



HEKOMMEPIECKOE ПAРTHEPCTBO «ЗCBEPO»

Epidemiological Impact and Cost Effectiveness of Harm Reduction Programmes in Russia

Based on the results of the Global Fund Round 5 HIV Programme in Russia, 2006-2011

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Scaling up access to HIV prevention and treatment by strengthening HIV services for injecting drug users in the Russian Federation

Period of the Programme:
1 September 2006 – 31 August 2011

Total Budget: EUR 10.1 mln

Annual geography indicator: 33 cities



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Goals

- ❑ To scale up the coverage and quality of services in the field of HIV-prevention for PWID (including PWID involved in sex-work) in 33 cities of Russia;
- ❑ To increase the demand for prevention, care and support in the field of HIV through mobilization of communities and scaling up the potential on the community level.




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What is "Comprehensive Programme"?

Comprehensive range of services

Comprehensive range of partners



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Comprehensive range of services*:

- ❑ Access to drug treatment and rehabilitation (except of opioid substitution therapy); overdose prevention;
- ❑ Access to HIV testing and counselling;
- ❑ Access to ART;
- ❑ Access to STI prevention, testing and treatment;
- ❑ Needle/syringe programmes;
- ❑ Condom provision to IDUs and their sex partners;
- ❑ Information, education and communication of IDUs and their partners;
- ❑ Access to vaccination, testing and treatment of hepatitis;
- ❑ Access to TB testing and treatment.

* WHO/UNODC/UNAIDS (2009). Technical Guide for Countries to Set Targets for Universal Access to HIV Prevention, Treatment and Care for Injecting Drug Users. www.who.int/hiv/pub/idu/targetsetting/en/



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Comprehensive range of partners:

- ❑ AIDS Centres
- ❑ Drug Treatment Centres
- ❑ Non-State Rehabilitation Centres
- ❑ TB Treatment Facilities
- ❑ STI treatment clinics
- ❑ Psychologists, lawyers, social case management
- ❑ NGOs, local DU communities and self-support groups



Level of demand of services by the clients*

Needle/syringe exchange and provision	98%
Condom provision	83%
Referrals to HIV VCT	70%
Information materials (Hep's, "Veins", others)	67%
Peer counseling (outreach worker)	67%
Referrals to TB treatment	51%
Referrals to drug treatment, gen.physician, gynecologists	53%
Other referrals (Lawyer, psychologist)	40%

* Evaluation of services and client satisfaction survey in 33 cities of Russia. 2011 (5,949 interviews)



Results against the main indicators:

- **Total coverage:** • **149 628**
- **Referred to / approached HIV VCT:** • **87 295 (58%) / 29 023 (19%)**
- **Referred to / approached TB services:** • **14 119 (9%) / 5 267 (3,5%)**
- **Approached drug treatment:** • **1245 (<1%)**

Average service use rate: 30%



Epidemiological impact and cost effectiveness evaluation*

1. **HIV cases prevented:** Extrapolation of the identified HIV transmission rates to the Programme sites (Federal AIDS Centre, official statistics)
2. **HIV cases prevented:** Kaplan & O'Keefe (survey and routine monitoring data available, "ESVERO")

Accomplished only at the territories covered by the Programme

* With the support of the UNAIDS RCT EECA



1. **HIV cases prevented:** Extrapolation of the identified HIV transmission rates to the Programme sites (Federal AIDS Centre, official statistics)

Study in the selected 6 cities of the Programme, where no other interventions for IDUs were operational.



HIV Transmission Rate, 2010*



2009:
Average rate for Russia:
14,34

Average rate in the 6 cities of the Programme (Volgograd, Orel, Lipetsk, Balakovo, Byisk, Yekaterinburg)

10,4

*Based on the Federal AIDS Centre statistics for the Report "Principles of Evidence-Based Medicine and Harm Reduction Programmes to Prevent HIV-Infection Among the Most Vulnerable Populations". Moscow, 2010



New HIV infections among IDUs

11 cities covered by the Programme:

- **New cases in 2008:** **2 135**
- **New cases in 2009:** **1 810**

Reduction for 15,2%

* Official Statistics of the local AIDS Centres in Abakan, Balakovo, Byisk, Voronezh, Penza, Rubtsovsk, Serov, Yekaterinburg, Novorossiysk, Barnaul, Irkutsk



IDU Transmission

11 cities covered by the Programme:

2008 – 42,4%

2009 – 35,6%

Average for Russia:

2008 – 62%

2009 – 61%

* Official Statistics of the local AIDS Centres in Abakan, Balakovo, Byisk, Voronezh, Penza, Rubtsovsk, Serov, Yekaterinburg, Novorossiysk, Barnaul, Irkutsk



Programme Cost Effectiveness, 2010 (HIV transmission rate extrapolated)

If to extrapolate the average-Russia HIV transmission rate to the 6 selected cities:

1 153 new HIV cases prevented

Costs of the 1 prevented case:

EUR 533

(EUR 615,000 spent for 6 projects / 1,153 prevented cases)

Annual costs of 1st Line ARVT for naïve patient:

EUR 4,500

(Average 1st line medications cost)

Costs correlation: 1:9



2. HIV cases prevented: Kaplan & O'Keefe (survey and routine monitoring data available, "ESVERO")

* Kaplan E.H., O'Keefe E. Let the needles do the talking!
Evaluating the New Haven needle exchange. Interfaces
1993: 23: 7-26



Economic Impact, 2010 r.

Kaplan & O'Keefe Model*

Three key parameters of the Model:

- Risk of HIV transmission per 1 injection
- Frequency of the shared use of injection paraphernalia
- Basic/initial level of HIV prevalence in community

* Kaplan E.H., O'Keefe E. Let the needles do the talking! Evaluating the New Haven needle exchange. Interfaces 1993: 23: 7-26



Programme Cost Effectiveness, 2010 Kaplan & O'Keefe

A	HIV negative IDUs coefficient
N	Number of syringes per 1 IDU per year
S	Needles sharing coefficient
D	Non-disinfected syringes sharing coefficient
Q	HIV Prevalence among IDUs coefficient
T	0,006 – Infection risk coefficient per 1 shared use
M	Number of partners per 1 shared injection
H	Number of new HIV cases
ΔH	Difference between new HIV cases among clients and non-clients of the Programme (delta)



Prevented HIV cases, 2010 Kaplan & O'Keefe (all the Programme cities)

	Programme Clients	Non-Clients
A	0,86	0,86
N	37 480 145	37 480 145
S	0,021	0,056
D	0,529	0,713
Q	0,14	0,14
T	0,006	0,006
M	1,78	1,75
H	544	1895
ΔH	1 351	



Programme cost effectiveness, 2010
Kaplan & O'Keefe (all cities of the Programme)
1 351 HIV cases prevented

Total Programme costs (33 cities):
EUR 1,367,000

Costs of the 1 prevented case:
EUR 1,012
(EUR 1,367,000 / 1,351 cases)

Costs correlation with ART
(1st line, per year per patient)
1:4

** Based on interviews of 1,471 clients and 278 non-clients of the Programme*



Programme cost effectiveness, 2011
Kaplan & O'Keefe (all cities of the Programme)
845 HIV cases prevented

Total Programme Costs (33 cities):
EUR 1,328,485

Costs of the 1 prevented case:
EUR 1,572
(EUR 1,328,485 / 845 cases)

Costs correlation with ART
(1st line, per year per patient)
1:3

** Based on interviews of 3,306 clients and 2,709 non-clients of the Programme*



Accompanying Costs Calculation

Other necessary costs should be considered (annual):

- «D» monitoring – EUR 550.
- OI chemoprophylaxis – EUR 550
- OI treatment, out-patient – EUR 4,325
- OI treatment, in-patient – EUR 8,125
- Clinical trials – EUR 650
- Disability indemnities/pension – EUR 2,250

* Survey of the Altay Kray AIDS Centre



Outcomes

- ❑ The Programme has displayed a defined and measurable epidemiological and economic impact
- ❑ The Programme permitted savings of State money for approx. EUR 65 mln to be spent for ART (FAD for the State Duma Report, 2010)
- ❑ The Programme's effectiveness is evidently dependent on the coverage (not less than 60%)
- ❑ Any external barriers to the Programme (political, legal, financial) significantly reduce the Programme's impacts and effectiveness
- ❑ Further research is needed to improve the data quality



THANK YOU FOR YOUR ATTENTION!