naloxone and 500 informational brochures were distributed to IDUs and family. During this period 25 clients returned with feedback or requests for additional naloxone. (Project report, Ranar, 16 February 2008)
- 4) Recommended priorities:
 - a) Drug user surveys as needs assessment tool
 - b) Broad access to naloxone
 - c) Integrate naloxone prescription into medical care at low-threshold centers and clinics
 - d) Low-threshold programs to provide overdose prevention
- 5) Further work: These organization could organize overdose trainings:
 - a) NGO Ranar: Overdose and naloxone trainings for law enforcement, drug user representatives, low-threshold program staff, drug users and their relatives, and future trainers
 - b) NGO Sotsium and RNC: Overdose training without a naloxone component
 - c) Chief Narcologist R. Tokubaev expressed his opinion that naloxone could be distributed to drug users and family through RNCs by prescription.

SECTION C: OVERDOSE KNOWLEDGE AND SKILLS

- 1) Medical and drug treatment provider knowledge: no information provided
- 2) Drug user knowledge: no information available
- 3) Drug user skills (based on experience at Ranar):
 - a) Drug users often manage overdose by injecting a salt solution, performing rescue breathing and cardio-pulmonary resuscitation, and attempting physical stimulation. In rare cases they might use cardiamine but they call EMS very rarely.
 - b) Some syringe exchange programs distribute cardiamine
 - c) Barriers to effective management:
 - i) fear of police
 - ii) cost of ambulance; witnesses may call an ambulance but then leave the victim

SECTION D: LOCAL AND NATIONAL POLICY

- 1) Strategies: Overdose is not included in any known national or regional strategy
- 2) Agencies with potential involvement:

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- a) RNC and AIDS Center are ready to cooperate, if a strategy is developed.
 - b) Mostly international organizations have expressed interest in overdose prevention and naloxone (e.g. Open Society Institute's International Harm Reduction Development Program, Population Services International (PSI), CARHAP program of the GRM International, UNODC, Central Asia AIDS Project (CAAP)).
- 3) Law enforcement
- a) Drug user registry: There is a drug user registry but local experts don't feel that affects the overdose situation. Fear of the police and corruption remain a major obstacle to accessing care.
 - b) Healthcare: According to the law, if EMS receives an overdose call, they must call police and come together, but EMS reports this is not routine policy.
 - c) Law enforcement officers reportedly demand money if they arrive at an overdose call.
 - d) Law enforcement officers do not participate in resuscitation efforts.
- 4) Laws: There are no known laws regarding data collection, supporting naloxone, or protecting witnesses from arrest or prosecution when they call for help.

LATVIA

Researcher: Egija Lapina, Research Consultant
Aug 1, 2008

SECTION A: EPIDEMIOLOGY

- 1) Data sources for drug overdose:
 - a) Latvia Public Health Agency (PHA) publishes an annual report:
 - i) Latvia State Centre for Forensic Medical Examination (LSCFME) conducts forensic studies in all suspicious deaths and sends death certificate information to Health Statistics and Medical Technologies State Agency (HSMTSA) which prepares the information for publication by PHA
 - ii) Overdose deaths are recorded as "drug-related deaths" (DRDs) per the EMCDDA definition¹.
 - iii) Researcher notes that these data may be underestimated due to:
 - (1) Not all decedents undergo toxicology
 - (2) Some substances may evaporate (Spread of addictive substances use and its consequences in Latvia; PHA, Ministry of Health; 15th ed. 2007), leading to a need for improved technology and trained experts
 - (3) Medical examiners may not be identifying overdose as a cause of death for unclear reasons
 - b) First Medical Aid Stations (EMS) receive emergency calls and could provide data on drug overdoses. Ambulance staff determine and record the cause of the call regardless of whether or not the patient is transferred to a hospital.
 - c) Future data possibilities:
 - i) Police databases about drug abuse and overdose are only available if there is a related criminal offence, (violence, assault, driving under the effects of any narcotic or psychotropic substances, detention for use or possession of illicit drugs, etc.).
 - ii) STI and AIDS Prevention Centre (PHA) do not maintain data regarding drug overdose.
 - iii) Two hospitals collect their own data in Riga:
 - (1) Latvian Toxicology Center (LTC)
 - (2) Psychiatry and Narcology Center (PNC)
 - (a) Riga PNC (reorganized from State Agency for Narcology in March 2007) is now responsible for collecting data on inpatient and outpatient institutions and their patients, including toxicological tests.
 - (b) After March 2007, when the national Focal Point was merged with the PHA, data became difficult to access due to differences in databases and legislative issues.
 - (c) Legislative amendments are needed to allow comparison of different sources of data (e.g. police data, data on mortality, data from inpatient and outpatient institutions, etc.). The most important problems with introducing an indicator for overdose are (Spread of addictive substances use and its consequences in Latvia; PHA, Ministry of Health; 15th ed. 2007):
 - (i) Protection of individual data may prohibit merger of recorded personal data into one dataset

¹ According to the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) definition of drug-related deaths: "Drug-related deaths and mortality among drug users" refers to those deaths that are caused directly by the consumption of drugs of abuse. These deaths occur generally shortly after the consumption of the substance(s)"

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- (ii) Each database has different objectives, thus categories will be different and difficult to compare.
 - (iii) Some of the data sources are of low quality.
 - (iv) Medical treatment data varies greatly based on when the data are recorded, whether it has been changed, difficulty identifying all cases, confidentiality of data, and other problems.
- 2) Drug use prevalence (population 2 259 810 in 2007):
- a) 12.3% of general population survey reported lifetime drug use, 2.6% reported lifetime opioid use in 2002 (EMCDDA)
 - b) By mortality multiplier, there were 1 842 to 3 182 problematic drug users in 2001, 1 000-1 917 in 2003, with a rate of 1-1.8 per 1000 inhabitants in 2002. (EMCDDA)
 - c) By capture-recapture methods there were 2 254-4 788 problematic drug users in Riga in 2003 (blood donors, drug treatment, and tuberculosis data). (EMCDDA)
 - d) Other estimates are higher (Drug Policy and Health in Latvia 2002):
 - i) 10 000 problem drug users in country based on multiplier method although the methodology of this is unclear (EMCDDA);
 - ii) 15000 drug dependant people with 90% of registered dependant people reporting opiate use and 65% of the total reporting injection drug use (IDU)
 - iii) 18 725 IDUs, 22% of whom are HIV-positive (Cook & Kanaef, 2008)
 - e) A plurality of drug treatment admissions were for heroin (49%) followed by amphetamines (14%) and other opiates (11%). (Spread of addictive substances use. PHA)
- 3) Top causes of death among:
- a) Drug users: No breakdown of death among drug users available
 - b) Drug treatment program patients: No data available
 - c) People with HIV:
 - i) Through 2000, 84% of HIV cases of known etiology were secondary to IDU (European Centre for AIDS).
 - ii) A survey of 407 IDUs in Riga found that 22.6% tested sero-positive for HIV (Prevalence of HIV and other infections and risk behaviour among injecting drug users and their main sexual partners in Latvia, Lithuania, and Estonia, 2007-2008, unpublished).
 - iii) In 2007, 42 out of 56 deaths were among HIV-positive patients recognized as narcotic drug users. There is no data available regarding active drug use at time of death, although in the following table, overdose was the second most frequent cause of death among people with HIV in 2007.

Cause of death among people with HIV in 2007 (Public Health Agency)

Cause of death	Nr of cases
Tuberculosis	9
Contamination	6
Hematogenic and/or anomalies of immune system	6
Pneumonia	5
Unclear	5
Infection and/or parasitic disease	4
Cardiopathia	3
Atrophic cirrhosis	3
Violence	2
Cancer	2
Toxic demence	1
Suicide	1
Cardiac-pulmonary insufficiency	1
Pancreatitis	1
Drowning	1

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Cardiac infarction	1
Meningoencephalitis	1
Limfadenopathy	1
Respiratory insufficiency	1
Hepatitis C	1
Alcohol hepatitis	1
Total	56

- d) Prisoners: In 2007, 3 prisoners overdosed on narcotic drugs, 1 died (Latvian Prison Administration Medical Department data)
- 4) Fatal overdose data (based on PHA publication):
- a) The only breakdown of overdose death data available and published by PHA is age and trends in death rates by year. (Spread of addictive substances use and its consequences in Latvia; PHA, Ministry of Health; 15th ed. 2007)
 - b) Based on interviews and expert opinion, these PHA data are believed to severely underestimate the number of overdose deaths.
 - c)

of lethal narcotic drug overdoses

Year	# of cases
1996	1
1997	5
1998	3
1999	32
2000	42
2001	36
2002	35
2003	12
2004	14
2005	14
2006	17

lethal narcotic overdoses by age and sex (2006)

Age	Male	Female	Total
15-19	2	1	3
20-24	3	1	4
25-29	7	0	7
30-34	2	0	2
35-39	1	0	1

Source: PHA 2007

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Narcotic drug overdose registered in Latvian Toxicology Centre for Riga region in 2007

Narcotic drug	Male	Female
amphetamines	23	6
amphetamines comb.	13	1
Efedrin	1	
Ecstasy	3	1
Heroin	36	5
Heroin comb.	13	2
Hinin		1
cocaine	2	
marihuana	5	2
marihuana comb.		1
metamfetamins	4	3
Morphine	3	2
morphiines comb.	3	
Oksibutirat-Na	4	
Unidentified narcotic drug	16	6
Unidentified narcotic drug comb.	5	1
Opiates	10	1
TOTAL	141	32

Latvia Toxicology Centre 2007, unpublished data

- iii) EMS of Riga Region reported 719 calls for narcotic drug overdose in 2007, with 168 (23%) taken to the hospital.

EMS of Riga region attended narcotic drug overdoses in 2007

Age, gender	# emergency medical calls		Narcotic drug contamination		Drug addiction syndrome	
	Total	taken to hospital	Total	taken to hospital	Total	taken to hospital
Total	945	210	719	168	226	42
female	97	28	62	22	35	6
male	848	182	657	146	191	36
0-14	8	8	2	2	6	6
female	1	1		0	1	1
male	7	7	2	2	5	5
15-19	59	34	33	20	26	14
female	6	4	3	2	3	2
male	53	30	30	18	23	12
20-24	289	59	214	50	75	9
female	31	10	23	9	8	1
male	258	49	191	41	67	8
25-29	312	52	261	46	51	6
female	25	3	15	2	10	1
male	287	49	246	44	41	5
30-34	169	28	137	25	32	3

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female	18	4	11	3	7	1
male	151	24	126	22	25	2
35-39	70	17	44	14	26	3
female	7	3	5	3	2	0
male	63	14	39	11	24	3
40 and more	38	12	28	11	10	1
female	9	3	5	3	4	0
male	29	9	23	8	6	1

Source: First AIDS Medical Station of Riga Region (unpublished)

- iv) Although approximately 40% of Latvia's population live in Riga, these data cannot be extrapolated to the rest of Latvia. The Hospital of Ventspils reports only 42 "contaminations" in 2007, including 23 from alcohol, 3 from narcotic drugs, 12 from medications, and 4 from unclear source.
- b) Drug user survey data
 - i) A 2007 study involving 407 IDUs in Riga found that 44.4% reported ever overdosing, with about 32.8% overdosing once, 25.9% overdosing twice, and 32.5% overdose 3-5 times (Prevalence of HIV and other infections and risk behaviour among injecting drug users and their main sexual partners in Latvia, Lithuania, and Estonia, 2007-2008, unpublished).
 - ii) In 2006 the State Agency for Narcology and the Center for AIDS Prevention conducted a study of drug problems in Latvia in 12 municipalities with low-threshold HIV programs for IDUs. Snowball sampling recruited 555 IDUs, 68% male (Tendencies and habits of drug use in Latvia. State Agency for Narcology).
 - (1) 85 respondents (15.3%) had overdosed during the last 6 months.
 - (a) Those respondents had overdosed 1 to 11 times in the past 6 months
 - (i) 1.6 overdoses on average
 - (ii) 56 people out of 86 had overdosed once
 - (iii) 18 people had overdosed twice
 - (b) 39 (46%) were helped by a friend at their last overdose and 11 (13%) were attended to by an ambulance.
 - (2) IDUs that regularly attend low-threshold centers overdosed less frequently than those who did not regularly attend.
 - iii) The PHA conducted "Tendencies and habits of drug abuse in Latvia: analysis of the results of the chapter of 2007 of drug users cohort study (Riga, 2007)" with the NGO DIA+LOGS, including overdose questions.
 - (1) 12.1% of respondents had ever overdosed
 - (2) Heroin users were more likely to have overdosed than users of other drugs
 - (3) Those who were in treatment during the past year were more likely to have overdosed (19.8% vs 10.5%)
 - (4) Specialists believe that the number of overdoses increases when a new shipment of narcotics arrives as the purity and potency varies (opinion of toxicologists and narcologists)
- 6) Further overdose details
 - a) Drugs involved in overdose include: See above.
 - i) According to LTC data, prescription drug overdoses are occurring more frequently: e.g., *Ciclodol*, a Parkinson disease medication. Interviewed stakeholders feared this trend would worsen with difficult economic times.
 - ii) Home-made drugs have been associated with an extrapyramidal syndrome observed in intravenous methcathinone (ephedrone) users in Eastern Europe and

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Russia, including Latvia (A Parkinsonian Syndrome in Methcathinone Users and the Role of Manganese. *New England Journal of Medicine*; March 6, 2008). Ephedrone was mainly obtained from over the counter medicines freely available from pharmacies.

- b) Demographics of overdose:
 - i) See above
 - ii) Although there are no publicly available data regarding overdose in prisons, the proportion of prisoners using opiates in the month prior to incarceration (13%) matches the proportion using opiates during incarceration, raising the concern that overdoses in prison may be frequent (Spread of addictive substances use and its consequences in Latvia; PHA, Ministry of Health; 15th ed. 2007).

SECTION B: OVERDOSE SERVICES

- 1) Emergency medical and hospital services
 - a) Service availability: available in all localities
 - b) Cost: all emergency services are free of charge
 - c) Service barriers: Per interviews, IDUs attempt to self-manage overdoses and call an ambulance only in very critical situations. This behavior may be caused by beliefs that the ambulance team will refer them to law enforcement. In the past, overdoses were routinely reported to police but this has not been in place for 1 year among emergency medical services and 10 years at the LTC.
- 2) Naloxone
 - a) Legal status: Naloxone was registered in Latvia in 2004 under the INN name Naloxoni hydrochloridum. According to law and officials' opinions, medical intervention (i.e. naloxone and agonist maintenance treatment) can be conducted only by professionals with the relevant medical certificate and premises that are medically certified.
 - b) Availability: Naloxone is available in pharmacies for patients with prescription of relevant specialist. The approximate price is 2,65 LVL or 3,78 EUR per package (0.4 mg/ 1 ml, 10 ml per 1 ampoule, 10 ampoules per 1 package). There is no naloxone in low-threshold programs.
 - c) Sales: Warsaw Pharmaceutical Work Polfa S.A.

Drugs used in opioid dependency treatment in Latvia 2002-2007 (IMS Health data base)

	2002	2003	2004	2005	2006	2007
Total	548	522	10 266	14 731	11 174	10 271
buprenorphine	N/A	N/A	9 389	13 655	10 405	8 518
Subutex	N/A	N/A	9 389	13 655	10 405	8 518
naloxone	548	522	877	1 076	769	1 753*

*19% of 2007 naloxone sales were from pharmacies, although these may have been hospital pharmacies as there are no data suggesting physicians are prescribing naloxone directly to patients.

- d) Use: EMS routinely use naloxone. There are no data on use of high-dose naloxone in overdose cases.
- 3) Prevention programs
 - a) Per low-threshold specialists there is a shortage of and gaps in overdose training programs for non-medical harm reduction staff.

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- i) Projects:
 - (1) The syringe exchange in Riga, managed by NGO "DIA+LOGS", developed an overdose prevention leaflet and are seeking the finance for publication. Currently, the A4 format paper is distributed in two languages (Russian and Latvian) as a photocopy.
 - (2) There have been 3 seminars with a small overdose component:
 - (a) In 2008 one training session for low-threshold program staff (20 participants) within a project funded by European Commission (detailed project information on site www.aidsnetwork.eu; introduced participants to types of narcotic drugs, how to recognize overdose symptoms and possible treatment. The training session was theoretical with no practical demonstrations.
 - (b) UNODC in Latvia plans a seminar in September 2008 about outreach work and possibly overdose epidemiology and management (agenda currently under discussion).
 - (c) A seminar in 2005 included overdose recognition and management but there was no follow-up.
 - ii) Medical providers are trained according to approved guidelines of medical technologies (database is available at www.vsmtva.gov.lv) and recommendations developed for treatment of addiction patients (Guidelines for treatment of narcological (addiction) patients (Latvian State Narcology Centre).
 - iii) Agonist maintenance therapy: Methadone and buprenorphine therapy included 164 patients in 2006 but remains limited to Riga (Cook & Kanaef 2008).
 - iv) Safer injection facilities: none
- 4) Recommended priorities:
 - a) Establish the extent and priority of overdose among relevant agencies.
 - b) Identify indicators and reporting about overdose to establish a common and valid statistical system.
 - c) Assign responsibility to appropriate agencies and programs.
 - d) Develop collaboration between medical providers, NGOs, and law enforcement.
 - e) Conduct legislative analysis to find gaps and inconsistencies in laws pertaining to overdose (e.g., criminal and public health law may work at cross purposes).
 - f) Develop a handbook on overdose prevention and management for low-threshold program staff
- 5) Further work:
 - a) EMS and First Aid specialists could provide training on rescue breathing / CPR
 - b) Riga Centre of Psychiatry and Addiction Disorders could develop an overdose prevention and management training program.

SECTION C: OVERDOSE KNOWLEDGE AND SKILLS

- 1) Medical and drug treatment provider knowledge (based on interviews):
 - a) There are no data about level of knowledge on overdose prevention and management. Medical and drug treatment specialists are trained according to requirements for relevant medical personnel (narcologists, toxicologists, etc.). Nonetheless, drug users more often use unidentified chemicals that could cause different reactions.
 - b) Harm reduction service providers report that knowledge about prevention and management of drug overdose is minimal.
- 2) Drug user knowledge (based on interviews): Drug users generally manage overdose based on peer experiences and rarely call EMS. Drug users also often report to each

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other when new shipments of drug are more potent or less pure in an effort to prevent overdose cases.

- 3) Drug user skills (based on interviews):
 - a) Managing overdose: Drug users attempt physical stimulation and untrained rescue breathing in cases of overdose.
 - b) Barriers to effective management: Lack of knowledge and fear of further repression (for example, being registered in drug users registry). Drug users frequently provide incorrect personal information to EMS.

SECTION D: LOCAL AND NATIONAL POLICY

- 1) Strategies:
 - a) Several documents make note of overdose, but European Union (EU) policy is the most consistent:
 - i) EU policy
 - (1) The EU Drugs Action Plan (2005-2008) sets a specific objective to reduce the number of drug-related deaths and to increase availability and access to harm reduction services that can play a role in preventing and reducing overdose-related morbidity and mortality. One of 42 indicators is introduced to measure the Action Plan putting responsibility on EU Member States to include reduction of drug related deaths "as a specific target at all levels with interventions specifically designed for this purpose, such as promoting outreach work, e.g. the work of street units, through well-trained healthcare operators."
 - (2) On 18 June 2003, the Council of the EU adopted a Recommendation on the prevention and reduction on health-related harm associated with drug dependence. The document recommends that Member States make available a range of different services particularly aiming at risk reduction in order to reduce substantially the number of drug-related deaths. Among other approaches, the statement specifically mentions:
 - (a) peer education for overdose prevention and management ("Member States should ... encourage, when appropriate, the involvement of, and promote training for, peers and volunteers in outreach work, including measures to reduce drug-related deaths, first aid and early involvement of the emergency services."
 - (b) training EMS to manage overdoses ("Member States should ... ensure that emergency services are trained and equipped to deal with overdoses")
 - (3) The implementation of these actions, however, is not fully successful. In 2005, drug related death prevention measures, e.g., by making naloxone available on ambulances, was available in 20 out of 25 EU Member States (including Latvia). However, in only ten Member States were emergency staff being trained to respond to drug overdose. Even fewer countries had naloxone on take-away policies. (Trimbos 2007)
 - (4) The urgent need to address overdose is noted by head of the EMCDDA, "[W]e are not getting it right when it comes to overdose prevention in Europe. We have made real progress when it comes to HIV reduction among drug users. We now need to match this with equally effective actions to reduce drug-related deaths. This will require innovation, determination and vision, and ultimately the commitment of policy-makers to invest in overdose reduction programmes'. (EMCDDA 2007b)
 - ii) HIV/AIDS prevention program for 2009 – 2013 (unpublished, draft material) recommends a harm reduction strategy for 'overdose'. This program is under discussion and not publicly available, but promotes professional knowledge and introduction of good practice overdose prevention programs as well as training of

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staff of HPP, prisons and NGOs. PHA is the central institution responsible for implementing overdose prevention and management programs. No budget is yet known and a legislative analysis will be needed.

- iii) The state drug control plan does not use the term "overdose" although the document emphasizes increased availability of agonist maintenance therapy; the Ministry of Health is the responsible agency per this document (IeM_NarkoplansInfo100708.doc; Plan for 2009 for control and limitation of distribution and dependency of narcotic and psychotropic substances (informative part)).
 - b) EU: There are several EU and related strategies addressing drug addiction and overdose problems, although none provide detailed guidance (e.g., EC adopted the Drugs strategy 2005-2012, strategies and policy recommendations developed by European Monitoring Centre for Drugs and Drug Addiction and other such documents).
- 2) Agencies with potential involvement:
- a) Overdose issues are direct or indirect responsibility of the following governmental agencies:
 - i) Ministry of Health
 - ii) PHA
 - iii) Riga Centre of Psychiatry and Addiction Disorders
 - b) Two projects funded by international donors are in place in all three Baltic states that could include overdose training:
 - i) UNODC (United Nations Office on Drugs and Crime) project "HIV/AIDS Prevention and Care among Injecting Drug users and in Prison Settings in Estonia, Latvia and Lithuania"
 - ii) EC funded project "Expanding Network for Coordinated and Comprehensive Actions on HIV/AIDS Prevention among IDUs and Bridging Population" (implemented by PHA).
 - c) Low-threshold centres providing services for IDUs are developed and maintained by local municipalities. There are approximately 10 low-threshold centres and 2 mobile syringe exchange units in Latvia (Jelgava, Jūrmala, Olaine, Kuldīga, Ķekava, Rīga, Liepāja, Ogre).
- 3) Law enforcement
- a) Drug user registry: Information about patients treated in special narcological hospitals is collected and maintained by Riga Centre of Psychiatry and Addiction Disorders based on a form including personal data, education, occupation, and basic and co-substance abuse diagnoses. Officials note that not all hospitals or relevant specialists send the form to the Centre thus the database is incomplete (Spread of addictive substances use and its consequences in Latvia; PHA, Ministry of Health; 15th ed. 2007). Fear of being included in the registry may reduce the likelihood of overdose witnesses calling EMS.
 - b) Healthcare: First Medical Aid Station of Riga region terminated a cooperation agreement with police, thus police are no longer routinely informed of an overdose.
 - i) If the emergency ambulance has been called in case of an overdose and the person refuses to be taken to the inpatient institution, the personal data of the individual is registered, but in most cases victims provide someone else's information and eventually this unrelated person might be included in the registry of drug abusers and might later have problems (e.g. to obtain permit to hold gun).
 - ii) Even when an overdose victim is taken to a hospital, police are informed only in cases when violence is suspected.
 - c) Law enforcement officers will provide first aid when life is threatened.
- 4) Laws: There is no special legislation regarding overdose prevention or management.

ROMANIA

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Jul, 31, 2008*

SECTION A: EPIDEMIOLOGY

- 1) Data sources for drug overdose:
 - a) National Anti-Drug Agency ("NAA", Direction Romanian Office for Drugs and Drug Addiction; <http://www.ana.gov.ro/eng/attribution.htm>) collects data on drug-related issues from all ministries. Each year the NAA publishes an annual report on the national drug situation that includes overdose.
 - i) These data are believed to be extremely incomplete.
 - ii) In Bucharest, data is collected mainly from hospitals, the National Forensic Institute Mina Minovici, and the Ambulance service.
 - iii) There is no significant information available on overdose outside of Bucharest, although they may be registered as comas of unknown origin or as medical intoxications.
 - iv) Emergency hospitals have toxicology capability in every county capital city and the most frequent cases drug-related cases are acute alcohol intoxication.
 - b) Future possibilities:
 - i) The Ministry of Health developed a national data collection system that does not currently include overdose.
 - ii) Toxicology for drug detection was improved in a 2006 capacity building process for three forensic institutes (Bucharest, Iasi and Timisoara) as a part of the PHARE Project (RO 2004/016-772.03.11).
 - iii) Harm reduction and other drug service organizations could collect basic data on drug overdose
 - c) Barriers to good data: Diagnosis for drug abuse in emergency units outside Bucharest is hard to made for a series of reasons:
 - i) Lack of attention to overdose because it is considered rare
 - ii) Lack of experience in recognizing drug overdose
 - iii) Lack of toxicological tools
- 2) Prevalence of drug use (population 22 276 056 in 2007):
 - a) 1.7% of persons aged 15-64 used cannabis, less than 1% used other illicit drugs in 2004 (EMCDDA Country Profile)
 - b) 13 694 – 34 318 injection drug users (IDUs) in 2007 (EMCDDA Country Profile)
 - c) Drug use appears to be growing, especially among teenagers who report 97-98% illicit drug use prevalence (Drug Law and Health Policy Network 2002)
- 3) Top causes of death among:
 - a) Drug users: no data available in NAA report
 - b) Drug treatment program patients: anecdotal reports of overdose deaths but National Forensic Institute data make no reference to drug-related deaths (DRDs) among drug treatment patients
 - c) People with HIV (Bals M, 2008):
 - i) National AIDS Commission statistics do not include cause of death
 - ii) 4 982 out of 15 085 people living with HIV/AIDS had died through year-end 2007
 - iii) Pulmonary tuberculosis is believed to be the most frequent opportunistic infection and cause of death
 - iv) 16 cumulative cases of HIV and 11 cases of AIDS among IDUs; this is believed to be a major underestimate
 - d) Prisoners (per newspaper Adevarul, 10/07/2007):
 - i) From 2003-2007, popular press reports 473 deaths in prison, 31 suicides.

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- ii) In 2006, 14% of deaths were due to medical causes (stroke, tuberculosis, gastrointestinal disease, neoplasm)
- iii) 2 reports of drug overdose death in prison
 - (1) 1 cocaine (accessed 31 July 2008: http://www.ziare.com/FIUL_LUI_TAMANGO_A_MURIT_IN_PUSCARIE-75609.html)
 - (2) 1 inhalants (accessed 31 July 2008: http://www.stirilocale.ro/timis/Supradoza_la_inchisoare_IDN148398.html)
- 4) Fatal overdose data:
 - a) Official data are extremely poor and miss an unknown number of overdose fatalities
 - b) 11 DRDs were registered by the Emergency Clinic Hospital Bucharest in 2006 [Raport national privind situatia drogurilor in Romania 2007 (cu date din 2006)]
 - c) 35 out of 2 083 autopsies were registered as possible DRDs by the National Forensic Institute Mina Minovici in 2006 based on medical, police or prosecutor reports, including references to visible injection signs, the presence of paraphernalia near the body location, or other circumstances related to drug use.
 - i) 21 cases were confirmed as being DRDs: in 18 cases the presence of a psychoactive substance was determined, while in 3 cases the toxicological result was negative, due to limited detection tools, advanced decomposition state of the body or prolonged hospital survival. These cases were classified as "acute decease directly related to drug use", based on the combination of inclusion criteria in the category of DRDs and the absence of exclusion criteria.
 - ii) This represents an increase from 12 confirmed DRDs in 2001; the increase is believed by NAA to be do to new laboratory tools in place since 2006.
 - iii) Data are available only for Bucharest due to a lack of laboratory equipment in the rest of the country.

Drug-related deaths in Bucharest by sex and year

Sex	Year						Total
	2001	2002	2003	2004	2005	2006	
Male	10	3	6	6	5	20	50
Female	2	0	1	1	1	1	6
Total	12	3	7	7	6	21	56

Source: INML Mina Minovici Bucharest

Drug-related deaths by age and sex, 2006

Sex	Age						Total
	15-19	20-24	25-29	30-34	35-39	40-44	
Male	2	10	5	1	1	1	20
Female	0	1	0	0	0	0	1
Total	2	11	5	1	1	1	21

Source: NAA 2007

Drug-related deaths at Emergency Clinic Hospital by toxicological cause of death, 2006

Substance	Number	% of total
Methadone	4	36.4
Barbiturates	1	9.1
Benzodiazepines	1	9.1
Hypnotics and sedatives	1	9.1
Other substances	4	36.9

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Total	11	100
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Source: Emergency Clinic Hospital Floreasca Bucharest

Overdose deaths determined by medical examiner by toxicology, 2006

Detected substances	Number	Detected opiates	Number
Opioids	20	Heroin	4
MDMA	1	Tramal/Tramadol	1
Bezodiazepines	7	Meconine	2
Carbamazepine	7	Morphine	3
Cocaine	1	Codeine	4
Barbiturates	2	Methadone	6
Other substances	3	<i>Total</i>	<i>20</i>

Source: INML Mina Minovici Bucharest

d) Further details of fatal overdose (NAA, 2006):

i) Drugs involved in overdose:

- (1) The presence of opiates was confirmed in 20 cases.
- (2) In some cases, toxicology revealed a mixture of psychoactive products; the death may have been caused by the synergistic effect of the drugs, thus accounting for relatively small concentrations of each drug.
- (3) Toxicological determination is made on complex biological products (blood, organs, hair, bile, etc), which reduces the ability to detect small amounts of drugs.
- (4) Methadone may have been noted as cause of death due to positive toxicology and/or enrollment in a methadone clinic (in at least 1 case) under circumstances in which decedents were positive for other compounds as well.
- (5) In 5 cases injecting paraphernalia was found (syringes, cookers, lemon salt, foil, spoons, heroin balls. Toxicological analysis of these objects found traces of heroin (3), codeine (2), meconine (3), and morphine (2) in different combinations. In one case only diazepam was found.

ii) Route of administration: intravenous in 18 cases, oral in 1, oral and sniffing in 1, unknown in 1.

iii) Demographics:

- (1) Location: home 7; hospital 7; 1 case each for street, staircase, courtyard, shop, elevator, basement, hotel room.
- (2) Serological analysis performed in 6 cases showed 5 cases HCV+, 1 HIV+, 1 syphilis-positive, and 2 with no positivity

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Drug related deaths by cause of death, sex and age group, 2006

Cause of death	Male						Female	
	15-19	20-24	25-29	30-34	35-39	40-44	20-24	25-29
Cocaine	1							
Heroin		4					1	
Benzodiazepine		2	2					
Other synthetic narcotics		1						
Psycho-disleptic drugs		2		1				
Methadone		2	1		1	1		
Septal-ventricular defect / toxicomany			1					
Other			1					
Total	1	11	5	1	1	1	1	

Source: Public Health Authority Bucharest, 2006

5) General drug overdose data:

a) Ambulances bring overdose cases to:

- i) The closest available hospital
- ii) Most cases go to Toxicology unit from the Emergency Clinic Hospital Floreasca.
- iii) Some cases are transported to emergency units by friends or taxis.

Ambulance Service Bucharest drug intoxication cases, 2005

Age groups	Withdrawal		OD		Drug intoxication	
	Male	Female	Male	Female	Male	Female
0-10	0	0	0	0	0	0
11-20	70	24	13	5	9	1
21-30	220	49	32	10	40	7
31-40	45	8	11	0	7	1
41-50	16	1	2	1	0	0
51-60	8	1	1	0	0	0
> 60	2	1	0	1	0	0
Total (categories)	445 (361 + 84)		76 (59 + 17)		65 (56 + 9)	
Total male	476					
Total female	110					
Total cases	586					

Source: Plan de servicii comunitare FIC – ARAS 2006

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Ambulance Service Bucharest drug intoxication cases, 2006

Year: 2006 Age groups	Withdrawal		OD		Drug intoxication	
	Male	Female	Male	Female	Male	Female
0-10	0	0	1	1	0	0
11-20	68	51	36	6	9	8
21-30	276	88	100	14	28	1
31-40	61	13	14	0	5	2
41-50	14	4	2	1	1	1
51-60	8	2	1	0	1	0
> 60	1	0	0	2	0	0
Total (categories)	586 (428+158)		178 (154+24)		56 (44+12)	
Total male	626					
Total female	194					
Total cases	820					

Source: Plan de servicii comunitare FIC – ARAS 2007

- b) The intensive care unit in the Emergency Clinic Hospital received 106 overdose cases in 2006 (National Report on Drug Situation in Romania, National Anti-drug Agency, 2007).
- i) 3 patients were registered twice
 - ii) 4 cases were fatal
 - iii) 4 patients were foreigners
 - iv) Syndromes were recorded as:
 - (1) Heroin/opiates dependency syndrome: male 79 (32.5%); female 16 (27.6%)
 - (2) Heroin / opiate acute intoxication: male 37 (15.2%); 11 (19.0%)
 - (3) Heroin / Opiate withdrawal: male 7 (2.9%); 2 (3.3%)
 - (4) Heart/Lungs failure / Acute insufficiency of breathing: male 12 (5.0%); 3 (5.1%)
 - (5) Cocaine acute intoxication: female 1 (1.8%)

Drug overdoses seen at Emergency Clinic Hospital in Bucharest by sex and age, 2005-2006

Age group	2005		2006	
	Male	Female	Male	Female
< 15	0	0	0	2
15-19	6	2	3	5
20-24	17	9	27	6
25-29	24	1	33	4
30-34	9	1	11	0
35-39	6	1	7	0
40-44	1	0	1	0
45-49	1	0	2	1
Unknown	1	0	1	2
Total	65	14	85	20

Source: Emergency Clinic Hospital Bucharest

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Drug medical emergencies seen at Emergency Clinic Hospital in Bucharest according to location of emergency service, 2005-2006

Site of service	2005	2006
Hospital	19	18
Ambulance	1	21
Taxi / street	9	14
Friends / relatives	16	30
Prisons	3	5
Police arrest	0	3
Working place	0	1
Home	2	2
Other situation	0	2
Non-specified	28	13
Total	79	109

Source: Emergency Clinic Hospital Bucharest

Non-fatal emergencies – diagnosis 72 hours after admission, 2006

Diagnosis after 72 hours	Number	%
Coma (I-IV)	28	9.3
Heroin/opiates dependency syndrome	95	31.5
Heroin / opiate acute intoxication	48	15.9
Heroin / Opiate withdrawal	9	3.0
Heart/Lungs failure / Acute insufficiency of breathing	15	5.0
Alcohol acute intoxication	13	4.3
Acute poly medical-drug intoxication	47	15.6
Acute medical-drug intoxication	1	0.3
Cocaine acute intoxication	1	0.3
Depressive episode (psychopathic background)	3	1.0
Suicide attempt	7	2.3
Confusion syndrome	19	6.3
Depressive-reactive distress	2	0.7
Personality distress	2	0.7
Pregnancy / abortion	1	0.3
HCV	9	3.0
HBV	1	0.3
Total	301	100

Source: Emergency Clinic Hospital Bucharest

Overdose cases positive for selected drugs in Emergency Clinic Hospital Bucharest, 2006

Substance	# of positive results	% positive
Heroin	9	8.4
Methadone	21	19.6
Other opiates	26	24.3
Cocaine	1	0.9
Barbiturates	14	13.1
Benzodiazepines	35	32.7
Other hypnotics and sedatives	11	10.3
Other hallucinogenics	1	0.9
Other substances	98	91.6
Negative	22	20.6
Unknown / lost	4	3.7

Total | 242

Source: Emergency Clinic Hospital, Bucharest

- c) Drug user surveys: No studies have been conducted. Anecdotal data from drug users accessing ARAS drop-in centre suggest that myths dominate overdose management; drug users often inject salt water and lemon salt in an attempt to revive the overdose victim.
- 6) Further overdose details (based on ARAS experience):
 - a) Types of drugs involved in overdose:
 - i) Opiates: street heroin and medical opioids (e.g. morphine, Tramal/Tramadol, Codeine, meconine)
 - ii) Amphetamine-type drugs: not documented in Romania, although pharmacists and drug users say Regenon (an amphetamine-based weight loss drug) is used by adolescents and young people.
 - iii) Cocaine: one cocaine overdose was registered in 2006. Cocaine is very expensive (100E per gram) and used mostly by wealthy people.
 - iv) Alcohol: most common drug in Romania with alcohol treatment most developed section in drug services field.
 - b) Modes of administration: injection is the primary mode in cases of heroin overdose although there are cases of oral administration resulting in overdose.
 - c) Demographics of overdose (Ambulance Service Bucharest):
 - i) Age: average age of overdose patients was 21-30 in 2006.
 - ii) Gender: 76.34% male in 2006.
 - iii) Location: most common location of overdose is home although overdoses were also registered on the street, staircases, courtyards, shops, elevators, basements, and hotel rooms (National Forensic Institute Mina Minovici). Prisoners report that a drug overdose in prison is due to an abstinence period rather than the quality and concentration of the product.
 - iv) Timing: There are no official data regarding overdose during or soon after drug treatment or prison, although unofficial data show the existence of overdose during drug treatment.

SECTION B: OVERDOSE SERVICES

- 1) EMS and hospital services
 - a) Service availability:
 - i) In cities, ambulances provide emergency assistance and monitoring. In villages, service is provided by emergency service (public service) or SMURD service (private emergency service with national coverage).
 - ii) The Ambulance Service in Bucharest has 151 cars. Intervention teams are composed of a driver, medical assistants, and medical doctors (emergency and general practitioners)
 - iii) In 2006 new equipment for drug detection in blood and urine samples was established for those entering prison and for emergency case management (Report on Drug Situation in Romania, p. 86, NAA 2007).
 - b) Cost:
 - i) services are paid by the National House of Health Insurance of the Ministry of Health.
 - ii) Cost per case Ambulance Service Bucharest in 2006
 - (1) Withdrawal: 30 Euro
 - (2) Overdose: 33 Euro
 - (3) Intoxication: 32 Euro

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- c) Service barriers (per expert opinion):
 - i) Fear of police:
 - (1) Drug users avoid calling the ambulance because they fear drawing attention of police. Some drug users reported that they have directly experienced police coming after calling the ambulance, while most have heard about similar situations and prefer not to call the ambulance.
 - (2) According to the manager of Ambulance Service Bucharest, in some cases the ambulance team is followed by police squads or calls the police after having conflicts with violent drug users (especially in withdrawal cases). In these cases the ambulance staff security is felt to be more important than confidentiality.
 - (3) According to a doctor from an emergency unit in Bucharest, in some cases a drug overdose victim leaves the unit as soon as awakening out of fear of contact with police.
 - ii) Family: Accessing emergency services can draw the attention of an otherwise unaware family to a problematic drug use situation
 - iii) Self-management: drug overdose are often 'treated' with injected lemon salt and water. In some cases the victim is abandoned.
- 2) Naloxone
 - a) Legal status: No pharmaceutical importer submitted a request to register naloxone for medical use. The Romanian Government through the Ministry of Health can approve the registration of this substance by itself if it considers naloxone important for public health.
 - b) Availability: naloxone is not available in pharmacies.
 - c) Use:
 - i) Naloxone is used by the Emergency Clinic Hospital in Bucharest for overdose emergencies, although it has semi-legal status.
 - ii) Ambulances do not carry naloxone.
 - iii) Medical staff has limited knowledge about naloxone.
- 3) Prevention programs
 - a) NGOs:
 - i) Harm reduction service providers (ALIAT, ARAS, INTEGRATION) provide information and education on drug related issues, including overdose by request in outreach syringe exchange or drop-in centers.
 - ii) Components of overdose management:
 - (1) Counseling: risks and myths about overdose
 - (2) There are no programs to teach rescue breathing, distribute naloxone, or attempt inter-agency collaboration to improve EMS utilization.
 - (3) There are anecdotal reports about some drug users having naloxone.
 - iii) Agonist maintenance treatment: there are 8 maintenance treatment centers in the country (6 centers in Bucharest, 1 in Iasi, 1 in Oradea) (source: RHRN 2008) providing slots for approximately 1000 patients. 1 pilot methadone maintenance program in a prison near Bucharest as well as 2 syringe exchange programs.
 - iv) Safer injection facilities: none
 - b) Barriers to implementing programs: may be mostly due to poor data (Report on Drug Situation in Romania, p. 43, NAA, 2007)
 - i) Poor technical resources for drug detection in medical and forensic units
 - ii) Difficulties in servicing laboratory equipment
 - iii) Delays in paying forensic investigations
 - iv) Insufficient human resources
 - v)
 - vi) Salaries are very small for medical examiners

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- c) Program successes: New detection equipment for the National Forensic Institute Mina Minovici in 2006.
- 4) Recommended priorities:
 - a) Naloxone registration
 - b) Improving data collection system
 - c) Training in overdose prevention and interventions
- 5) Further work:
 - a) NAA can organize training for its staff
 - b) Ministry of Health could provide specialized training in OD prevention for medical staff

SECTION C: OVERDOSE KNOWLEDGE AND SKILLS

- 1) Medical and drug treatment provider knowledge
 - a) Basic training for overdose management is provided in medical schools and universities.
 - b) Low-threshold service providers receive basic training in harm reduction but no specific information on overdose (RHRN training curricula includes OD as a topic among harm reduction interventions)
 - c) Level of knowledge about overdose has not been assessed
- 2) Drug user knowledge: Drug users recognize that prison is associated with reduced drug tolerance and heightened risk of overdose. No other data were available.
- 3) Drug user skills:
 - a) Drug users inject a mixture of lemon salt and water into the overdose victim and attempt to keep the person awake with physical stimulation.
 - b) Barriers to effective management: Drug users who witness an overdose are reluctant to call EMS. They attempt to self-manage or put the person in a taxi or in their car and drop them in front of the hospital.

SECTION D: LOCAL AND NATIONAL POLICY

- 1) Strategy:
 - a) Overdose is mentioned once in the Action plan of the National Anti-Drug Strategy 2005-2012, with regards to DRD prevention.
 - b) European Union (EU) policy also provides guidance:
 - i) The EU Drugs Action Plan (2005-2008) sets a specific objective to reduce the number of drug-related deaths and to increase availability and access to harm reduction services that can play a role in preventing and reducing overdose-related morbidity and mortality. One of 42 indicators is introduced to measure the Action Plan putting responsibility on EU Member States to include reduction of drug related deaths "as a specific target at all levels with interventions specifically designed for this purpose, such as promoting outreach work, e.g. the work of street units, through well-trained healthcare operators."
 - ii) On 18 June 2003, the Council of the EU adopted a Recommendation on the prevention and reduction on health-related harm associated with drug dependence. The document recommends that Member States make available a range of different services particularly aiming at risk reduction in order to reduce substantially the number of drug-related deaths. Among other approaches, the statement specifically mentions:
 - (1) peer education for overdose prevention and management ("Member States should ... encourage, when appropriate, the involvement of, and promote training for, peers and volunteers in outreach work, including measures to

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- reduce drug-related deaths, first aid and early involvement of the emergency services.”
- (2) training EMS to manage overdoses (“Member States should ... ensure that emergency services are trained and equipped to deal with overdoses”)
- iii) The urgent need to address overdose is noted by head of the EMCDDA, “[W]e are not getting it right when it comes to overdose prevention in Europe. We have made real progress when it comes to HIV reduction among drug users. We now need to match this with equally effective actions to reduce drug-related deaths. This will require innovation, determination and vision, and ultimately the commitment of policy-makers to invest in overdose reduction programmes’.
- (EMCDDA 2007b)
- 2) Agencies with potential involvement:
- i) NAA is responsible for designing, implementing and monitoring drug policies.
 - ii) The Ministry of Health (through local PHA branch) is responsible for data collection and implementation of health policies.
- 3) Data collection and services
- a) Drug user registry:
 - i) A national database was developed by the NAA including detailed information about drug users accessing services to monitor their care; registration is made according to EMCDDA protocols and definitions.
 - b) Healthcare:
 - i) Unconfirmed sources say EMS inform police when encountering an overdose, withdrawal or other drug-related case.
 - ii) Physicians may be reluctant to register a case as overdose for social or legal reasons.
 - iii) Drug users say police officers request information about patients from detoxification and maintenance programs. Rumors circulate that police use the overdose recovery period to obtain information about drug dealers or related crimes.
 - iv) No reports of arrests in overdose cases were noted.
 - v) Law enforcement officers do not participate in resuscitation efforts.
- 4) Laws
- a) Data collection: regulated through a common order from the Ministry of Interior and the Ministry of Health
 - b) Naloxone: not registered
 - c) Witness protection:
 - i) Law 143/2000 specifies that any witness of a drug related situation (such as overdose) must inform police. The same laws specifies that drug users seeking help have the right to access drug, medical, or social services.
 - ii) Law 522/2004 establishes medical coverage for drug-related medical interventions

RUSSIA

Researcher: Mikhail Torban, MD, Department of Addictions, Saint Petersburg Bekhterev Psychoneurological Research Institute
 July 31, 2008

SECTION A: EPIDEMIOLOGY

- 1) Data sources for drug overdose:
 - a) Deaths of drug users who are registered with the narcological dispensary may be reported by family members, although only 14-20% of drug users are registered (*Koshkina 2008*).
 - b) Police report "unnatural" deaths to medical examiner who provides exam and cause of death to local registry
 - c) Approximately 20-30% of overdoses are attended by ambulance or hospitalization (*Sergeev, Sarang 2003*).
 - d) Surveys of drug users are available in Russia
 - e) There are no AIDS center data
 - f) Barriers to data: Only 20% of overdoses noted by the dispensary are also noted by the medical examiner's office, suggesting that the primary data source – medical examiner – misses a large proportion of overdose fatalities.
- 2) Drug use prevalence (population 141 377 752 in 2007):

Registered drug users in 2007 (estimated to be 14-20% of total; Koshkina 2008)

Drug dependence	Number	Rate / 100,000 population
All *	355 568	250,4
Opioid	311 832	219,6
Cannabiod	23 572	16,6
Stimulant	4 260	3,0
Other	15 904	11,2

*72,6 % are IDUs

- a) Estimated total of 2 000 000 injection drug users (IDUs), 12-30% of whom are estimated to be HIV-positive (Russian Federation 2006 Country Report)
 - b) A separate 2007 study of 988 IDUs in 10 Russian regions found 44.3% of 382 IDUs who answered the question were in the drug user registry (*Oleynik, Sergey. Narcology Service in Russia from the Perspective of Patients. For Russian Harm Reduction Network. Moscow-Penza, 2007*).
- 3) Top causes of death among:
 - a) Drug users:

Cause of death among drug users by year (Koshkina, 2008)

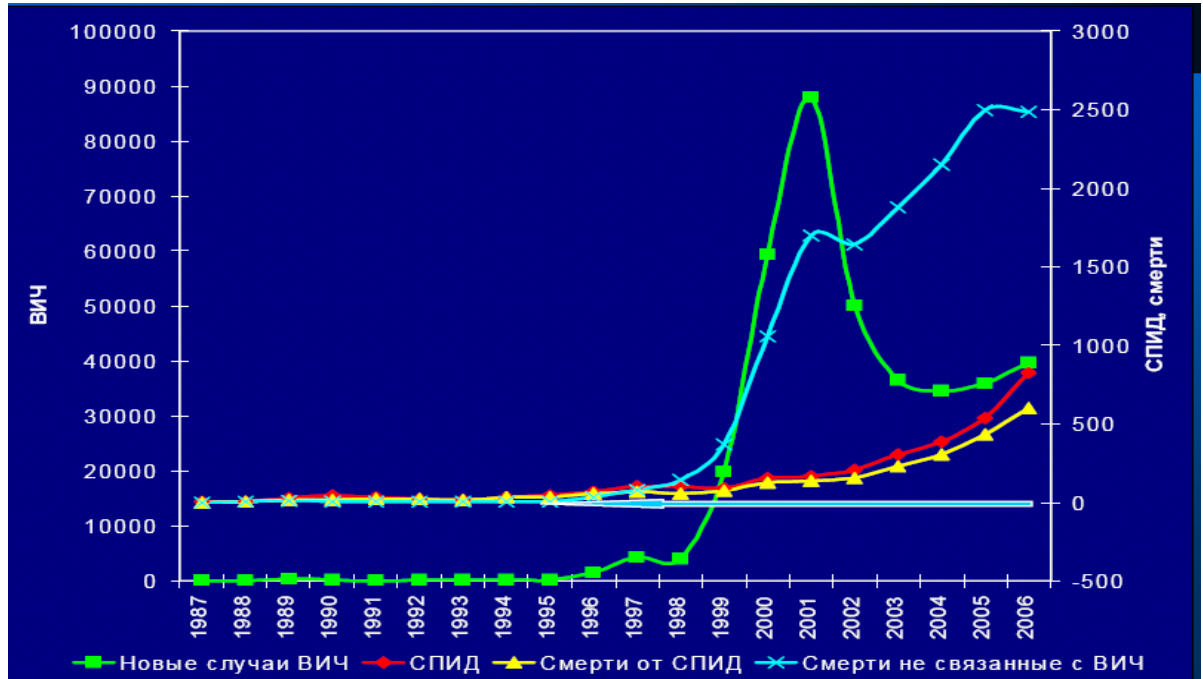
	Somatic disease	Unknown	Overdose	Accident	Other	Psychiatric disorder
2005	30.3	24.6	20.3	13.8	5.9	0.6
2006	31.5	25.5	18.8	10.9	8.1	0.5

- b) Drug treatment program patients: no data available

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- c) People with HIV: IDU fuels the HIV epidemic in Russia. HIV/AIDS accounts for 1,68 deaths among men and 0,5 deaths among women per 100 000 general population [<http://demoscope.ru/weekly/2007/0275/barom03.php>]. Most deaths are not due to HIV/AIDS-related illnesses.

Cause of death among AIDS patients in Russia: mostly not due to HIV-related illnesses



Source: N.N Ladnaya of the Federal AIDS Center of the Russian Federation made on November 1, 2007

- d) Prisoners: no data provided
- 4) Fatal drug overdose:
- a) Prevalence / incidence (Koshkina 2008)
 - i) 9 354 overdose deaths were documented by dispensaries in 2006
 - ii) 2.3 overdose deaths per 100 drug users annually
 - iii) 6.6 overdose deaths per 100 000 general population annually
 - iv) 20.3 and 18.8% of deaths among drug users in 2005 and 2006 were due to drug overdose
 - b) An estimated 10% of overdoses are fatal per ambulance data (Yale-Bekhterev Saint-Petersburg Overdose Study, 2006-2007)

Number of deaths from illicit drug poisoning in Russia by year (Koshina 2008)

Year	2003	2004	2005	2006
Deaths	3943	6365	8151	9354

Mortality of illicit drug poisoning per 100,000 general population by region

Region	Drug poisoning deaths / 100 000 general population			
	2003	2004	2005	2006
Russia	2,8	4,5	5,8	6,6

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Moscow region	2,1	5,8	8,5	13,0
Kaliningrad region	9,3	31,4	46,6	20,7
Leningrad region	3,7	11,2	14,2	15,4
Tatarstan	5,7	12,4	10,2	11,7
Perm region	1,7	6,2	10,9	12,5
Sverdlovsk region	3,1	8,5	14,7	14,5
Altai region	1,7	5,2	8,0	10,1
Krasnoyarsk region	1,7	6,8	9,1	13,0
Irkutsk region	19,7	23,2	21,0	11,3
Kemerovo region	31,0	19,8	22,0	23,4
Novosibirsk region	12,1	17,4	22,7	30,3
Omsk region	2,2	7,4	16,0	22,0

City	Sample size	Recruitment	% in narco-logy registry	% OD in past year	% OD'ed, called EMS	% called EMS who were hospitalized	Year of study	Reference
Ekaterinburg	300	through RDS	10,7% (32/300)	22,7% (68/300)	33,8% (23/68)	23,5% (16/68)	11/07-2/08	Stellit/RHRN (2008). Prevalence estimation for injecting drug use, HIV and associated infections and risk behaviours among IDUs in Ekaterinburg and Orel. Study report
Orel	300	through RDS	18,7% (56/300)	12,7% (38/300)	34,2% (13/38)	8,8% (6/38)	11/07-2/08	Stellit/RHRN (2008). Prevalence estimation for injecting drug use, HIV and associated infections and risk behaviours among IDUs in Ekaterinburg and Orel. Study report
Moscow	455	indigenous field workers and chain referral		23,4% (106/454)		20% (20/110)	9-11/03	Rhodes T, Platt L, Maximova S, Koshkina E, Latishevskaya N, Hickman M, et al. Prevalence of HIV, hepatitis C and syphilis among injecting drug users in Russia: Multi-city study. <i>Addiction</i> . 2006;101(2):252-66.
Volgograd	517	indigenous field workers and chain referral	25.50%	25,2% (129/512)		35,9% (51/142)	9-11/03	Rhodes T, Platt L, Maximova S, Koshkina E, Latishevskaya N, Hickman M, et al. Prevalence of HIV, hepatitis C and syphilis among injecting drug users in Russia: Multi-city study. <i>Addiction</i> . 2006;101(2):252-66.
Barnaul	501	indigenous field workers and chain referral	19.90%	24,5% (123/501)		20,5% (25/122)	9-11/03	Rhodes T, Platt L, Maximova S, Koshkina E, Latishevskaya N, Hickman M, et al. Prevalence of HIV, hepatitis C and syphilis among injecting drug users in Russia: Multi-city study. <i>Addiction</i> . 2006;101(2):252-66.
Togliatti	426	indigenous field workers and chain referral	27.20%	53% (223/419)		19,3% (43/223)	9-11/01	Rhodes T, Lowndes CM, Judd A, Mikhailova L, Sarang A, Rylkov A, et al. Explosive spread and high prevalence of HIV infection among injecting drug users in Togliatti City,

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Togliatti	476	through RDS	27.80 %	49,4% (129/261)		18,0%(47/261)	5-6/04	Russia. AIDS. 2002 29 May, 2002;16:F25-F31. Platt L, Rhodes T, Hickman M, Mikhailova L, Lisetsky K, Sarang A, Lewis K, Parry J. (2008) Changes in HIV prevalence and risk among new injecting drug users in a Russian city of high HIV prevalence. J Acquir Immune Defic Syndr. 2008 Apr 15;47(5):623-31.
Voronozh	309	through RDS	33,9% (105/309)	8,4% (26/309)	11,5% (3/26)	3,8% (1/26)	11/07 -4/08	"VEGA" HIV survey in vulnerable populations (WHO, Federal AIDS Center, Stelit). Preliminary data.
Chelyabinsk	306	through RDS	28,8% (88/306)	17,3% (53/306)	41,5% (22/53)	7,5% (4/53)	11/07 -4/08	"VEGA" HIV survey in vulnerable populations (WHO, Federal AIDS Center, Stelit). Preliminary data.
Naberezhnyye Chelny	350	through RDS	57,7% (202/305)	22,3% (67/350)	22,4% (15/67)	0% (0/67)	11/07 -4/08	"VEGA" HIV survey in vulnerable populations (WHO, Federal AIDS Center, Stelit). Preliminary data.

Source: Koshkina, 2008

Number and mortality of hospitalized overdose victims in Saint-Petersburg

Years	# Overdose	# Death	Mortality rate
1990	80	6	7,50%
1993	338	10	2,96%
1995	486	10	2,06%
1996	632	6	0,95%
1997	712	16	2,25%
1998	1108	15	1,35%
1999	1361	13	0,96%
2000	1685	30	1,78%
2001	687	14	2,04%
2002	448	16	3,57%
2003	657	12	1,83%
2004	1258	13	1,03%
2005	1633	16	0,98%

Source: newsletter: "Addiction Medicine in Saint-Petersburg in 2000-2005"

5) General overdose (selected local data as no national data available):

- a) Novosibirsk (population 1 400 000): emergency medical services (EMS) attended overdose 2,505 times (99 fatal) in 2007, 7,576 (381 fatal) in 2006, 6,553 (305 fatal) in 2005, and 4,176 (194 fatal) in 2004. (<http://abort.prihodi.net/2007/12/25/99047/> accessed 30 July 2008).
- b) Naberezhnyye Chelny (population 517,356): EMS attended 435 IDUs in 2007, 45 of whom were dead on ambulance arrival (Naberezhnyye Chelny Project Report).
- c) Saint-Petersburg (population 4 600 000): EMS brought more than 1,600 illicit drug overdoses to the main toxicological center in 2005.
- d) Based on drug user surveys:
 - i) 59% (Sergeev, Sarang et al Russian Overdose Study, 2003) to 75% (Yale-Bekhterev Saint-Petersburg Overdose Study, 2006-2007) of drug users have experienced overdose

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- ii) 81% of drug users have witnessed overdose (Sergeev, Sarang et al Russian Overdose Study, 2003).

Overview of Russian registry data on overdose among IDUs by city

- 6) Further overdose details
 - a) Drugs involved in overdose include:
 - i) Opiates: 77% heroin, 21% homemade opioids (Sergeev, Sarang et al Russian Overdose Study, 2003), opioid mix 8,9% (Yale-Bekhterev Saint-Petersburg Overdose Study, 2006-2007)
 - ii) Amphetamine-type drugs were reported by subjects in 8.5% of witnessed cases (Yale-Bekhterev Saint-Petersburg Overdose Study, 2006-2007)
 - iii) Alcohol was noted in 11.1% of experienced overdoses and 59.3% of witnessed overdoses (Yale-Bekhterev Saint-Petersburg Overdose Study, 2006-2007)
 - iv) Other drugs: antihistamines in 11% of overdoses (Sergeev, Sarang et al Russian Overdose Study, 2003)
 - b) Route of administration: 91.5% of overdoses involve injected drugs and 8.5% involve sniffed drugs (Yale-Bekhterev Saint-Petersburg Overdose Study, 2006-2007)
 - c) Demographics of overdose:
 - i) Yale-Bekhterev Saint-Petersburg Overdose Study, 2006-2007
 - (1) Average age of nonfatal overdose victim 30.8 years, 61.7 male, 100% white, 16% employed; 21.7% were living alone, 43.3% with parents, 21.7% with spouse; 30.5 overdosed at home, 25.4% at a friends home, and 25.4% on the street; 24.4% overdosed during or soon after drug treatment and 18.2% overdosed during or soon after prison
 - (2) Random sample of fatal overdose incidents showed mean age of 35, [92.6% mean], 26 out of 27 due to heroin, 63% also with alcohol present, 11% HIV+, 51.9% HCV+, 66.7% died at home with 3.7% dying at friend's house and 18.5% dying on the street.
 - ii) Sergeev, Sarang et al Russian Overdose Study, 2003
 - (1) Median age of nonfatal overdose victim 22-25 years, 71% male; 37% overdosed at home, 40% at a friend's home, 4% at a dealer's home, and 15% on the street
 - d) Family: recent data suggests that family dynamics may play an important role in drug overdose in Russia (Yale-Bekhterev Saint-Petersburg Overdose Study, 2006-2007).

SECTION B: OVERDOSE SERVICES

- 1) EMS and hospital services
 - a) Service availability: ambulances (consisting of doctor, nurse, and driver) and emergency departments service overdose cases with no involvement from police or firefighters. Services are limited by distance in rural areas, with no services in deep rural Russia (especially Siberia and Russian Far East), ambulances only in "district centers".
 - b) Cost: Emergency services are free although patients sometimes pay ambulance staff "tips" in hope for better services. For overdose patients those "tips" are usually for not calling police. In St. Petersburg "tips" was paid in 23% of cases when ambulance arrived; another 23% paid for better medical care (Yale-Bekhterev Saint-Petersburg Overdose Study, 2006-2007).
 - c) Service barriers:

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- i) The major limitation on services is distance. In towns usually the only ambulance service is based at the local hospital. City districts are very moderately stratified into "dangerous" and "not dangerous"; each part has its own ambulance service.
 - ii) EMS is called in 16% (Sergeev, Sarang et al Russian Overdose Study, 2003) to 36.6% of overdose cases (Yale-Bekhterev Saint-Petersburg Overdose Study, 2006-2007). The most important reasons EMS was not called were:
 - (1) Confidence in ability to resuscitate without medical intervention (54% and 80% in St Petersburg and Russia study, respectively)
 - (2) Fear of police (14.3% and 17% in St Petersburg and Russia study, respectively)
 - (3) Lack of confidence in the ambulance response (11.4% in St Petersburg study)
 - (4) In 2% of cases in the Russia study, ambulance staff refused to help because the victim was a drug user.
 - (5) In Saint-Petersburg the mean time of ambulance arrival was 20 minutes.
 - iii) Reporting:
 - (1) Overdoses are generally not reported to police by ambulance and hospital staff. There is variation, such as in Naberezhnye Chelny in Republic of Tatarstan where ambulance staff are instructed to call police for overdose cases.
 - (2) Overdose cases that arrive at the hospital are generally entered in the drug user registry.
- 2) Naloxone
- a) Legal status: Naloxone is a registered medicine in Russia (Reg # П №011962/01-2000 25.05.00ППР)
 - b) Availability: Naloxone is available in a limited number of pharmacies for purchase with a prescription (1 pharmacy in Saint-Petersburg and 1 pharmacy in Moscow), in quantity of 500 packs at wholesalers (on Jul 25, 2008) at \$ 7.70 (5.22 EUR) per pack (10 ampoules, 1 mL, 0.4 mg each)). Poor availability of naloxone in pharmacies can be explained by low demand so pharmacy owners have no reason to stock the medicine, especially in small cities and towns.
 - c) Sales: Warsaw Pharmaceutical Work Polfa S.A. Annual sales are "confidential", so unavailable.
 - d) Use: Only special "narcological" ambulances in big cities use naloxone (about 10-15 cars or 10% of the fleet). In big cities and in some towns. Naloxone is now included in EMS guidelines, but hospital use is voluntary. Ambulance staff in Saint-Petersburg use higher doses of naloxone, up to 4-5 milliliters (2-3 milligrams), based on internal guidelines per interviews.
- 3) Prevention programs
- a) NGOs:
 - i) Pilot overdose programs (all started within past 6 months so no outcome data available):
 - (1) Organizations:
 - (a) Organization name: NGO Tver Initiative
 - (i) Project name: Prevention of overdose among IDUs. Education and provision of naloxone
 - (ii) Location: Tver, Russia
 - (iii) Components: Education and naloxone distribution
 - (iv) Comments: first program initiated in Russia in 2006 with Open Society Institute funding
 - 1. Revealed 52% of IDUs had overdose experience and 86% had witnessed overdose, while 64% did not know about naloxone, 7

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- attempted heart massage, 4 injected with water, 2 put the victim in cold water, and 3 did nothing
2. By spring 2007, 21 persons, including 9 active IDUs, had been trained, 100 dosages of naloxone had been distributed, and 9 cases of naloxone used to reverse overdose were documented.
 3. Further naloxone was impossible to obtain and the project was stopped.
 4. Tver Initiative is currently working to expand naloxone availability as the medication often remains unavailable even in ambulances or dispensaries, and tuberculosis clinics are often unaware of the medication. (Personal communication with Yury Ivanov, narcologist and head of Tverskaya Iniciativa, 21 August 2008).
- (b) Organization name: Altai region NGO "Vybor (The Choice)"
- (i) Project name: Overdose prevention in Biysk
 - (ii) Location: Biysk, Altai Region
 - (iii) Settings: outreach
 - (iv) # of people served: over 100
- (c) Organization name: Charitable fund for education, health protection and HIV/AIDS prevention (Timur Islamov Fund)
- (i) Project name: Life Save
 - (ii) Location: Naberezhnye Chelny, Tatarstan, Russia
 - (iii) Settings: outreach.
 - (iv) # of people served: over 100
- (d) Organization name: Regional charitable fund against drug use and AIDS
- (i) Project name: Overdose prevention in Samara's IDUs.
 - (ii) Location: Samara, Russia
 - (iii) Settings: outreach.
 - (iv) # of people served: over 100
- (2) Components:
- (a) Education and naloxone distribution based on the US-based, SCAREME program
 - (b) Rescue breathing
 - (c) Planned collaboration with emergency medical and law enforcement to make it safer for witnesses to call for help
 - (d) Agonist maintenance: illegal in Russia
 - (e) Safer injection facilities: illegal in Russia
 - (f) Unstructured surveys or focus-groups before the start of the project and for project evaluation and progress control (results unavailable).
- ii) 7 harm reduction programs provide brief information on overdose.
- iii) 23 harm reduction projects distribute overdose brochures.
- iv) The Russian Harm Reduction Network provides overdose prevention training
- b) Barriers:
- i) Low availability of naloxone for programs
 - ii) Legal barriers to NGOs obtaining naloxone:
 - (1) If an NGO is not within a medical centre, the NGO must arrange to have a medical centre obtain naloxone and distribute naloxone by the centre's physician.
 - (2) NGO program physicians can prescribe but cannot distribute medication.
- c) Program successes: the pilot program in Naberezhnye Chelny reported 11 successful naloxone reversals in the first month of activity, very high patient satisfaction, and the following quotes from outreach workers:
- (a) "IDU who used naloxone come back and ask for naloxone again. It's second lap of naloxone use."

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- (b) "There are people who didn't accepted naloxone from us, but they have heard about [positive effects] naloxone and now they ask for it. "
 - (c) "Inmates in jail have heard of naloxone, there is a rumor in IDU community about naloxone"
 - (d) "They [drug users] usually use naloxone at flats, when a group of IDU use together"
 - (e) "There's no withdrawal after 1 ampoule of naloxone but the person is revived! Awesome!"
 - (f) "We have a client who have been recipient of naloxone."
- 4) Recommended priorities:
- a) Improve naloxone availability in pharmacies, ambulances, and hospitals
 - b) Rescheduling naloxone as non-prescription medication
 - c) Change policy at sites where ambulances report overdose to police to prevent the practice
 - d) Trainings for IDUs
 - e) Record keeping and evaluation of overdose programs
- 5) Further work could include:
- a) Bekhterev Institute in collaboration with Yale University and consultants created a protocol for overdose prevention and research in need of funding; this research would implement an overdose program, evaluate participants management of overdose cases, and provide a means to expand the service if successful.

SECTION C: KNOWLEDGE AND SKILLS

- 1) Medical and drug treatment provider knowledge (based on interviews):
- a) EMS staff recognize and manage overdose. One of 3 interviewed ambulance staff knew some methods to prevent overdose. Ambulance staff noted possible complications of lay use of naloxone (seizures, lungs edema, brain edema, aspiration, brain infarct).
 - b) Toxicologists (those who treat overdose patients in hospitals) recognize and manage overdose. The only prevention method noted by toxicologists was to stop using drugs.
 - c) Narcologists (drug treatments specialists) recognize and manage overdose. The only prevention method noted by narcologists was to stop using drugs.
- 2) Drug user knowledge (based on Yale-Bekhterev Saint-Petersburg Overdose Study):
- a) Overdose risk factors: Participants correctly identified key risk factors for opioid overdose such as taking too large a dose (24.4%), mixing drugs with alcohol (21.1%), and variability of drug quality (17.8%). However, "bad self-control" or a flawed character was mentioned by about 20% of respondents as risk factors for overdose.
 - b) Overdose recognition: Participants accurately described opioid overdose symptoms, with 52 people (86.7%) mentioning one or more actual symptoms; most frequently mentioned were loss of consciousness (n=32), absence of breathing (n=31), and cyanosis (n=34). In contrast, only 13 participants (21.7%) provided correct amphetamine overdose symptoms; 28 respondents knew no symptoms.
 - c) Overdose prevention: Strategies to prevent opioid overdose included a preliminary injection or "tasting" of a small quantity of drug (n=23), not mixing drugs and alcohol (n=8), and consistently using the same dealer (n=3). Less effective or ineffective strategies were also reported: knowing one's optimal dose (n=19) and judging the physical appearance of the drug (n=2). Eight participants failed to mention any strategy. Abstinence (n=4) and better self-control (n=2) were also noted as effective, albeit nonspecific, strategies for reducing overdose risk.

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- d) Overdose management: Nearly half of participants (41.4%) reported lacking confidence in or being unsure of their ability to help in an overdose situation. They expressed interest in receiving information about overdose prevention (76.3%) or in receiving a one-hour training session on how to respond to an opioid overdose (67.2%). Less than half of the sample (44.1%) had heard of naloxone despite its availability by prescription at pharmacies in Russia and its use in hospitals and some EMS units.
 - 3) Drug user skills:
 - a) Managing overdose
 - i) Based on Yale-Bekhterev Saint-Petersburg Study: No resuscitation was attempted in 8.9% of overdoses when others were present. The most commonly reported resuscitation procedure was physical stimulation (36.5%) such as slapping, walking around, applying cold water or ice. CPR/rescue breathing was reported in 29% of cases, and less effective resuscitation activities (e.g., injection with salt or milk) were performed in 6.3% of cases.
 - ii) Based on the Russia study (Sarjeev and Sarang 2003): rescue breathing in about half of cases, physical stimulation in about 30%, sometimes injections of salt water or pure boiled water.
 - b) Barriers to effective management
 - i) Lack of knowledge about naloxone: less than half of participants of Saint-Petersburg Overdose Study have ever heard about naloxone and none of them had any training or detailed information of its use.
 - ii) Lack of knowledge about how to revive an OD victim: nearly half of Saint-Petersburg Overdose Study participants (41.4%) reported lacking confidence in or being unsure of their ability to help in an overdose situation.
 - iii) Too high confidence in abilities to revive victim himself when it's time to call ambulance: 80% of persons who didn't call ambulance reported this reason.
 - iv) Fear that EMS will call police: about 15% in both studies.
 - v) Fear of EMS futility and negative attitudes. For example, participants in the Russia study said:
 - (1) Yekaterinburg: ambulance either refuse to come or comes too late.
 - (2) Yekaterinburg: if you call ambulance it will come in 30-40 minutes. I know lot of people who died awaiting for ambulance.
 - (3) Lipetsk: doctors hate us
 - (4) Yaroslavl: when ambulance comes they take all victim's money from his pockets.
 - (5) Saratov: when they come they have no syringes or medicines. They are angry because they came for some "junkies". They call police and police arrests us.
- *** Researcher notes that while these complaints may be plausible, his experience was that in 2006 ambulances in St Petersburg arrived in 20 minutes, did not report overdose to police, revived everyone to whom they attended, and had not been reported to be violent.

SECTION D: LOCAL AND NATIONAL POLICY

- 1) Strategies: Overdose is not included in any known national or regional strategy.
- 2) Agencies with potential involvement: No information was available regarding specific agencies or individuals with an interest in developing overdose activities.
- 3) Law enforcement
 - a) Drug user registry: Everybody who receives free drug treatment and some who have been caught by police being high are registered. Being registered mean loosing some

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- civil rights such as driver license or Russian citizenship and vulnerability to police attention. Officially, drug user registry data are not to be shared with police, however the data are frequently shared. The system of registration makes drug users more suspicious for state services (such as ambulance) and potentially deters overdose witnesses from calling EMS.
- b) Healthcare:
 - i) A 2007 survey of 988 IDUs in 10 Russian regions found th 52.5% of respondents feared that a diagnosis of drug dependency would be shared by substance abuse treatment providers with police (Oleynik, Sergey. Narcology Service in Russia from the Perspective of Patients. For Russian Harm Reduction Network. Moscow-Penza, 2007.
 - ii) Agents inform police of overdoses in Naberezhnye Chelny and some other regions of Russia, but reportedly not in Saint Petersburg and reportedly not to the narcology service with the “bad reputation” drug user registry. (Levinson, L, Torban, M (2008) Narcology Register: According to A Law or According to Instruction? Regulation of register of drug users in the Russian Federation). Moscow, 2008 (in print).
 - c) Arrests: 1 of 60 overdoses surveyed in Saint-Petersburg (Yale-Bekhterev Saint-Petersburg Overdose Study, 2006-2007) were arrested for unknown reasons.
 - d) Law enforcement does not participate in resuscitation efforts.
- 4) Laws
- a) Data collection: Overdose is included as a one of the causes of death in dispensary reports.
 - b) Naloxone: There are no laws to support naloxone distribution.
 - c) Witness protection: There are no laws to protect witnesses from prosecution in the case of an overdose.

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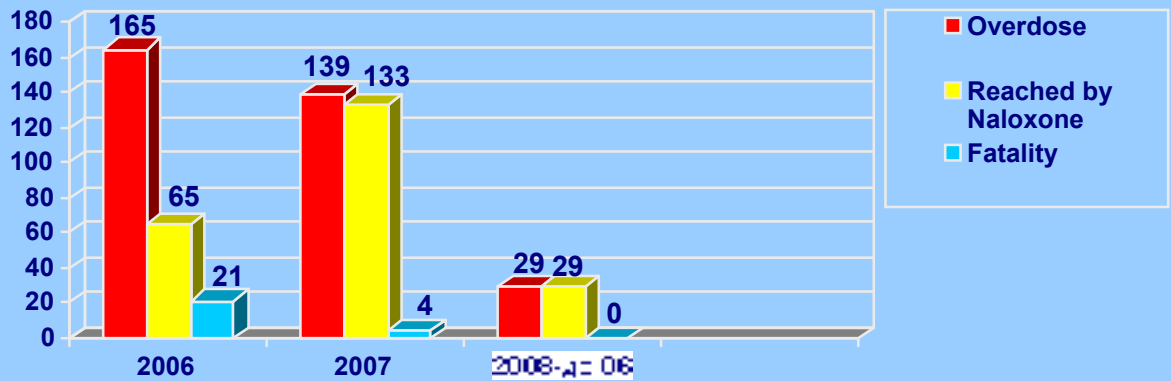
Researcher: Maram Azizmamadov, Director, NGO Volonter
July 30, 2008

SECTION A: EPIDEMIOLOGY

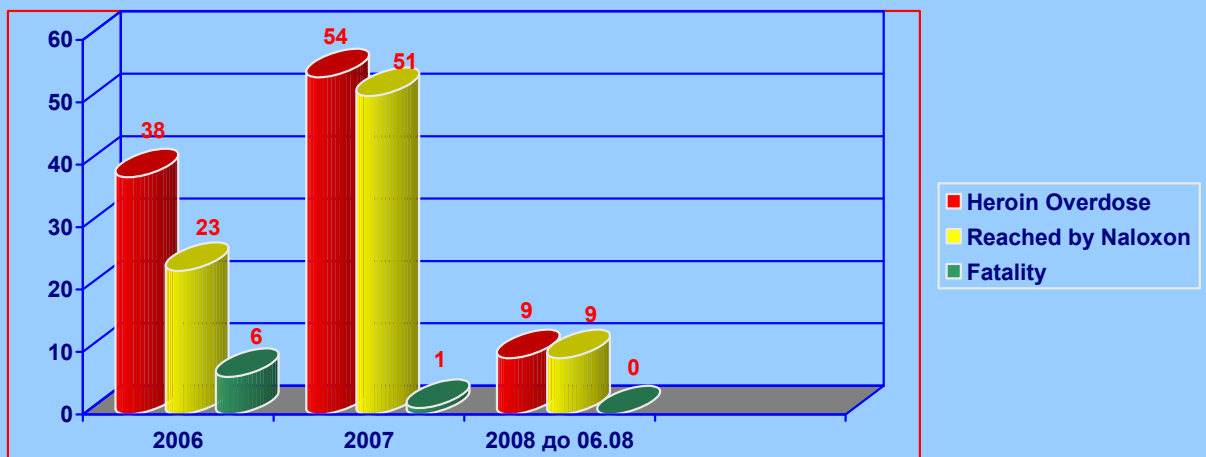
- 1) Data sources for drug overdose:
 - a) There is no national database.
 - b) Individual hospital and emergency medical services (EMS) maintain data.
 - c) The data from Khorog city EMS and emergency department are reliable but incomplete.
 - d) Future data possibilities:
 - i) Alternative means of data collection have been discussed through meetings with NGO Volonter without much progress, except a plan to use a unique identification code for government-run clinics to enhance patient and drug user confidentiality.
 - e) Barriers to data: Health problems related to drug use and other stigmatized conditions are not prioritized.
- 2) Drug use prevalence (population 7 076 598 in July 2007):
 - a) Registered drug users:
 - i) 7 841 registered drug users, 82.7% are heroin users (Interview with Narcological Dispensary June 2007)
 - ii) Regions with higher uptake of harm reduction activities are believed to less actively register drug users (Needs assessment report for the project on drug overdose in Tajikistan. Association of Harm Reduction in Tajikistan; Tajik Branch of Open Society Institute - Assistance Foundation. Dushanbe, Tajikistan. 2006)
 - b) Estimated injection drug users (IDUs):
 - i) 52 598 (from 43 316 to 61 880) or 1.53 / 100,000 population (from 1.26 to 1.79) (EMCDDA Country Profile)
 - ii) 15 000 IDUs, 23.5% of whom are HIV-positive (UNODC 2007)
- 3) Top causes of death among:
 - a) Drug users: overdose and liver disease (per expert opinion)
 - b) Drug treatment program patients: no data available
 - c) People with HIV: no data available
 - d) Prisoners: Tuberculosis (Needs assessment report for the project on drug overdose in Tajikistan. Association of Harm Reduction in Tajikistan; Tajik Branch of Open Society Institute - Assistance Foundation. Dushanbe, Tajikistan. 2006)_
- 4) Fatal overdose:
 - a) Khorog (EMS and hospital data from Khorog services)
 - i) EMS attended to 21 overdose fatalities in 2006 and 4 in 2007
 - ii) Hospital attended to 4 overdose fatalities in 2006 and 1 in 2007
 - iii) Although no overdose deaths were registered thus far in 2008, there were 2 overdose fatalities in July involving a labor migrant and a suspected suicide following release from abusive pretrial detention
 - b) Dushanbe (Needs assessment report for the project on drug overdose in Tajikistan. Association of Harm Reduction in Tajikistan; Tajik Branch of Open Society Institute - Assistance Foundation. Dushanbe, Tajikistan. 2006)
 - i) Estimated total was 170 overdoses with 27 fatalities in 2005
 - ii) EMS attended 52 overdoses, 7 of which were fatal in 2005
 - iii) Republican Narcological Center registered 28 drug users with overdose in 2005
 - iv) Toxicology Department registered 55 overdoses with 5 fatalities in 2005
 - v) NGOs reported 35 overdoses among IDUs with 15 fatalities in 2005

Regional Overview on Overdose Programming

Number of narcotic poisonings from 2006 to June 2008 registered by EMS services in Khorog City



Number of narcotic poisonings from 2006 to June 2008 registered by the reanimation department of the oblast hospital in the city of Khorog



5) General overdose:

- i) NGO Volonter has began purchasing and distributing naloxone to EMS, hospitals, and drug users.
- ii) Khorog EMS attended to 21 165 overdoses in 2006 and 139 in 2007; an increasing proportion received naloxone (65 in 2006 and 133 in 2007) with a substantial reduction in the fatality rate.

Regional Overview on Overdose Programming

- iii) Khorog hospital attended to 38 overdoses in 2006 and 54 in 2007; an increasing proportion received naloxone (23 in 2006 and 51 in 2007) with a substantial reduction in the fatality rate.
- 6) Further overdose details
 - a) Drugs involved in overdose include:
 - i) heroin, heroin mixed with dimedrol, alcohol and heroin are the dominant drugs in overdose
 - ii) 79.2% of drug users use heroin, a major shift since 1996, with only 9.8% using opium (Needs assessment report for the project on drug overdose in Tajikistan. Association of Harm Reduction in Tajikistan; Tajik Branch of Open Society Institute - Assistance Foundation. Dushanbe, Tajikistan. 2006)
 - b) Route of administration: injection, often sharing injection equipment
 - c) Demographics of overdose:
 - i) Risk factors
 - (1) Drug users often purchase from varied and small dealers due to police harassment, possibly leading to increased overdose risk from varied purity and potency
 - (2) Overdose appears to occur frequently after substance abuse treatment, with about half of fatal overdoses known to RAN in Dushanbe each year occurring just after treatment (Needs assessment report for the project on drug overdose in Tajikistan. Association of Harm Reduction in Tajikistan; Tajik Branch of Open Society Institute - Assistance Foundation. Dushanbe, Tajikistan. 2006)
 - ii) 2006:
 - (1) Timing: 13 out of 27 fatal overdoses occurred immediately after drug treatment
 - (a) 10 within 1 day of completing drug detoxification at the narcological dispensary (aged 35-58)
 - (b) 2 after non-medical treatment at NGO Volonter (age 23 and 41)
 - (2) Location:
 - (a) 23 out of 27 fatal overdoses on the street or at an injection site (i.e. shooting gallery), 4 occurred at home
 - (b) 65 out of 88 overdoses were attended to on the street, 23 at the hospital
 - iii) 2007:
 - (1) Timing: out of 4 fatal overdoses, 1 occurred after detox, 2 after relapse, 1 was considered suicide
 - (2) Location:
 - (a) 4 out of 5 overdose fatalities occurred on the street, 1 at home
 - (b) 133 out of 184 overdoses were attended to on the street, 51 in the hospital
 - iv) 2008:
 - (1) Timing: although no overdose deaths registered, there were 2 fatalities in July 2008 involving
 - (2) Location:
 - (a) Of the 2 fatalities in July, 1 occurred at work and 1 at home
 - (b) 26 out of 38 overdoses were attended to on the street, 3 at a syringe exchange program, and 9 in the hospital

SECTION B: OVERDOSE SERVICES

- 1) EMS and hospital services

Regional Overview on Overdose Programming

- a) Service availability:
 - i) Due to the harsh geographical environment of the Ghorno Badakhshan Autonomous Region (78% of the region is mountainous) it is hard for the EMS services to reach clients at times.
 - ii) In Khorog city NGO Volonter activities have lowered the barriers to EMS care.
 - b) Cost: EMS and local hospital services are funded by local resources. Naloxone is purchased by NGO Volonter with funding from the Open Society Institute and distributed to hospitals, EMS, and drug users
 - c) Service barriers:
 - i) 80% of the country is mountainous, difficult terrain
 - ii) Infrastructure was devastated by civil war, poverty, and natural disasters
- 2) Naloxone
- a) Legal status: not a registered drug
 - b) Availability: NGO Volonter purchases Ukrainian-made naloxone through the pharmaceutical network in Dushanbe and Khorog with permission from the oblast department of pharmaceuticals. It is not available for consumer purchase as it is not registered.
 - c) Sales: In accordance with NGO Volonter's grant agreement, in 1 year 2000 vials of naloxone were purchased at \$1.7 (1.15 EUR) per vial.
 - d) Use:
 - i) NGO Volonter distributes purchased naloxone -
 - (1) – to ambulance services in Khorog and 2 districts of the oblast that border Afghanistan and have the largest concentration of IDUs.
 - (2) – to narcological and emergency services in Khorog and Dushanbe under a contract with partner organizations
 - (3) – to NGO Volonter in Khorog and 2 NGOs in Dushanbe
 - ii) There are no reports of providers using too high a dose, although patients often express discontent after being revived, claiming that they were just high and feeling ashamed at having been in an emergency situation
- 3) Prevention programs
- a) NGO
 - i) Volonter is the major overdose prevention project in the country
 - (1) Sites: Khorog, Rushan and Shurgan districts of the Ghorno Badakhshan region, Dushanbe city
 - (2) Goals: HIV/AIDS prevention and overdose prevention
 - (3) Components of overdose prevention:
 - (a) Education and naloxone distribution for:
 - (i) EMS and hospitals
 - (ii) Drug users
 - (iii) Training of trainer sessions with partner NGOs
 - (b) Rescue breathing training: not noted
 - ii) RAN runs an overdose project in Dushanbe, including training, although not yet clear if drug users receiving naloxone (Needs assessment report for the project on drug overdose in Tajikistan. Association of Harm Reduction in Tajikistan; Tajik Branch of Open Society Institute - Assistance Foundation. Dushanbe, Tajikistan. 2006)
 - iii) Mavroid in Kulyab (Sogd oblast) was recently funded by Open Society Institute to initiate an overdose program in prisons, where 70% of inmates are serving sentences for drug crimes. (Needs assessment report for the project on drug overdose in Tajikistan. Association of Harm Reduction in Tajikistan; Tajik Branch of Open Society Institute - Assistance Foundation. Dushanbe, Tajikistan. 2006)
 - b) Agonist maintenance therapy: illegal
 - c) Safer injection facilities: not available

Regional Overview on Overdose Programming

- d) Barriers: No systematic overdose data collection for needs assessment or rapid response
- e) Successes:
 - i) Use of naloxone by EMS and hospitals associated with a decreased overdose fatality rate.
 - ii) Increased interest among target groups: 783 out of 3928 NGO Volonter clients requesting information wanted to learn about overdose.
- 4) Recommended priorities:
 - a) Unstructured surveys or focus-groups to provide baseline needs assessment.
 - b) Registering naloxone so it is accessible in pharmacies
 - c) Developing and expanding the NGO Volonter project to other regions (currently 1 other region has initiated a pilot)
 - d) Organizing national trainings on overdose prevention among police, EMS, and NGO staff
 - e) Improving national EMS system for overdose
- 5) Further work:
 - a) NGO Volonter plans expanded psychological and addiction counseling outreach support for clients prioritized in the overdose prevention program through grants and collaboration with Open Society Institute and AIDS Foundation East West.
 - b) Other organizations:
 - i) NGO "SPIN Plus" in Dushanbe is represented by the drug user and HIV-positive community
 - ii) NGO "NUR" in Shurgan is prepared to train in overdose

SECTION C: KNOWLEDGE AND SKILLS

- 1) Medical and drug treatment provider knowledge: no data provided
- 2) Drug user knowledge: no data provided
- 3) Drug user skills: no data provided

SECTION D: LOCAL AND NATIONAL POLICY

- 1) Strategies:
 - a. Decree # 485 of Republic of Tajikistan signed August 2006 by the Minister of Health to improve narcological services noted the need for national level indicators for tracing overdose, naloxone use for medical treatment of overdose, and overdose prevention projects.
 - b. The HIV/AIDS Response Program for Republic of Tajikistan, 2007- 2010 (August 7, 2006) reportedly discusses drug overdose.
- 2) Agencies with potential involvement: none noted
- 3) Law enforcement:
 - a) Registry: A drug user registry is in place and likely deters drug users from accessing care.
 - b) Healthcare: no data provided regarding reporting of overdoses to police
 - c) Arrests: no data provided
 - d) Law enforcement participation in resuscitation efforts: no data provided
- 4) Laws: There are no laws supporting overdose prevention

COUNTRY RESEARCH SOURCES

Kyrgyzstan

- 1) International Narcotics Control Board Report, 2001. (www.state.gov/g/inl/rls/nrcrpt/2000/index.cfm?docid=892)
- 2) European Monitoring Centre on Drugs and Drug Addiction, Country Profiles: Kyrgyzstan. 2008. (<http://profiles.emcdda.europa.eu/html.cfm/index19780EN.html> accessed 1 March 2008).
- 3) Project report, Ranar, 16 February 2008
- 4) BBC World Service. Deadly TB strain sweeps Kyrgyz prisons. 24 March 2008 (accessed 28 August 2008 <http://news.bbc.co.uk/2/hi/asia-pacific/7307398.stm>)
- 5) Emergency Medical Services, Bishkek, unpublished data
- 6) Emilis Subata & Raminta Stuikyte / CEEHRN Central and Eastern European Harm Reduction Network. "Substitution Drug Treatment in Central and Eastern Europe and Central Asia Regulation and Practices" 2007.
- 7) Cook, C. & Kanaef, N (2008) Global State of Harm Reduction 2008: Mapping the Response to Drug-related HIV and Hepatitis C Epidemics. International Harm Reduction Association.
- 8) KR Healthcare Ministry Order "Addendum to the order of KR Healthcare Ministry dated November 23, 2001 # 406 "Approved list of medications for use in medical practice" dated June 28, 2002 # 268, the medication Naloxone (Polish manufacture, company Ziekh Polfa) is included into addendum of medications and medical products approved for use in Kyrgyz Republic. The information on dosage, packaging and form of Naloxone in 1 ml ampoules is in the above order of KR Healthcare Ministry.
- 9) KR Government Decree "On approving the list of life saving medications of Kyrgyz Republic" # 759 dated October 31, 2006 Naloxone is on the list of life saving medications of Kyrgyz Republic. The pharmacological group, the medication form and unit dosage is in the above KR Government Decree.
- 10) Selected interviews:
 - a. Tatina Samudinova Emergency Medical Services, Bishkek, 25 July 2008
 - b. Djanyl Djusupova, Head of Pharmacopeia Committee of the Kyrgyz department of drug provision and medical equipment at the Ministry of Health, 25 July 2008
 - c. Republican Narcology Director Ruslan Tokubaev, 24 July 2008

Latvia

- 1) European Monitoring Centre for Drugs and Drug Addiction, Country overview: Latvia (accessed 8/13/08 <http://www.emcdda.europa.eu/publications/country-overviews/ly>)
- 2) "Spread of addictive substances use and its consequences in Latvia," Public Health Agency, Ministry of Health. 15th ed. 2007.
- 3) Cook, C. & Kanaef, N (2008) Global State of Harm Reduction 2008: Mapping the Response to Drug-related HIV and Hepatitis C Epidemics. International Harm Reduction Association.
- 4) Prevalence of HIV and other infections and risk behaviour among injecting drugusers and their main sexual partners in Latvia, Lithuania, and Estonia, 2007-2008. Conducted by collaborative research team including Public Health Agency in Latvia, Department of Public Health and National Institute for Health Development in Estonia, and Ministry of Health in Lithuania. 2008 Draft report. Unpublished.
- 5) "HIV/AIDS surveillance in Europe, end-year report 2000." European Centre for the Epidemiological Monitoring of HIV/AIDS. 2001. NO 64. www.eurohiv.org

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- 6) Latvia Public Health Authority (PHA) , unpublished data, July 2008
- 7) Latvian Prison Administration Medical Department, unpublished data, August 2008
- 8) Clinical university, hospital "Gaiļezers", Toxicology Centre of Latvia, unpublished data, July 2008
- 9) First Aid Medical Station of Riga Region, unpublished data, July 2008
- 10) Hospital of Ventspils, unpublished data, July 2008
- 11) State Agency for Narcology and the Center for AIDS Prophylactics. "Tendencies and habits of drug use in Latvia." 2006.
- 12) Public Health Agency. "Tendencies and habits of drug abuse in Latvia: analysis of the results of the chapter of 2007 of drug users cohort study." Riga: 2007.
- 13) A Parkinsonian syndrome in methcathinone users and the role of manganese. *New England Journal of Medicine*; March 6, 2008
- 14) IMS Health data base, unpublished data, July 2008
- 15) Council of the European Union. European Union Drugs Strategy (2005-2012). Document No 15074/04. Official Journal of the European Union. 2005/C 168/01
- 16) Council of the European Union. European Union Drug Action Plan (2005-2008). 8652/05. Official Journal of the European Union. 2005/C 168/0)
- 17) Council of the European Union Recommendation of 18 June 2003 on the prevention and reduction of health-related harm associated with drug dependence. Official Journal of the European Union. 2003/488/EC
- 18) European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) (2007a) Annual report 2007 on the state of the drugs problem in Europe. Luxembourg: Office for Official Publications of the European Communities, 2007
- 19) EMCDDA (2007b) Europe risks failing to meet targets to reduce drug-related deaths. *Drugnet Europe No60* (October-December 2007).
- 20) Trimbos Institute (2006). Prevention and reduction of health-related harm associated with drug dependence. An inventory of policies, evidence and practices in the EU relevant to the implementation of the Council Recommendation of 18 June 2003. Synthesis report for the European Commission. Contract nr. SI2.397049
- 21) Training guidelines (for medical personnel – none available for low-threshold programming):
 - a. Approved guidelines of medical technology for narcotic (and other substance) intoxication (data base is available www.vsmtva.gov.lv , see ATTACHMENT 13).
 - b. Guidelines for treatment of narcological (addiction) patients (Latv. Narkoloģisko pacientu ārstēšanas vadlīnijas) developed by State Narcology Centre.
 - c. Overdose and its consequences (for medical personnel) (Narkotisko vielu pārdozēšana un tās sekas *Latv.*), Med. prof., toxicologist, Viesturs Liguts (Attached)
 - d. Overdose and its consequences (for non-medical personnel, LTC personnel training) (Narkotisko vielu pārdozēšana un tās sekas *Latv.*), Med. prof., toxicologist, Viesturs Liguts
 - e. Toxicology handbook, Dr.Med.Prof. Viesturs Liguts, (contamination, first aid and treatment), (*language - Latvian*).
 - f. Guidelines for treatment of narcological (addiction) patients (Latv.Narkoloģisko pacientu ārstēšanas vadlīnijas); State Narcology Centre
 - g. Narcology for general practitioners (Latv.-Narkoloģija vispārējās prakses ārstiem), Dr.Med.Gundars Osis, 2006
- 22) Interviews
 - a. Dr.Med.Prof. Viesturs Liguts, Riga Stradina University, professor of the Department of Anesthesiology and Reanimatology, Head of Contamination Centre, Latvia Toxicology centre. July 2008.

Regional Overview on Overdose Programming

- b. Agita Seja, NGO "DIA+LOGS" (harm reduction and HIV prevention, LTC and mobile syringe exchange unit). July 2008.
- c. Inga Bulmistre, specialist of HIV prevention consultation focal point, Public Health Agency. July 2008.
- d. Mārcis Trapencieris, analyst, Public Health Agency, Latvia. July 2008.
- e. Dr. Ilze Maksima, analyst, Public Health Agency, Latvia. July 2008.
- f. Gunta Grīsele, Deputy Head of Epidemiological Safety, Ministry of Health, Latvia. July 2008.
- g. Regīna Fedosejeva, Head of Medical Department, Latvian Prison Administration. July 2008.
- h. Anda Karnīte, Public Health Specialist, AIDS and STI Prevention Centre, Public Health Agency. July 2008.
- i. Iveta Skripste, Methodological expert, AIDS and STI Prevention Centre, Public Health Agency. July 2008.
- j. Dr. Ievina Alka, Deputy Doctor, First Medical Aid Station of Riga region. July 2008.

Romania

- 1) National Report on Drug Situation in Romania, National Anti-drug Agency, 2007 (<http://www.ana.gov.ro/eng/attributions.htm>)
- 2) Bucharest Community Service Plan in Drug Addiction Field, Foundation for Community Care Services, Bucharest, 2007
- 3) European Monitoring Centre for Drugs and Drug Addiction, Country overview: Romania accessed 8/13/08. <http://www.emcdda.europa.eu/publications/country-overviews/ro>
- 4) Bals M. "Evolution of the HIV/AIDS phenomenon in Romania 1985-2007," Presentation. National Infectious Diseases Institute, Bucharest, Romania. 2008. Romanian: http://www.cnlas.ro/download/DATE_ROMANIA_31_dec2007.pdf (accessed 19 August 2008); English: http://www.cnlas.ro/download/ROMANIA_31_dec2007_english.pdf (accessed 19 August 2008)
- 5) Adevarul (daily newspaper), 10/07/2007, accessed 25 July 2008
- 6) Ziare, report on cocaine overdose in prison. 22 March 2007 (accessed 28 August 2008 http://www.ziare.com/FIUL_LUI_TAMANGO_A_MURIT_IN_PUSCARIE-75609.html)
- 7) StiriLocale report on inhalant overdose in prison. 11 June 2007 (accessed 28 August 2008 http://www.stirilocale.ro/timis/Supradoza_la_inchisoare_IDN148398.html)
- 8) Emergency Clinic Hospital Floreasca Bucharest 2006 data: Report national privind situatia drogurilor in Romania 2007 (cu date din 2006)
- 9) INML Mina Minovici Bucharest, unpublished data, 2007.
- 10) Public Health Authority Bucharest, unpublished data, 2006/2007.
- 11) Plan de servicii comunitare FIC – ARAS, unpublished data, 2006
- 12) Rapid assessment of the drug users population in Bucharest, National Anti-drug Agency, Bucharest 2008 (unpublished)
- 13) NGO Ranar unpublished data and experience, July 2008.
- 14) Opioid Substitution Therapy. (<http://www.ihra.net/uploads/downloads/Projects/GlobalStateofHR/GSHREurasia.pdf> accessed 21 August 2008)
- 15) Council of the European Union. European Union Drugs Strategy (2005-2012).

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- Document No 15074/04. Official Journal of the European Union. 2005/C 168/01
- 16) Council of the European Union. European Union Drug Action Plan (2005-2008). 8652/05. Official Journal of the European Union. 2005/C 168/0)
 - 17) Council of the European Union Recommendation of 18 June 2003 on the prevention and reduction of health-related harm associated with drug dependence. Official Journal of the European Union. 2003/488/EC
 - 18) European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) (2007a) Annual report 2007 on the state of the drugs problem in Europe. Luxembourg: Office for Official Publications of the European Communities, 2007
 - 19) EMCDDA (2007b) Europe risks failing to meet targets to reduce drug-related deaths. Drugnet Europe No60 (October-December 2007).
 - 20) Trimbos Institute (2006). Prevention and reduction of health-related harm associated with drug dependence. An inventory of policies, evidence and practices in the EU relevant to the implementation of the Council Recommendation of 18 June 2003. Synthesis report for the European Commission. Contract nr. SI2.397049
 - 21) Romanian Law no 143 / 2000 on fighting against illicit drug use and drug trafficking; Law no 522 / 2004 – completing law no 143/2000
 - 22) Interviews
 - a. Dr. Lucian Suditu, Direction Romanian Office for Drugs and Toxicomania, National Anti-drug Agency, July 2008
 - b. Dr. Eugen Hriscu, Romanian Alliance to Fight Alcoholism and Addiction, July 2008
 - c. Dr. Livia Pomana – National Forensic Institute Mina Minovici, Chief of Toxicology Laboratory, July 2008
 - d. Inspector Gabriel Constantin, Police Section no 12, Bucharest, July 2008
 - e. Mihai Tanasescu, project coordinator, Romanian Association Against AIDS, ARENA - Opiate Substitution Center, July 2008
 - f. Liana Velica, Romanian Association Against AIDS, July 2008
 - g. Andrei Potorac, Integration Association, July 2008
 - h. Catalina Iliuta, UNODC, July 2008
 - i. The National Prison Administration data request, July 2008
 - j. The Forensic Institute Dr. Mina Minovici Bucharest, July 2008

Russia

- 1) Koshkina EA, "Mortality associated with drug use", presentation at "Use of epidemiological methods for drug users mortality researches", Petrozavodsk, Russia, 2008.
- 2) Sergeev, B, Karpets A, Sarang A, Tikhonov M. Prevalence and circumstances of opiate overdose among injection drug users in the Russian Federation. Journal of Urban Health. 2003; 80(2): 212-9.
- 3) Russian Federation (2006) Country Report of the Russian Federation on the Implementation of the Declaration of Commitment on HIV/AIDS.
- 4) Demoscope Weekly, 2007. (accessed 28 August 2008; <http://demoscope.ru/weekly/2007/0275/barom03.php>)

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- 5) Federal AIDS Center of the Russian Federation, unpublished data produced 1 November 2007
- 6) "Addiction Medicine in Saint-Petersburg in 2000-2005." Newsletter.
- 7) Prihodi newsletter 2007 (accessed 28 August 2008 <http://abort.prihodi.net/2007/12/25/99047/>)
- 8) Naberezhnye Chelny Project Report, unpublished data 2008.
- 9) Yale-Bekhterev Saint-Petersburg Overdose Study, 2006-2007, not published.
- 10) Grau LE, Green TC, Blinnikova K, Torban M, Krupitsky E, Ilyuk R, Kozlov AP, Heimer R. Opioid overdose risk among drug users in St. Petersburg, Russia. Unpublished.
- 11) Green TC, Grau LE, Blinnikova KN, Torban M, Krupitsky E, Ilyuk R, Kozlov A, Heimer R. Social and structural aspects of the overdose risk environment in St Petersburg, Russia." Unpublished.
- 12) Personal communication with Yury Ivanov, narcologist and head of Tverskaya Iniciativa, 21 August 2008
- 13) Oleynik, Sergey. Narcology Service in Russia from the Perspective of Patients. For Russian Harm Reduction Network. Moscow-Penza, 2007.
- 14) Levinson, L, Torban, M (2008) Narcology Register: According to A Law or According to Instruction? Regulation of register of drug users in the Russian Federation). Moscow, 2008 (in print).

Tajikistan

- 1) Needs assessment report for the project on drug overdose in Tajikistan.
- 2) Association of Harm Reduction in Tajikistan; Tajik Branch of Open Society
- 3) Institute - Assistance Foundation. Dushanbe, Tajikistan. 2006
- 4) European Monitoring Centre on Drugs and Drug Addiction, Country Profiles: Tajikistan. 2008. (<http://profiles.emcdda.europa.eu/html.cfm/index19783EN.html> accessed 28 August 2008).
- 5) United Nations Office on Drugs and Crime Regional Office for Central Asia (2007) Compendium on Drug Related Statistics 1996-2007.
- 6) Aceijas C., S.R. Friedman, H.L.F. Cooper, L. Wiessing, G.V. Stimson, and M. Hickman 2006. Estimates of injecting drug users at the national and local level in developing and transitional countries, and gender and age distribution. Sexually Transmitted Infections 82 (suppl_3): iii10 - iii17.
- 7) Emergency Medical Services Khorog City, unpublished data, 2008
- 8) Khorog Oblast Hospital, unpublished data, 2008
- 9) Interviews:
 - a. Narcological Dispensary representative, June 2007
 - b. NGO Volonter clients, July 2008

LIST OF RESOURCES

epidemiology of overdose

overdose knowledge and skills

overdose services

local and national policy

other useful materials

links

This list was created aiming to make key resources available to harm reduction practitioners in Central and Eastern Europe and Central Asia on the issue of drug overdose and some of the approaches taken and tools used to address it.

We thank all our members and the group of experts working on the EHRN project "Regional Overview on Overdose Programming" who contributed to gathering and selecting the materials. We also gratefully acknowledge the financial contribution of the French Ministry of Health, Youth, Sport and Voluntary Sector through the World Health Organization Regional Office for Europe to this report.

Please [contact us](#) to get additional information on materials and training opportunities, or to provide additional resources and feedback.

epidemiology of overdose

"Given the prevalence of drug use and its role in driving the HIV epidemic in this region, overdose is believed to be a major cause of mortality among HIV-positive individuals and illicit drug users alike. Nonetheless, reliable data on drug overdose is difficult to obtain in the best of infrastructural circumstances and may face unique obstacles in this region." Survey of Drug Overdose Situation in Specified Countries. EHRN, 2008

Overdose: A Major Cause of Preventable Death in Central and Eastern Europe and Central Asia. Recommendations and overview of the situation in Latvia, Kyrgyzstan, Romania, Russia and Tajikistan

Coffin Philip, Eurasian Harm Reduction Network (EHRN), Vilnius, August 2008.

In this report, created for the European Harm Reduction Network and funded by the French Ministry of Health, Youth, Sport and Voluntary Sector through the World Health Organization Regional Office for Europe, the current situation with regard to overdose epidemiology, services, knowledge, and policies in Eastern Europe and Central Asia is summarized and recommendations for improvement are made.

[in English] [in Russian][other materials]

Overdose in Central and Eastern Europe and the former Soviet Union

Phillip Coffin, Agnese Strodaha. International Harm Reduction Development Program of the Open Society Institute, New York – 2001 (abridged and revised by IHRD June 2002)

This research was conducted on request of International Harm Reduction Development (IHRD) program of Open Society Institute to investigate capability to prevent overdoses within programs financed by IHRD in Central and Eastern Europe as well as in the former Soviet Union. 70 people from 13 countries of the region took part in the research. As the results show, overdose prevention initiatives promote harm reduction legalization, prevent fatalities and increase quality of drug users' lives.

[\[in English\]](#)[\[in Russian\]](#)

Clinical and Contextual Correlates of Opioid Overdose Risk among Drug Users in St. Petersburg, Russia

Lauretta E. Grau, Traci C. Green, Mikhail Torban, Ksenia Blinnikova, Evgeny Krupitsky, Ruslan Ilyuk, Andrei P. Kozlov, Robert Heimer. DRAFT COPY

The research sought to identify and describe local attitudes, knowledge and clinical correlates of having either personally experienced or witnessed opioid overdose among a group of 60 drug users, both in and out of treatment, in St. Petersburg. The results suggest that experiencing or witnessing opioid overdoses are common, overdose knowledge is generally high, but self-efficacy for effectively intervening is low. Furthermore, the researchers concluded that drug users in St. Petersburg are interested in receiving overdose prevention and response training.

[\[in English\]](#) [\[St. Petersburg Overdose Study Questionnaire\]](#)

Social and structural aspects of the overdose risk environment in St. Petersburg, Russia

Traci C. Green, Lauretta E. Grau, Ksenia N. Blinnikova, Mikhail Torban, Evgeny Krupitsky, Ruslan Ilyuk, Andrei Kozlov, Robert Heimer. DRAFT COPY

This study sought to uncover social and structural aspects contributing to fatal overdose risk in St. Petersburg and assess prevention intervention feasibility. Twenty-one key informant interviews were conducted with drug users, treatment providers, toxicologists, police, and ambulance staff. The researchers concluded that local social and structural elements influence risk environments for overdose. Interventions at the community and structural levels to prevent and respond to opioid overdoses are needed for and integral to reducing overdose mortality in St. Petersburg.

[\[in English\]](#)

Need Assessment report for the project on drug overdosing in Tajikistan

Association of Harm Reduction in Tajikistan, Tajik Branch of Open Society Institute – Assistance Foundation. Dushanbe – 2006

This report investigates the dynamics of drug use in Tadjikistan; availability of the national statistics on morbidity/mortality from drug overdose; existence of the educational programs on prevention of drug overdose and interventions into this sphere; availability and provision of emergency care services and use of Naloxone in case of drug overdose. Conclusions and recommendations of this paper can be useful for creation and strengthening of overdose prevention programmes, especially in Tadjikistan.

[\[in English\]](#)

Annual report 2007: the state of the drugs problem in Europe

European Monitoring Centre for Drugs and Drug Addiction. Luxembourg: Office for Official Publications of the European Communities - 2007. ISBN 978-92-9168-288-1

The report on the state of the drugs problem in Europe presents the EMCDDA's yearly overview of the drug phenomenon. This is an essential reference book for policymakers, specialists and practitioners in the drugs field or indeed anyone seeking the latest findings on drugs in Europe. Published every autumn, the report contains non-confidential data supported by an extensive range of figures.

[\[in English and other EU languages\]](#)

[\[Also check EMCDDA briefing on overdose among young people, 2004\]](#)

Awareness of opiate overdose problem: research report

(Информированность о проблеме передозировки опиатами: отчет по исследованию Борис Сергеев, Ph.D, Аня Саранг, Михаил Тихонов)

This report conveys the results of "Awareness of overdose problem" survey, conducted by Russian harm reduction projects and harm reduction training project of "AIDS Foundation East-West". The survey was performed in March – June of 2001.

[\[in Russian\]](#)

Drug-related overdoses within a medically supervised safer injection facility

Thomas Kerr, Mark W. Tyndall, Calvin Lai, Julio S.G. Montaner, Evan Wood. Research paper: International Journal of Drug Policy, 2006

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This research paper examines the incidence and features of overdoses at the supervised injection facility (SIF) in Vancouver, Canada and the responses made by SIF staff. The findings suggest that SIF can play a role in managing overdoses among IDU and indicate the need for further evaluation of the impact of SIF on morbidity and mortality associated with overdose. "There have been a large number of overdoses within the SIF, and it is noteworthy that none of these overdoses resulted in a fatality" – the report says.

[in English]

Fatal heroin "overdose": A review

Darke, Shane & Zador, Deborah. *Addiction*, 1996, 91(12): 1765–1772

This paper is an analytical review of publications and researches on the problem of fatal heroin overdose. The paper considers the most general circumstances accompanying overdoses, overdose causes and features, as well as possible strategies to lower mortality associated with heroin use.

[in English][in Russian]

Overdose Prevention Pilot Study: Harm Reduction Saves Lives

Drug Policy News (www.drugpolicy.org), December 5, 2002

This short article covers results of pilot research in San Francisco with participation of 24 heroin users. The participants of the experiment, conducted from May 2001 to February 2002, were taught to identify overdose symptoms, use Naloxone, deliver cardiopulmonary resuscitation and overcome psychological barrier when it was vitally important to call "911" (emergency number). The results have come to be "more than encouraging": there was no fatalities resulting from 18 overdoses among participants. The research showed a number of other positive results.

[in Russian]

overdose knowledge and skills

Overdose Prevention and Response: A guide for people who use drugs and harm reduction staff in Eastern Europe and Central Asia

Curtis M., Guterman L. Draft as of April, 2008

This guidebook was created as a resource for the development and implementation of drug overdose prevention and response programs within drug user activist groups and harm reduction organizations in the Russian Federation and elsewhere in Eastern Europe and Central Asia. This

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guide combines practical information about overdose and common risk factors with strategies for preventing, identifying, and responding effectively if witness to an overdose. This guide also includes sample overdose training curricula and a collection of 'tips from the field' from experienced overdose trainers and harm reduction experts.

[\[in English\]](#)

Opiate Overdose Management through Naloxone Peer Distribution: Review of Evidence

Shulga L. International HIV/AIDS Alliance in Ukraine, 2008

This article reviews existing literature on overdose management in harm reduction programs through naloxone peer distribution, showing its efficiency in overdose death prevention among opiate drug users while immediate medical help is not available. The article also reviews the legal aspects of naloxone distribution in Ukrainian context and gives recommendations on developing peer based interventions.

[\[in English\]](#)[\[in Russian\]](#)

Take-home naloxone to reduce heroin death. Review

Catherine T. Baca & Kenneth J. Grant. Center on Alcoholism, Substance Abuse, and Addictions (CASAA) and Family and Community Medicine, University of New Mexico, Albuquerque, New Mexico

This review summarizes the pertinent medical literature related to the distribution of take-home Naloxone which is currently taking place in many countries around the world. The focus is on evidence from the addiction medicine and emergency medicine literature relevant to the distribution of take-home Naloxone.

[\[in English\]](#)

Tver. Overdose prevention among IDUs. Education and administration of naloxone

(Тверь. Профилактика передозировок среди ПИН. Обучение и предоставление налоксона. Юрий Иванов, в рамках проекта « Развитие и укрепление ресурсов сообщества потребителей наркотиков. Доступность медицинской помощи, соблюдение гражданских прав и свобод потребителей наркотиков в Твери».)

It is a presentation on opiate overdose and its prevention. The material can be useful for those developing trainings on overdose.

[\[in Russian\]](#)

Get the SKOOP: Skills and Knowledge on Overdose Prevention

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Presentation by Sharon Stancliff, MD, Harm Reduction Coalition, 2006

This presentation covers epidemiology of overdose in the USA, causes and ways to prevent lethal overdoses. It also examines SKOOP model of overdose prevention.

[in English and Russian][other OD materials by the Harm Reduction Coalition]

Opioid Overdose Prevention Core Curriculum

New York State Department of Health Website

This is a source of basic knowledge and on overdose prevention for trainers and tips for conducting trainings.

[in English][also check New York State Department of Health Website]

Drug overdose

(Брошюра «Передозировка наркотиками», Всероссийская сеть снижения вреда, 2006 г.)

This is a brochure on overdose prevention developed by the Russian Harm Reduction Network. The material can be useful for developing overdose prevention campaigns.

[in Russian]

Preventing overdose

Andrew Preston, Paul Hardacre, Neil Hunt, Jon Derricott. Exchange Campaigns / Department of Health, 2001

The guide has been written to support the range of campaign materials that have been developed to reduce the numbers of opiate related overdose deaths. It includes information on causes and risk factors of overdose, proper and dangerous ways of response to overdose situations. It also gives 10 key strategies for reducing overdose deaths, useful contacts, bibliography list for further reading and a list of materials to support a preventing overdose campaign. The guide was edited for Australian conditions, though it can be useful for designing an overdose prevention campaign in the region.

[in English][other OD materials by Exchange Campaigns]

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Overdose prevention and management

(Предупреждение передозировки и управление. Презентация. Амстердам – 2006)

This presentation contains information on overdose epidemiology in Central and Eastern Europe (in Russia in particular), basic information on overdose situations and response, information on how to initiate overdose programmes using an example of New York.

[\[in Russian\]](#)

Overdosing on opiates: Part I – Causes

David Best, Lan-Ho Man, Deborah Zador, Shane Darke, Sheila Bird, John Strang, Mike Ashton. Drug & Alcohol Findings: Issue 4, 2000.

This paper aims to clarify the extent and causes of overdose as a basis for developing prevention strategies. It is a review of international literature with an emphasis on Britain.

[\[in English\]](#)

overdose services

Building capacity in overdose prevention

Presentation by Sharon Stancliff, MD, Caroline Rath, PA-C. Harm Reduction Coalition, New York, USA - 2008

This presentation gives key arguments and names main challenges for the provision of overdose prevention services at syringe exchange/syringe access sites, homeless shelters, hospitals, inpatient, public clinics, drug treatment and HIV programs, jails/ prisons and with the formerly incarcerated populations. It also gives information on implementation of overdose prevention services in the New York, USA.

[\[in English\]](#) [\[other OD materials by the Harm Reduction Coalition\]](#)

It's Rarely Just the "H": Addressing Overdose among South Australian Heroin Users through a Process of Intersectoral Collaboration

Catherine McGregor, Katrina Hall, Robert Ali, Paul Christie, Robert Braithwaite, Shane Darke. Summary of the Report, 1999.

The document pictures key ideas of the report on the project to address heroin overdose among South Australian, which started in 1994. The project is implemented according to peer education approach; slogans and training materials that were elaborated during its

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realization have turned out to be effective means of transmitting health protection ideas among injection drug users.

[\[in English\]](#)[\[in Russian\]](#)

Also check:

Naberezhnye Chelny – feedback on an overdose prevention project

(НАБЕРЕЖНЫЕ ЧЕЛНЫ – обратная связь по проекту профилактики передозировок)

[\[in Russian\]](#)

Information on a project “Overdose prevention among injecting drug users in Samara”

(Информация о проекте «Профилактика передозировок среди потребителей инъекционных наркотиков в г. Самара»)

[\[in Russian\]](#)

local and national policy

Policy Report: Amendments to the Regulations and Procedures Manual

Vancouver Police Department Planning and Research Section. Board Report # 0648, June 2006

These are the guidelines for police attending fatal and non-fatal illicit drug overdoses. The policy was based on research from Australia, and recognized the occurrence of drug overdoses as medical emergencies; the primary reason for police attendance at a non-fatal drug overdose call being assistance with life saving measures and with public safety. The incidents of drug overdose deaths can decrease if the police do not lay charges for the drug use.

[\[in English\]](#)

Naloxone availability: Another positive change

Dan Bigg. Harm Reduction Coalition, No.9, Fall 1999

This article by Dan Bigg – the director of the Chicago Recovery Alliance – tells about the necessity to make naloxone available without prescription and to disseminate information on its proper use.

[\[in English\]](#)[\[in Russian\]](#)

Reducing drug related deaths: A Report by the Advisory Council on the Misuse of Drugs

London: The Stationery Office - 2000. ISBN 0113412398

A major focus of this report is on preventing deaths from the misuse of controlled and illicit drugs and interactions between illicit drugs and alcohol. The aim of the report is to provide a statement which can serve as a catalyst for strong and multiple actions. It a call for a new, integrated, and determined initiative on the prevention of deaths due to drug misuse in the UK.

[in English]

other useful materials

Overdose Awareness Day: Poster, The Salvation Army 2008

Slide: Cause of death among PLHIV in Russia: Not only AIDS, Not even mostly AIDS

NYC Background Questionnaire

NYC Naloxone Medical History

NYC pre - post test questions

Refill Questionnaire

TOR Flyer "BECOME AN OVERDOSE RESPONDER!", Harm Reduction Coalition

TOR Flyer "IS YOUR CLIENT TURNING BLUE?!", Harm Reduction Coalition

MBIDOZIMI (OVERDOZA): NDIHMA E PARË, Aksion Plus, Tiranë - 2005 [in Albanian]

links

http://www.exchangesupplies.org/drug_information/campaigns/overdose/overdose_intro.html

Exchange Supplies tools for harm reduction

<http://www.anypositivechange.org/res.html>

Chicago Recovery Alliance

<http://www.harmreduction.org/article.php?list=type&type=51>

Harm Reduction Coalition

<http://nomadoverdoseproject.googlepages.com/nomadhomepage>

N.O.M.A.D Not One More Anonymous Death/Overdose Prevention Project

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http://www.health.state.ny.us/diseases/aids/harm_reduction/opioidprevention/index.htm

New York State Department of Health, AIDS Institute

<http://www.drug-overdose.com/>

Information on overdose

http://www.nta.nhs.uk/areas/drug_related_deaths/trends.aspx

National Treatment Agency for Substance Misuse: Drug related death trends in England

<http://killpeople.com/breathe/index.html>

Breathe (the overdose game)

Links to these resources and more are available at www.harm-reduction.org

The Eurasian Harm Reduction Network (EHRN) is a regional network with a mission to support, develop and advocate for harm reduction approaches in the field of drugs, HIV and AIDS, public health and social exclusion by following the principles of humanism, tolerance, partnership and respect for human rights and freedoms.

Founded in 1997 as the Central and Eastern European Harm Reduction Network, EHRN today unites more than 260 individuals and organizations from 25 countries in Central and Eastern Europe and Central Asia. The network's members come from both the public and private sectors and include government agencies, drug treatment and HIV professionals, harm reduction organizations, researchers, community groups and activists (notably, organizations of people living with HIV, and drug users), as well as supporters and experts from outside the region. EHRN is governed by its members through their elected representatives on the Steering Committee. The executive work is carried out by a Secretariat based in Vilnius, Lithuania.

The main activities of the network include advocacy for better policies on HIV and drugs, informational support and exchange, and capacity building of members and other stakeholders involved in the field of reduction of drug-related harm in Central and Eastern Europe and Central Asia. EHRN members and their allies seek to reduce drug-related harm, including the transmission of HIV and other blood-borne diseases, through facilitating the use of less repressive and less discriminative policies with respect to drug users and other vulnerable populations.

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