

COLLABORATIVE RESEARCH ON HIV
AMONG PERSONS WHO INJECT DRUGS IN
TALLINN, ESTONIA, 2005 - PRESENT

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The number of newly identified HIV+ cases per 100 000 (2016)



Research Teams

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INITIAL STATE OF PREVENTION KNOWLEDGE FOR HIV AMONG PWID

Knew how to prevent epidemics of HIV among PWID:

1. Begin prevention early, prevalence < 5%
2. Establish trusting communications between health workers and PWID
3. Provide education about HIV/AIDS
4. Provide very good access to sterile injection equipment—syringe exchange and/or pharmacy sales

INITIAL STATE OF PREVENTION KNOWLEDGE FOR HIV AMONG PWID

Did not know how to stop high seroprevalence (> 50%)

epidemics, particularly in low/middle/transition countries:

1. Large numbers of both HIV+s and HIV-s
2. Mixing and modest rates of risk behavior generate moderate incidence (4-6/100 person-years)
3. High death rates among HIV positive
4. Stable prevalence and incidence for many years

Question 2: How to stop high prevalence epidemics among PWID in Estonia

Advantages: well established research procedures and data, modeling, Global Fund monies

Disadvantages: No grant funding for population-level interventions, inertia in the healthcare system,

Question 2: How to stop and ongoing high prevalence epidemics among PWID in low/middle income/transitional countries

Limited financial resources

Limited trained healthcare workers

Intense stigmatization of both HIV and injecting drug use

**MULTIPLE META-ANALYSES OF PREVENTION PROGRAMS
FOR PWID IN LIMITED RESOURCE SETTINGS**

METHODS

- Bi-annual respondent driven sampling (RDS) surveys
- Interviews (drug use, risk behavior, use of services, and HIV,
HCV testing
- $N_s = 250 - 350$

MEDICATION-ASSISTED TREATMENT (METHADONE, BUPRENORPHINE)

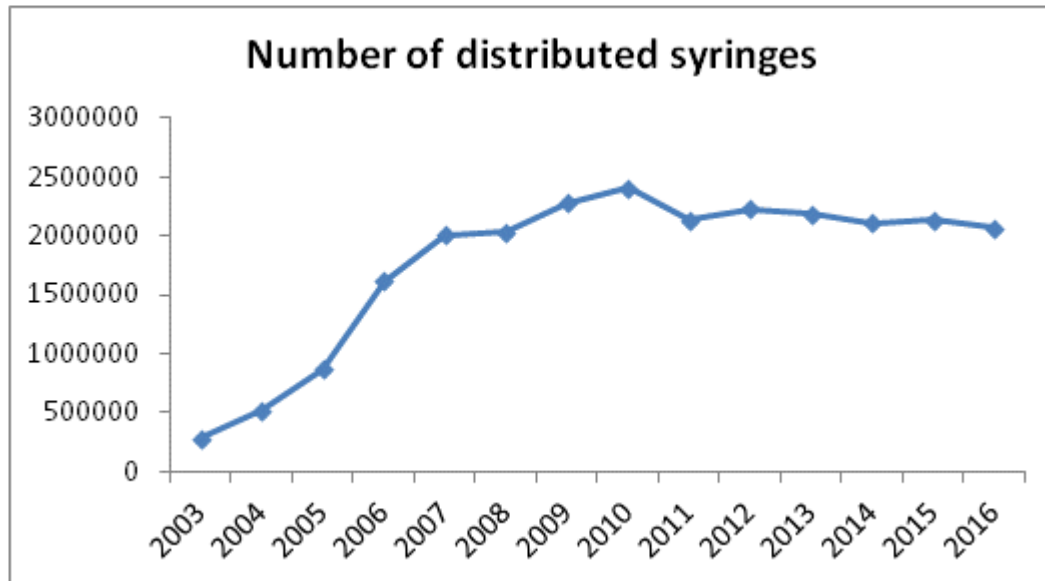
- 1000 – 1200 persons in treatment from 2005 to 2016
- Coverage: 10% to 15%
- 99% receive methadone
- Low dosages
- Programs required to have psychiatrists

- UNAIDS target: 50% coverage

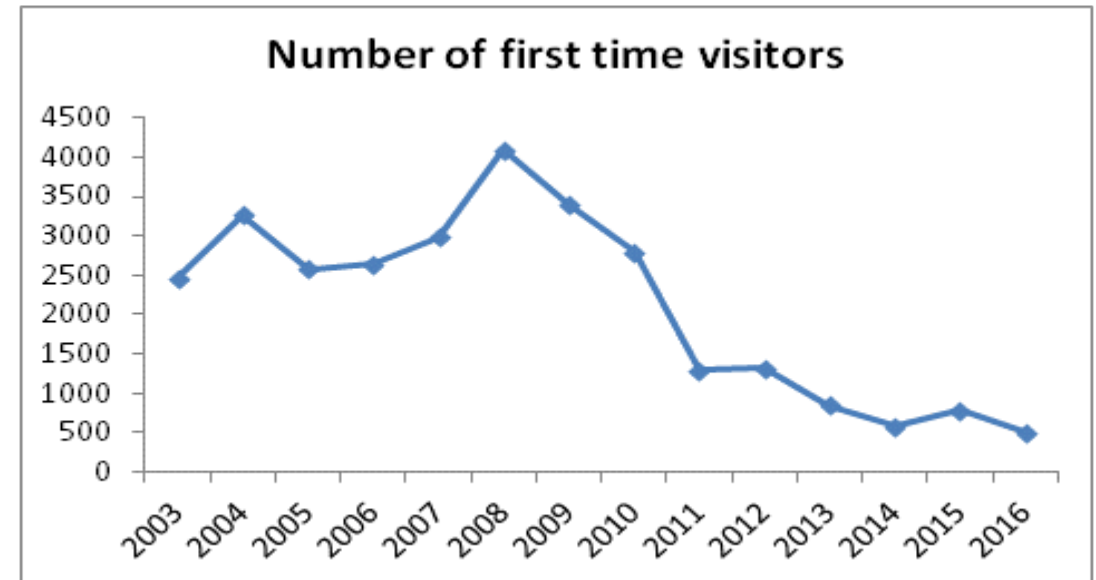
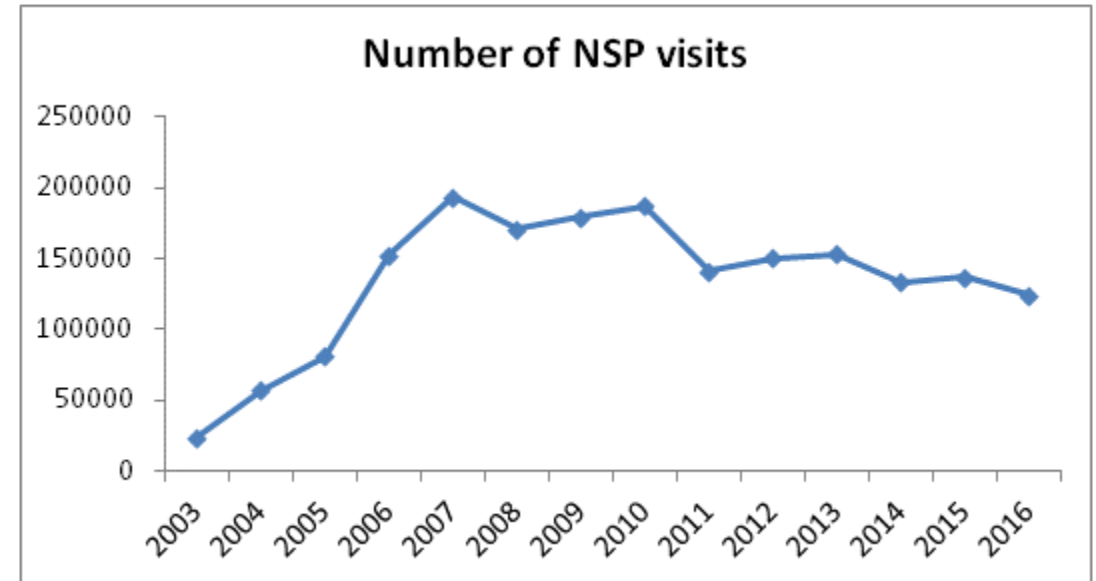
ANTIRETROVIRAL TREATMENT

- Gradual expansion from 2005 to present
- Coverage increasing but approximately 67% currently
- UNAIDS target: 90% coverage

NSP / ESTONIA



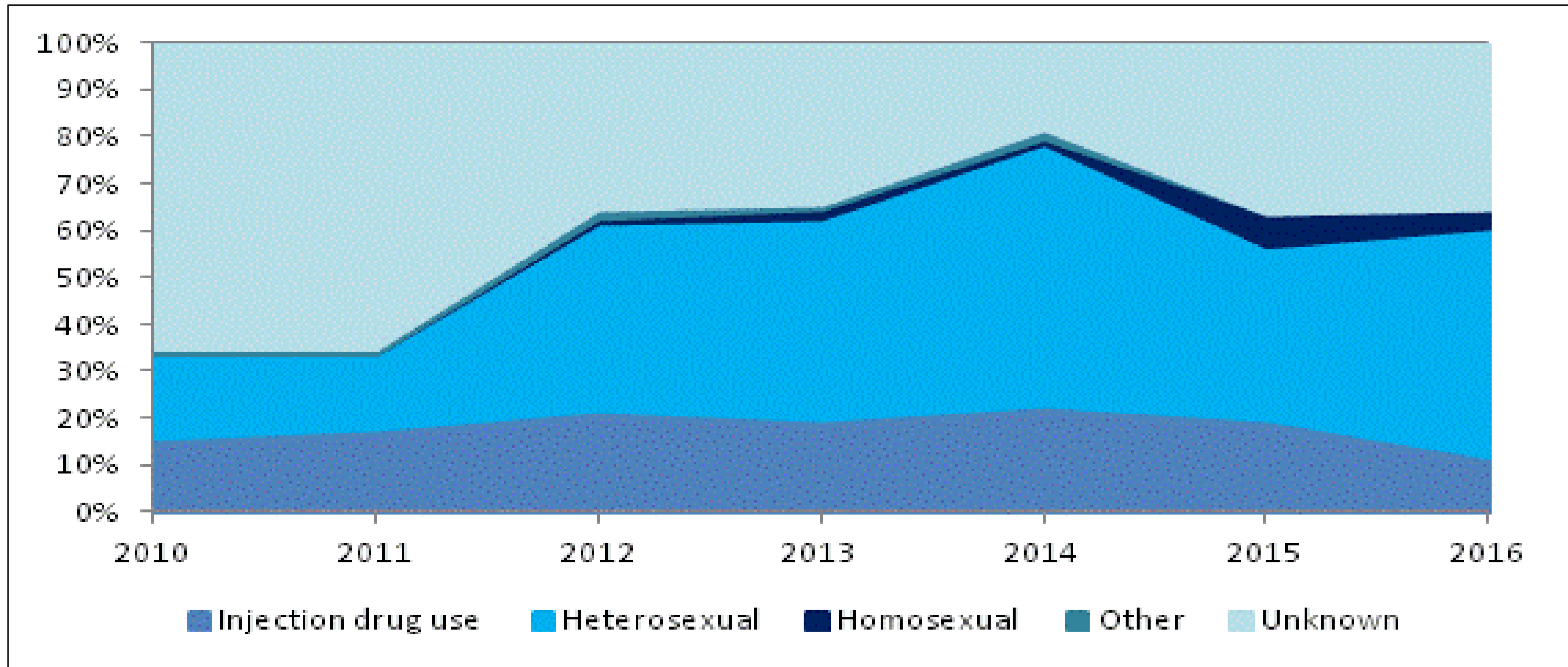
UNAIDS target: 200/PWID/year



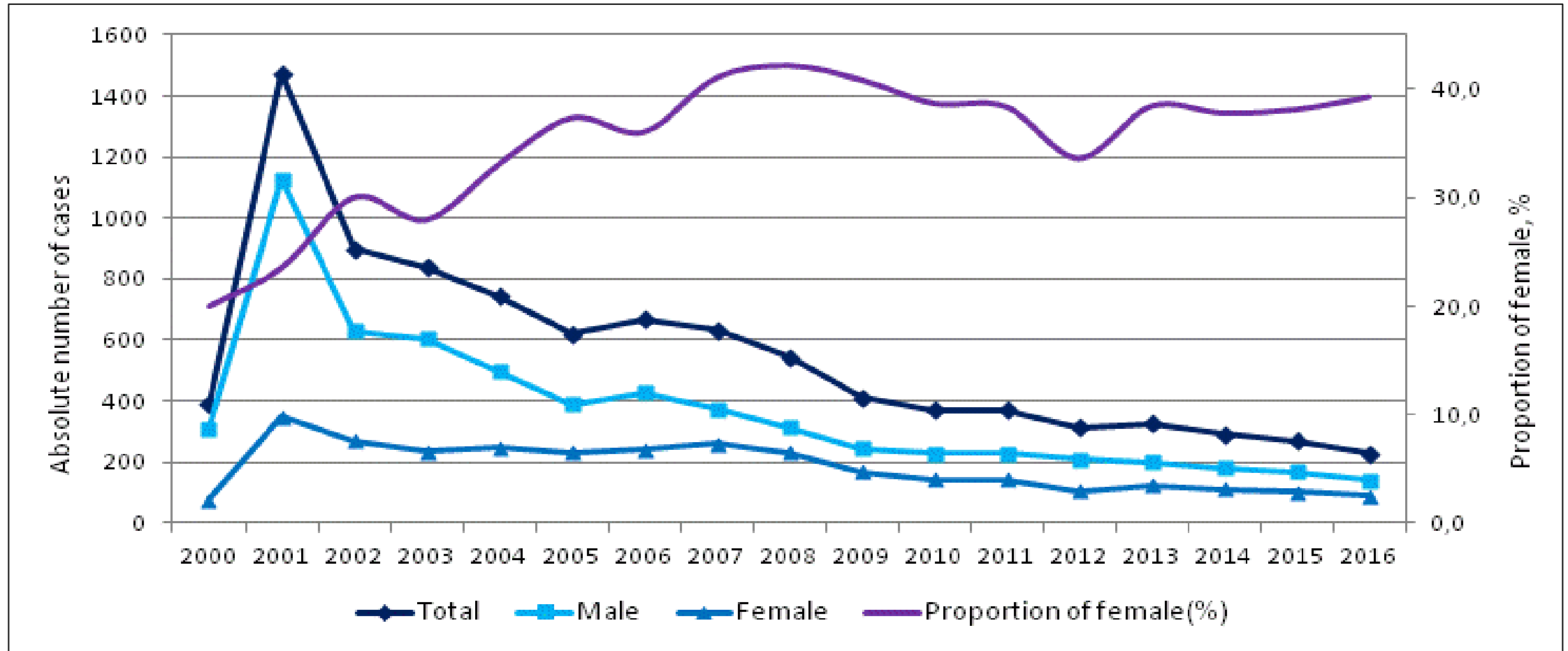
HIV PREVALENCE, PREVENTIVE/HARM REDUCTION SERVICES UTILIZATION AMONG PERSONS WHO INJECT DRUGS IN TALLINN, ESTONIA

	2005	2007	2009	2011	2013	2016
Proportion infected with HIV (%)	54	55	50	50	58	55
Proportion of HIV-negative tested for HIV (last 12 months)	54	56	31	49	52	44
Proportion using NSP^{last 4 weeks}	70	76	85	70	76	70*
Proportion of HIV-infected on ART (%)	0	8.4	20	40	62	67

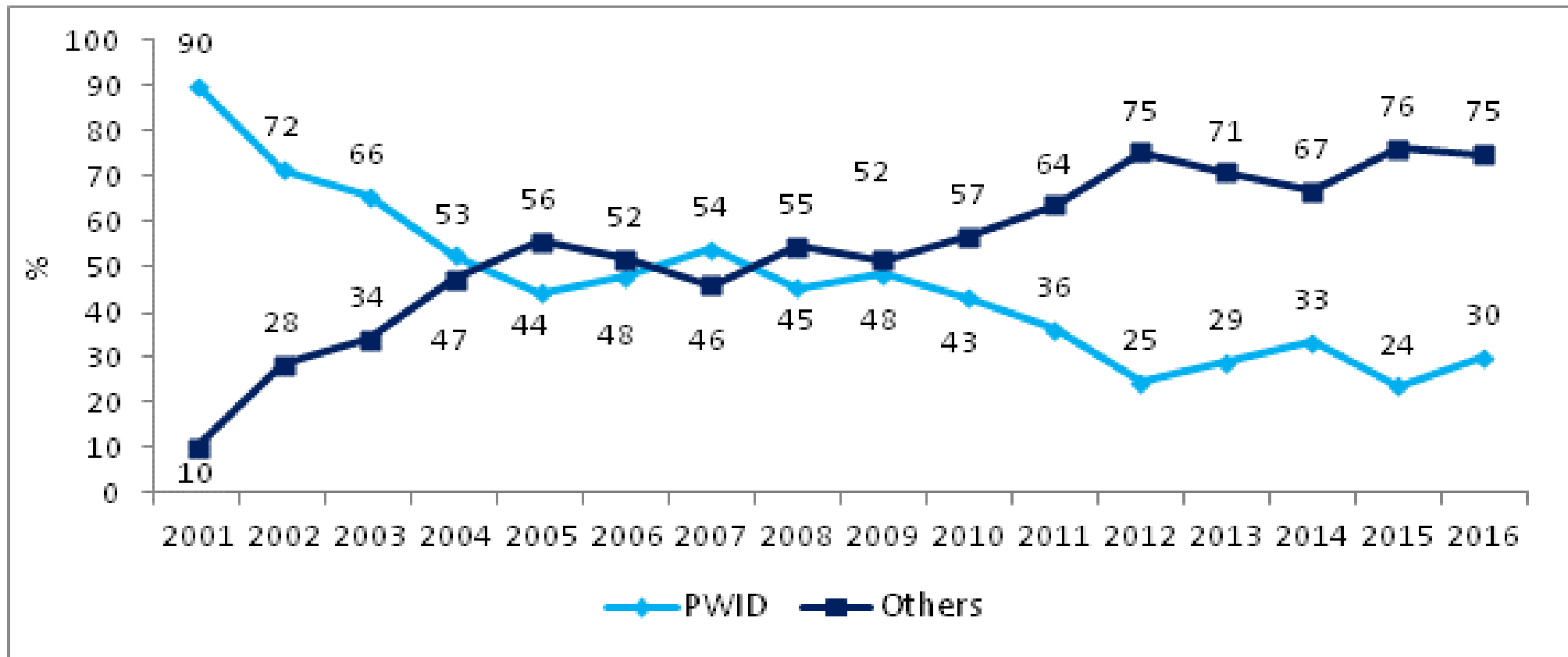
PROPORTION OF NEWLY DIAGNOSED HIV CASES ACCORDING TO TRANSMISSION ROUTE, 2010-2015 & 2016 (HEALTH BOARD)



NEWLY DIAGNOSED HIV CASES BY GENDER AND PROPORTION OF WOMEN, 2000-2015-2016 (HEALTH BOARD)



ABSOLUTE NUMBERS OF NEWLY DIAGNOSED HIV CASES ACCORDING TO TRANSMISSION ROUTE, 2001-2016 (ANONYMOUS/VCT TESTING CABINETS)



Potential for injecting-related transmission of HIV by PWID

TARGET: 1%

	2005	2007	2009	2011	2013	2016
PWID infected with HIV, not on ART, reporting distributive sharing	.	16%	13%	10%	9%	4%

Current situation of HIV among PWID: Epidemic controlled but has not ended

Estimated incidence: 0.5 – 2/100 person-years at risk

Excellent needle/syringe access—high end of UNAIDS target

Inadequate Medication Assisted Treatment

Improving ART, but still well below 90-90-90 goals

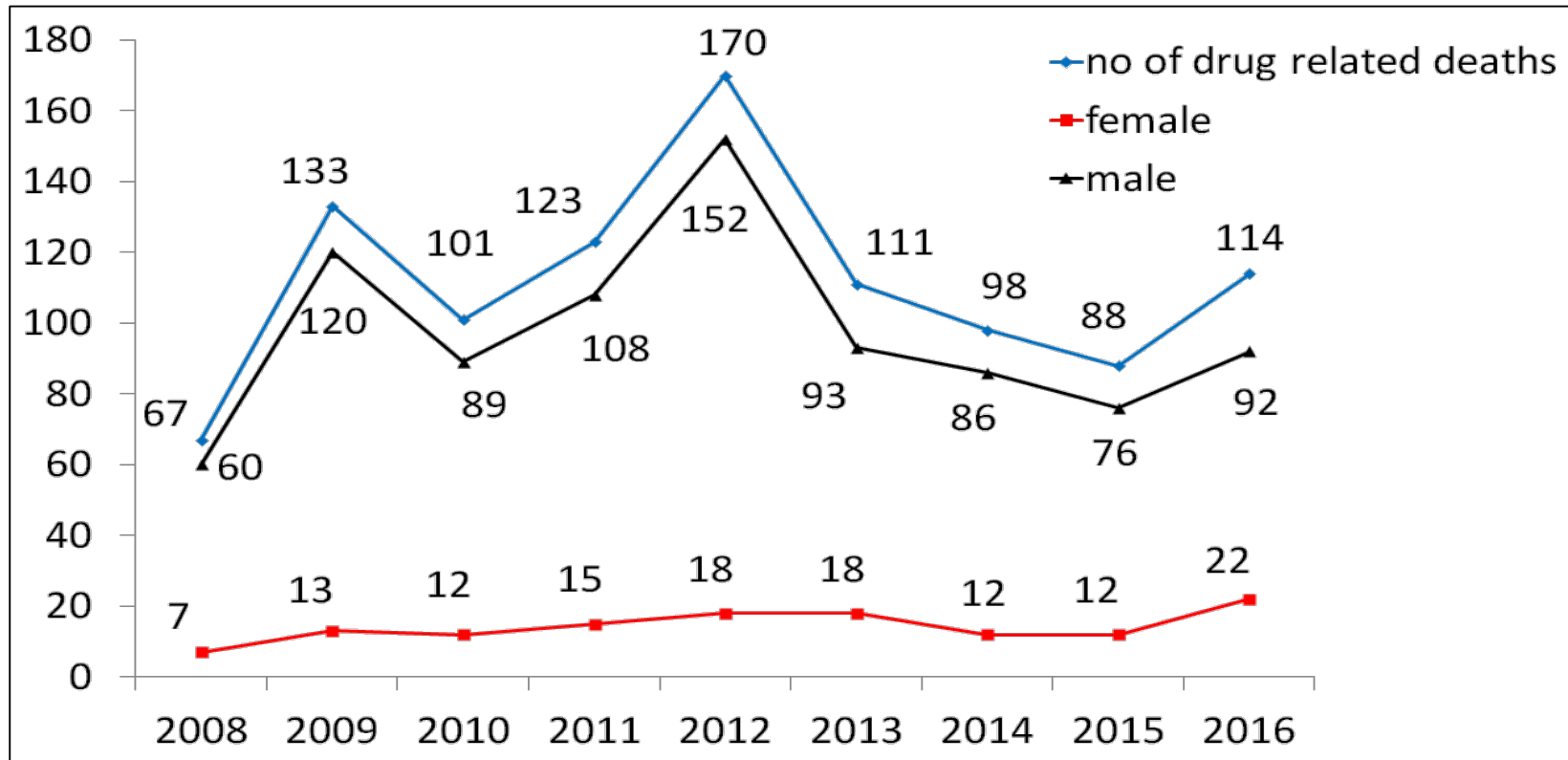
Improving towards goal of reducing transmission potential

Transitioning to heterosexual transmission epidemic?

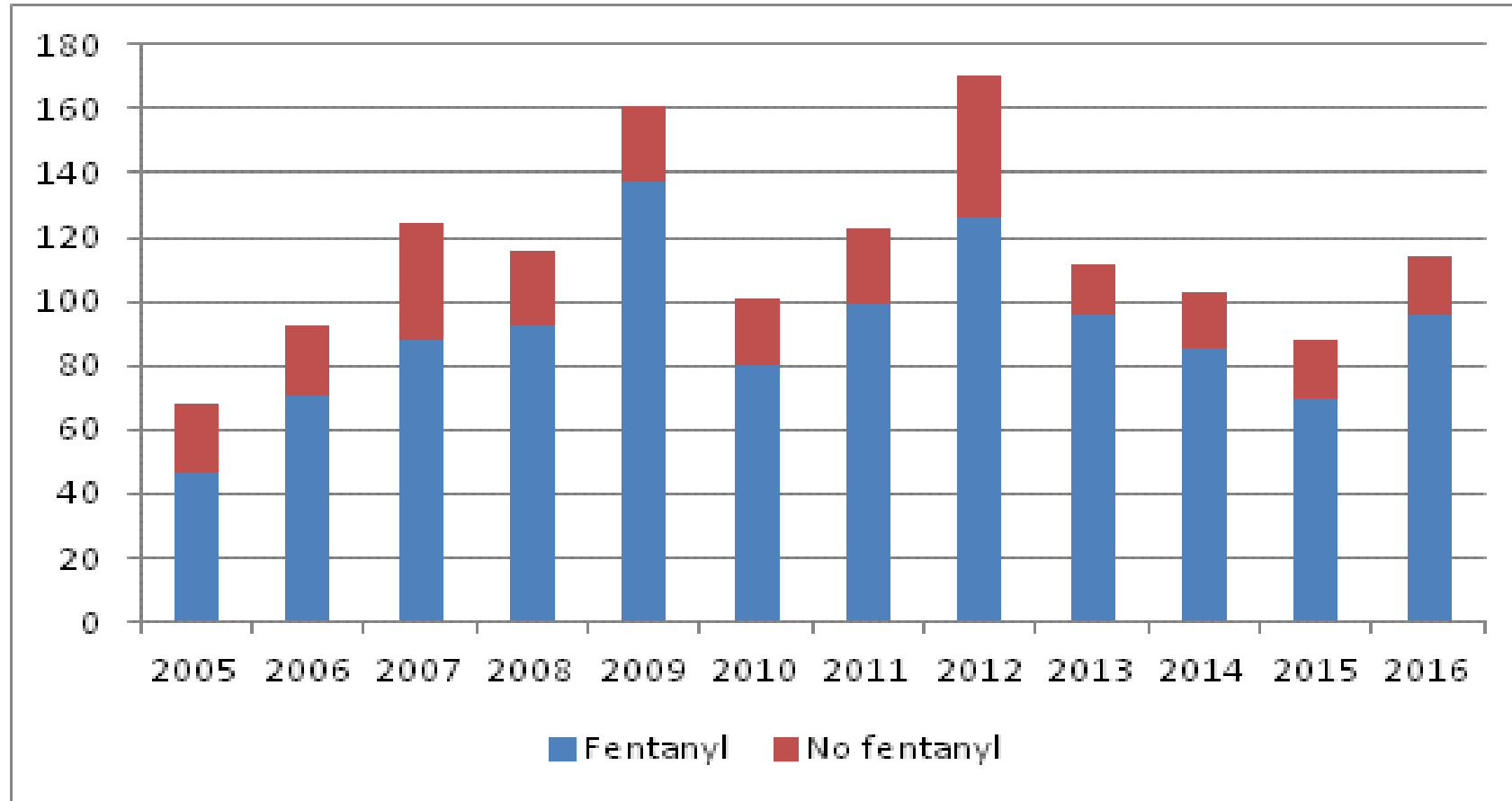
Overdose deaths

Highest per capita rate in Europe
103/million population

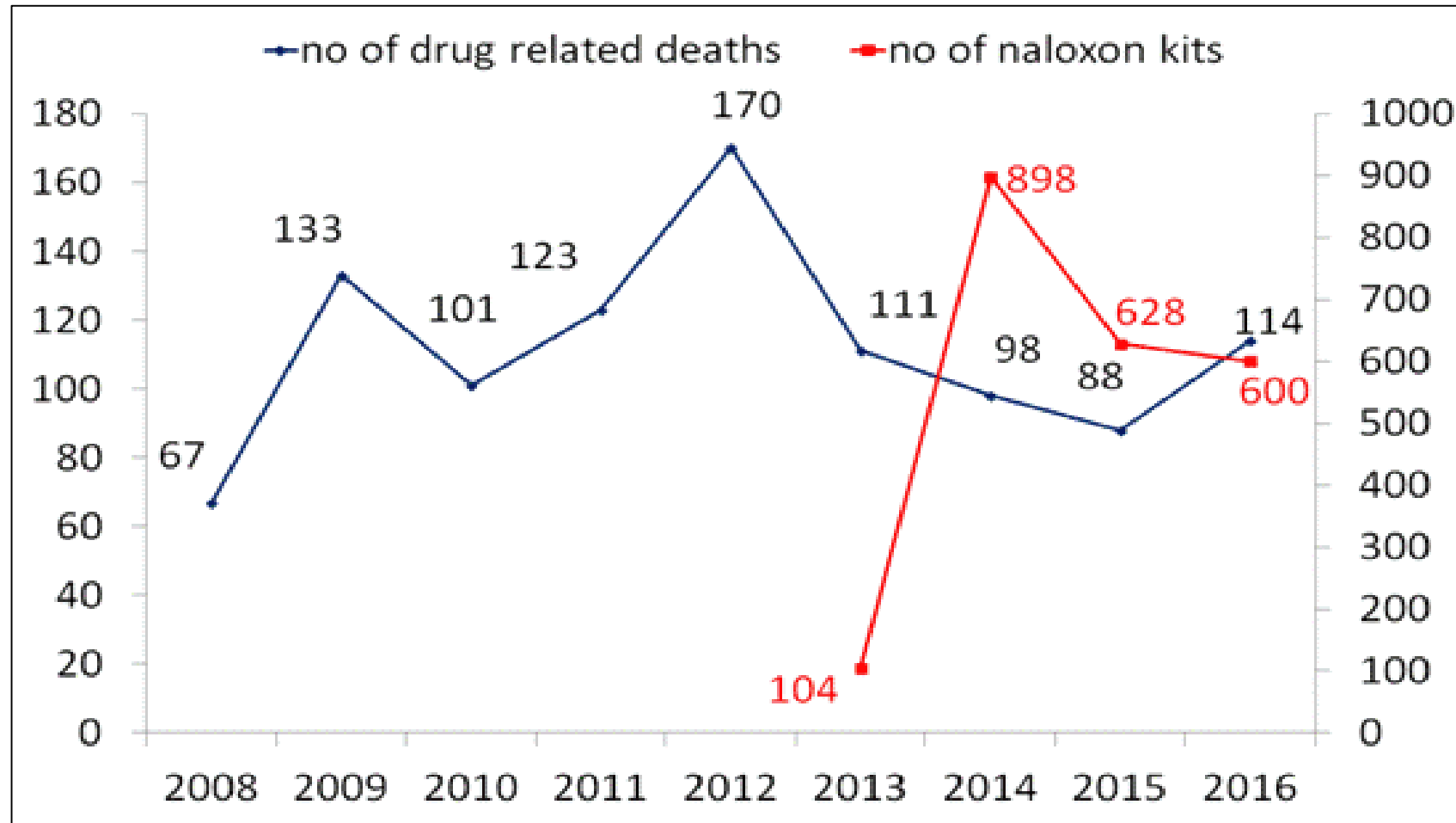
ABSOLUTE NUMBERS OF DRUG OVERDOSE DEATHS (ALL, BY GENDER)



TOXICOLOGY OF OVERDOSE DEATHS



NUMBER OF DRUG RELATED DEATHS AND NALOXONE KITS DISTRIBUTED



PROBLEM OF NEW INITIATES INTO INJECTING

HIV AMONG NEW INJECTORS IN TALLINN, ESTONIA

	2005	2007	2009	2011	2013	2016
HIV prevalence among new injectors (%)						
All	34	39	16	23	22	28
Men	35	36	14	11	6	11
Women	32	50	43	46	43	44
Estimated HIV incidence rate among new injectors (per 100 py)^b						
All	20.9	26.3	9.0	14.8	17.5	17.8
Men	21.5	23.4	5.4	7.1	4.7	6.5
Women	19.4	40.0	26.1	32.4	32.4	32.2

MOVING BEYOND COMBINED PREVENTION FOR HIV: BREAK THE CYCLE

- Working with current persons who inject to reduce initiation into injecting
- Regret over own injecting
- Motivational interviewing to focus motivation on not initiating into injecting: ambivalence about/opposition to initiating others
- Skills training in rejecting requests for assistance with first injections

BREAK THE CYCLE

- Pre-post evaluation of intervention
- N = 299, follow up of 221
- Preliminary results show 73% reduction in the percentage of participants assisting with a first reduction and 40% reduction in injecting in front of non-injecting drug users.

SUMMARY

- GREAT PROGRESS in reducing HIV transmission among PWID, reduction in potential transmitters from 16% to 4% of PWID population
- Current level of new infections—30/year among PWID—no longer a public health catastrophe
- Improvements needed in MAT and ART coverage
- Emergent problems of fentanyl related overdose and new initiates into injecting drug use