

HIV and HCV incidence estimates among PWID from the Latvian PWID cohort study



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Riga Drug User's Cohort Study (RDUCS)

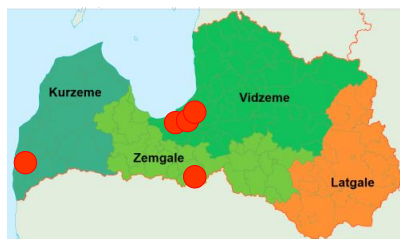
- Launched in 2006, in 2016 - the 9th wave of the study
- In each wave of the research the same respondents are reached; in case of necessity also new drug users are included
- HIV, HCV (also HBV, syphilis) express-testing – in 2012, 2013, 2014, 2016
- People with positive HIV or HCV tests – not tested repeatedly the next wave
- Field work led and coordinated by the low-threshold centre "DIA + LOGS"



Sample size and sites

Year	Sample size	Number of persons tested
2012	515	379
2013	529	373
2014	539	399
2016	546	369

- Five geographical areas of Latvia - Riga, Jurmala, Ogre, Liepaja and Bauska



Results 2014 vs 2016 - HIV

		Results, 2016		
		Negative	Positive	Total
Results, 2014	Negative	198	5	203
	Positive	0	3	3

← 2.5%

1	2	3	4	5
Bauska	Riga	Riga	Riga	Bauska
male	female	male	male	male
40 years	38 years	36 years	38 years	26 years
amphetamine	amphetamine	heroin	Subutex	heroin
17 years inj.	22 years inj.	21 years inj.	22 years inj.	4 years inj.

Results 2014 vs 2016 - HCV

		Results, 2016		
		Negative	Positive	Total
Results, 2014	Negative	38	10	48
	Positive	3	19	22

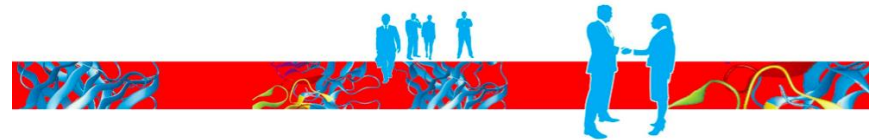
← 20.8%

1	2	3	4	5	6	7	8	9	10
Riga	Riga	Riga	Bauska	Riga	Riga	Riga	Riga	Riga	Riga
male	female	male	male	female	male	male	female	male	male
49	38	46	26	27	24	28	26	24	48
years	years	years	years	years	years	years	years	years	years
heroin	amph	amph	heroin	amph	amph	amph	amph	amph	heroin
30	22	26	4	6	4	6	5	4	30
years	years	years	years	years	years	years	years	years	years
inj.	inj.	inj.	inj.	inj.	inj.	inj.	inj.	inj.	inj.

“Latvian Café”



- - HERMETIC -
Hiv European Research on Mathematical Modelling and Experimentation of HIV Testing In hidden Communities
- Nov 2015 – Oct 2018




Partners

- Main partner - INSERM (French National Institute of Health and Medical Research), France



- Project leader – Virginie Supervie



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Virginie Supervie PhD Biomathematics

Course and current status

Virginie Supervie has obtained a PhD in Biomathematics in 2006 at the University Pierre and Marie Curie (UPMC) Paris 6.

From 2006 to 2009, she joined as a post-doctoral fellow the Center for Biomedical Modeling directed by Professor Sally Blower at the David Geffen School of Medicine at the University of Los Angeles California (UCLA).

From 2009 to 2014, she was a post-doctoral fellow at the Institut National de la Santé et de la Recherche Médicale (INSERM) in Paris in the unit U943 on Clinical epidemiology, therapeutic strategies and virology in HIV infection directed by Dominique Costagliola.

Since October 2014, she is a research associate at INSERM in the team "Surveillance et Modélisation des maladies transmissibles" of the Institute Pierre Louis d'épidémiologie et de Santé Publique.

Scientific summary

Virginie Supervie works at the interface of biostatistics, biomathematics, public health and epidemiology. She uses the tools of statistical and mathematical sciences and epidemiology to address global public health problems. Her research has focused on the development and application of statistical methods and mathematical models in epidemiology of infectious diseases. She mainly works on HIV, but also worked on Syphilis, Tuberculosis and Bovine Spongiform Encephalopathy. A main theme of Dr. Supervie's work concerns statistical approaches for estimating disease incidence, knowledge of current patterns of incidence is essential for planning and evaluating prevention efforts and for resource allocation. She also has ongoing research in designing mathematical models that reflect the transmission dynamics of HIV. She uses her models to guide the design and evaluation of different HIV prevention and control strategies in both resource-rich and resource-constrained countries.

SCIENTIFIC TOPICS

- Public health
- Computer Science

KEYWORDS

- Infectious Diseases
- Mathematical & Computational Biology
- Statistics & Probability

ITMO

- Santé publique



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Partners

- Latvia – RSU (Rīga Stradins University)



- France – AIDES



- Belgium - WIV-ISP (Scientific Institute of Public Health)



- Belgium - ITM (Institute for Tropical Medicine)



- Estonia – NIHD (National Institute for Health Development)



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!!! 4 countries, 8 teams, 27 experts

HERMETIC project's aims

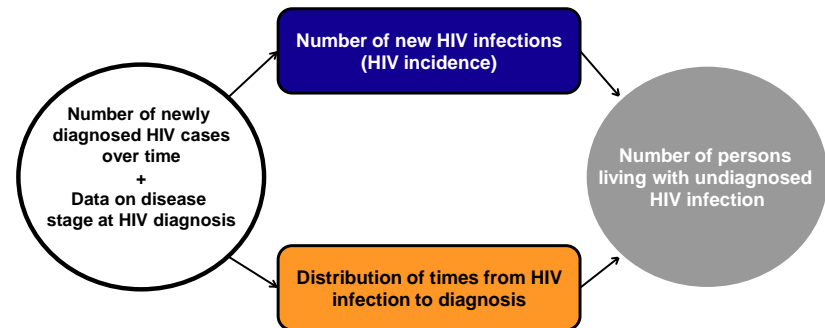
▶ **Aim 1: Combining statistical modelling and existing HIV surveillance data to estimate important characteristics of the HIV epidemic in the participating countries**

▶ **Aim 2: Developing, implementing, and evaluating targeted and innovative pilot testing project based on the outcome of the modelling**

▶ **Aim 3: Developing and disseminating a guiding framework for the translation of modelling into targeted interventions**

Aim 1: Unravelling the hidden parameters of the HIV epidemic

- Data: surveillance data on newly diagnosed HIV cases
- Methods: mathematical modelling (back-calculation approach)





Paldies par uzmanību! Thank you!