



Monitoring the HIV continuum of care in Europe and Central Asia

Findings from the Dublin Declaration Monitoring

Teymur Noori, ECDC
Civil Society Forum
Luxembourg
20-21 June, 2017

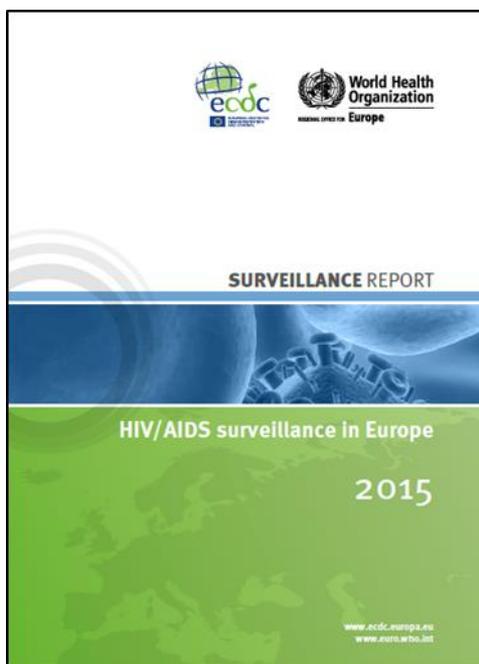
Outline

- Overview of HIV epidemiology in Europe
- Continuum of HIV care and progress toward achieving the UNAIDS 90-90-90 targets
- ECDC/EuroCoord collaboration on the continuum of HIV care
- Conclusions



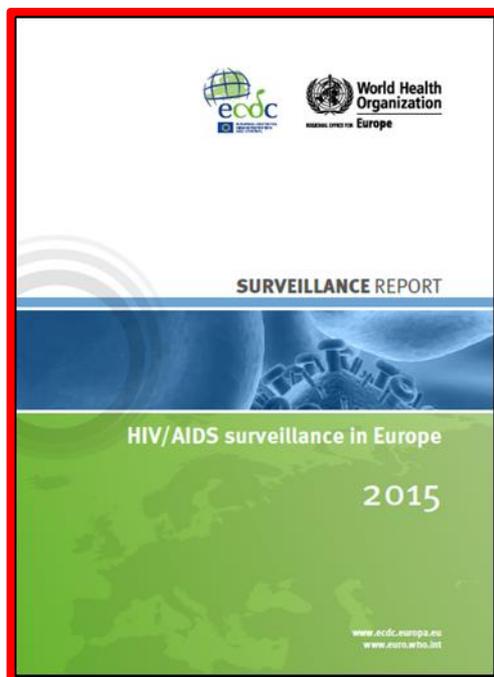
Monitoring HIV/AIDS in Europe

Know your epidemic – Know your response

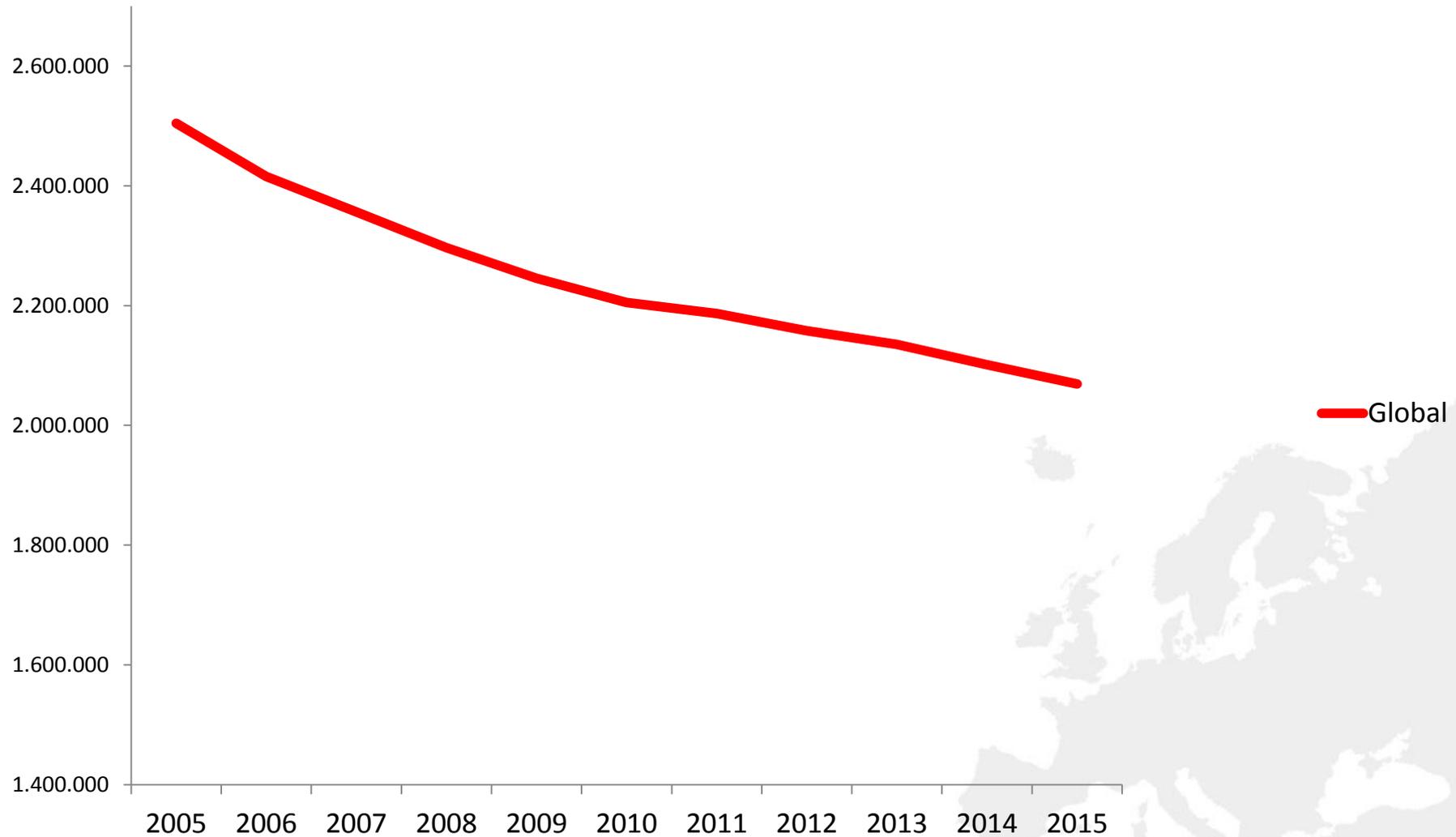


Monitoring HIV/AIDS in Europe

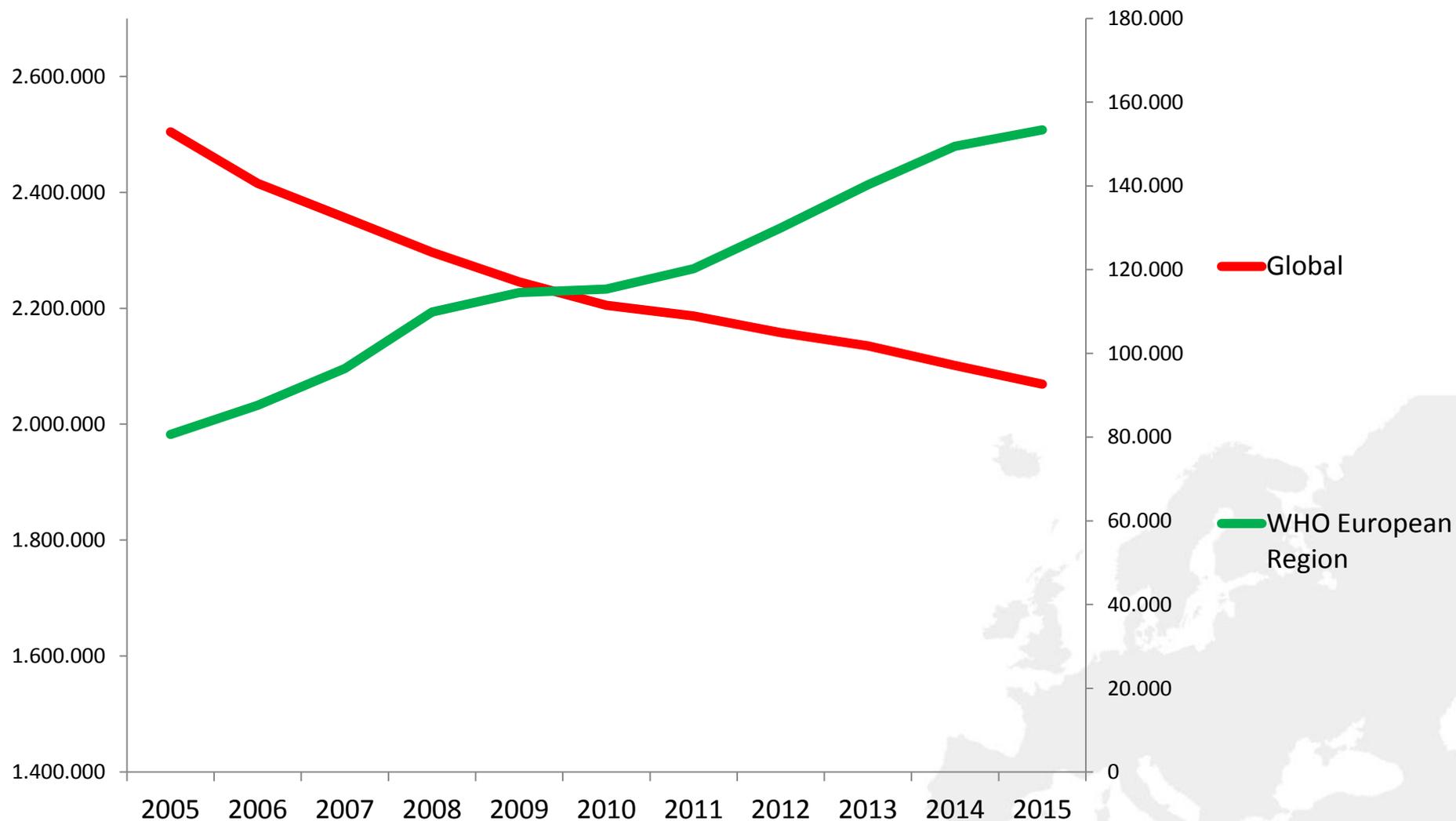
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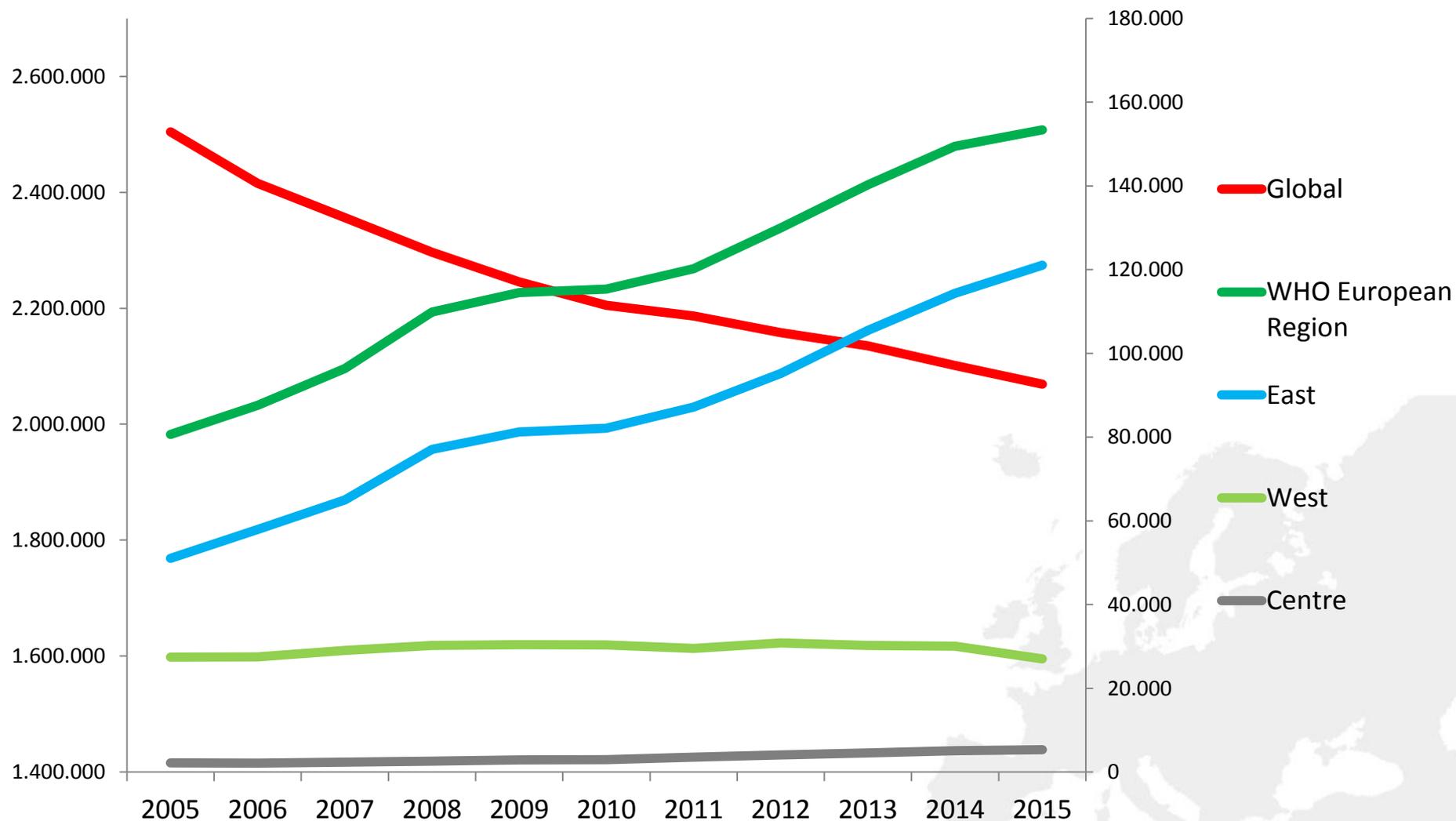
Estimated new HIV infections are decreasing globally



Estimated new HIV infections are decreasing globally, but increasing in the WHO European Region

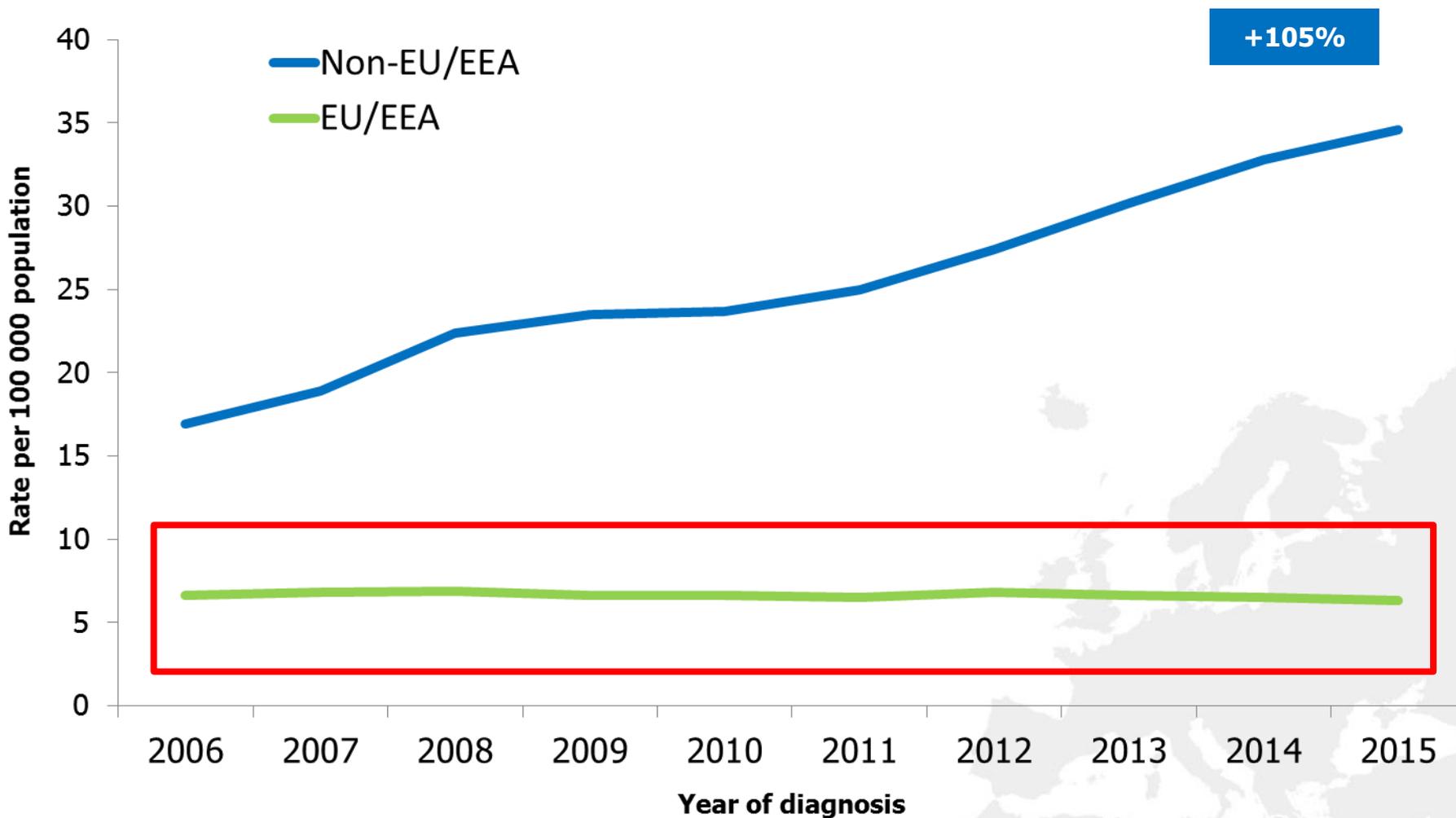


Estimated new HIV infections are decreasing globally, but increasing in the WHO European Region

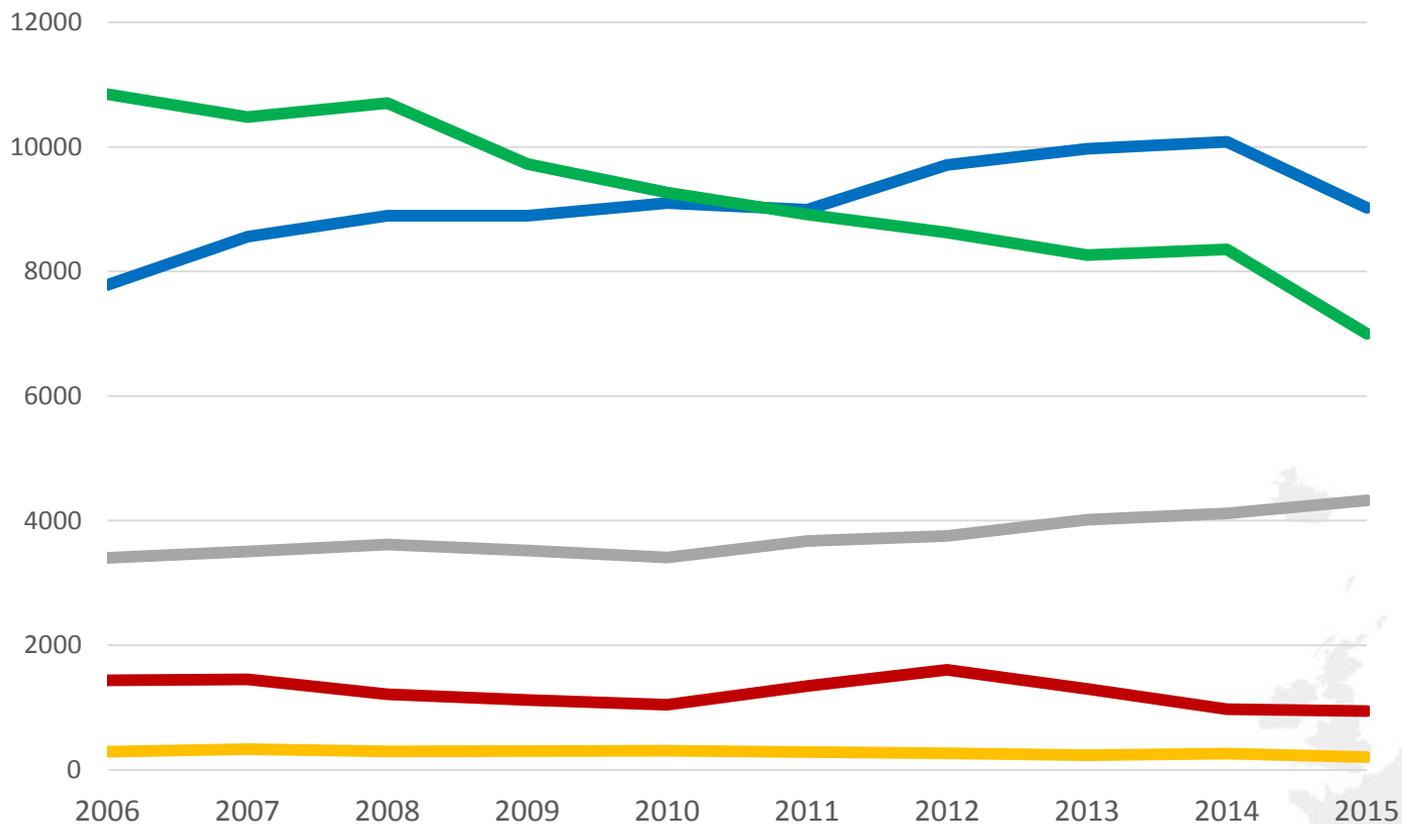


Rate of new HIV diagnoses

EU/EEA vs. non-EU/EEA countries, 2006–2015



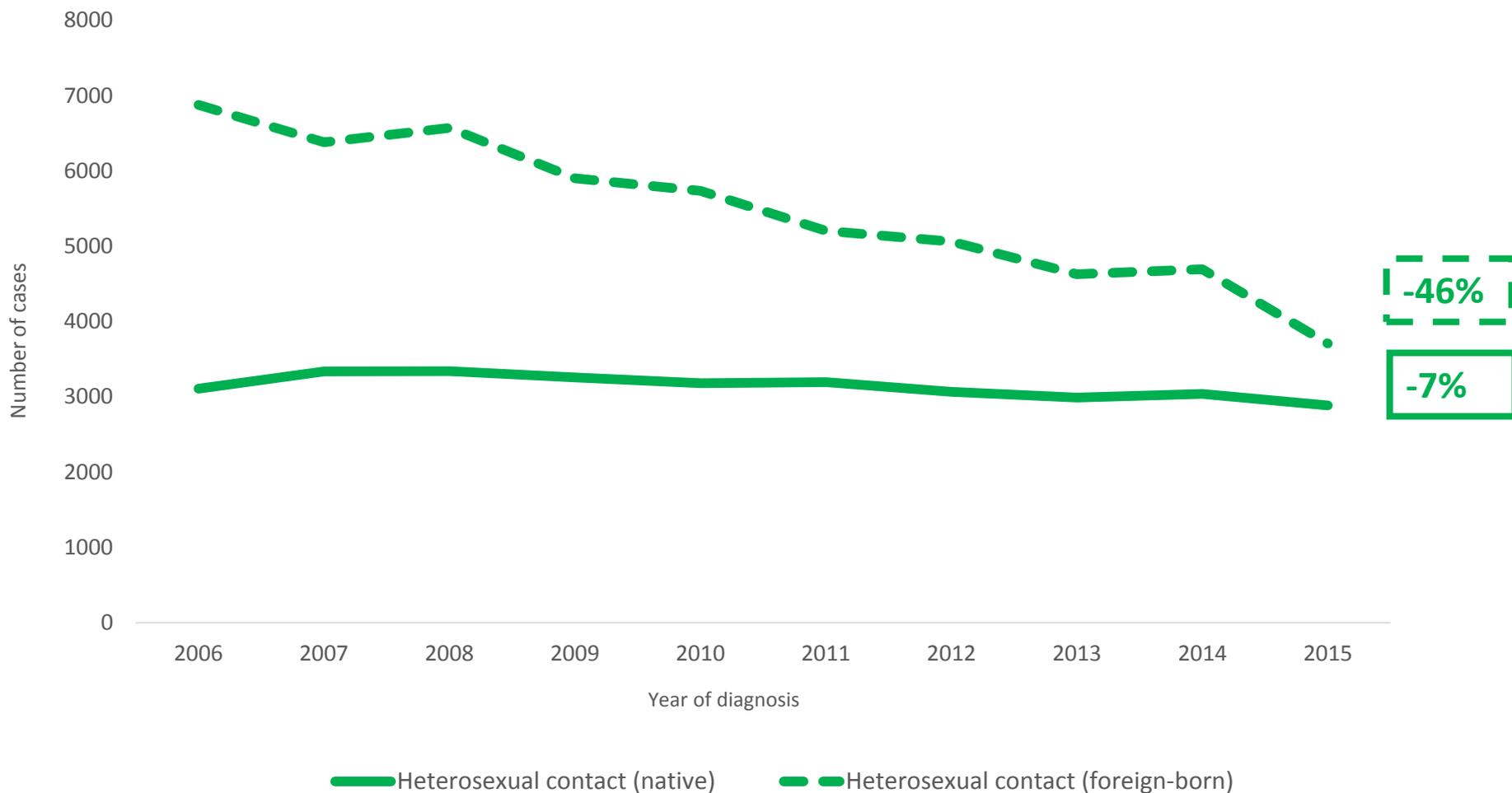
HIV diagnoses, by mode of transmission, 2006-2015, EU/EEA



- Sex between men
+16%
- Heterosexual contact
-33%
- Other/unknown
+27%
- Injecting drug use
-34%
- Mother to child
-29%

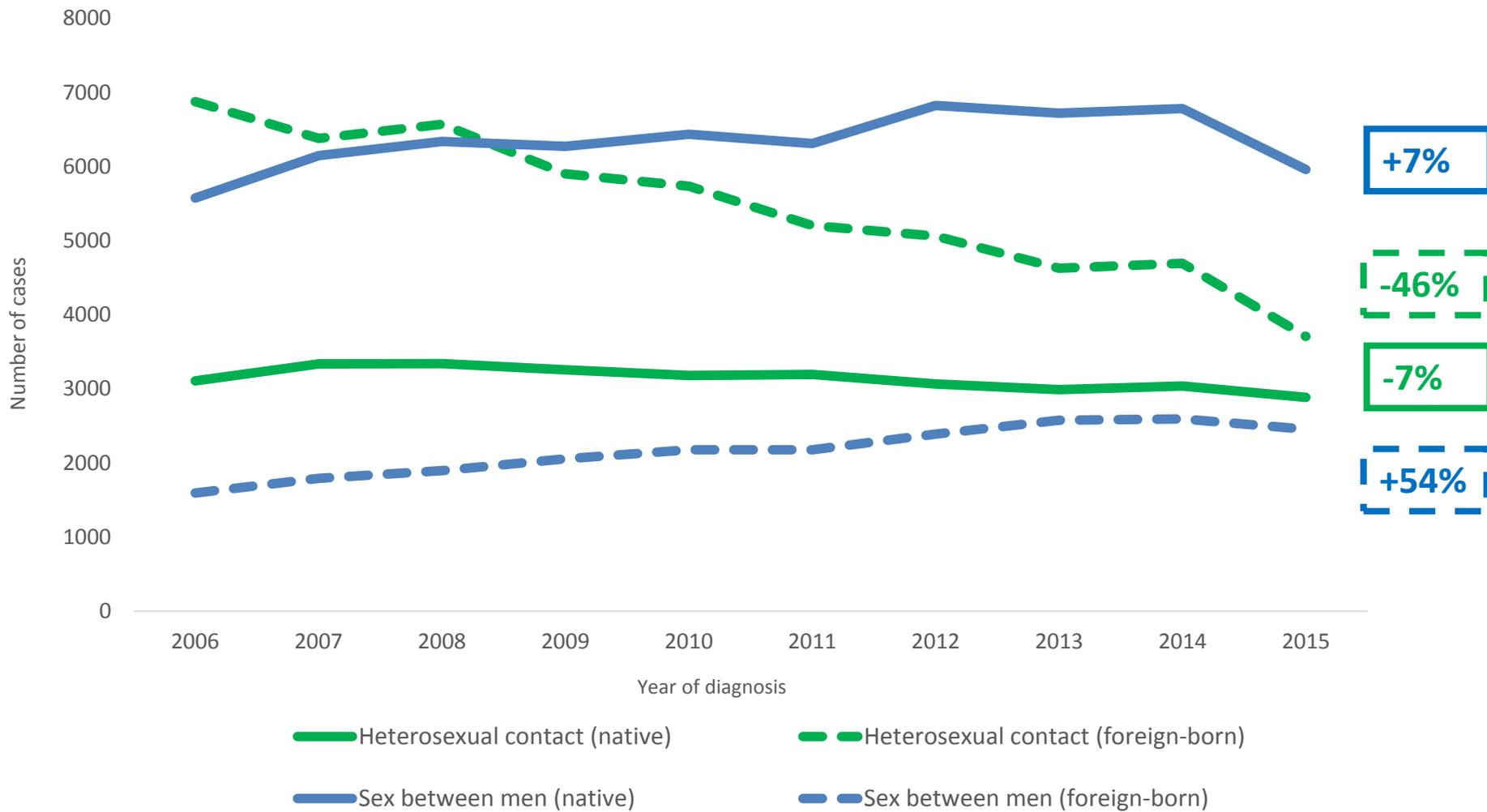
Data is adjusted for reporting delay. Cases from Estonia and Poland excluded due to incomplete reporting on transmission mode during the period; cases from Italy and Spain excluded due to increasing national coverage over the period.

HIV diagnoses, by heterosexual contact and migration status, EU/EEA, 2006-2015



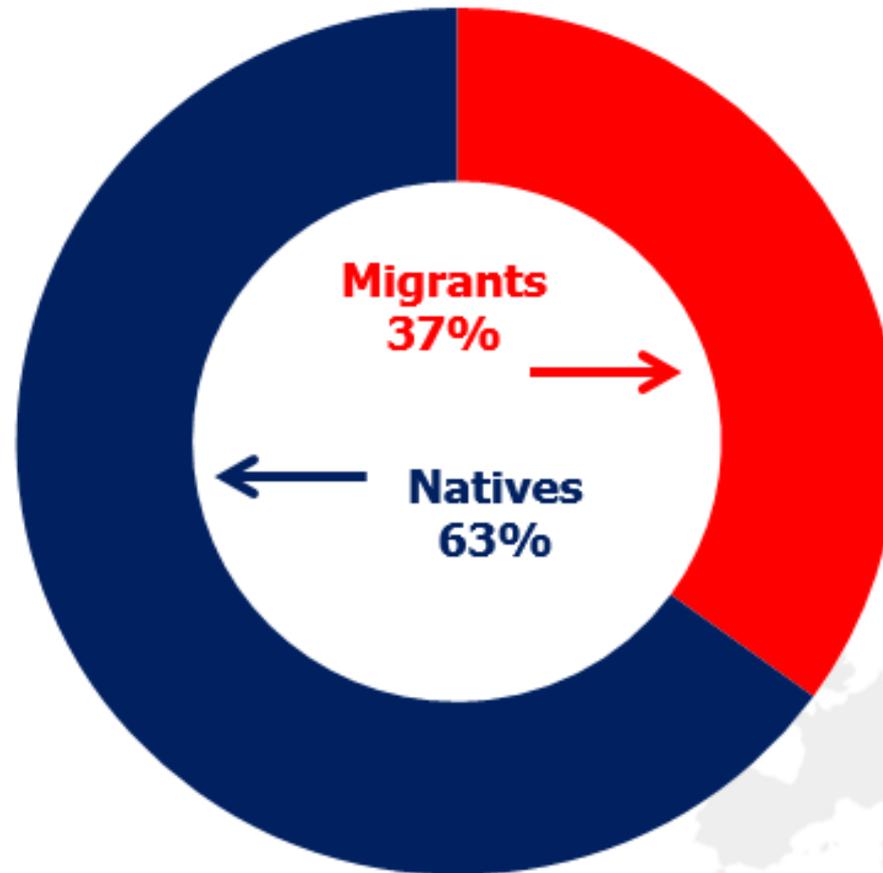
Data is adjusted for reporting delay. Cases from Estonia, Italy, Poland, Spain excluded due to inconsistent reporting over the period

HIV diagnoses, by heterosexual contact and sex between men and migration status, EU/EEA, 2006-2015



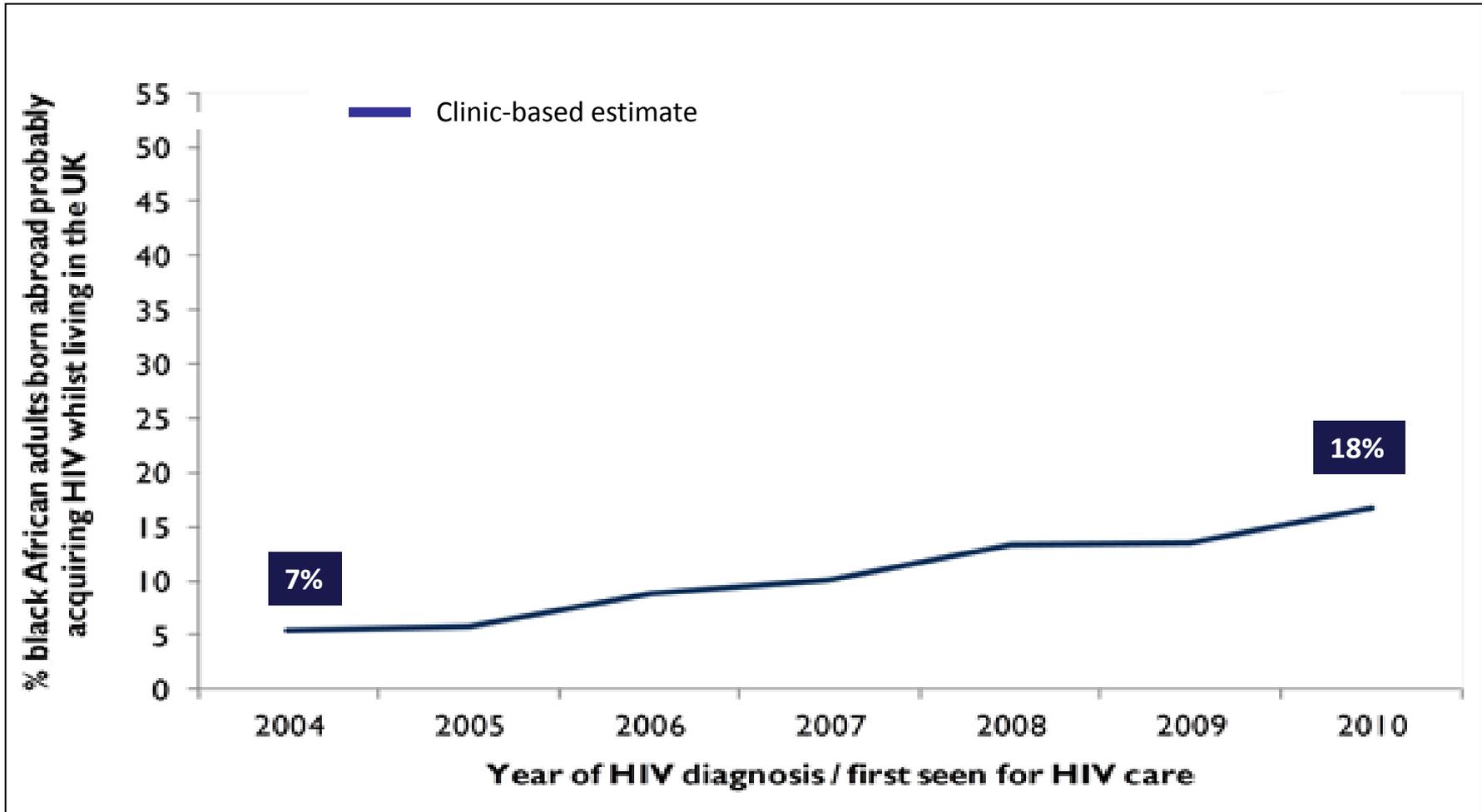
Data is adjusted for reporting delay. Cases from Estonia, Italy, Poland, Spain excluded due to inconsistent reporting over the period

Proportion of HIV diagnoses among natives and migrants* EU/EEA, 2015

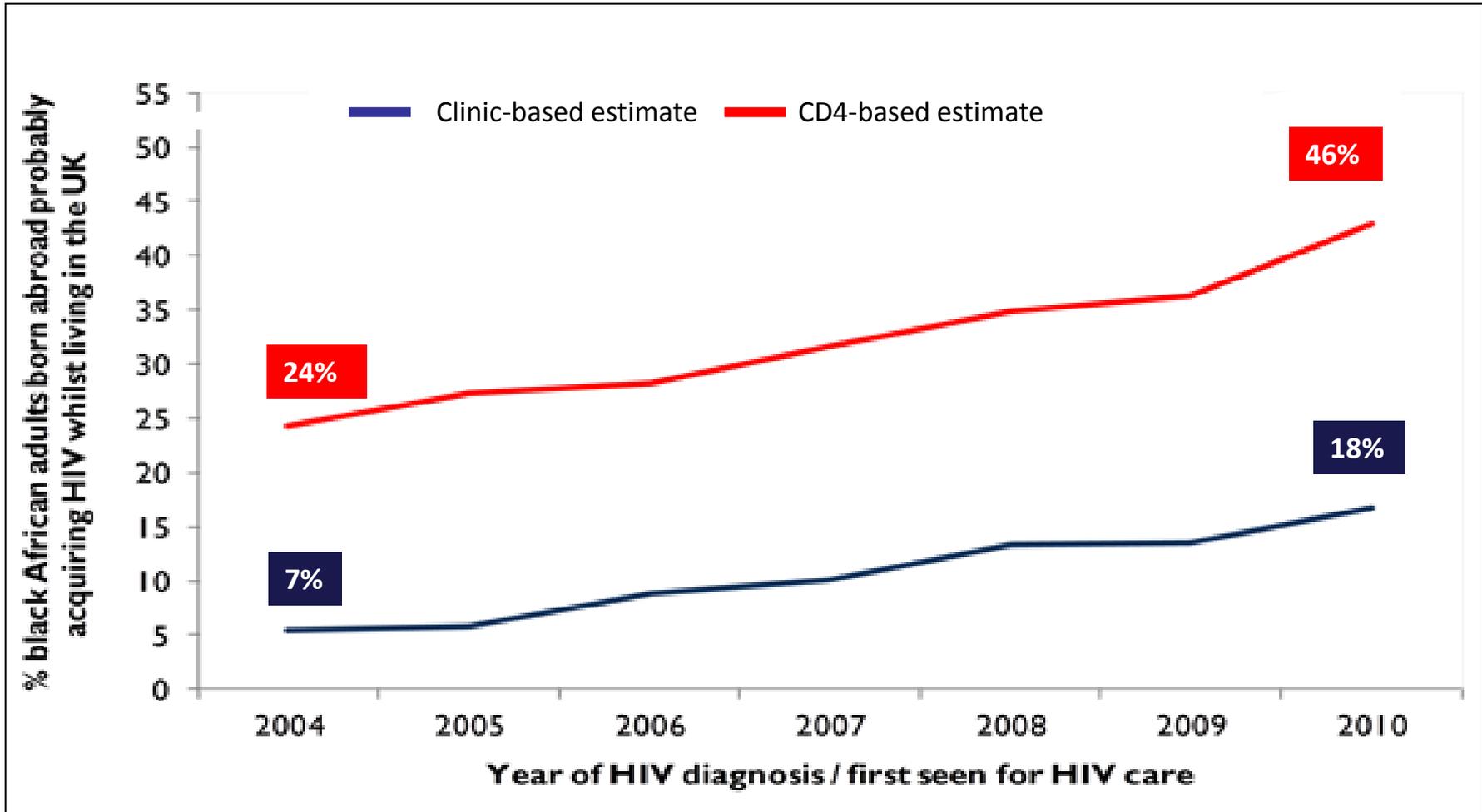


* Migrants are all persons born outside of the country in which they were diagnosed

Where do migrants get infected with HIV (prior to or after arrival to the EU)?

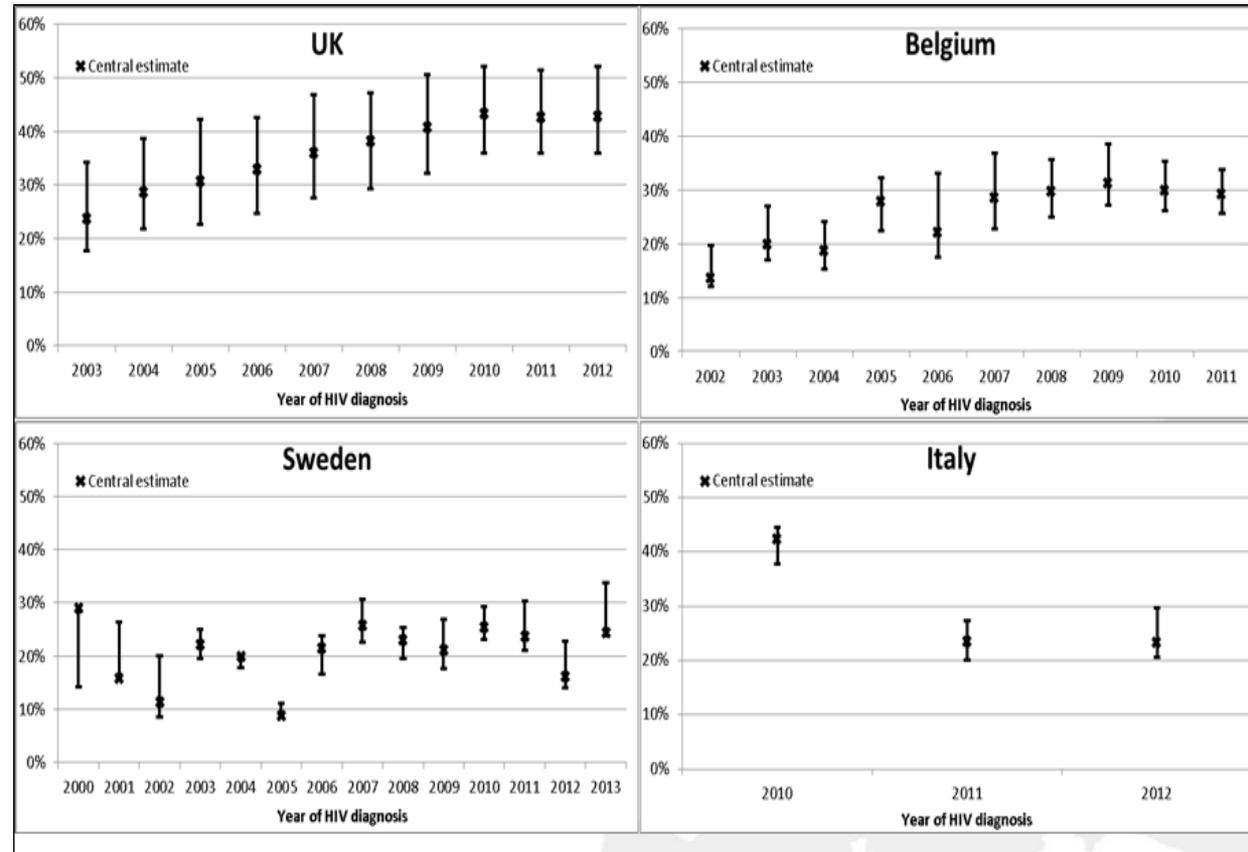


Where do migrants get infected with HIV (prior to or after arrival to the EU)?



Proportion of migrants who acquired HIV post-migration in Belgium, Italy, Sweden and the United Kingdom

- Multi-country estimates among **24,000** migrants diagnosed between 2000-2013
- Over **1/3** of migrants diagnosed **acquired HIV post-migration** in 2011
- **MSM migrants** were particularly affected with more than **40%** estimated to have **acquired HIV post-migration**



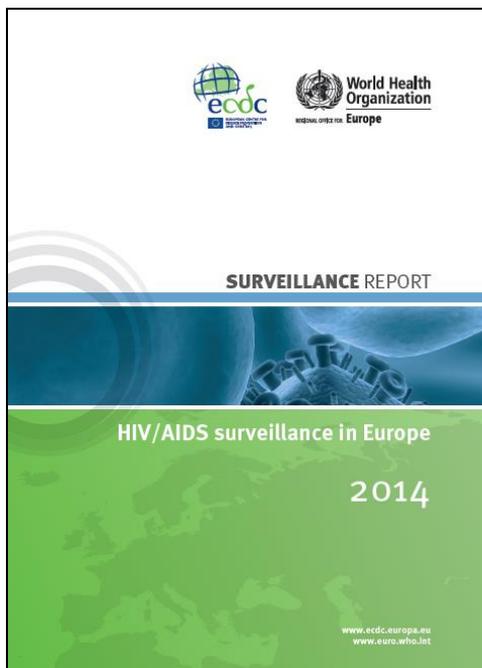
Proportion of migrants who acquired HIV post-migration in Belgium, Italy, Sweden and the United Kingdom

Why is this important?

- Screening newly arrived migrants at point of entry is not enough
- Some sub-populations of migrants are at-risk for HIV acquisition many years after arrival to the EU
- Countries should develop and deliver targeted primary HIV prevention programmes to migrant populations at risk
 - Including for those visiting friends and relatives

Monitoring HIV/AIDS in Europe

Know your epidemic – Know your response



Declarations and commitments on HIV/AIDS

Dublin Declaration



Éire 2004 Uachtaránacht an Aontais Eorpaigh
Ireland 2004 Presidency of the European Union

www.eu2004.ie



MALTA EU 2017

2017 Maltese Presidency of the Council of the European Union

THE MALTA DECLARATION ON HIV/AIDS

Call for fast tracking actions on HIV towards ending the AIDS epidemic by 2030
in the European Union

2000

2004

2015

2017

2001

2016

Declaration of
Commitment
on HIV/AIDS

UNITED NATIONS GENERAL ASSEMBLY
SPECIAL SESSION ON HIV/AIDS
25 - 27 JUNE 2001



2016 HIGH-LEVEL MEETING
ON ENDING AIDS

55 countries covered by the Dublin Declaration



Overall submission rate in 2016: $48/55 = 87\%$

Fast Track Targets by 2020

Target 1

90%

of all



living with HIV

DIAGNOSED

Target 2

90%

of all



diagnosed with HIV

ON ART

Target 3

90%

of all



on ART

**VIRALLY
SUPPRESSED**

Target 4

73%

of all people living
with HIV

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=

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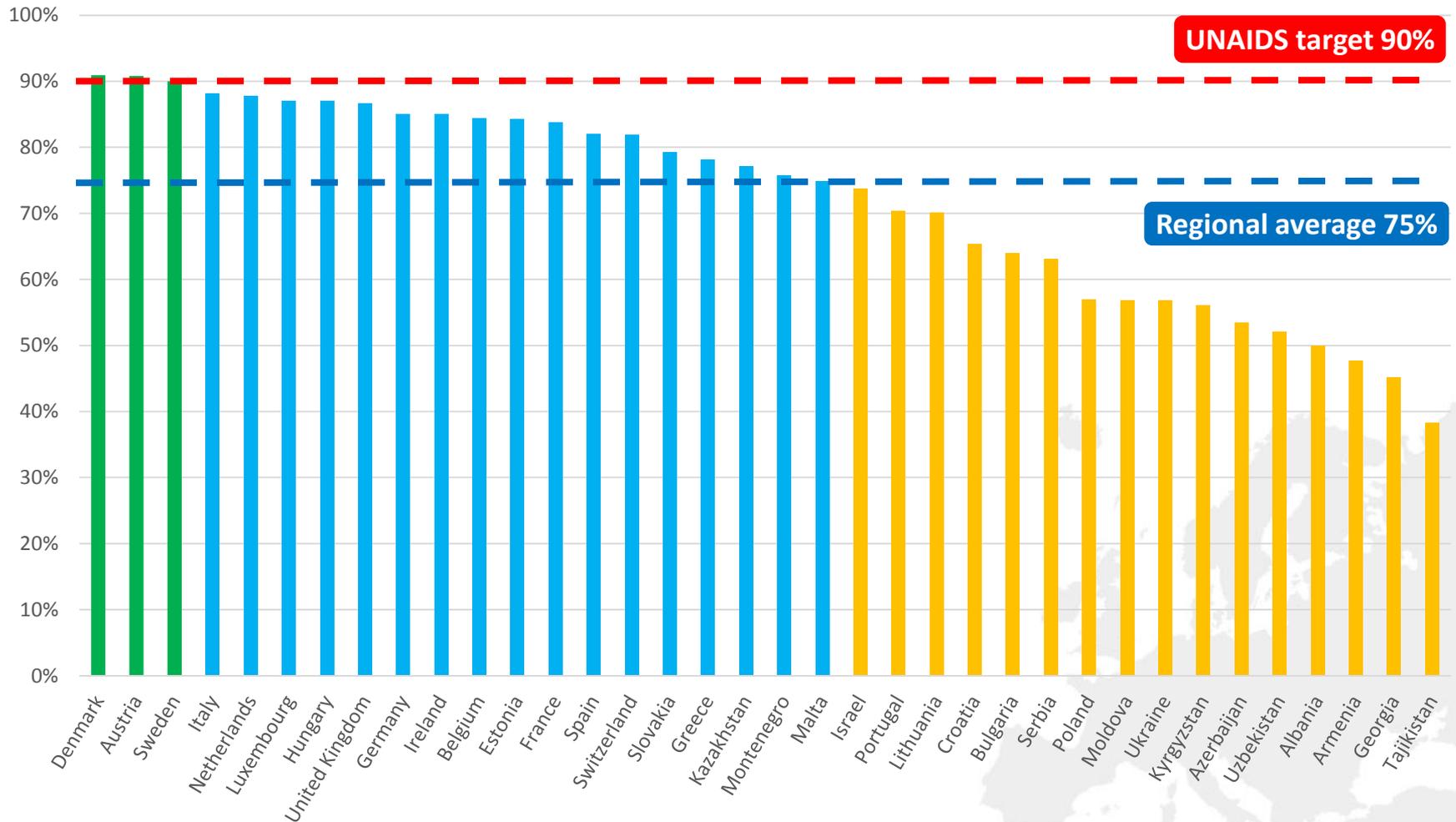
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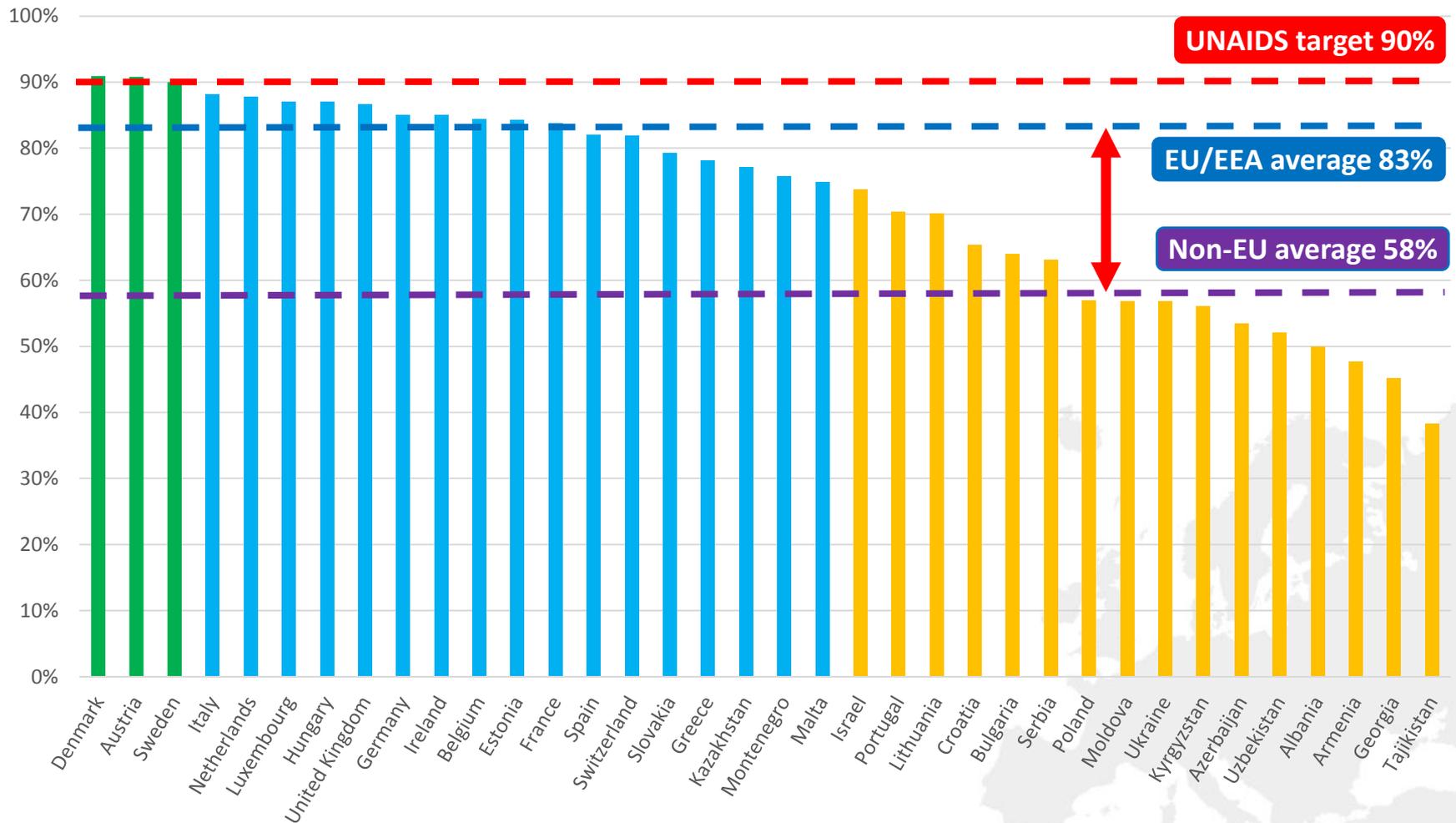
Progress toward achieving the first 90:

Target 1: 90% of all PLHIV who know their status (n=36)



Progress toward achieving the first 90:

Target 1: 90% of all PLHIV who know their status (n=36)



Too many people living with HIV have not yet been diagnosed

1 in **7** people
living with **HIV** in the EU/EEA
do **not know** they are infected



Because it's best to know: find a testing centre near you
all across Europe. Check bit.ly/ECDC HIV testing

Too many people living with HIV are diagnosed late



In the WHO
European Region

48%

of those with a CD4
count reported are
diagnosed late

Are new innovative approaches to HIV testing included in national HIV testing guidelines? (n=47)



Testing types	Yes	No	No guidelines
Community-based testing delivered by trained medical staff	27	10	10
Community-based testing delivered by non-medical staff (e.g. trained lay people)	11	26	10
Home-sampling kits	3	34	10
Self-testing kits	2	35	10

Are efforts underway to increase the use of community-based HIV testing, home sampling and self-testing? (n=47)

Key populations	CBT delivered by trained medical staff	CBT delivered by non-trained medical staff	Home sampling	Self-testing
MSM	26	16	4	3
Sex workers	21	8	1	2
PWID	19	10	1	2
Prisoners	15	4	0	0
General population	15	5	0	3
Migrants from generalised epidemics	12	5	1	2
Undocumented migrants	9	4	0	2

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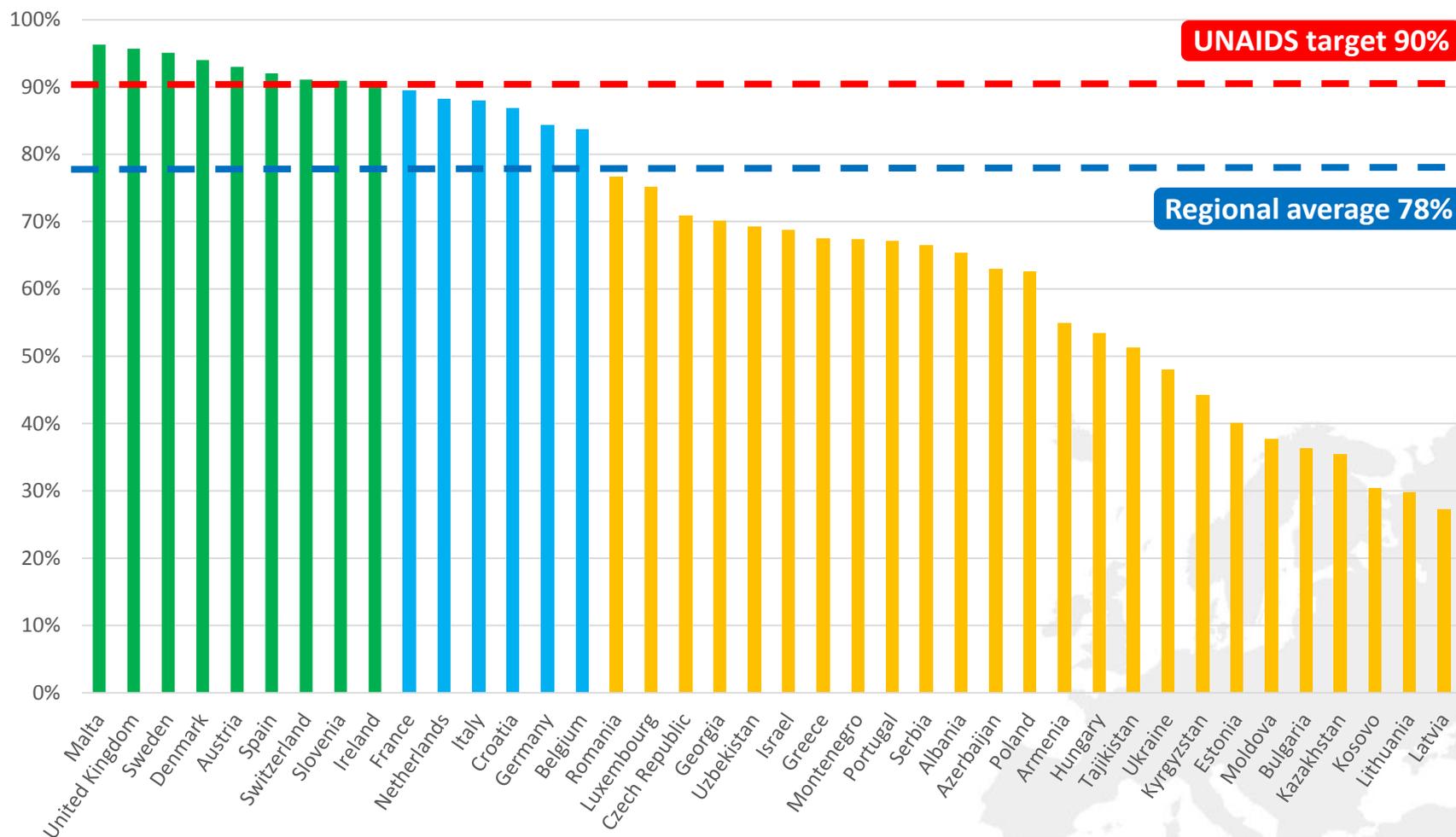
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Progress toward achieving the second 90:



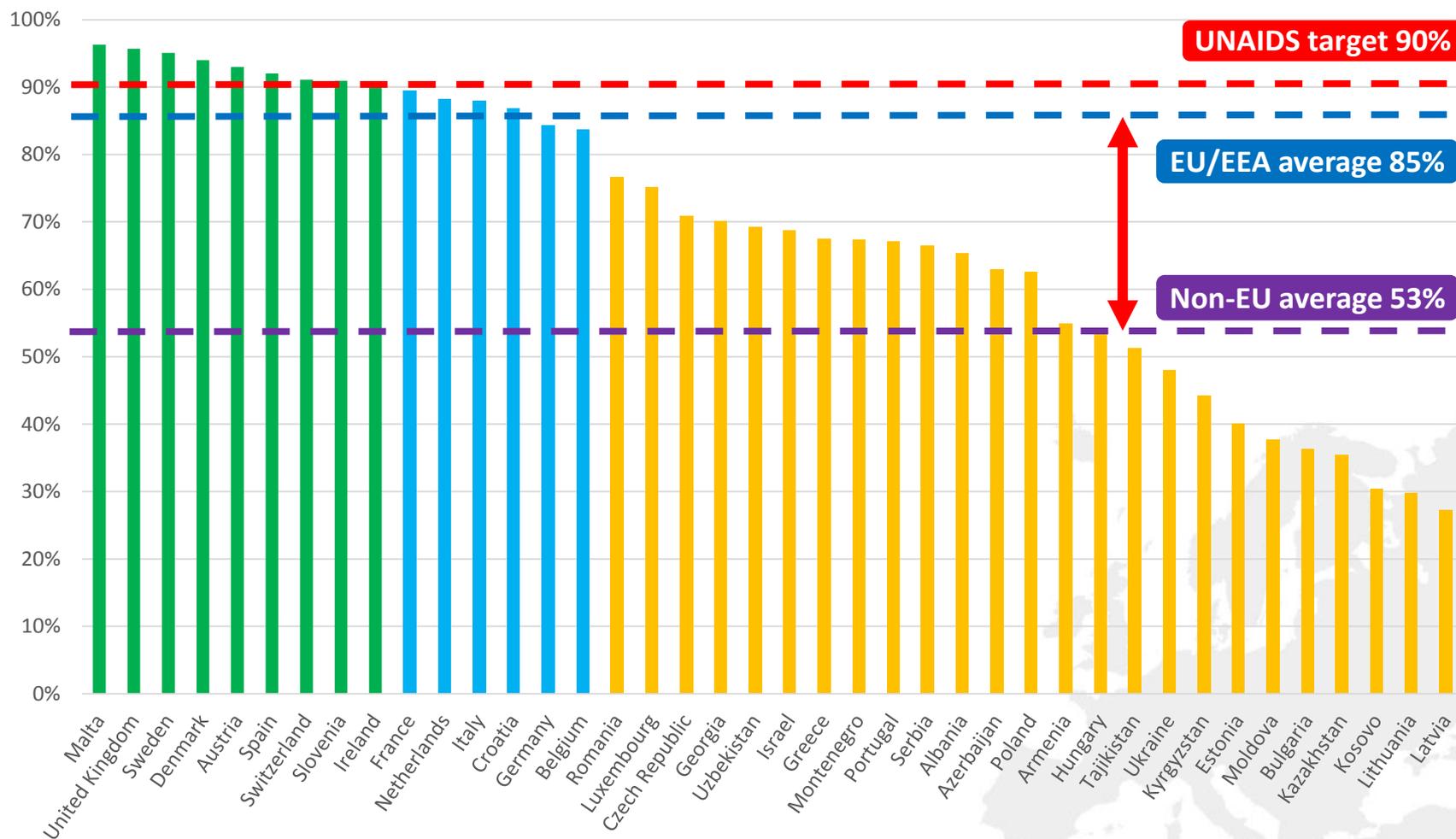
Target 2: 90% of those diagnosed on ART (n=40)



Progress toward achieving the second 90:



Target 2: 90% of those diagnosed on ART (n=40)



Too many people with diagnosed HIV infection are not yet on treatment

1 in **6** people

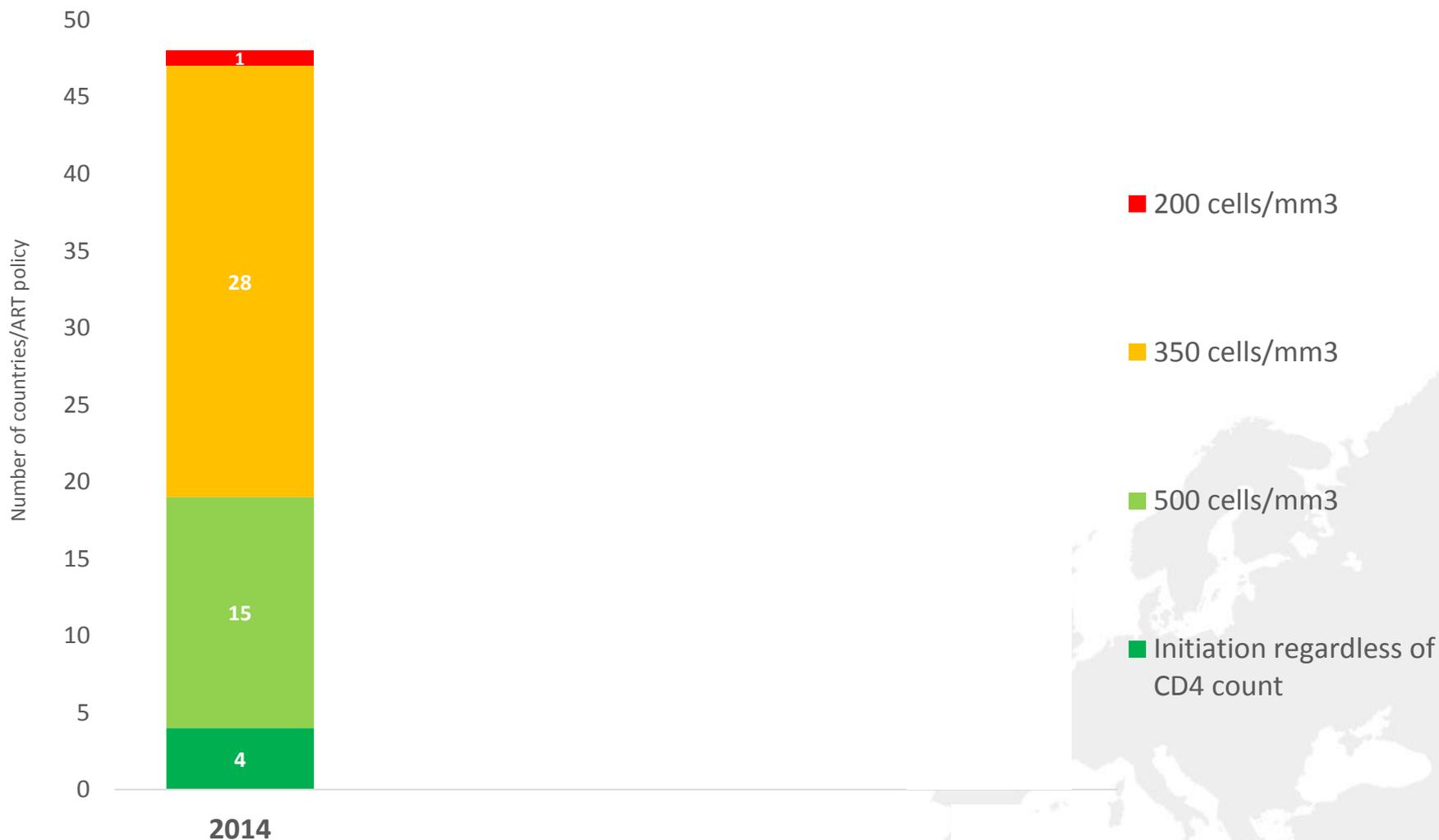
who are diagnosed with HIV
in the EU/EEA are **not on treatment**



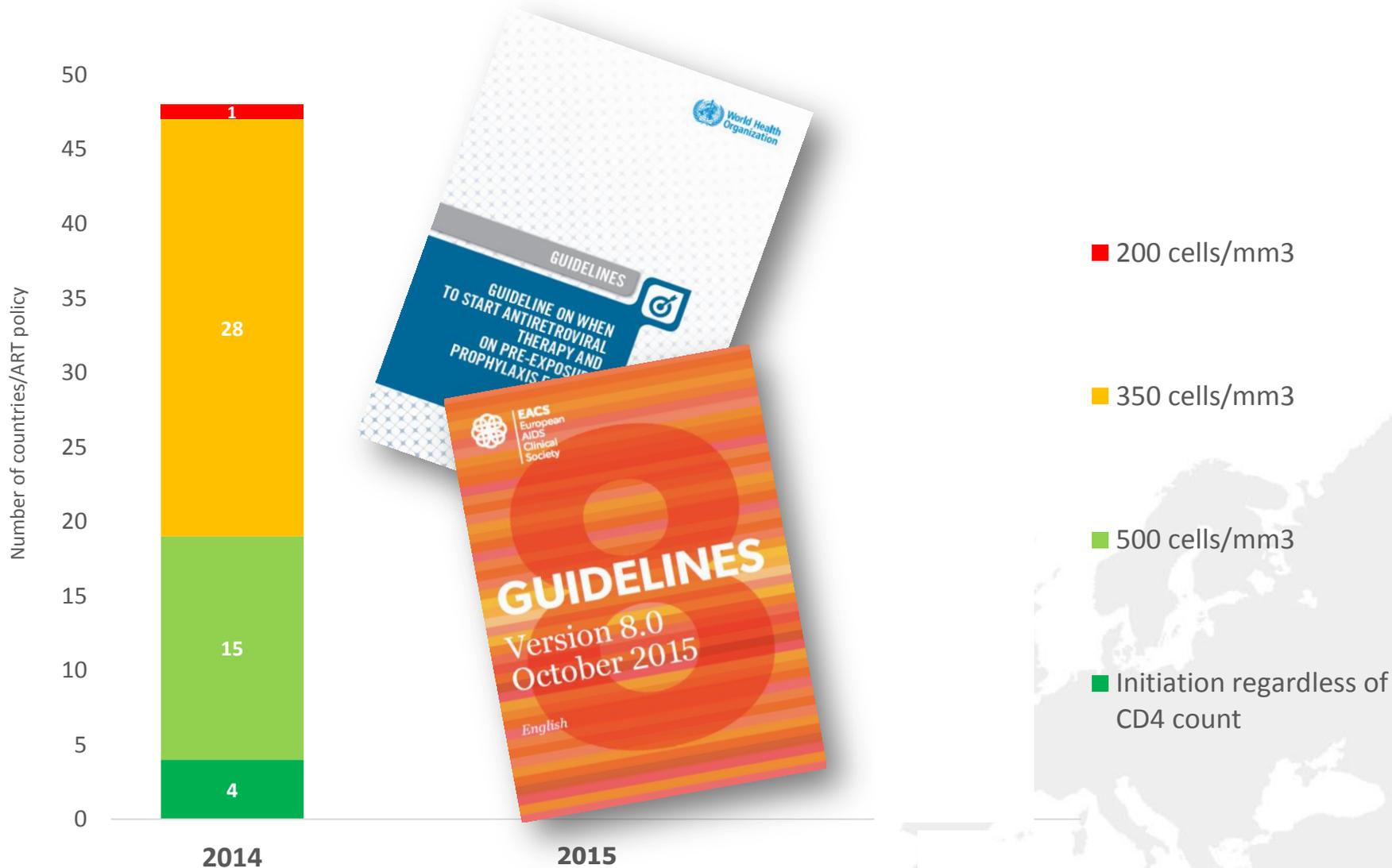
Treatment changes HIV infection from a life-threatening disease
into a manageable chronic condition.

Adopting 'test and treat' policies and reducing barriers to
accessing care helps make treatment more effective.

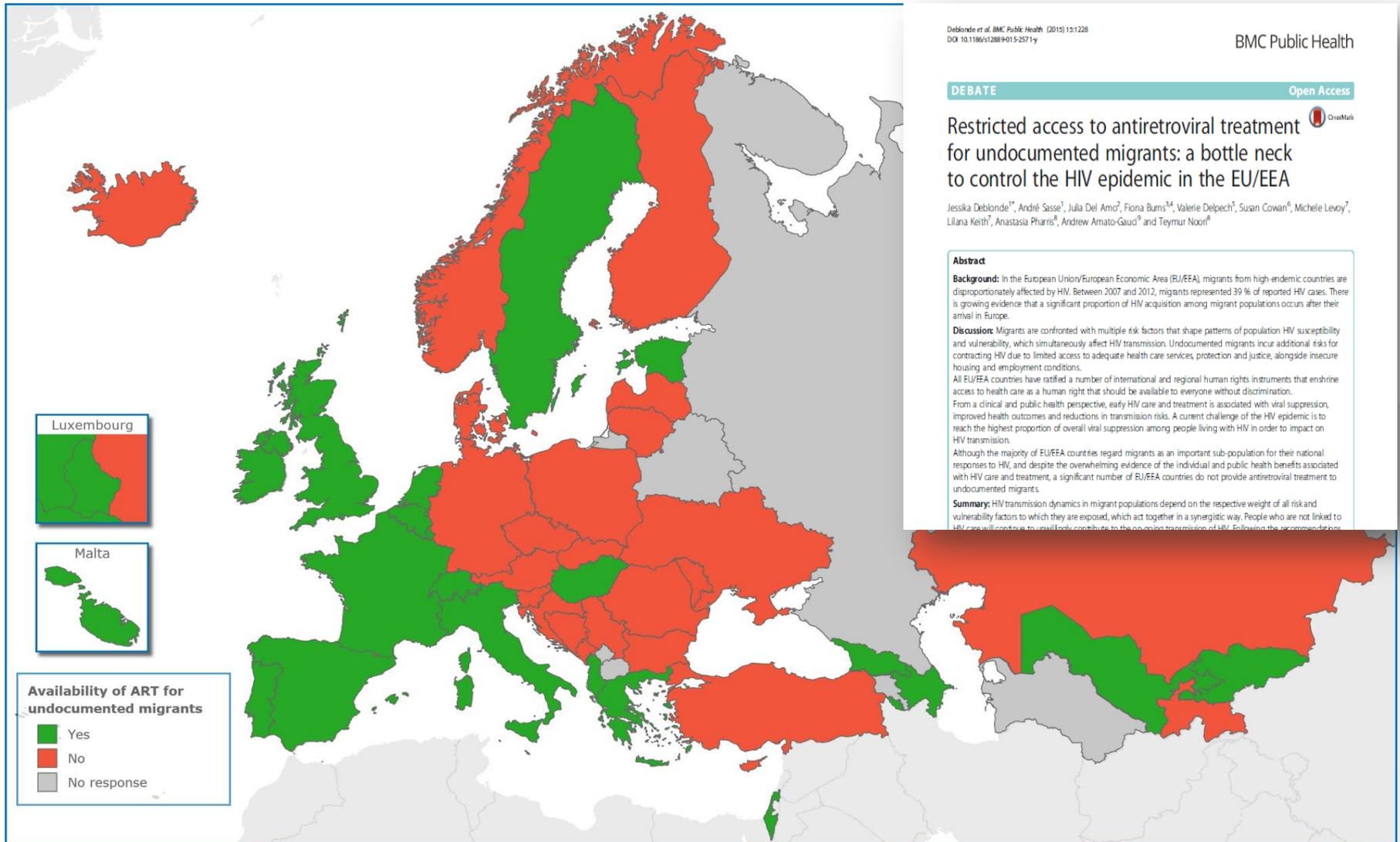
Policies on ART initiation in European countries 2014 (n=48)



Policies on ART initiation in European countries 2014 (n=48)



Availability of ART for undocumented migrants, 2016



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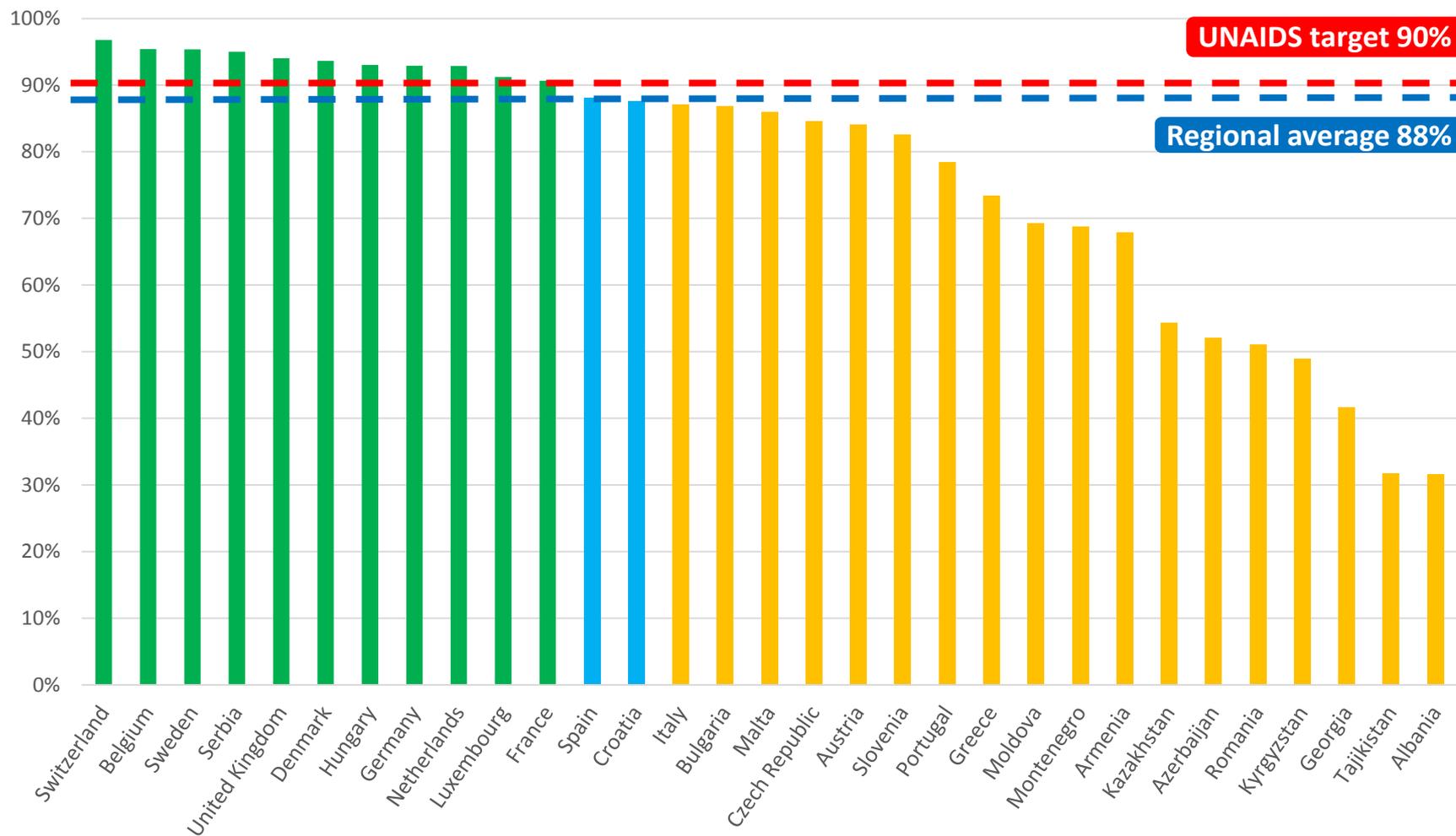
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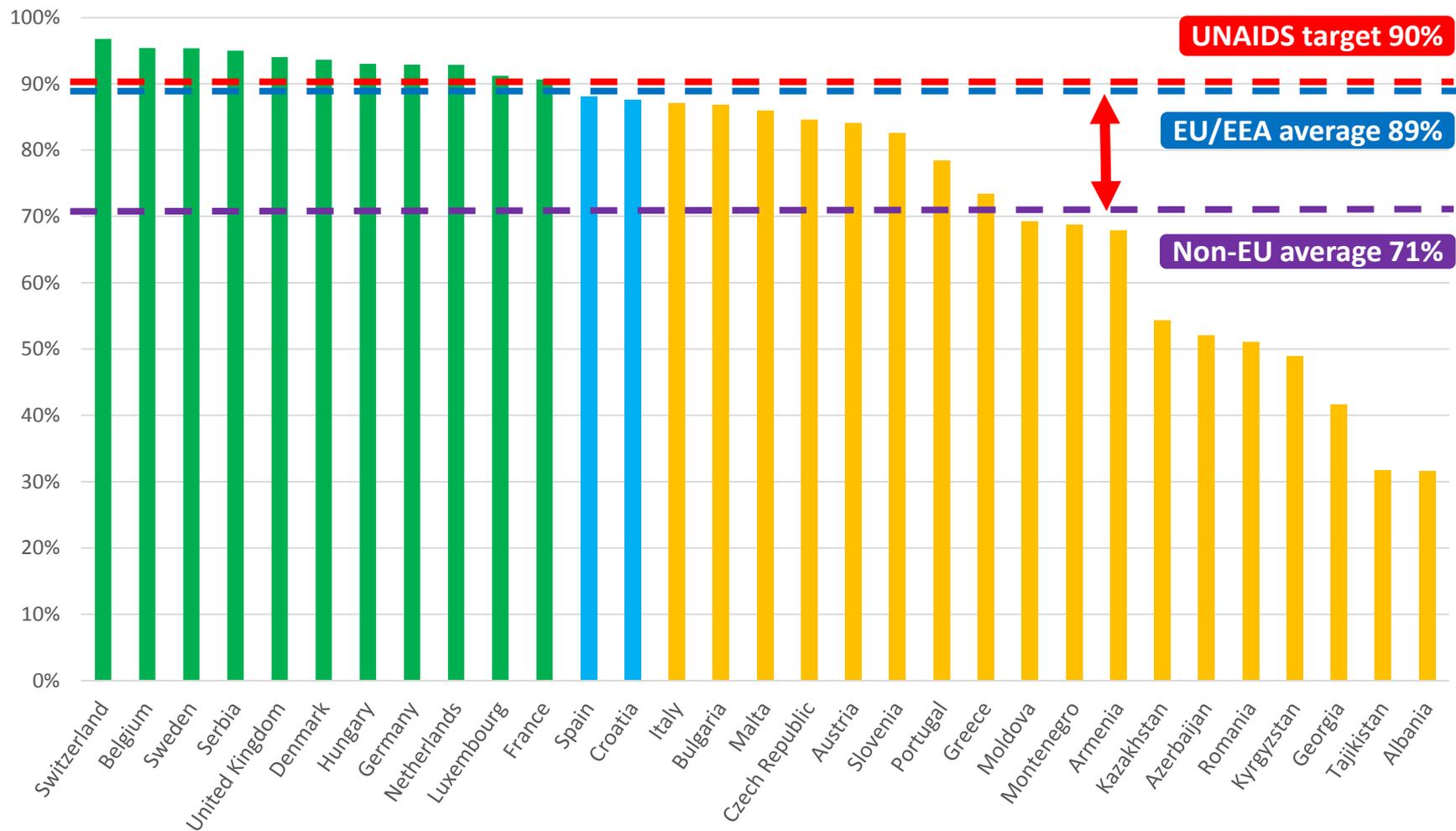
Progress toward achieving the third 90:

Target 3: 90% of those on ART virally suppressed (n=31)



Progress toward achieving the third 90:

Target 3: 90% of those on ART virally suppressed (n=31)



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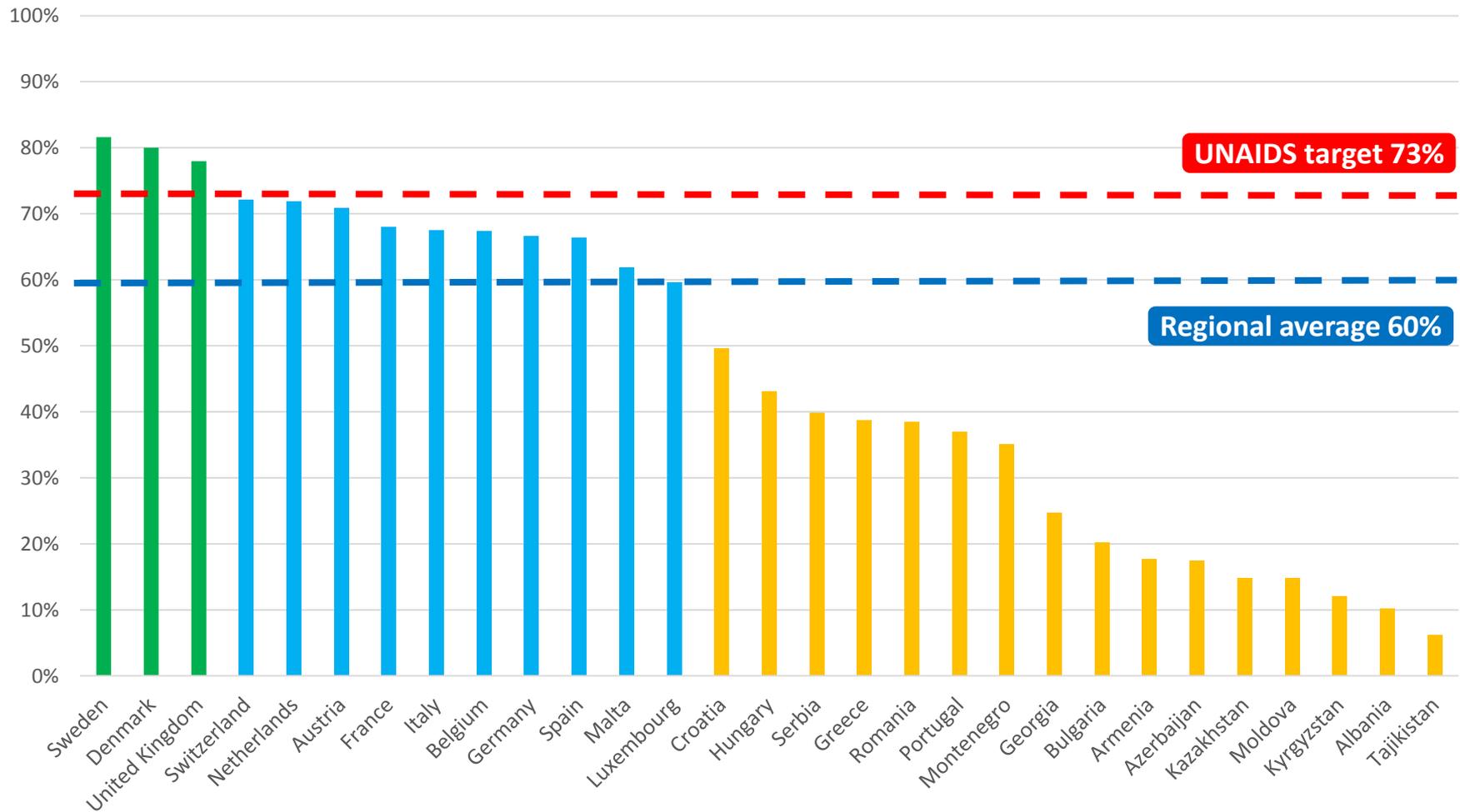
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Progress toward achieving the 90-90-90:



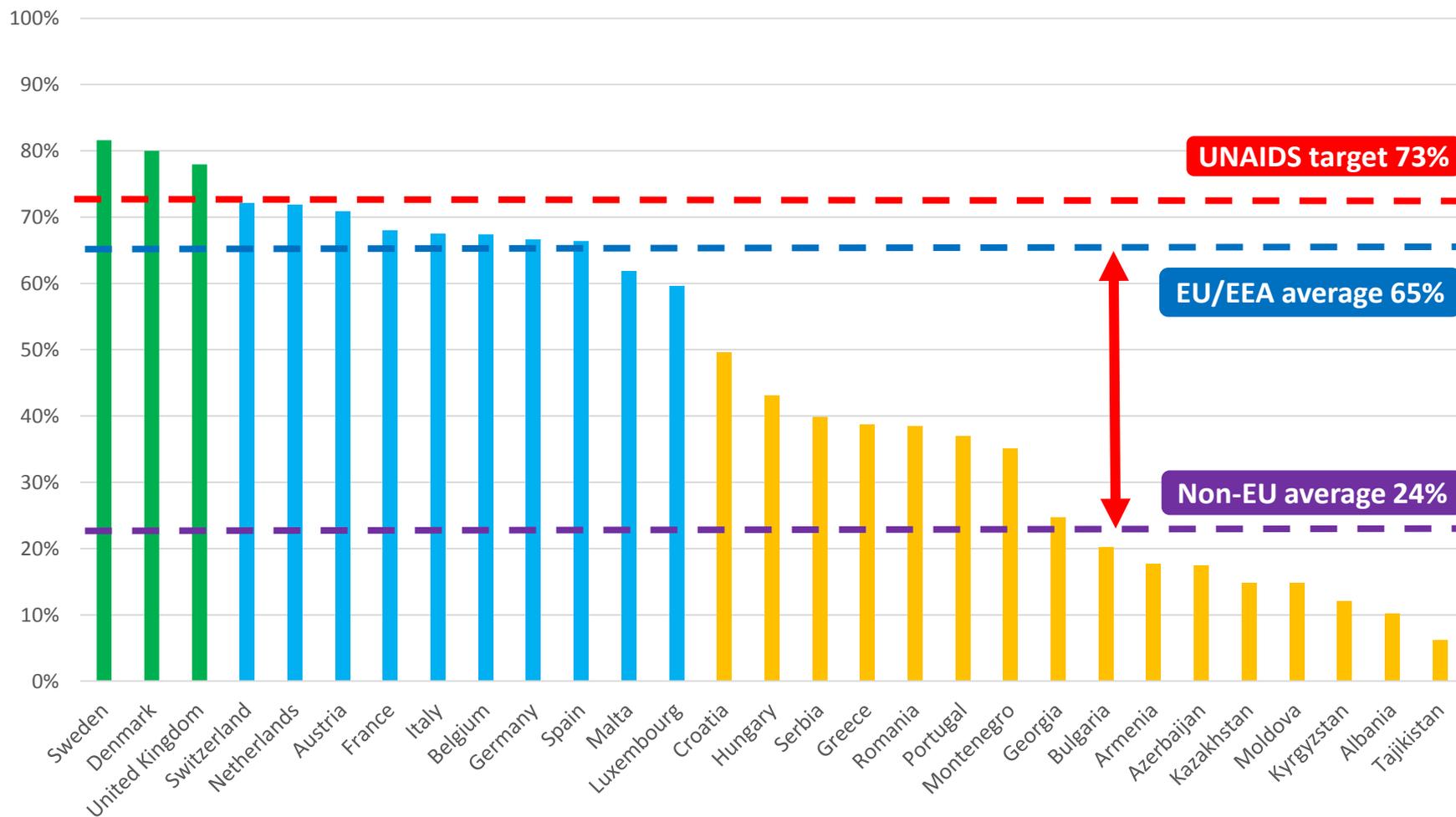
Target 4: 73% of all PLHIV virally suppressed (n=29)



Progress toward achieving the 90-90-90:



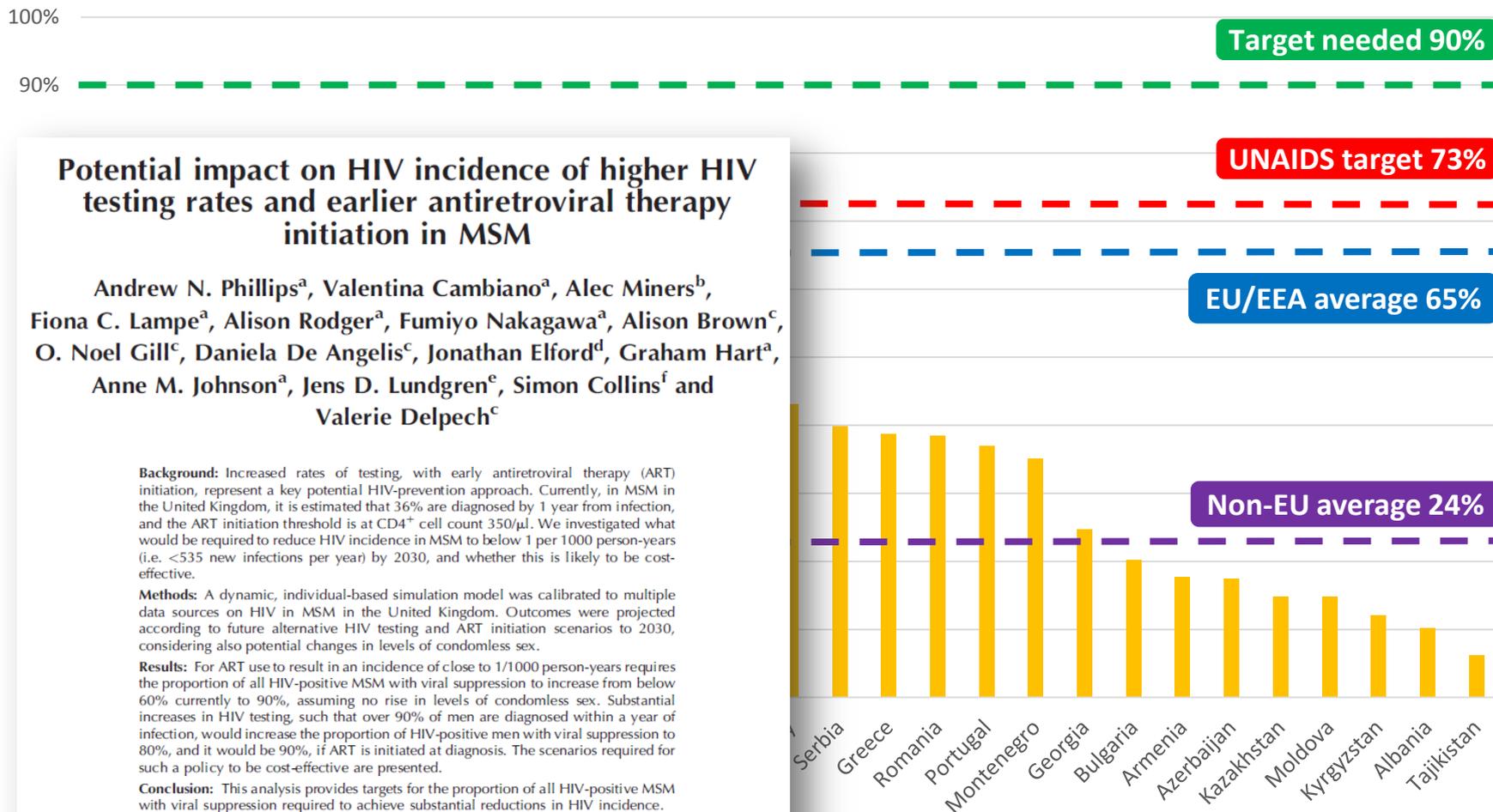
Target 4: 73% of all PLHIV virally suppressed (n=29)



Progress toward achieving the 90-90-90:



Target 4: 73% of all PLHIV virally suppressed (n=29)



Target needed 90%

UNAIDS target 73%

EU/EEA average 65%

Non-EU average 24%

Potential impact on HIV incidence of higher HIV testing rates and earlier antiretroviral therapy initiation in MSM

Andrew N. Phillips^a, Valentina Cambiano^a, Alec Miners^b,
 Fiona C. Lampe^a, Alison Rodger^a, Fumiyo Nakagawa^a, Alison Brown^c,
 O. Noel Gill^c, Daniela De Angelis^c, Jonathan Elford^d, Graham Hart^a,
 Anne M. Johnson^a, Jens D. Lundgren^e, Simon Collins^f and
 Valerie Delpech^c

Background: Increased rates of testing, with early antiretroviral therapy (ART) initiation, represent a key potential HIV-prevention approach. Currently, in MSM in the United Kingdom, it is estimated that 36% are diagnosed by 1 year from infection, and the ART initiation threshold is at CD4⁺ cell count 350/μl. We investigated what would be required to reduce HIV incidence in MSM to below 1 per 1000 person-years (i.e. <535 new infections per year) by 2030, and whether this is likely to be cost-effective.

Methods: A dynamic, individual-based simulation model was calibrated to multiple data sources on HIV in MSM in the United Kingdom. Outcomes were projected according to future alternative HIV testing and ART initiation scenarios to 2030, considering also potential changes in levels of condomless sex.

Results: For ART use to result in an incidence of close to 1/1000 person-years requires the proportion of all HIV-positive MSM with viral suppression to increase from below 60% currently to 90%, assuming no rise in levels of condomless sex. Substantial increases in HIV testing, such that over 90% of men are diagnosed within a year of infection, would increase the proportion of HIV-positive men with viral suppression to 80%, and it would be 90%, if ART is initiated at diagnosis. The scenarios required for such a policy to be cost-effective are presented.

Conclusion: This analysis provides targets for the proportion of all HIV-positive MSM with viral suppression required to achieve substantial reductions in HIV incidence.

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AIDS 2015, 29:1855–1862

Can we produce an EU/EEA continuum of care estimate based on country reported data?



- Variability of data availability, quality, sources and measurement have historically made it difficult to compare and combine results across countries

- But...



EuroCoord/ECDC collaboration on estimating the continuum of care



- ECDC project with UCL & EuroCoord on estimating the continuum of care using surveillance and cohort data
- Using standard definitions and high quality data sources

Clinical Infectious Diseases

MAJOR ARTICLE



The Human Immunodeficiency Virus Continuum of Care in European Union Countries in 2013: Data and Challenges

Annabelle Gourlay,¹ Teymur Noori,² Anastasia Pharris,² Maria Axelsson,³ Dominique Costagliola,⁴ Susan Cowan,⁵ Sara Croxford,⁶ Antonella d'Arminio Monforte,⁷ Julia del Amo,⁸ Valerie Delpech,⁹ Asunción Diaz,⁹ Enrico Girardi,³ Barbara Gussenheimer-Bartmeyer,¹⁰ Victoria Hernando,⁸ Sophie Jose,¹ Gisela Leierer,¹¹ Georgios Nikolopoulos,^{12,13} Niels Obel,¹⁴ Eline Op de Coul,¹⁵ Dimitra Paraskeva,¹³ Peter Reiss,^{16,17} Caroline Sabin,¹ André Sasse,¹⁸ Daniela Schmid,¹⁹ Anders Sonnerborg,²⁰ Alexander Spina,¹⁹ Barbara Suljoi,²¹ Virginie Superville,⁴ Giota Touloumi,²² Dominique Van Beekhoven,¹⁸ Ard van Sighem,¹⁶ Georgia Vourli,²² Robert Zangerle,¹ and Kholoud Porter,¹ for the European HIV Continuum of Care Working Group

¹University College London, United Kingdom; ²European Centre for Disease Prevention and Control, and ³Public Health Agency of Sweden, Solna; ⁴Sorbonne Universités, UPMC Université Paris 06, INSERM, Institut Pierre Louis d'Epidémiologie et de Santé Publique (IPLESP UMR_S 1136), Paris, France; ⁵Statens Serum Institut, Copenhagen, Denmark; ⁶Public Health England, London, United Kingdom; ⁷ASST Santi Paolo e Carlo University Hospital, Milan, Italy; ⁸Centro Nacional de Epidemiología, Instituto de Salud Carlos III, Madrid, Spain; ⁹Istituto Nazionale Malattie Infettive 'L. Spallanzani', Rome, Italy; ¹⁰Robert Koch Institute, Berlin, Germany; ¹¹Medical University Innsbruck, Austria; ¹²Medical School, University of Cyprus, Nicosia; ¹³Hellenic Center for Disease Control and Prevention, Amarousio, Greece; ¹⁴Higshospitalet, Copenhagen University, Denmark; ¹⁵National Institute for Public Health and the Environment, Bilthoven; ¹⁶Stichting HIV Monitoring, Amsterdam, and ¹⁷Academic Medical Center, Amsterdam, The Netherlands; ¹⁸Scientific Institute of Public Health, Brussels, Belgium; ¹⁹Austrian Agency for Health and Food Safety, Vienna; ²⁰Karolinska Institutet and Karolinska University Hospital, Stockholm, Sweden; ²¹National AIDS Unit, Istituto Superiore di Sanità, Rome, Italy; and ²²Medical School, National and Kapodistrian University of Athens, Greece

Background. The Joint United Nations Programme on HIV/AIDS (UNAIDS) has set a "90-90-90" target to curb the human immunodeficiency virus (HIV) epidemic by 2020, but methods used to assess whether countries have reached this target are not standardized, hindering comparisons.

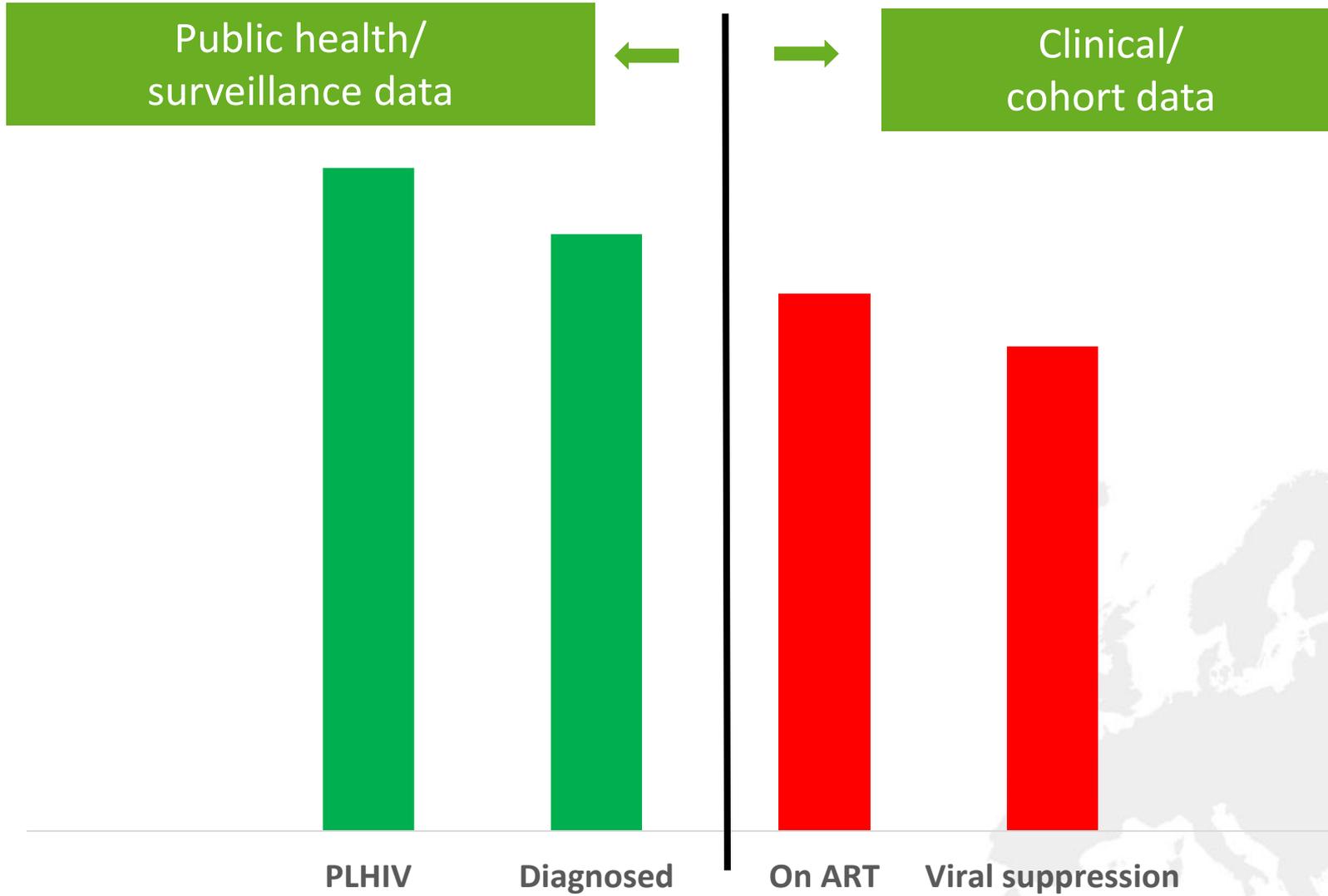
Methods. Through a collaboration formed by the European Centre for Disease Prevention and Control (ECDC) with European HIV cohorts and surveillance agencies, we constructed a standardized, 4-stage continuum of HIV care for 11 European Union countries for 2013. Stages were defined as (1) number of people living with HIV in the country by end of 2013; (2) proportion of stage 1 ever diagnosed; (3) proportion of stage 2 that ever initiated ART; and (4) proportion of stage 3 who became virally suppressed (≤ 200 copies/mL). Case surveillance data were used primarily to derive stages 1 (using back-calculation models) and 2, and cohort data for stages 3 and 4.

Results. In 2013, 674 500 people in the 11 countries were estimated to be living with HIV, ranging from 5500 to 153 400 in each country. Overall HIV prevalence was 0.22% (range, 0.09%–0.36%). Overall proportions of each previous stage were 84% diagnosed, 84% on ART, and 85% virally suppressed (60% of people living with HIV). Two countries achieved $\geq 90\%$ for all stages, and more than half had reached $\geq 90\%$ for at least 1 stage.

Conclusions. European Union countries are nearing the 90-90-90 target. Reducing the proportion undiagnosed remains the greatest barrier to achieving this target, suggesting that further efforts are needed to improve HIV testing rates. Standardizing methods to derive comparable continuums of care remains a challenge.

Keywords. HIV infection; continuum of care; surveillance; cohort analysis; antiretroviral therapy.

Bringing together HIV surveillance and clinical data



Surveillance and cohort leads in participating countries



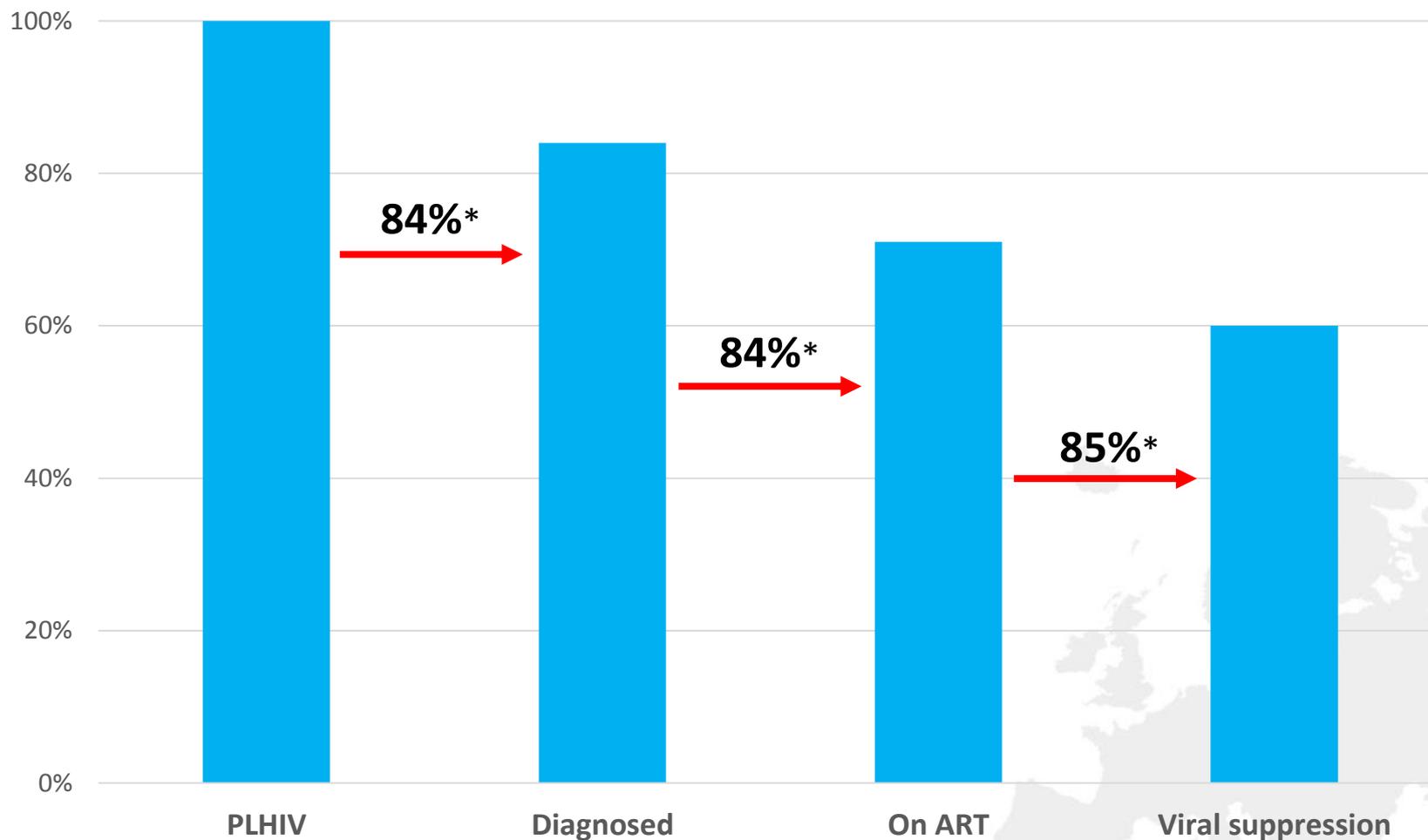
Country	Surveillance leads	Cohort leads
Austria	Daniela Schmid/Alexander Spina	Robert Zangerle
Belgium	Andre Sasse/Dominique Van Beckhoven	Andre Sasse/Dominique Van Beckhoven
Denmark	Susan Cowan	Niels Obel
France	Florence Lot/Francoise Cazein	Dominique Costagliola/Virginie Supervie
Germany	Barbara Günsheimer-Bartmeyer	Barbara Günsheimer-Bartmeyer
Greece	Georgios Nikolopoulos	Giota Touloumi
Italy	Barbara Suligoj	Antonella d' Arminio Monforte/Enrico Girardi
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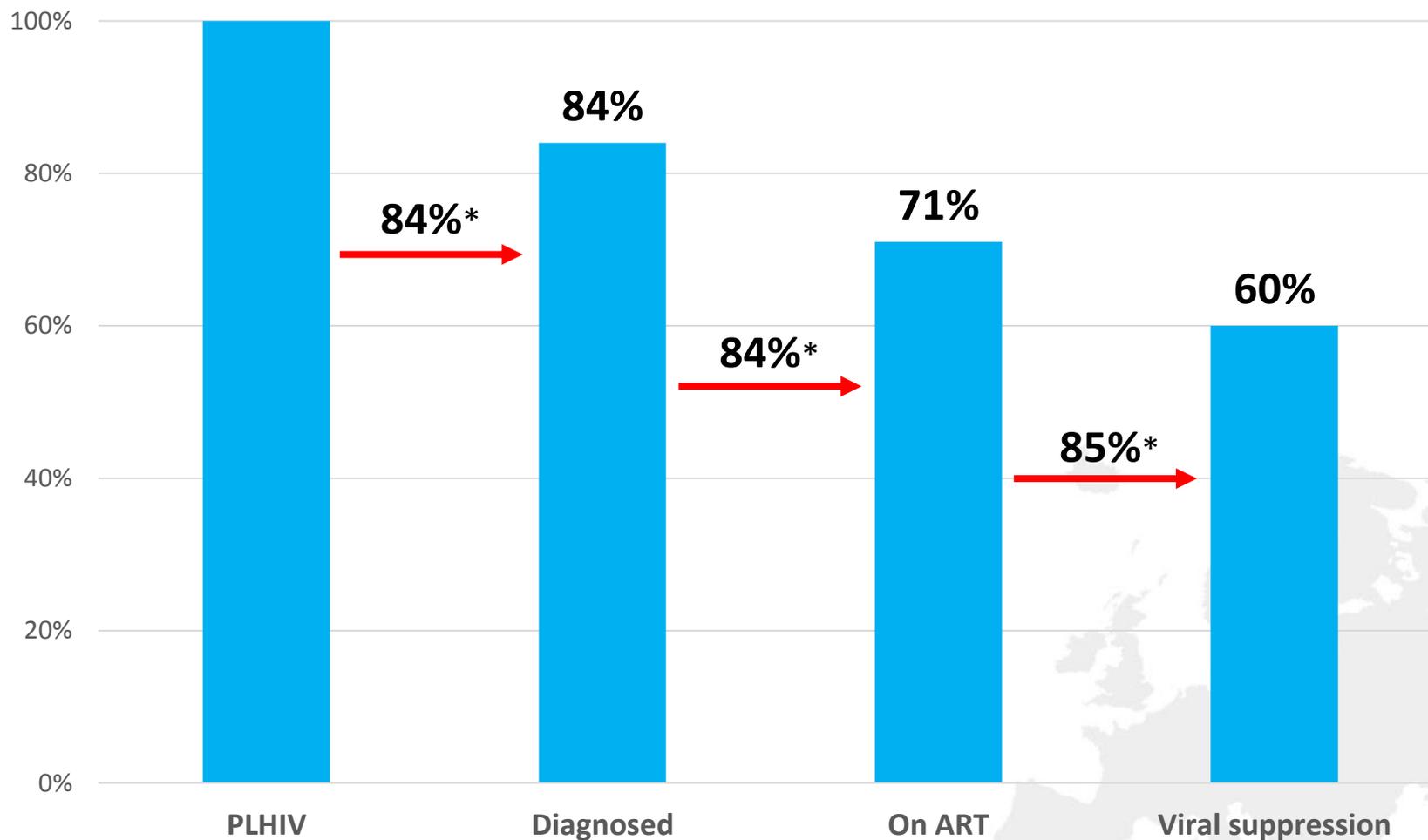
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Austria	Daniela Schmid/Alexander Spina	Robert Zangerle
Belgium	Andre Sasse/Dominique Van Beckhoven	Andre Sasse/Dominique Van Beckhoven
<ul style="list-style-type: none">▪ These 11 countries have a combined population of 378.6 million (74% of the EU population)▪ The estimated number PLHIV in these 11 countries = 670 000 (≈80% of all PLHIV in the EU/EEA)		
Spain	Mercedes Diez/Asuncion Diaz	Julia Del Amo/Vicky Hernando
Sweden	Maria Axelsson	Anders Sönnnerborg
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Estimates for HIV continuum using standardised definitions and surveillance/cohort data, 2013



*Percentages out of the previous step

Estimates for HIV continuum using standardised definitions and surveillance/cohort data, 2013

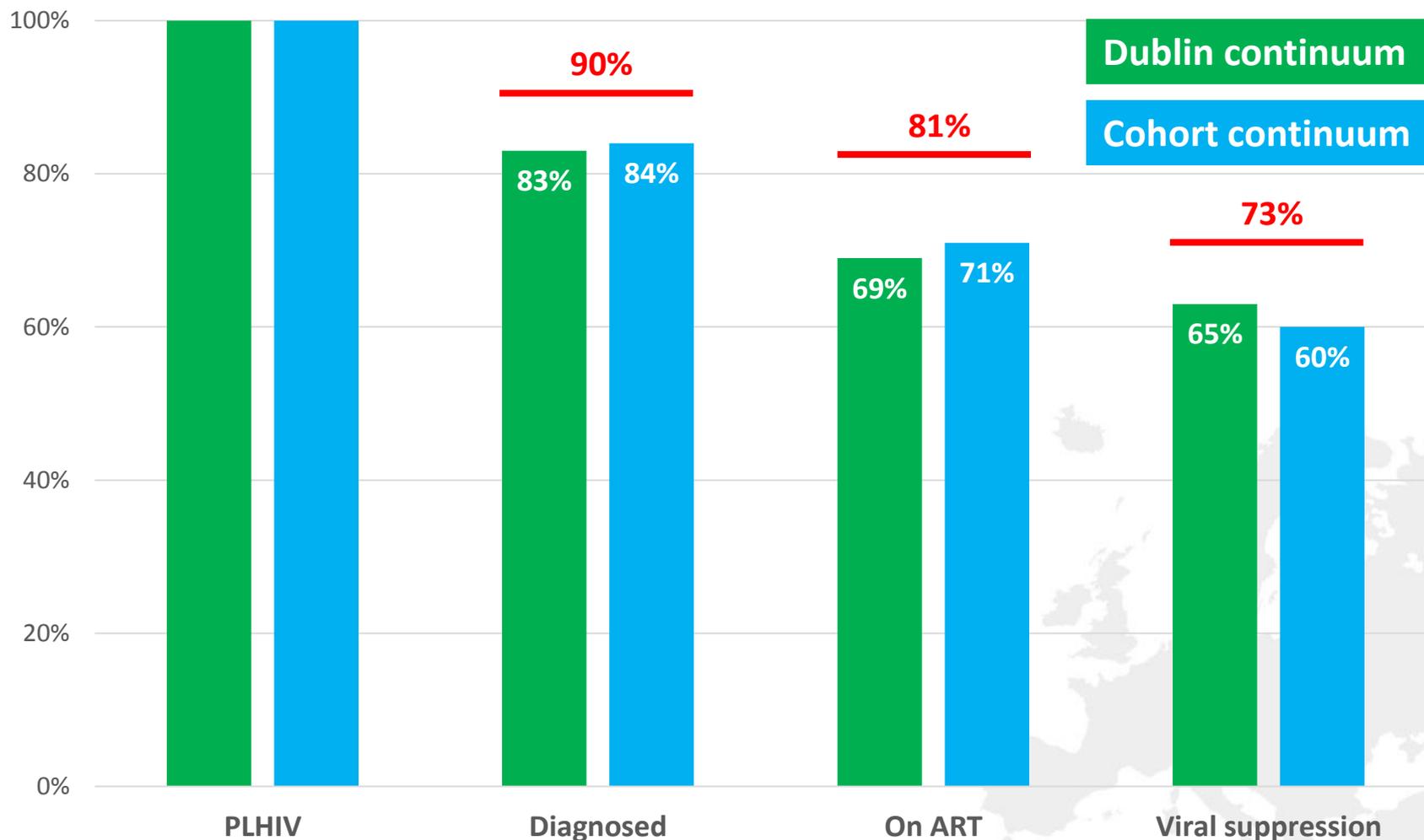


*Percentages out of the previous step

**Percentages out of all PLHIV by end 2013

Continuum of care estimates in the EU/EEA

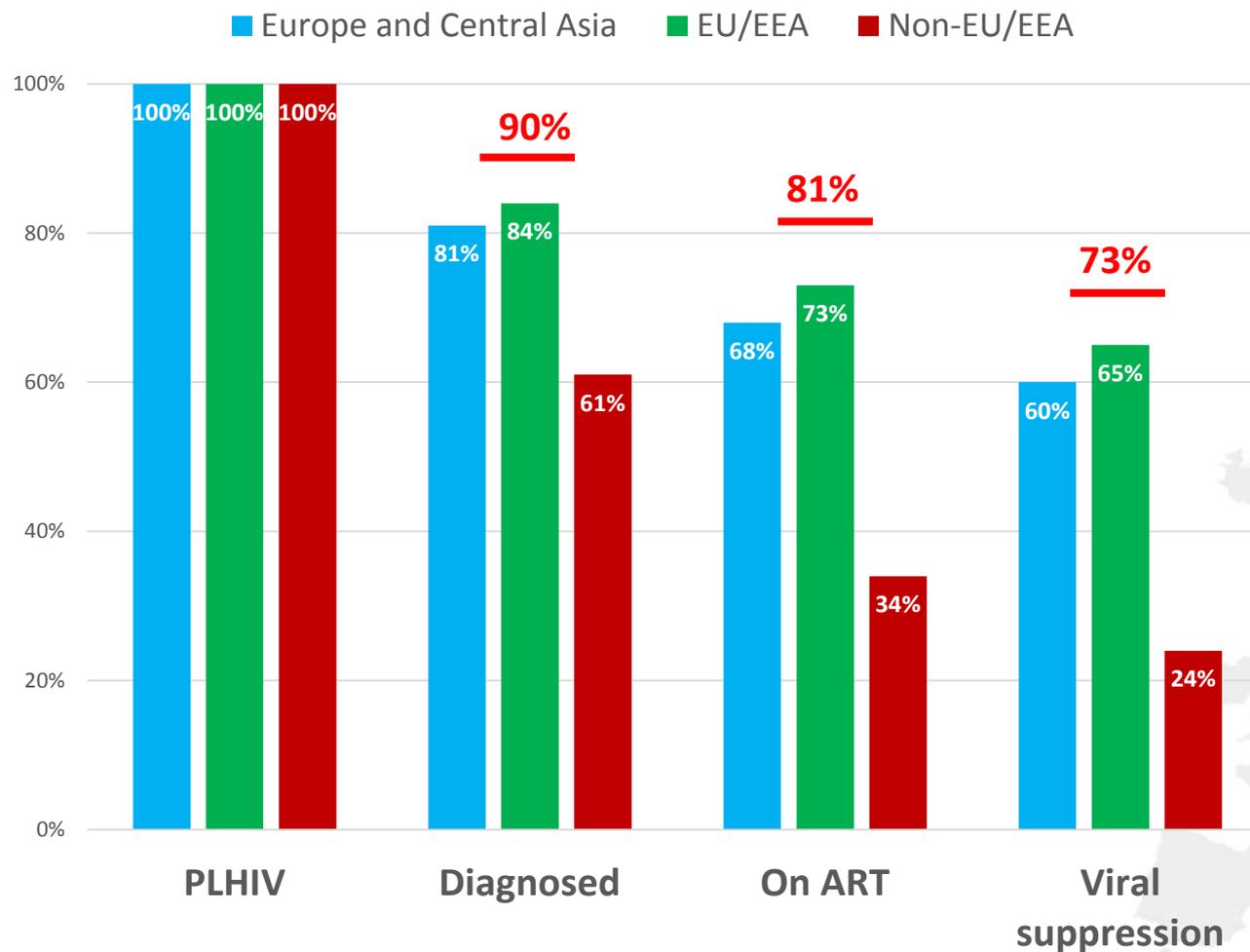
Dublin (n=18) vs clinical cohort (n=11) estimates



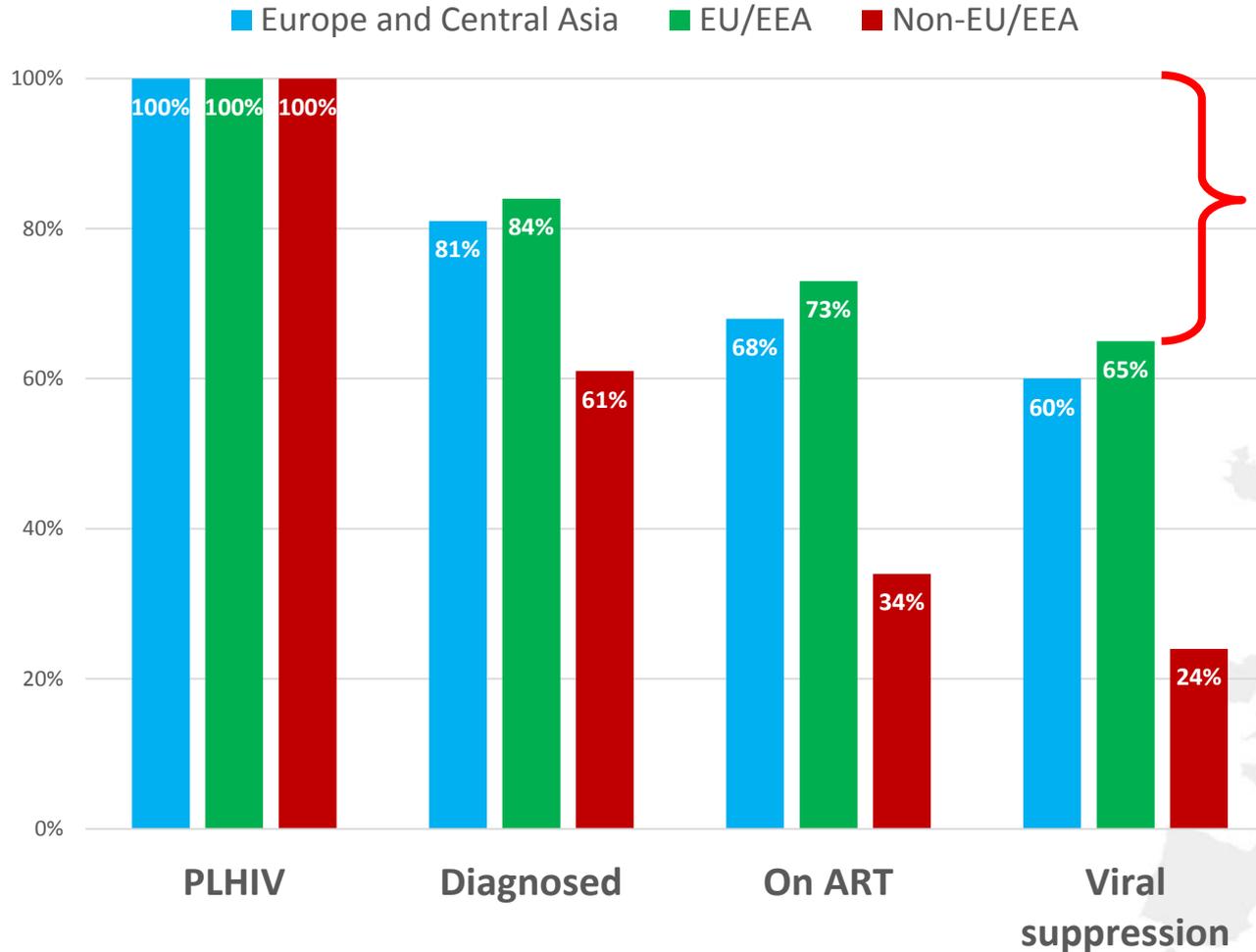
How close are we to reaching the 90-90-90 targets?



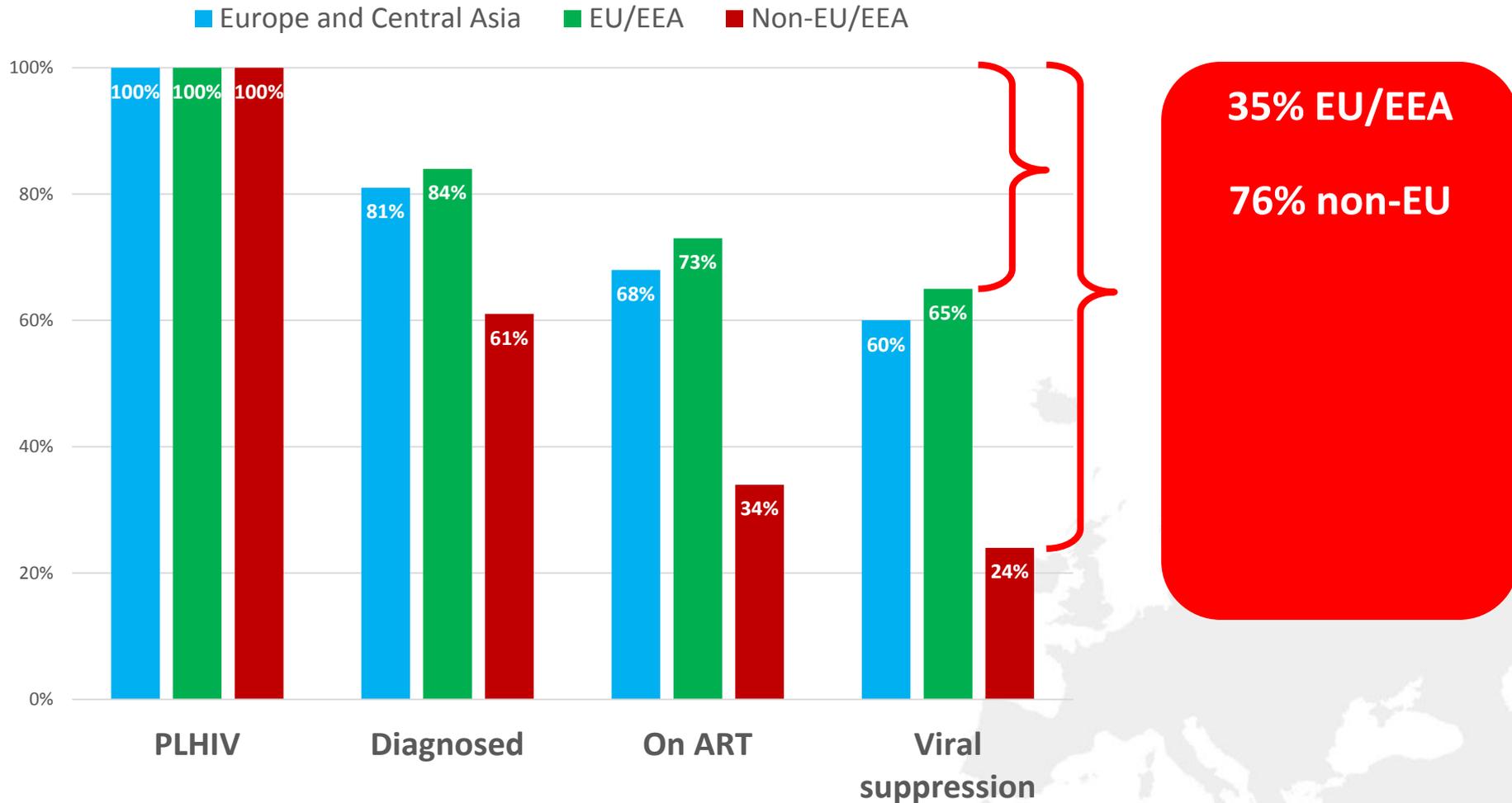
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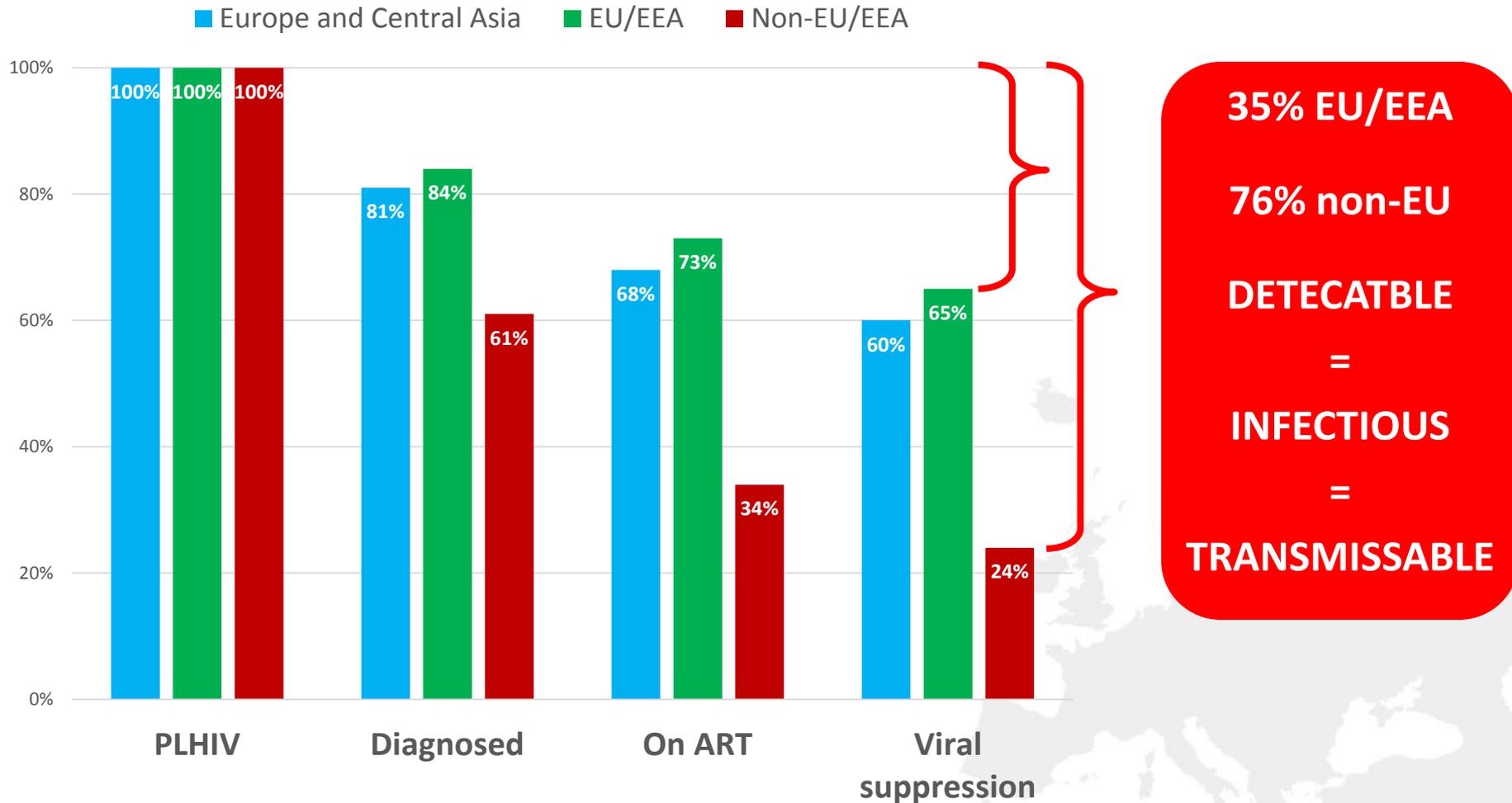
Those not virally suppressed are sustaining HIV transmission in Europe



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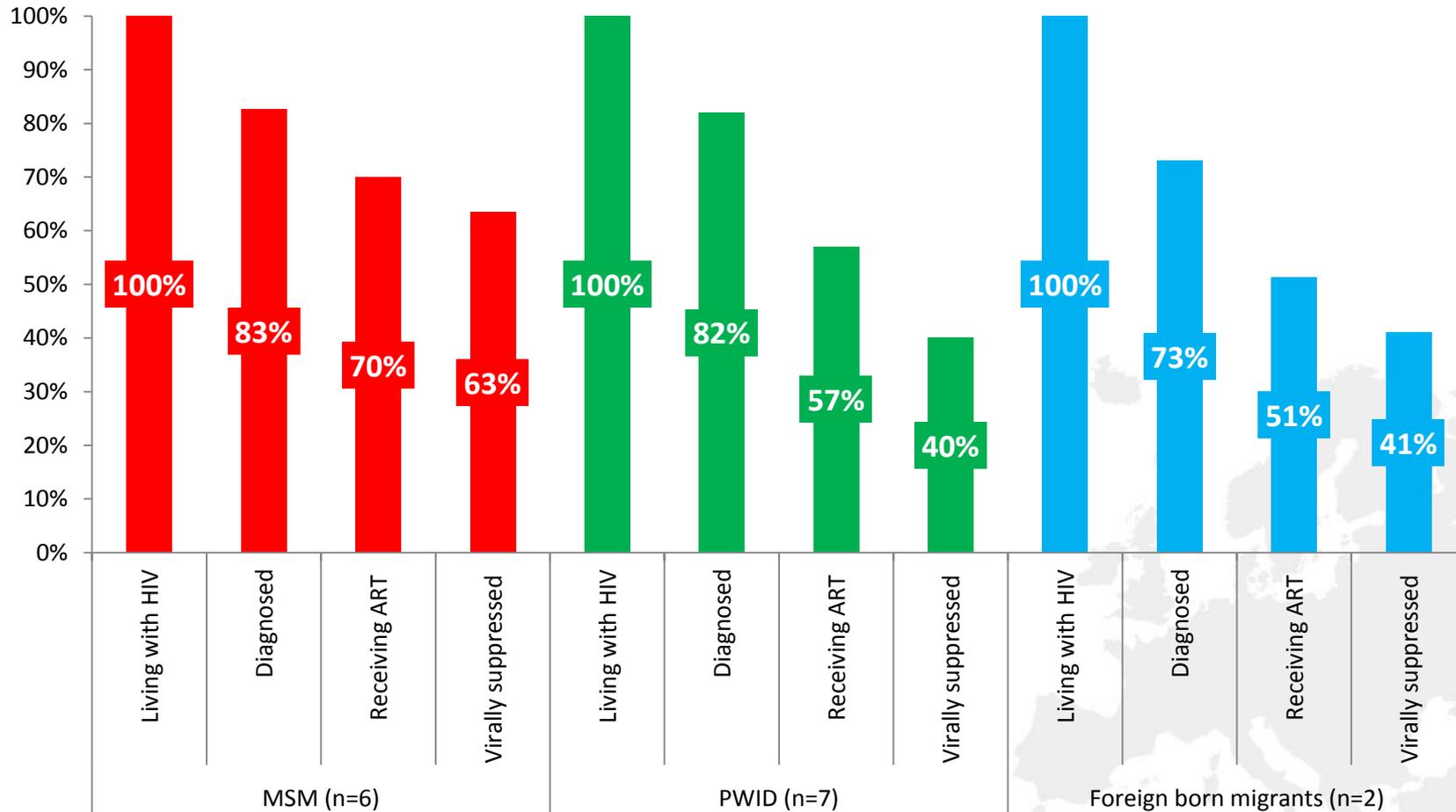
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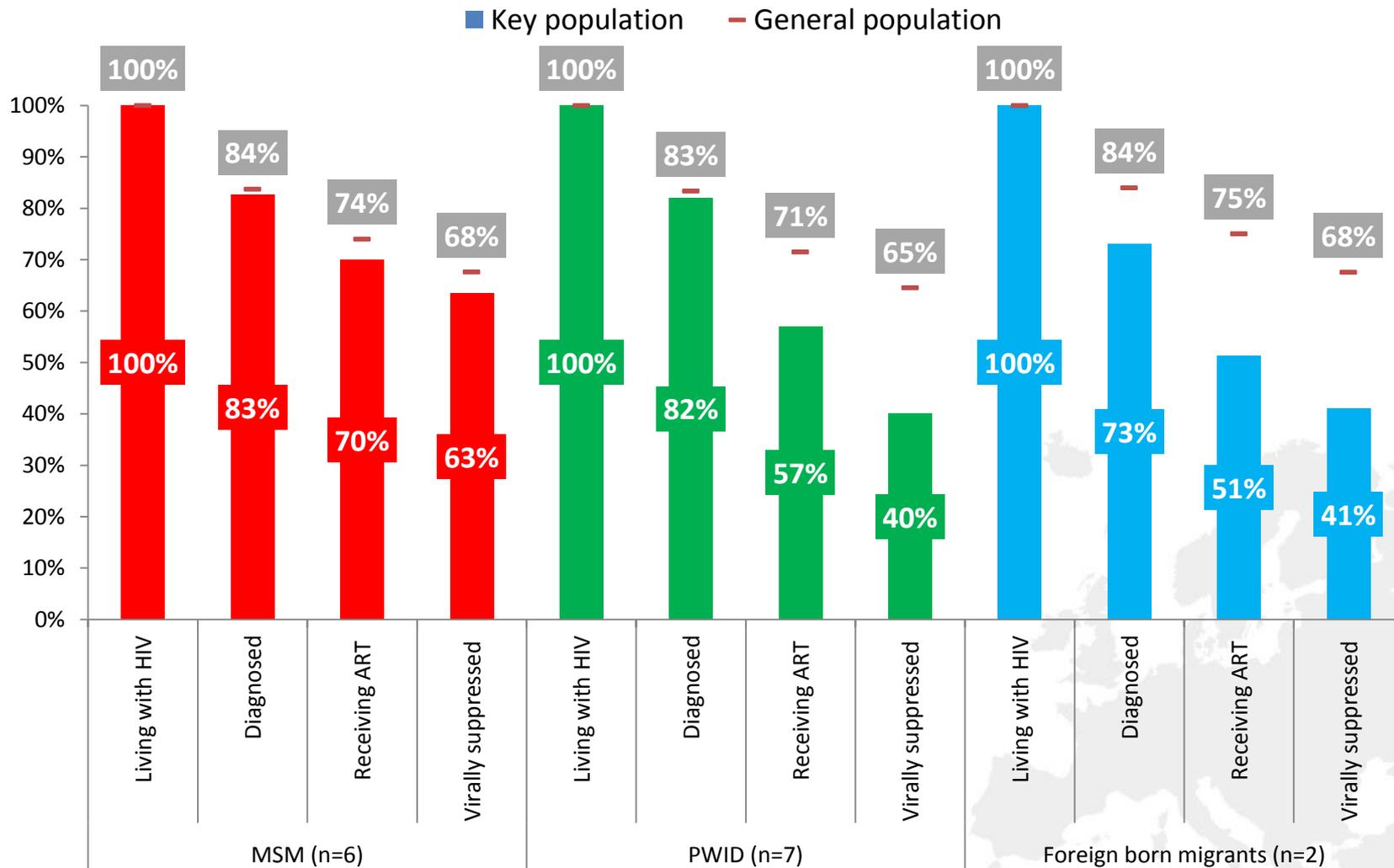
Key population continuums



Comparison of the continuum of care for key populations



Comparison of the continuum of care for key populations against national continua



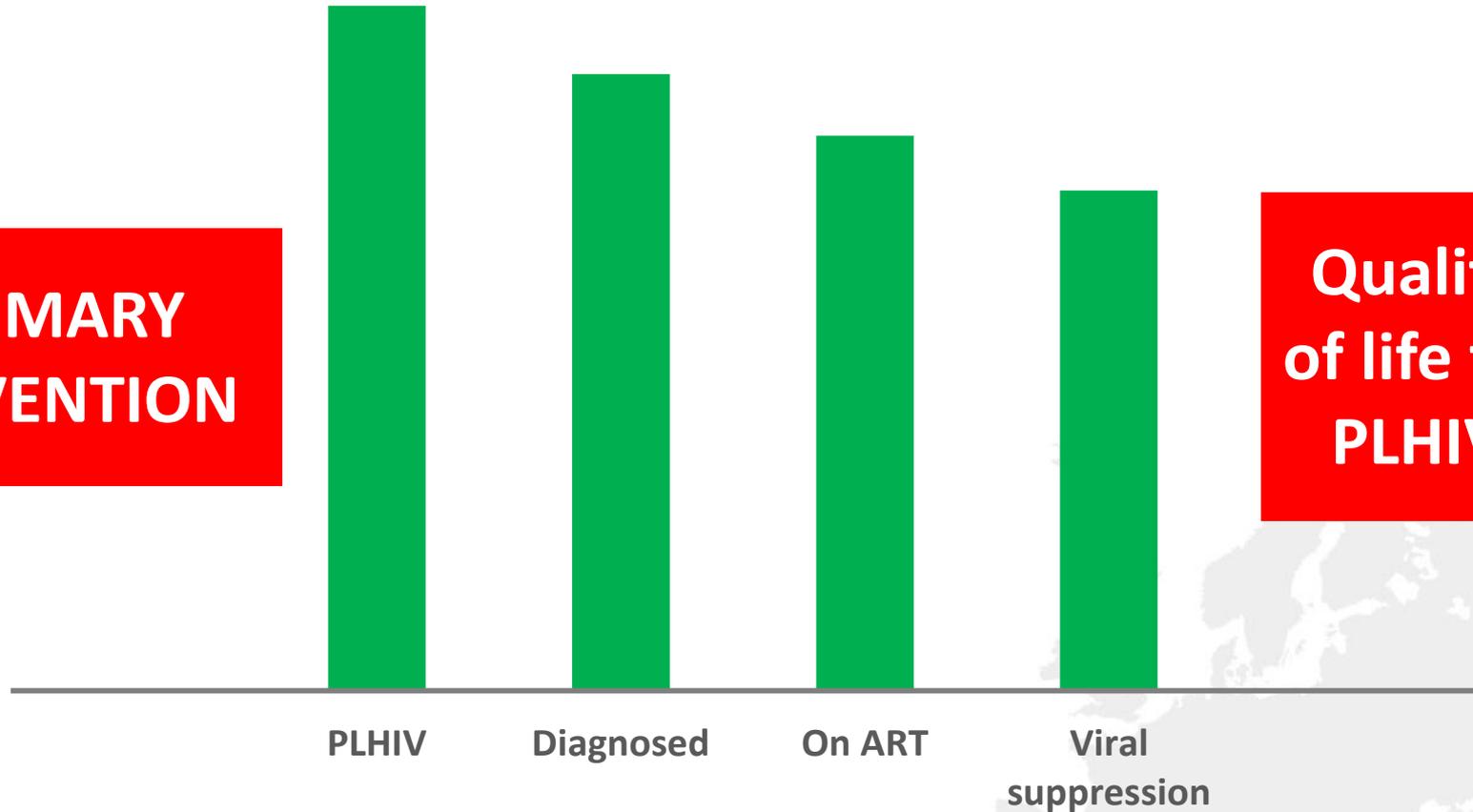
Conclusions

- Availability of continuum of care data has increased
- Main data gaps: PLHIV and viral load suppression
- Europe may appear reasonably close to reaching the stand-alone 90-90-90 targets, **but**



Do not look at the Continuum in isolation!

**PRIMARY
PREVENTION**



**Quality
of life for
PLHIV**

Acknowledgements



Dublin Declaration advisory group

Irene Rueckerl (Austria), Florence Lot, Daniela Rojas Castro, Richard Stranz (France), Gesa Kupfer (Germany), Derval Igoe (Ireland), Lella Cosmaro (Italy), Silke David, Eline Op De Coul (Netherlands), Arild Johan Myrberg (Norway), Olivia Castillo (Spain), Maria Axelsson (Sweden), Valerie Delpech, Alison Brown, Cary James, Brian Rice (United Kingdom), Velina Pendalovska (European Commission), Klaudia Palczak and Dagmar Hedrich (EMCCDDA), Taavi Erkkola, Kim Marsh (UNAIDS) and Annemarie Steengard (WHO Regional Office for Europe).

Dublin Declaration focal points in Europe and Central Asia

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