



# HIV Care beyond 2019

EACS opening, 6<sup>th</sup> November 2019

Prof Jens Lundgren

CHIP @Department of Infectious Diseases, Rigshospitalet, University of Copenhagen

WHO Collaborative Centre on HIV, viral hepatitis and TB



@ProfJLundgren



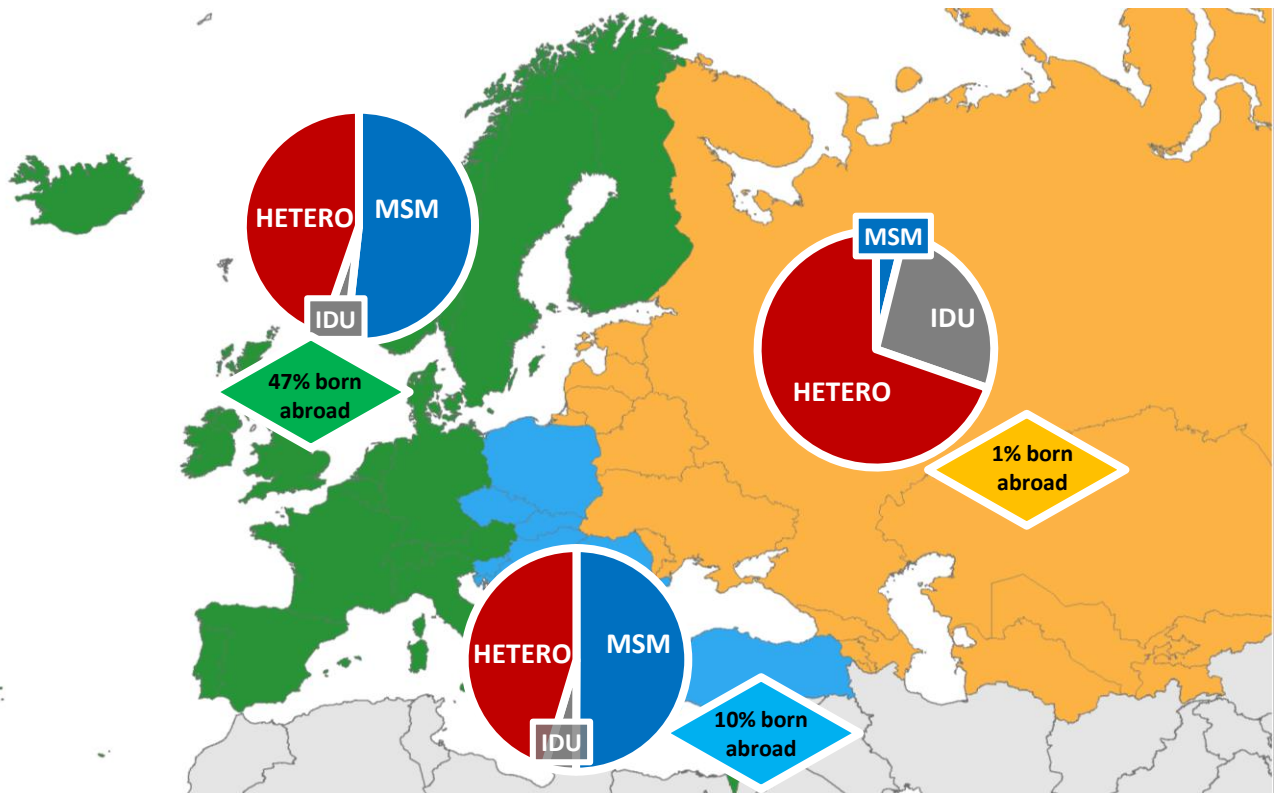
Rigshospitalet



## Basel, we have a problem

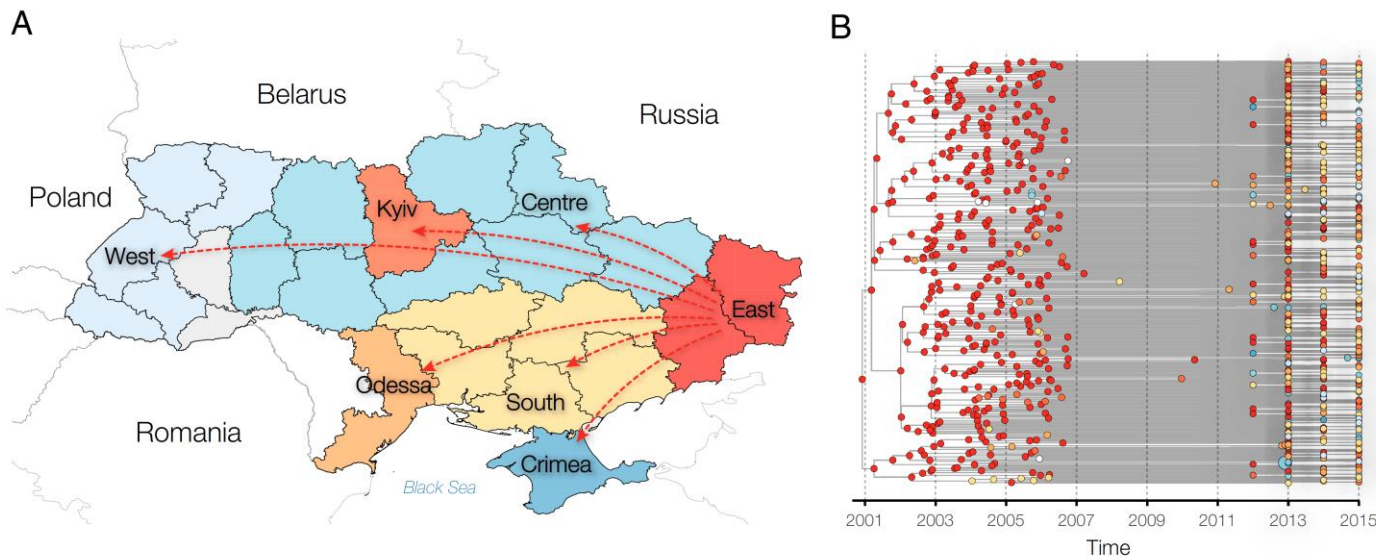
- Continued sizable HIV transmission rates throughout continent
  - Regional gradient (from endemic in west to epidemic in east)
  - Driven by large contingency of untreated PLWH
    - Not yet diagnosed
    - Diagnosed but not yet on ART
  - MSM, PWID and CSW
  - Potential for heterosexual driven transmission
    - i.e. transition from concentrated to generalised epidemic

# Distribution of new HIV diagnoses by transmission category and region of birth in 2017



Source: ECDC/WHO (2018). HIV/AIDS Surveillance in Europe 2018– 2017 data

# HIV genome flow from Eastern to Western Ukraine due to relocation of 1.7 million people: mixing untreated sexually active PWID



Vasylyeva *et al*, PNAS 2018

# The profile of solutions targeting uninfected and/or infected persons

Uninfected:

Infected:

Both:

Test  
population

Condom  
use

Pre/post-  
exposure  
Prophylaxis  
(PEP/PrEP)

Treat  
HIVpos

Harm  
reduction

Voluntary  
medical  
male  
circumcision

# Successful implementation of “test and treatment” requires policies that affect different section of health infrastructure

Non-diagnosed



intensity proportional to size  
of undiagnosed;  
accessible to key risk groups  
(if PR < 0.1% think again)

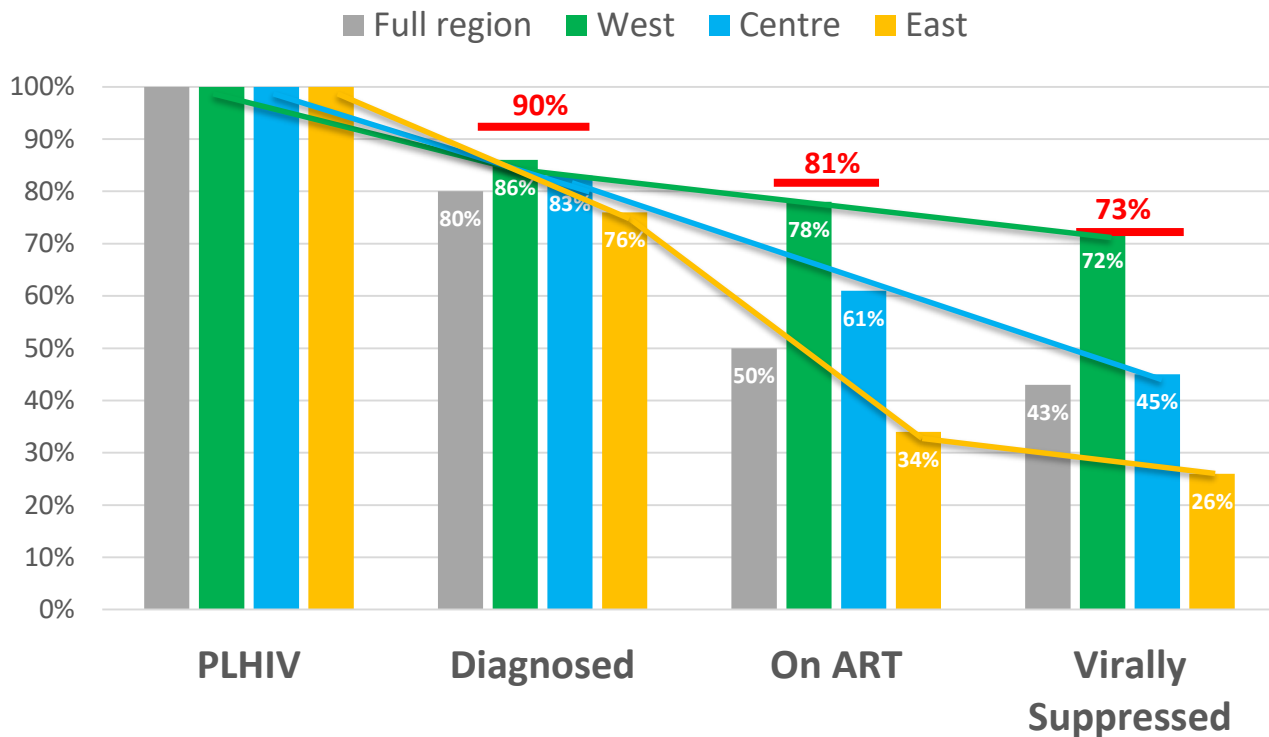
Diagnosed, not on suppressive ART



Expertise (trust);  
proximity (shared care);  
“un-stigmatised” & safe;  
comprehensive (life-style)

# How close are we to reaching the 90-90-90 targets?

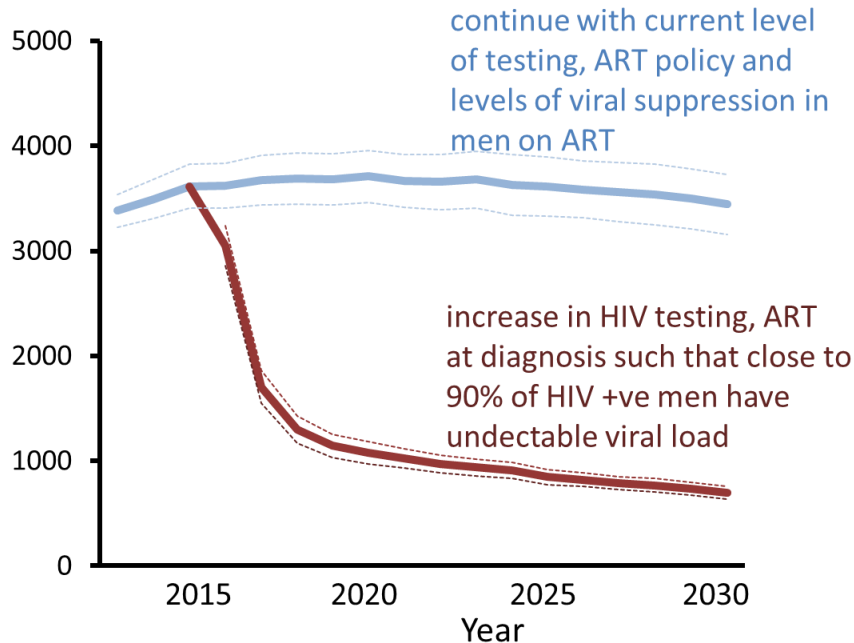
## “the shallow line”



Source: Brown Alison E, Hayes Rosalie, Noori Teymur, Azad Yusef, Amato-Gauci Andrew J., Pharris Anastasia, Delpech Valerie C., the ECDC Dublin Declaration Monitoring Network. HIV in Europe and Central Asia: progress in 2018 towards meeting the UNAIDS 90-90-90 targets. Euro Surveill. 2018;23(48).

What proportion of men would need to be virally suppressed on ART to achieve incidence  $< 1/1000$  (600 new infections per year) ? **90%**

Number of new infections  
per year (95% CI)



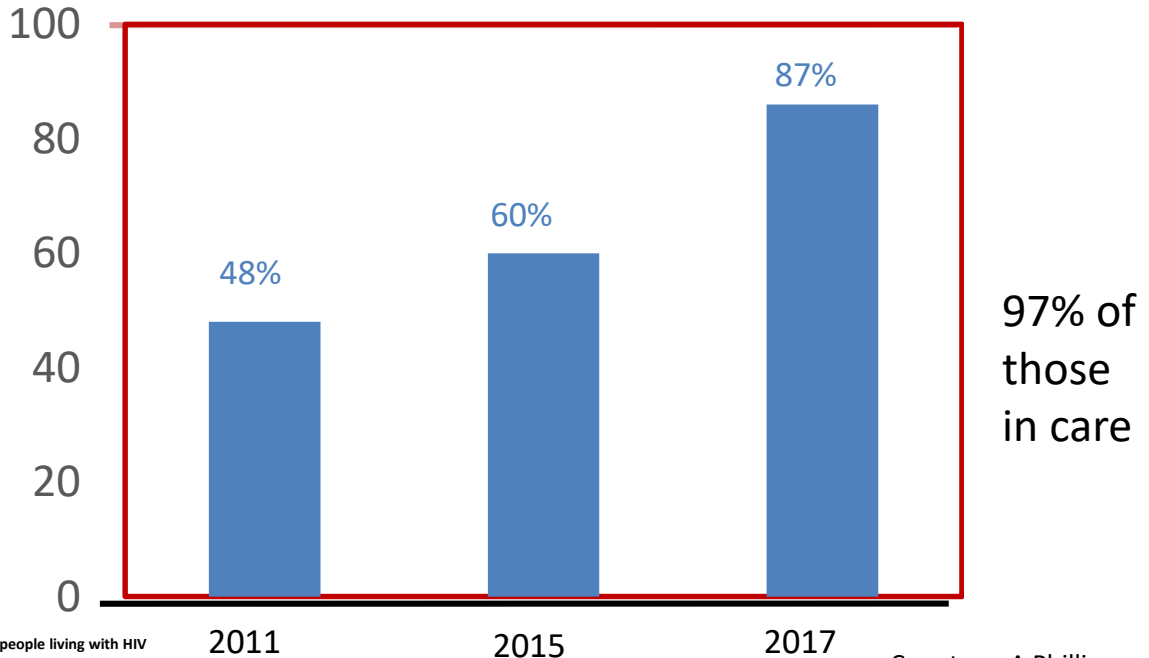
95% CI given for two lines to illustrate uncertainty over mean effect

Phillips et al: AIDS 2015



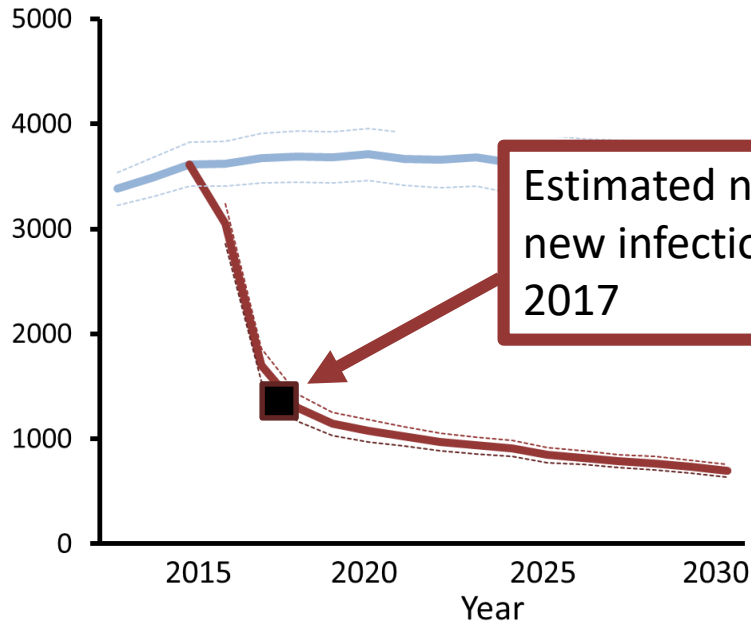
# Improvements in proportion of men living with HIV who were on ART with viral load "undetectable"

- Substantial progress due to: high levels of HIV testing, more rapid ART initiation after diagnosis, high quality clinical care



# Confirmation of model

Number of new infections  
per year (95% CI)

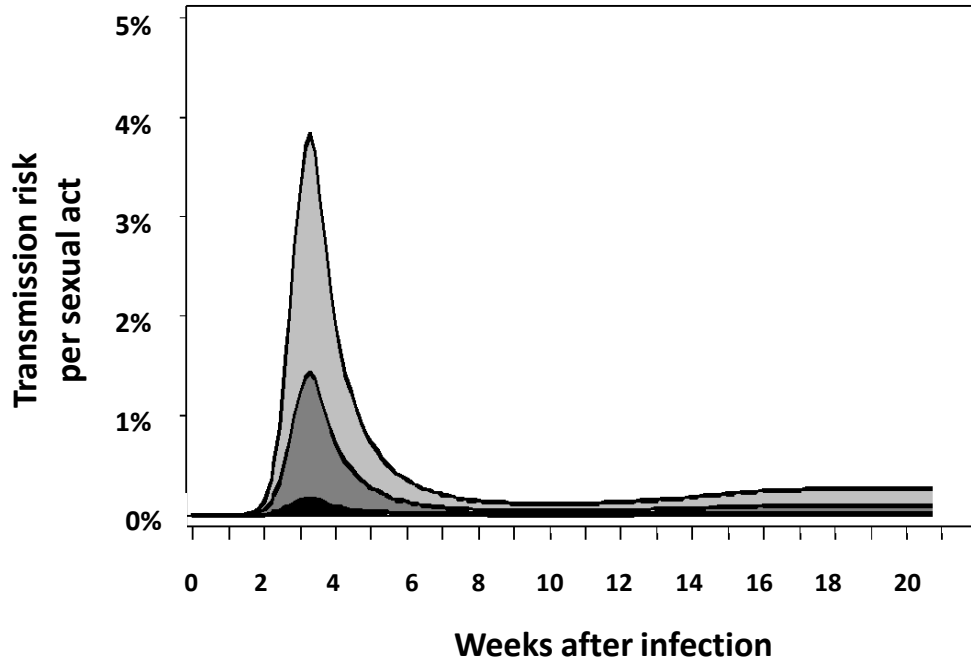


Nash et al. Progress towards ending the HIV epidemic in the United Kingdom: 2018 report. November 2018, Public Health England, London.

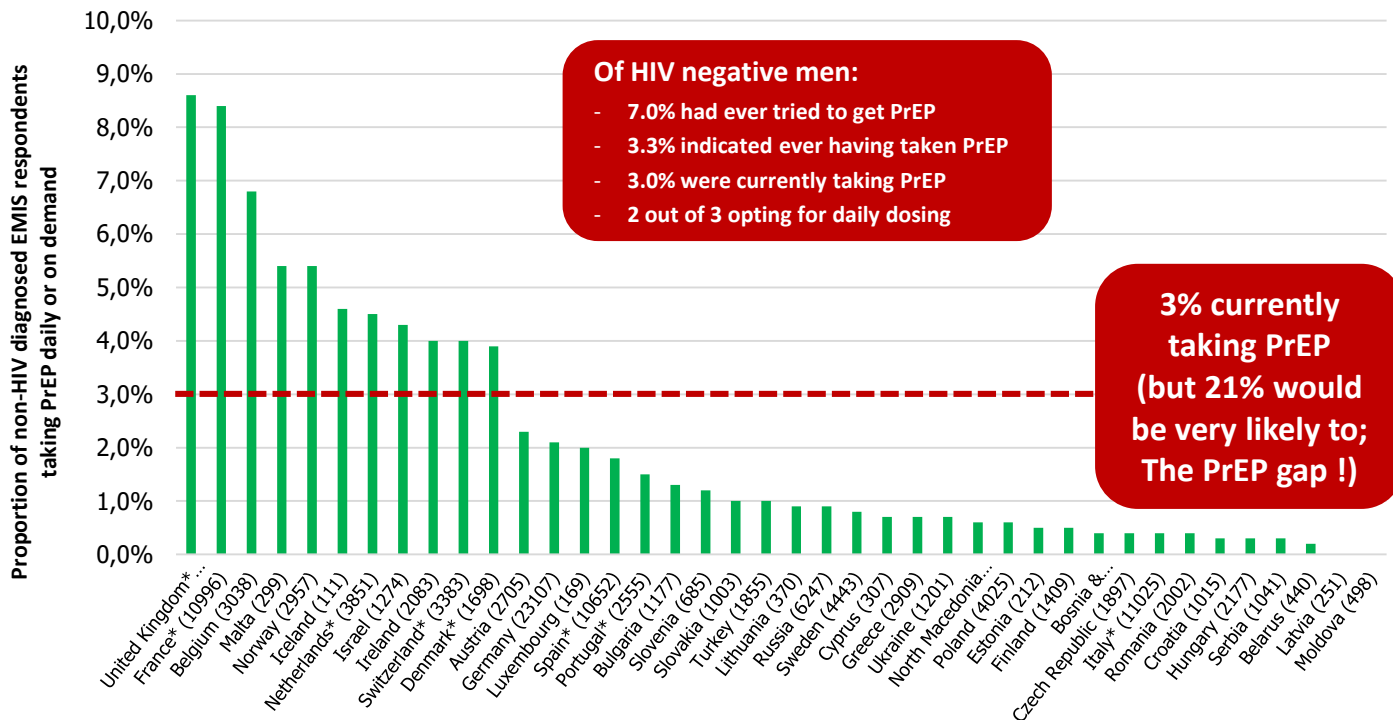
95% CI given for two lines to illustrate uncertainty over mean effect

Phillips *et al*, AIDS 2015

Central argument for additional preventive tools:  
Patients just infected are shortly thereafter at substantially  
larger risk of being source for onwards transmission



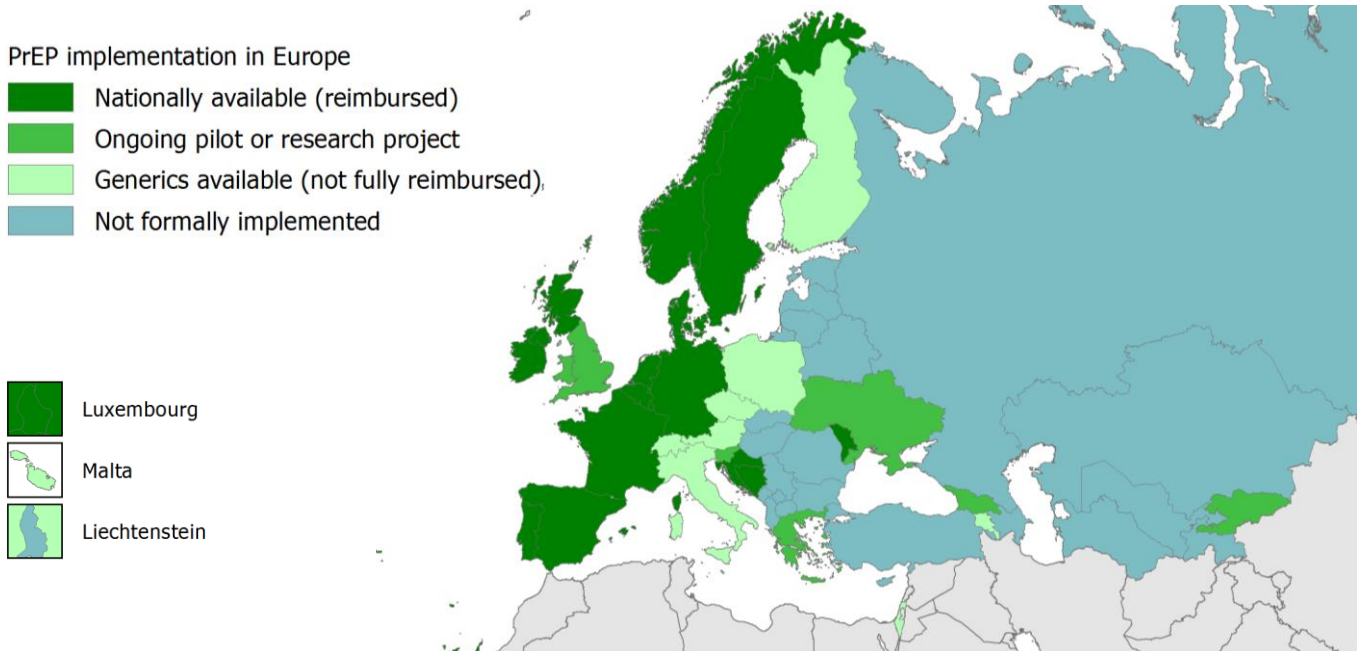
# EMIS-2017: Percentage currently taking PrEP daily or on demand (N=112 939)



EMIS 2017

Source: The EMIS Network. EMIS-2017 – The European Men-Who-Have-Sex-With-Men Internet Survey. Key findings from 50 countries. Stockholm: ECDC; 2019.

# Status of formal PrEP implementation in Europe as of 4 November, 2019



Source: ECDC  
(thanks Teymur Noori)

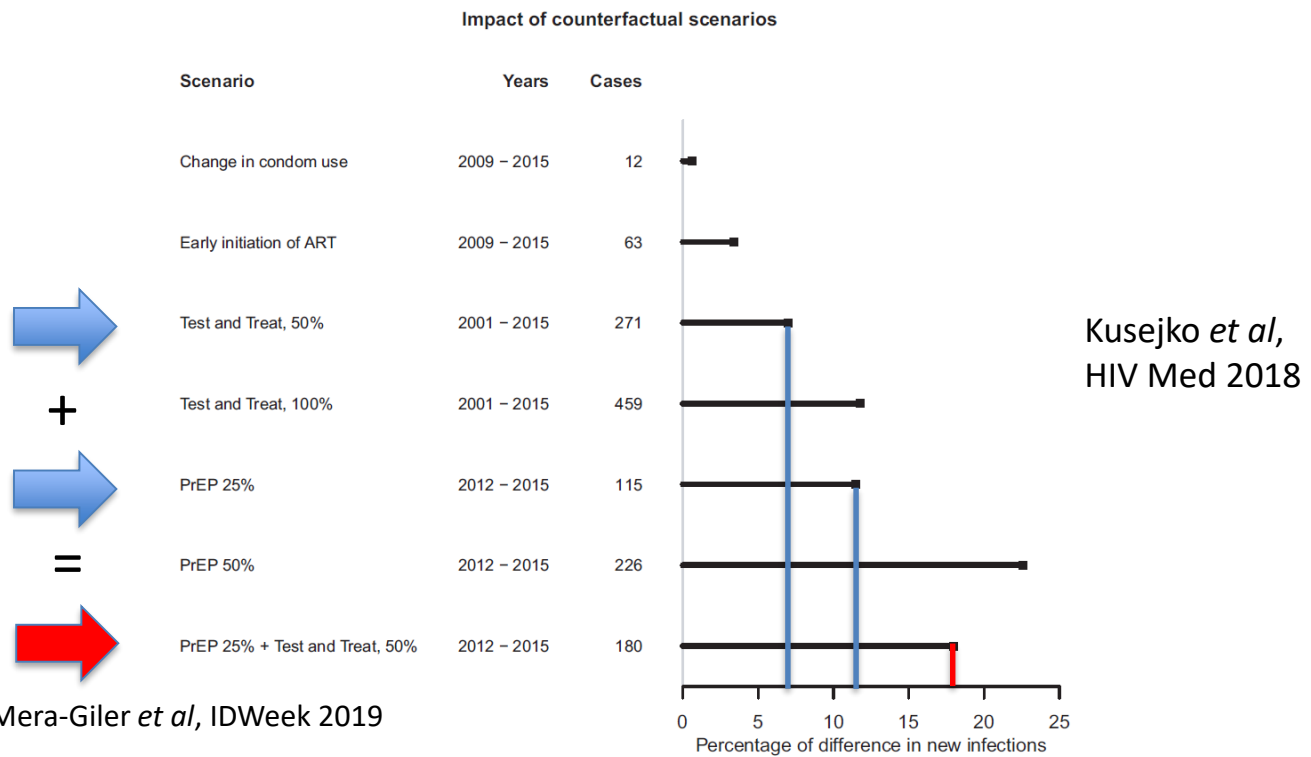
# PrEP

- It works very effectively for the individual
- Indication: benefit best for persons at high risk of HIV acquisition
  - current data support used on this indication
  - opportunity to diagnose also for other STD's
  - 54% "informal access" – 34% not told their primary SH physician
- Impact on transmission depends on
  - Individual factors
    - aware, willingness to take pills and be tested
  - Health system
    - technical capacity; cost of medicine and service delivery
    - Medicine cost differs markedly across Europe: €3 to €850/month
  - Embracement of target community
    - Ownership & engagement; know about U=U and high risk; accept surveillance

Thanks to Valerie Delpech, Teymur Noori

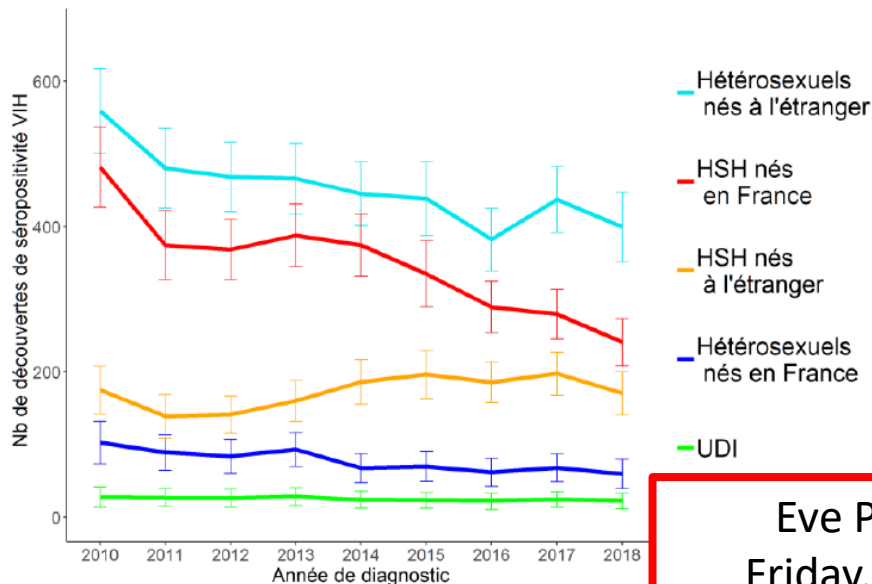
Source: The EMIS Network. EMIS-2017 – The European Men-Who-Have-Sex-With-Men Internet Survey. Key findings from 50 countries. Stockholm: ECDC; 2019; Hayes Rosalie, et al. Euro Surveill. 2019;24(41):pii=1900598;  
ECDC communication with experts on PrEP in European countries, April 2019;  
A Bourne, et al. Sex Transm Infect 2019;0:1–6. doi:10.1136/sextrans-2018-053705

# Contrafactual effects ("had we not introduced") from various HIV preventive interventions among MSM in Switzerland: additional impact



# Decline in diagnosis of **domestic French MSM** (target group for PrEP since 2016)

Source : Déclaration obligatoire du VIH, données au 31/03/2019 corrigées.



Eve Plenel  
Friday, 15.45  
San Francisco room

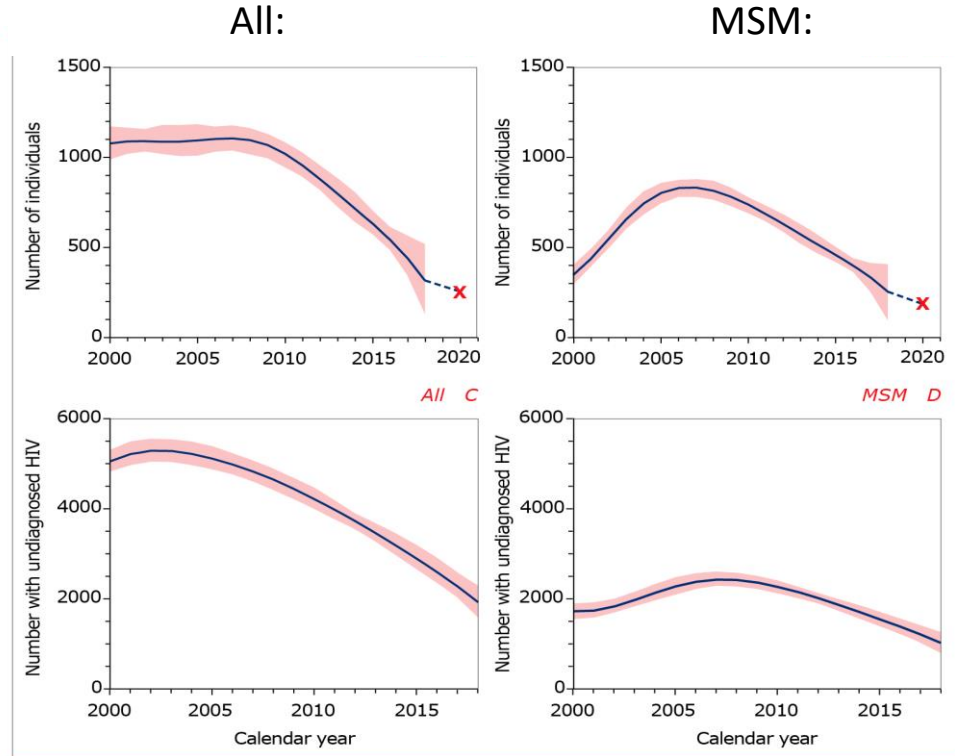


# Modelled number of new infections and undiagnosed over time in the Netherlands

Number  
newly  
infected

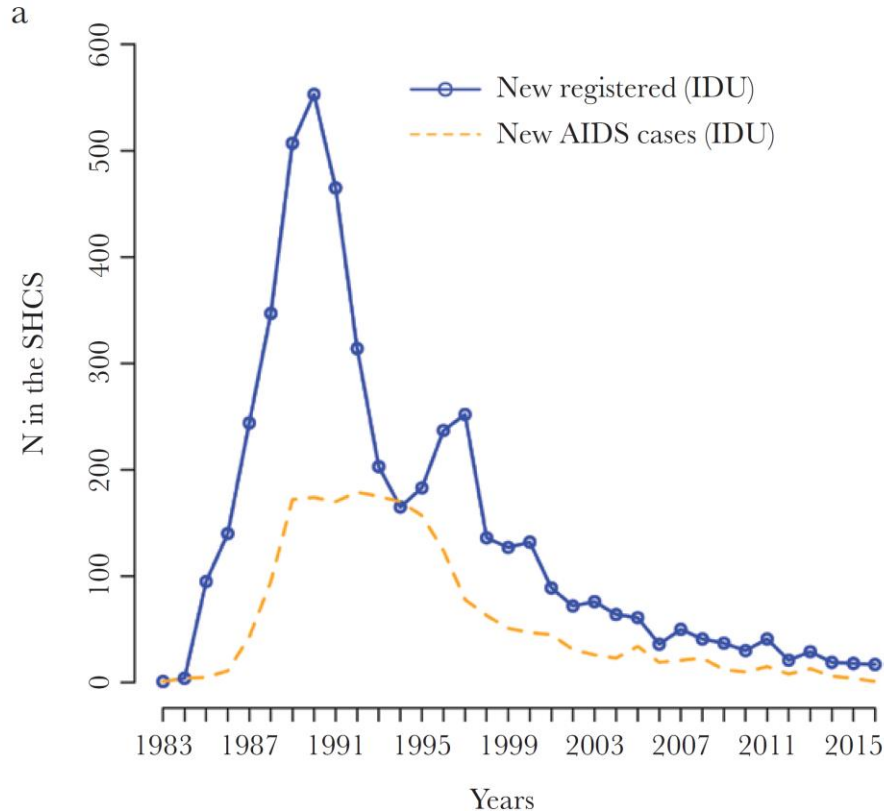
Number  
w/ HIV but not  
diagnosed

By end of 2018:  
23,300 HIV+  
1900 undiagnosed  
82% virally suppressed



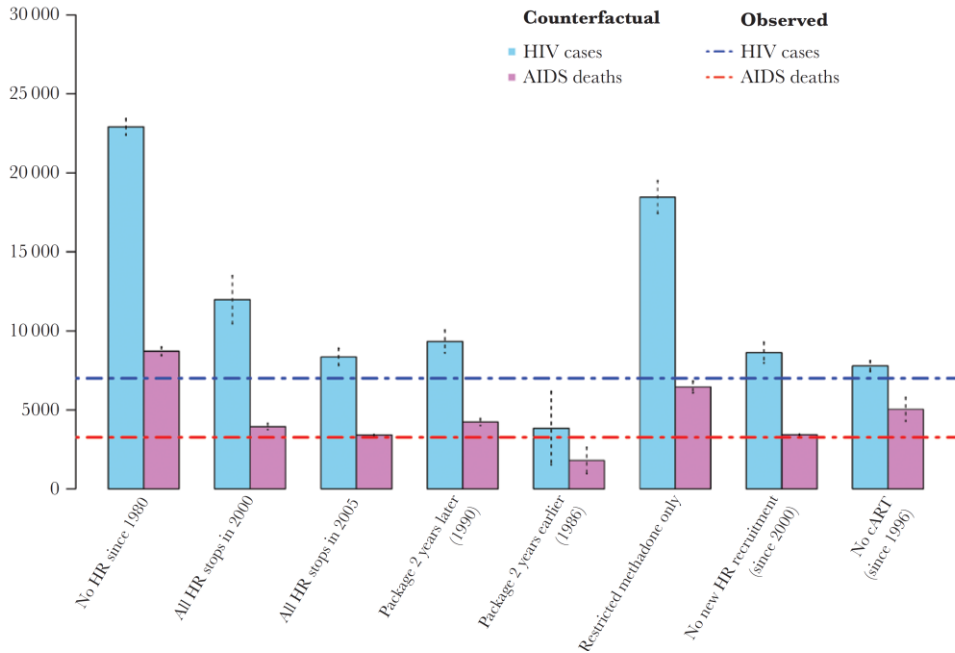
ATHENA cohort: Van Sighem, Op de Coul and Reiss, 2019

# PWID HIV outbreak in Switzerland



Marzel *et al*,  
OFID 2018

# Contrafactual effects ("had we not introduced") from various harm reduction\* interventions among PWID in CH

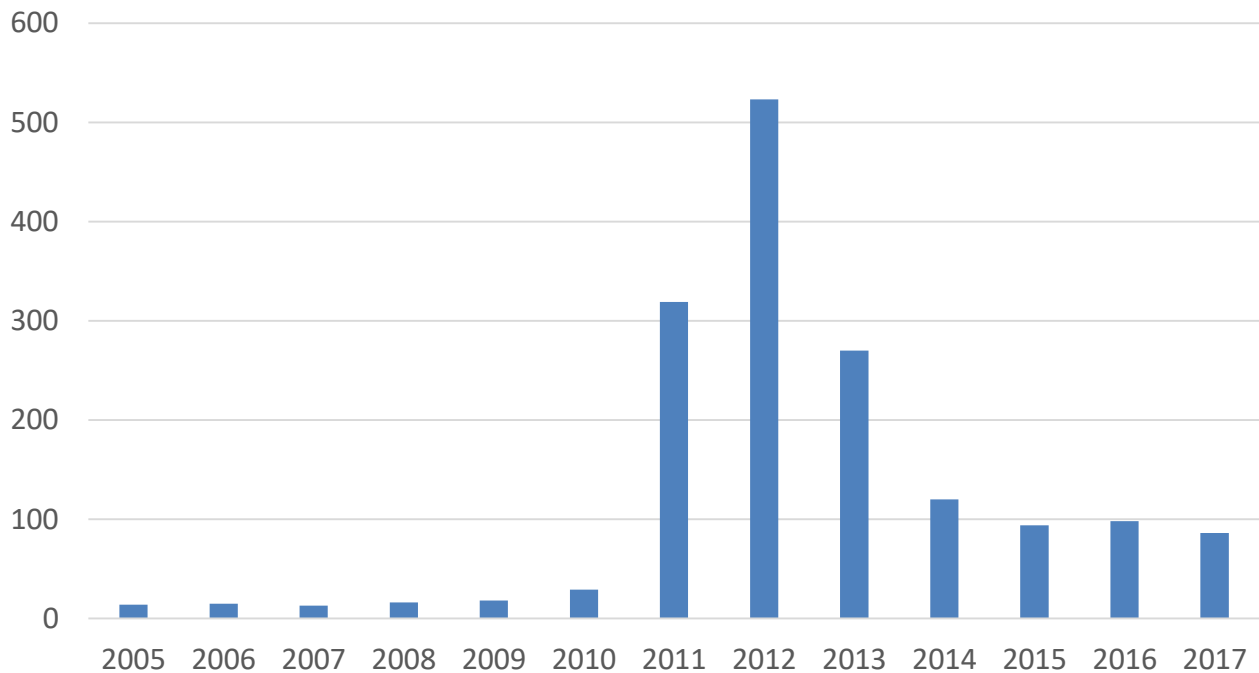


Marzel *et al*,  
OFID 2018

\* harm reduction (NEP, supervised fixing rooms, low threshold methadone)

# HIV diagnoses among PWID in Greece: breakdown and reinstating HR program

Once the genie is out of the bottle damn hard (but possible) to put it back



Sypsa et al, ARISTOTLE, IVHEM 2018

So .....

- Major routes of HIV transmission
  - MSM
  - PWID
  - heterosexual
- Five (+ ½) proven effective preventive interventions
- To be used in combination
  - only focusing on one or two is insufficient

# What does it take to implement sound public health policies\*

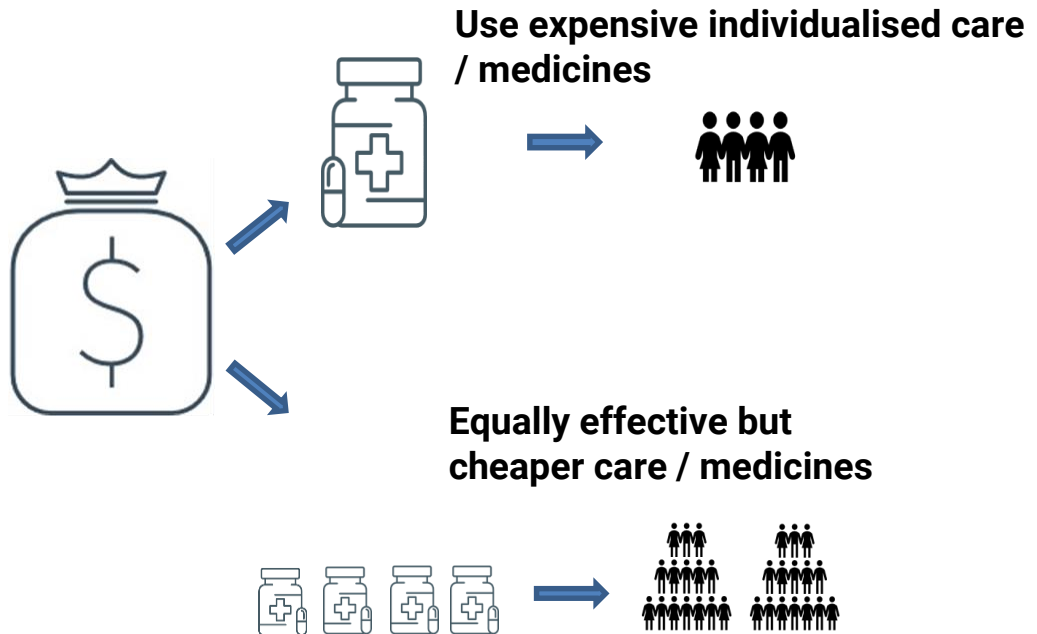


\*: Harm reduction (OST, NE), HIV testing of KAP, effective ART offering to all infected, PEP & PrEP to "high risk takers"

# Factors causing introduction of sound public health policy

- Political will changes if emerging transmission outside KAP
  - recruits and armed forces
  - social instability & economical decline due to deteriorating health of the population
- Advocacy
  - political leaders (aka. the “Mandela-effect” anno 2000)
  - civil society – NGO’s
  - health care professionals
- Post-graduate training – capacity building
- Sound clinical & implementation research – understand what it takes and how best to get there

# Cost conscious: argument for “public health approach” if fixed low health budget





**НОВОСТЬ!**

EACS онлайн курс  
по ДКП



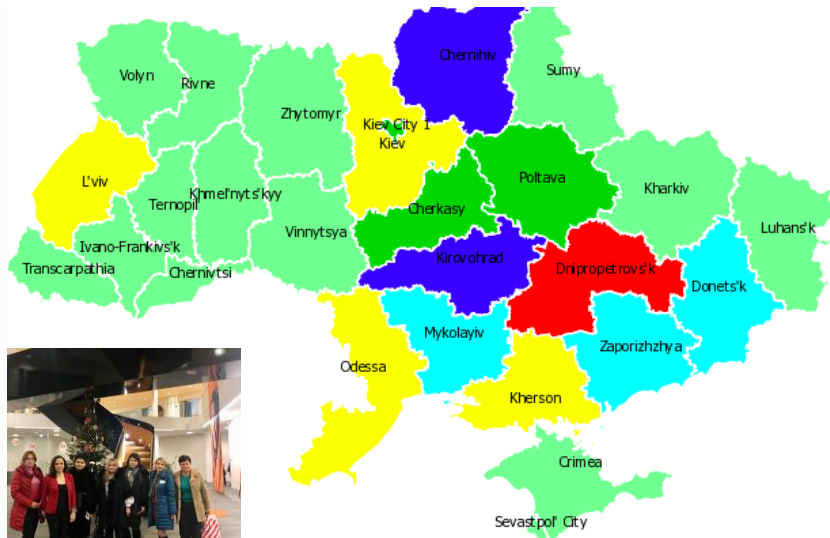
**EACS** European  
AIDS Clinical Society

# ОНЛАЙН-КУРС EACS ПО КЛИНИЧЕСКОМУ ВЕДЕНИЮ ПАЦИЕНТОВ С ВИЧ ИНФЕКЦИЕЙ

EPIDEMIOLOGY, SURVEILLANCE, OIS AND CO-MORBIDITIES, ART AND  
COMPLICATIONS OF ART, CONTINUUM OF HIV CARE, KEY AFFECTED POP  
AND TREATMENT AS PREVENTION, EPIDEMIOLOGY, SURVEILLANCE, OIS A  
MORBIDITIES, ART AND COMPLICATIONS OF ART, CONTINUUM OF HIV C

# WHO Collaborative Centre - Medical Exchange Training Program in Ukraine

- 34 centers visited (September 2019)



Number of healthcare facilities visited by Mentors from WHO CC



WHO Collaborating Centre  
on HIV and Viral Hepatitis



# Research on HIV, TB and/or HCV in patients with mono-, co-infections and/or comorbidities + fostering collaboration with the Russian Federation



*Consortia funded by the European Union's Horizon 2020 programme and the Ministry of Science and Higher Education of the Russian Federation.*



Analyzing HIV, TB and HCV epidemics across Europe and Russia, by investigating:  
- drug resistance of TB and HIV,  
- role of host genome in disease progression

12 partners

EU Coordinator: EURESIST (IT)

RUS Lead Partner: Gamaleya Centre of MOH of Russia



Delivering low-cost, portable and reliable point-of-care molecular TB diagnostic tests for both TB presence and drug-resistance.

9 partners

EU Coordinator: Edinburgh University (UK)

RUS Lead Partner: Central TB research institute of Russian Academy of Medical Science

# Summary

- HIV remains a major public health priority for Europe
- Five (and a half) effective and proven solutions
- Challenge: more extensive implementation + political/financial will to do so
- Methods: advocacy, leadership, cross-disciplinarity, networking, training and joined research efforts
- Many other important focus points not covered incl. co-infection (MDR TB and HCV), non-infectious comorbidities (NCD, CVD, CKD, ESLD & cancer), etc
- Thanks to: ECDC (Anastasia Pharris, Teymur Noori & Andrew Amato), Andrew Phillips, Jean-Michel Molina, Huldrych Günthard, Ard van Sighem, Peter Reiss, Valerie Delpech, CHIP (Ole Kirk, Daria Podlekareva, Olena Valdenmaier, Lisbeth Jørgensen & Dorthe Raben, *et al*)

# WESTERN-EASTERN EUROPEAN PARTNERSHIP INITIATIVE ON HIV, VIRAL HEPATITIS AND TB



**WEEPI is a foundation with the overall goal to improve the quality of care for people with HIV, viral hepatitis and tuberculosis in the Eastern European Region through support of clinical or implementation research projects.**

## **CALL FOR PROPOSAL**

WEEPI launches its first call, inviting public and private not-for-profit organisations from countries in Eastern Europe to submit applications.

The deadline for submission is 1<sup>st</sup> March 2020.

**weepi.org**

 @foundationweepi