SPECIAL REPORT

Continuum of HIV care

Monitoring implementation of the Dublin Declaration on Partnership to Fight HIV/AIDS in Europe and Central Asia: 2018 progress report

www.ecdc.europa.eu

ECDC SPECIAL REPORT

Continuum of HIV care

Monitoring implementation of the Dublin Declaration on partnership to fight HIV/AIDS in Europe and Central Asia: 2018 progress report

This report of the European Centre for Disease Prevention and Control (ECDC) was coordinated by Teymur Noori and reviewed by Anastasia Pharris and Andrew Amato.

This report is one in a series of thematic reports based on information submitted by reporting countries in 2018 on monitoring implementation of the Dublin Declaration on Partnership to Fight HIV/AIDS. Other reports in the series can be found on ECDC's website at: https://ecdc.europa.eu/en/infectious-diseases-public-health/hiv-infection-and-aids/prevention-and-control/monitoring-0.

Draft versions of the thematic reports were produced under contract ECDC/2017/007 by Rosalie Hayes, Alison Brown, Yusef Azad, and Valerie Delpech.

Acknowledgements
ECDC would like to acknowledge the support and guidance provided by members of the Dublin Declaration advisory group. Members of the advisory group include Kristi Ruutel (Estonia), Daniela Rojas Castro (France), Gesa Kupfer (Germany), Caroline Hurley (Ireland), Silke David (Netherlands), Arild Johan Myrberg (Norway), Isabel Aldir, Daniel Simões (Portugal), Sladjana Baros (Serbia), Irena Klavs (Slovenia), Gabrella Hok, Monica Idestrom, Lillian Van Leest (Sweden), Valerie Delpech, Alison Brown, Cary James (United Kingdom), Olga Varetska (Ukraine), Jean-Luc Sion (European Commission), Dagmar Hedrich (EMCDDA), Taavi Erkkola, Kim Marsh (UNAIDS), Annemarie Stengaard (WHO Regional Office for Europe), Alex Garner (Hornet), Jordi Casabona (INTEGRATE) and Axel J. Schmidt (ESTICOM).

ECDC would also like to thank the following country focal points for providing data through the Dublin Declaration questionnaire in March 2018: Roland Bani (Albania), Jennifer Fernández Garcia (Andorra), Samvel Grigoryan, Arshak Papoyan, Trdat Grigoryan (Armenia), Irene Kaszoni-Rueckerl, Bernhard Benka (Austria), Esmira Almammadova (Azerbaijan), Inna Karaban, Anna Rusanovich, Svetlana Sergeenko (Belarus), Daniel Reynders, Andre Sasse, Dominique Van Beckhoven (Belgium), Tonka Varleva, Mariya Zamfirova (Bulgaria), Josip Begovac, Tatjana Nemeth-Blazic, Zoran Dominkovic (Croatia), Linos Hadjihannas, Anna Demetriou (Cyprus), Veronika Mičulková, Marek Malý (Czech Republic), Jan Fouchard, Susan Cowan (Denmark), Kristi Rüütel, Tiina Drell (Estonia), Henrikki Brummer-Korvenkontio, Kirsi Liitsola (Finland), Jean-Christophe Comboroure. Florence Lot (France), Ketevan Stvilia, Nikoloz Chkhartishvili (Georgia), Gesa Kupfer, Ulrich Marcus, (Germany), Vasilios Raftopoulos, Sotirios Tsiodras, Dimitra Parasekva (Greece), Katalin Szalay, Maria Dudas (Hungary), Guðrún Sigmundsdóttir (Iceland), Caroline Hurley, Derval Igoe, Kate O'Donnell (Ireland), Daniel Chemtob, Yana Levin (Israel), Anna Caraglia, Francesco Maraglino, Barbara Suligoi, Lella Cosmaro (Italy), Bayserkin Baurzhan Satzhanovich, Irina Ivanova Petrenko (Kazakhstan), Laura Shehu, Pashk Buzhala (Kosovo[1]), Ulan Kadyrbekov, Aybek Bekbolotov (Kyrgyzstan), Šarlote Konova, Liva Gramatina (Latvia), Irma Caplinskiene (Lithuania), Andrea Leibold, Marina Jamnicki Abegg (Liechtenstein), Patrick Hoffmann, Carole Devaux, Pierre Weicherding (Luxembourg), Jackie Maistre Melillo, Tanya Melillo (Malta), Iurie Climasevschi, Igor Condrat (Moldova), Dominique De Furst (Monaco), Aleksandra Marjanovic, Alma Cicic (Montenegro), Silke David, Ashna Nakched, Eline Op De Coul, Ard van Sighem (Netherlands), Arild Johan Myrberg, Karl Kristian Bekeng (Norway), Iwona Wawer, Piotr Wysocki (Poland), Isabel Aldir, Teresa Melo, Helena Cortes Martins (Portugal), Mariana Mardarescu, Adrian Streinu-Cercel (Romania), Danijela Simic, Sladjana Baros (Serbia), Jan Mikas, Peter Truska (Slovakia), Irena Klavs (Slovenia), Olivia Castillo, Begoña Rodríguez Ortiz de Salazar, Asuncion Diaz (Spain), Maria Axelsson, Gabriella Hok (Sweden), Stefan Enggist, Axel J. Schmidt (Switzerland), Sayfuddin Karimov, Dilshod Sayburhonov (Tajikistan), Emel Özdemir Şahin, Ayla Aydin (Turkey), Valerie Delpech, Peter Kirwan, Alison Brown, Sara Croxford (United Kingdom), Ihor Kuzin, Violeta Martsynovska, Olga Varetska (Ukraine), Gulufar Normuratova, Nurmat Atabekov (Uzbekistan)

ECDC would like to thank the operational contact points for HIV surveillance from EU/EEA Member States and the national HIV/AIDS surveillance focal points from other countries of the WHO European Region for making available HIV/AIDS surveillance data.

ECDC would like to thank EMCDDA and UNAIDS for harmonising their monitoring systems with ECDC and making available country-reported data for the purposes of monitoring the Dublin Declaration. ECDC would also like to thank the WHO Regional Office for Europe for jointly coordinating HIV surveillance in the WHO European Region.

Suggested citation: European Centre for Disease Prevention and Control. Continuum of HIV care. Monitoring implementation of the Dublin Declaration on partnership to fight HIV/AIDS in Europe and Central Asia: 2018 progress report. Stockholm: ECDC; 2018

Stockholm, February 2019

ISBN 978-92-9498-304-6
doi: 10.2900/89066
Catalogue number TQ-04-19-123-EN-N

[1] This designation is without prejudice to positions on status, and is in line with UNSC 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.

Contents

Figures

Tables

Abbreviations

AIDS	Acquired immunodeficiency syndrome
ART	Antiretroviral therapy
CoC	Continuum of Care
ECDC	European Centre for Disease Prevention and Control
EEA	European Economic Area
EU	European Union
HIV	Human immunodeficiency virus
MSM	Men who have sex with men
PLHIV	People living with HIV
PrEP	Pre-exposure prophylaxis
PWID	People who inject drugs
TESSy	The European Surveillance System
UNAIDS	Joint United Nations Programme on HIV/AIDS
WHO	World Health Organization

Introduction

The continuum of HIV care has become one of the central metrics through which the public health response to HIV is evaluated at the local, national and international level[2]. In 2014, the Joint United Nations Programme on HIV/AIDS (UNAIDS) established the 90-90-90 targets, the aim being that by 2020; 90% of all people living with HIV are diagnosed, 90% of those diagnosed receive treatment and 90% of those receiving treatment achieve viral suppression[3] (Figure 1a). This translates to a target of 73% viral suppression among all people living with HIV (PLHIV). UNAIDS' modelling suggests that achieving these targets by 2020 will enable the world to meet the Sustainable Development Goal of eliminating the AIDS epidemic by 2030.

The continuum of HIV care is a conceptual framework that provides a snapshot of critical stages in achieving viral suppression among PLHIV. Achieving a high rate of viral suppression among PLHIV ensures a normal life expectancy, a better quality of life and prevention of onward transmission of HIV. The framework also enables countries to monitor the effectiveness of specific areas of their HIV response. The sequential nature of the stages in the continuum indicates where countries can focus their efforts and which programmes and activities require improvement.

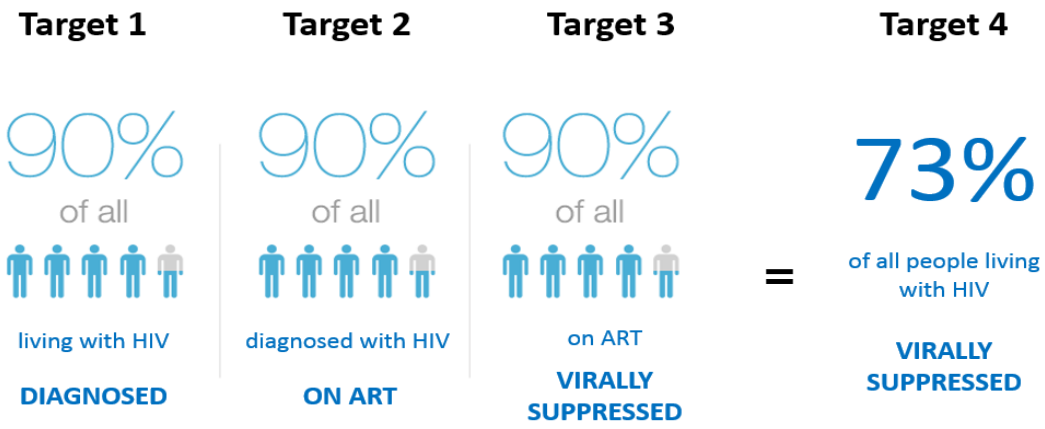
This report focuses on data findings on the continuum of HIV care submitted by countries in Europe and Central Asia for the 2018 round of reporting on implementation of the Dublin Declaration on Partnership to Fight HIV & AIDS in Europe and Central Asia. In this report, the continuum of care is expressed in two ways (Box 1). The 'global substantive targets' are defined as the percentages of each stage of the continuum in relation to all PLHIV, making 90-81-73 the target. The global 90-90-90 targets are assessed as percentages of the previous stage of the continuum.

Box 1 – Continuum definition

Global 90-90-90 target: each stage of the continuum is presented as a percentage of the previous stage of the continuum – target 90%-90%-90%

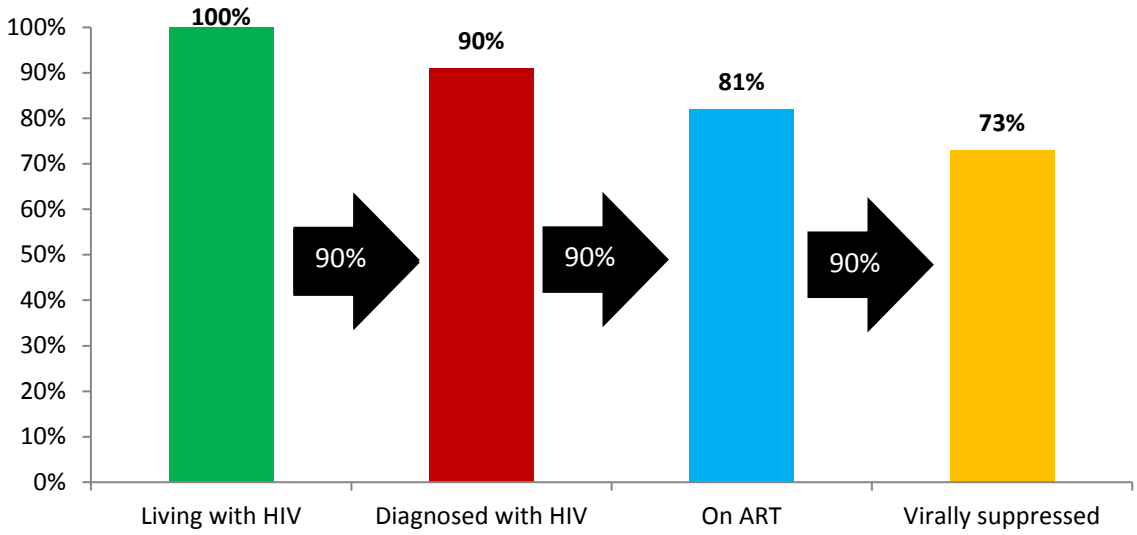
Global substantive target: each stage of the continuum is presented as a percentage of the total number of people living with HIV – target 90%:81%:73%

Figure 1a. Pictorial demonstration of the UNAIDS 90-90-90 targets



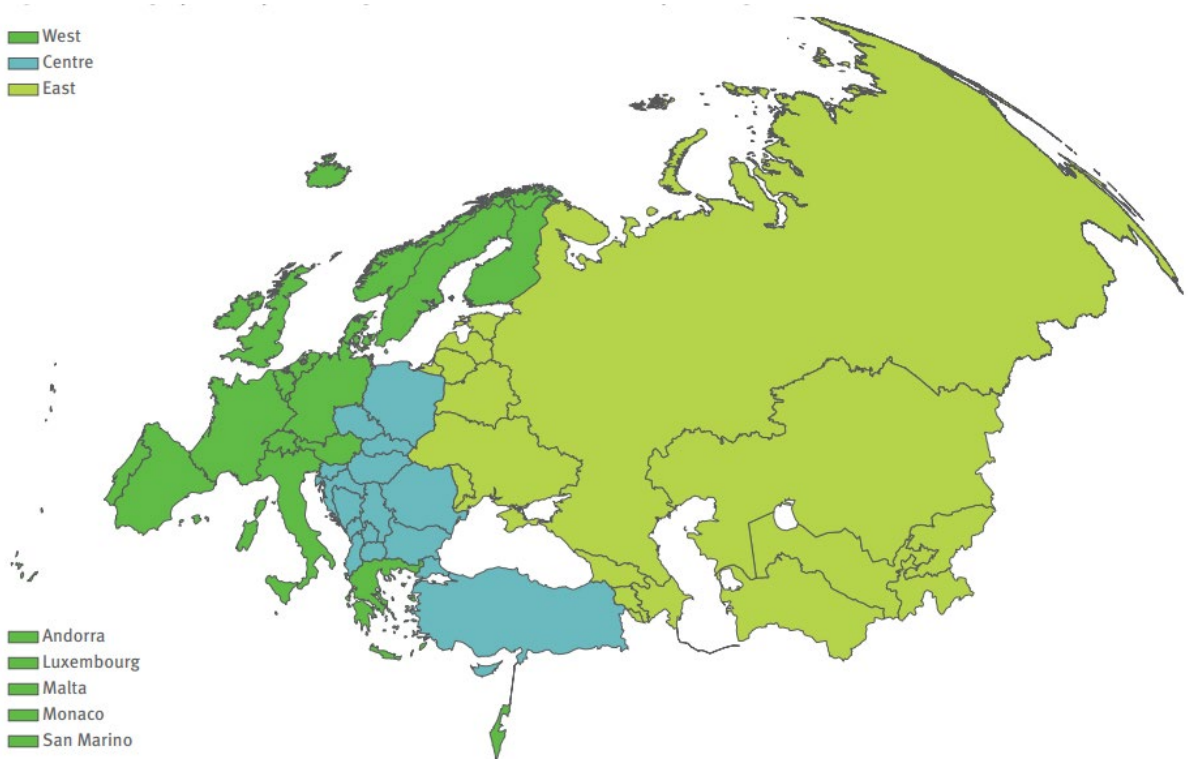
[2] Granich R, Gupta S, Hall I, Aberle-Grasse J, Hader S, Mermin J. Status and methodology of publicly available national HIV care continua and 90-90-90 targets: a systematic review. PLoS Med 2017; 14 (4): e1002253.
[3] UNAIDS. 90-90-90 An ambitious target to help end the AIDS epidemic. Geneva: UNAIDS; 2014.

Figure 1b. Continuum of HIV care as envisaged by the 90-90-90 UNAIDS targets by 2020



As well as considering the picture for the overall European and Central Asian region, data are presented by WHO sub-region (West, Centre, and East) which broadly groups areas of Europe and Central Asia by geography and epidemic type, as depicted in Figure 1c.

Figure 1c. Geographical/epidemiological division of the WHO European Region



The countries covered by the report are grouped as follows:

West, 24 countries: Andorra, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Luxembourg, Liechtenstein, Malta, Monaco, the Netherlands, Norway, Portugal, San Marino, Spain, Sweden, Switzerland, the United Kingdom.

Centre, 16 countries: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, the Czech Republic, Hungary, Kosovo, the former Yugoslav Republic of Macedonia, Montenegro, Poland, Romania, Serbia, Slovakia, Slovenia, Turkey.

East, 15 countries: Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan.

Key findings

- In 2018, 52 of the 55 countries in Europe and Central Asia completed the Dublin Declaration survey, and 34 provided data on all four stages of the continuum (compared to 29 countries in 2016). A total of 42 countries were able to provide data for at least two stages of the continuum of HIV care (compared to 41 in 2016). There were also improvements in the number of countries able to provide data for key populations; in 2018, nine countries reported all four stages for MSM, seven countries for people who inject drugs (PWIDs) and five countries for migrants. This compares to six, seven and two for 2016, respectively. The increasing availability of continuum data is important, as it means that more countries can assess the effectiveness of their HIV response, monitor progress towards the global 90-90-90 targets and identify areas that require greater attention, particularly the significant health inequalities faced by certain key population groups.
- In 2018, using data from countries able to provide at least two consecutive stages of the continuum, the overall performance of the European and Central Asian region against the global 90-90-90 targets is 80% of all PLHIV with HIV diagnosed, 64% of those diagnosed with HIV on treatment and 86% of those on treatment virally suppressed. More progress is needed to meet the substantive target of 73% of all PLHIV being virally suppressed, with performance for the overall region at 43% (based on the countries that submitted data for all four stages of the continuum).
- Substantial variation exists for each element of the continuum both between and within European and Central Asian sub-regions. Overall, the West sub-region has met two out of three of the global 90-90-90 targets, with 87% of all PLHIV diagnosed, 91% of people living with diagnosed HIV on treatment, and 93% of those on treatment virally suppressed. The Centre sub-region is performing overall at 83%, 73% and 75% and the East sub-region is performing overall at 76%, 46%, and 78% respectively.
- The West sub-region, performing at 74% overall, has also met the global substantive target of having 73% of all PLHIV virally suppressed, while the Centre and East sub-regions still have a great deal of overall progress to make, at 46% and 26% respectively.
- Based on information from the 25 countries that reported all four stages of the continuum in both 2016 and 2018, there was significant progress towards meeting the global substantive targets. Overall, for these countries, in 2018, 85% of all PLHIV were diagnosed, 75% of all PLHIV were on treatment and 67% of all PLHIV were virally suppressed. This compares to 82%, 70% and 62% respectively in 2016.
- Each sub-region also showed improvements in the outcomes in the continuum of care in 2018 compared to 2016. The only exception to this is the decline in the diagnosed fraction in the Centre sub-region by one percent – which could be attributed to the significant upward revisions of the estimates for the undiagnosed populations in Montenegro and Romania.
- Factors associated with improvements in the continuum of care include the implementation of treatment guidelines, access to treatment for undocumented migrants and implementation of services supporting adherence by addressing poor mental health, alcohol and substance abuse, immigration and housing concerns, etc.
- The number of people with transmissible levels of virus can be calculated by adding the number of PLHIV who are estimated to be undiagnosed, diagnosed but untreated and treated but not virally suppressed. Using data from the countries that provided all four stages of the continuum, this is estimated to be 1.2 million PLHIV in those reporting countries, or equivalent to 57% of all PLHIV. Over two-thirds of these people are estimated to be living in Russia.
- Of the people living with transmissible levels of virus in 2018, 36% were estimated to be undiagnosed, 51% were estimated to be untreated and 13% were estimated to be on treatment but have an unsuppressed viral load. This indicates that the greatest impact in reducing the number of people with transmissible levels of virus could be achieved through rapid and sustained scale-up of treatment, along with further efforts to increase HIV testing.

2018 at a glance[4]

Region or sub-region	Status	2020 target	2018 result	Global target met?
European and Central Asian Region	Diagnosed (n=40)	90%	80%	
	On antiretroviral therapy (ART) (n=41)	90%	64%	
	Virally suppressed (n=35)	90%	86%	
	Viral suppression of all PLHIV (n=34)	73%	43%	
West sub-region	Diagnosed (n=19)	90%	87%	
	On ART (n=19)	90%	91%	
	Virally suppressed (n=16)	90%	93%	
	Viral suppression of all PLHIV (n=16)	73%	74%	
Centre sub-region	Diagnosed (n=10)	90%	83%	
	On ART (n=10)	90%	73%	
	Virally suppressed (n=8)	90%	75%	
	Viral suppression of all PLHIV (n=8)	73%	46%	
East sub-region	Diagnosed (n=11)	90%	76%	
	On ART (n=12)	90%	46%	
	Virally suppressed (n=11)	90%	78%	
	Viral suppression of all PLHIV (n=10)	73%	26%	

- Met or exceeded target
- Within 10% of meeting target
- Target not met

[4] For each stage of the continuum, countries are included where they were able to provide two consecutive stages in order to calculate a percentage to measure against the 90% target ('n' indicates the number of countries that were included in the calculation for each stage.)

Methods

Between January and March 2018, a European Centre for Disease Prevention and Control (ECDC) survey was used to collect data to monitor implementation of the 2004 Dublin Declaration.[5] The monitoring questionnaire was disseminated to the 55 countries that are part of the WHO European Region via an online survey. Countries were asked to report available data for their entire population of PLHIV, as well as key populations including men who have sex with men (MSM), people who inject drugs (PWIDs), migrants (defined as persons born abroad) and other groups that countries could identify as important in their setting.

The survey asked countries to provide their latest estimates of the number and proportion of people at each stage of a four-stage continuum, as per the published European standard for monitoring the continuum of care.[6] The definitions for each of the four stages are provided in Table 1.[7]

Table 1. Consensus definitions for monitoring the continuum of HIV care during Dublin Declaration monitoring 2018

Stage 1: Total estimated number of people living with HIV in the country The total estimated number should be based on an empirical modelling approach, using the ECDC HIV Modelling Tool[8], Spectrum or any other empirical estimate. The estimate should include diagnosed and undiagnosed people.
Stage 2: Number/percentage of above (estimated number of people living with HIV in the country) ever having been diagnosed The number should include all new HIV or AIDS diagnoses. It should also include those people who are in care and those who have not been linked to care.
Stage 3: Number/percentage of above (estimated number of people living with HIV in the country, ever having been diagnosed) who are currently on antiretroviral treatment The number should include all people currently on ART, regardless of treatment regimen or treatment interruptions/discontinuation.
Stage 4: Number/percentage of above (estimated number of people living with HIV in the country, ever having been diagnosed or having initiated antiretroviral treatment) who had VL ≤200 copies/ml at last visit (virally suppressed)[9] The number should include all those who have ever initiated ART, regardless of regimen or treatment interruptions/discontinuation.

Absolute numerical values were collected and countries were also asked to specify the year to which the estimates related, the methods and data sources and the uncertainty bounds for each stage of the continuum. Countries were also asked to state the level of confidence they had in the accuracy of the data or estimate (high, medium or low), noting whether each stage accounted for deaths and out-migration.

In the 2018 reporting year, ECDC further harmonised data collection with UNAIDS to ensure compatibility and reduce burden on health authorities. ECDC was responsible for collecting a core set of Global AIDS Monitoring (GAM) indicators through Dublin monitoring for EU/EEA Member States, meaning there was no separate GAM reporting for EU/EEA Member States. Non-EU/EEA Member States continued to complete GAM through UNAIDS and were therefore asked to complete a shortened ECDC Dublin Declaration questionnaire, with any GAM questions removed. The data collected through these processes were then combined and included in the analysis for this report. This approach has been successful in both increasing the number of countries reporting data and reducing the reporting burden on countries.

[5] Both the EU and non-EU versions (including Russian translation) can be accessed on ECDC's website at https://ecdc.europa.eu/en/infectious-diseases-public-health/hiv-infection-and-aids/prevention-and-control/monitoring-0
[6] Gourlay et al 2017, https://oce.ovid.com/article/00002030-201709240-00002/HTML
[7] Countries were asked to report data using these definitions; however, in practice some countries may use slightly different definitions, so caution is required when drawing comparisons between countries.
[8] ECDC Modelling Tool. http://ecdc.europa.eu/en/healthtopics/aids/Pages/hiv-modelling-tool.aspx
[9] A viral load threshold for viral suppression of <200 copies/mL was used to allow for changes over time in the lower detection limits of viral load assays. A threshold of 200 copies/mL for population-level monitoring is consistent with recommendations in a recent systematic review of guidelines produced by IAPAC - www.iapac.org/uploads/JIAPAC-IAPAC-Guidelines-for-Optimizing-the-HIV-Care-Continuum-Supplement-Nov-Dec-2015.pdf and the US Centers for Disease Control and Prevention - www.cdc.gov/hiv/pdf/library/factsheets/cdc-hiv-care-continuum.pdf

Countries were asked to complete the Dublin Declaration survey between mid-February and the end of March 2018. In May 2018, the values reported by each country were returned for validation. Subsequent notifications of corrections were used to update the information reported. Validation of data collected through the GAM process was conducted by UNAIDS.

We analysed the number of countries that reported: (a) all four stages, (b) no stages, and (c) at least two consecutive stages of the continuum of care nationally and by key population (MSM, PWIDs and migrants only). Data are presented by WHO sub-region (West, Centre, and East) which broadly groups areas of Europe and Central Asia by geography and epidemic type[10].

Four main analyses were conducted: analysis against the global 90-90-90 targets; analysis of progress between 2016 and 2018 against the global substantive targets; factors associated with outcomes during the continuum of care process; and assessment of the total number of people living with transmissible levels of virus.

In analyses where data from multiple countries were combined, each element of the continuum was summed across countries and analyses were undertaken using the summed totals.

Analyses of performance against the global 90:90:90 targets included data only where at least two consecutive elements of the continuum were provided, as each measure is a percentage of the previous stage of the continuum.

Analyses of performance against the global substantive targets (Figure 1b) between 2016 and 2018 only included data where all four stages of the continuum were available for both 2016 and 2018, because each measure is a proportion of the first stage (estimated number of all PLHIV) and to allow for better comparability over time.

For comparisons between key populations and all PLHIV within countries, analyses were restricted to those countries where relevant data were available.

Factors associated with outcomes during the continuum were assessed by summarising the antiretroviral therapy (ART) treatment policy of countries together with treatment availability for undocumented migrants and comparing these with the proportion of patients treated at country level.

Finally, to calculate the number of people living with transmissible virus, it was assumed that people remaining undiagnosed and those not receiving treatment would have transmissible virus levels. Numbers in these categories were added to the number of people treated but known not to be virally suppressed to provide an estimated total number of people living with transmissible virus for each country. This measure was calculated only for countries that reported all four stages of the continuum of care.

[10] West: Andorra, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Luxembourg, Liechtenstein, Malta, Monaco, the Netherlands, Norway, Portugal, San Marino, Spain, Sweden, Switzerland, the United Kingdom
Centre: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, the Czech Republic, Hungary, Kosovo, the former Yugoslav Republic of Macedonia, Montenegro, Poland, Romania, Serbia, Slovakia, Slovenia, Turkey.
East: Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan

Results

Data availability

In 2018, responses (full and partial) were submitted from 52 of the 55 countries in the WHO European Region, with additional data supplemented from the UNAIDS' GAM survey. Overall, 43 countries provided data for at least one stage of the continuum and 42 countries provided at least two consecutive stages of the national continuum of care (this compares to 44 and 41 in 2016 respectively). A total of 34 (62%) countries provided data for all four stages of the continuum in 2018 (Table 2), compared to 29 (53%) countries in 2016.

There was also an increase in the proportion of countries reporting data for each individual stage, particularly for stages 1 and 4 (Figure 2). The number of countries providing 'no data' has stayed the same since 2016.

In 2018, eight countries did not report any element of the continuum of care: Cyprus, Hungary, Turkey, Poland, Latvia, Iceland, Liechtenstein and Norway.[11]

Annex 1 provides a full overview of which countries were able to provide data for each stage.

Figure 2. Number of countries reporting data for different stages of the HIV continuum of care, Europe and Central Asia in 2016 and 2018

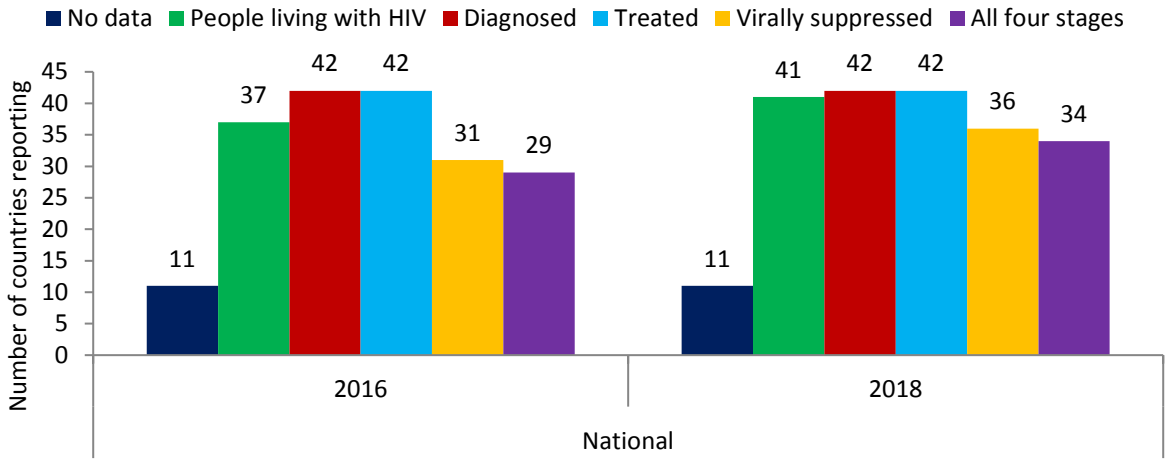


Table 2. Number of countries reporting data on all four stages of the continuum of care in 2016 and 2018

34 2018	**16 West** Austria, Belgium, Denmark, France, Germany, Ireland, Italy, Luxembourg, Malta, Monaco, the Netherlands, Portugal, Spain, Sweden, Switzerland, the United Kingdom **8 Centre** Albania, Bulgaria, Croatia, the Czech Republic, the former Yugoslav Republic of Macedonia, Montenegro, Romania, Slovenia **10 East** Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Lithuania, Moldova, Russia, Ukraine
29 **2016**	**15 West** Austria, Belgium, Denmark, France, Germany, Greece, Italy, Luxembourg, Malta, the Netherlands, Portugal, Spain, Sweden, Switzerland, the United Kingdom **7 Centre** Albania, Bulgaria, Croatia, Hungary, Romania, Montenegro, Serbia, **7 East** Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Tajikistan

Data sources

Data sources and methodologies used as well as the quality of the information collected by each country are variable and this will impact on the ability to compare findings from different countries and regions. Annex 2 provides an overview of the different data sources used for each stage of the continuum. Of the 41 countries that reported the method used to estimate the number of PLHIV (diagnosed and undiagnosed) almost half (49%, 20)

[11] In addition, Bosnia & Herzegovina, San Marino and Turkmenistan did not participate in the 2018 Dublin Declaration reporting process.

used the UNAIDS Spectrum method, 29% (12) used the ECDC modelling tool and 22% (9) used country-specific or bespoke methods. There were variations across the WHO Region, with all reporting countries in the East sub-region using Spectrum estimates. Half of the countries in the Centre sub-region reported using Spectrum estimates with the remainder using the ECDC modelling tool. In the West, three countries used Spectrum, seven used ECDC methods and nine of 20 countries used another modelling technique. Approximately half of reporting countries reported high confidence in the approach, with the remainder reporting medium confidence. This did not vary by data source. Year of reporting also varied and this will also have an impact on the ability to compare country estimates.

Table 3. Data sources for the estimated number of people living with HIV in Europe and Central Asia, 2018

Data source	Number of countries (n=41)	Countries (West, Centre, East)	Year of reported data (Number of countries)
Spectrum modelling tool	20 (49%)	**West:** Ireland, Italy, Spain **Centre:** Albania, the former Yugoslav Republic of Macedonia, Montenegro, Romania, Serbia **East:** Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Lithuania, Moldova, Russia, Tajikistan, Ukraine.	2015 (2); 2016 (4); 2017 (14)
ECDC HIV modelling tool	12 (29%)	**West:** Austria; Denmark; Finland; Greece; Malta; the Netherlands; Portugal **Centre:** Bulgaria; Croatia; the Czech Republic; Slovakia; Slovenia	2015 (1); 2016 (7); 2017 (4)
Other estimate method	5 (12%)	**West:** Belgium, Israel, Monaco, Sweden, Switzerland	2015 (2); 2016 (1); 2017 (2)
Other modelling tool	4 (10%)	**West:** France, Germany, Luxembourg, the United Kingdom	2014 (1); 2016 (2); 2017 (1)

For numbers of people living with diagnosed HIV, 25 out of 40 countries reported using new diagnoses or people accessing care surveillance data, whilst six used national or sentinel cohort data and 11 reported another source. Of the 25 countries that reported using surveillance data for stage two, 18 also reported using surveillance data for stage three and 15 for stage four (Annex 2). While the quality of data systems will vary somewhat, there are advantages and disadvantages of both cohort and surveillance data. Cohort data tend to be richer in clinical information and enable the linkage of patients over time to allow the outcomes of patients to be followed up. However, they are likely to be restricted to a subset of clinics, and may be biased towards clinics that are performing well, which may reduce the representativeness of the data. While surveillance data can also be linked over time to create a patient cohort, accompanying clinical data may be less rich. While surveillance data may be potentially more nationally comprehensive and therefore representative than clinic cohort data, the quality of surveillance systems is variable, including different rates for those lost to follow-up.

Where reported, the national continuum of care related to 2013 and 2014 for two countries, to 2015 for five countries, to 2016 for 13 countries and to 2017 for 19 countries. With the exception of seven countries, the year of reporting remained consistent between stages of the continuum for each country (Annex 2).

Accounting for out-migration and deaths

The ability to account for out-migration and deaths when calculating each of the stages of the continuum has a significant impact on the final estimates. For example, a country that is not able to account for out-migration or deaths of those diagnosed with HIV will most probably have an overinflated denominator of the total number of persons diagnosed. This may result in a lower proportion of people estimated to be on treatment and potentially virally suppressed. Annex 3 shows whether countries were able to account for out-migration and deaths in their calculations for each stage of the continuum of care.

Of the 43 countries that reported continuum of care data, 33 countries were able to exclude or partially exclude out-migration, with 15 of these countries able to exclude out-migration for all four stages of the continuum (marked with an asterisk). A total of 41 countries were able to exclude or partially exclude deaths, with 22 of these countries able to exclude deaths for all four stages of the continuum (marked with an asterisk). A total of 15 countries were able to exclude both out-migration and deaths for all four stages of the continuum.

Table 4. Exclusion of out-migration and deaths of people living with HIV from continuum data, Europe and Central Asia, 2018

Excluded or partially excluded	Number of countries (n=42)	Countries (West, Centre, East)
Out-migration	33 (79%)	**West:** Austria*, Belgium*, Denmark, France*, Germany, Ireland*, Israel, Luxembourg*, Malta, Monaco*, the Netherlands*, Portugal*, Sweden*, Switzerland, the United Kingdom** **Centre:** Albania, Croatia, Kosovo, the former Yugoslav Republic of Macedonia, Montenegro, Romania*, Slovakia, Slovenia **East:** Belarus*, Kazakhstan*, Kyrgyzstan*, Lithuania, Ukraine*
Deaths	41 (98%)	**West:** Austria*, Belgium*, Denmark, Finland, France*, Germany*, Greece, Ireland*, Israel, Italy*, Luxembourg*, Malta*, Monaco*, the Netherlands*, Portugal*, Spain, Sweden*, Switzerland, the United Kingdom* **Centre:** Albania, Bulgaria, Croatia*, the Czech Republic*, Kosovo, the former Yugoslav Republic of Macedonia, Montenegro, Romania*, Serbia, Slovakia, Slovenia **East:** Armenia*, Azerbaijan, Belarus*, Estonia, Georgia, Kazakhstan*, Kyrgyzstan*, Lithuania*, Moldova, Tajikistan, Ukraine*

Continuum of HIV care

This section discusses each stage of the continuum of HIV care in more detail, considering what the data tell us about the current situation in Europe and Central Asia and how this compares with the global targets. Annex 1 provides a full overview of what data were provided by which countries at each stage, and their performance against the global 90:90:90 targets.

Stage 1. Estimated number of people living with HIV

Based on reported data from 41 countries, an estimated 2 174 673 people are living with HIV in these countries (Table 5). It is important to note that 11 countries[12] were unable to provide data and three countries[13] did not participate in 2018 Dublin Declaration reporting, meaning the estimated numbers of PLHIV in these countries are not included in the calculation.

Table 5. Estimated number of people living with HIV: countries in the West, Centre and East sub-regions, reported in 2018[14]

West WHO sub-region		Centre WHO sub-region		East WHO sub-region	
Countries	**PLHIV**	**Countries**	**PLHIV**	**Countries**	**PLHIV**
Austria	7 079	Albania	1 300	Armenia	3 400
Belgium	18 758	Bulgaria	2 862	Azerbaijan	8 003
Denmark	6 000	Croatia	1 533	Belarus	26 120
Finland	3 880	Czech Republic	3 230	Estonia	7 900
France	156 600	The former Yugoslav Republic of Macedonia	383	Georgia	10 500
Germany	86 100	Montenegro	437	Kazakhstan	26 000
Greece	16 665	Romania	17 000	Kyrgyzstan	8 500
Ireland	7 205	Serbia	2 700	Lithuania	2 761
Israel	8 039	Slovakia	995	Moldova	15 132
Italy	130 000	Slovenia	987	Russia	998 525
Luxembourg	1 081			Tajikistan	15 000
Malta	453			Ukraine	244 000
Monaco	47				
Netherlands	22 900				
Portugal	38 959				
Spain	146 000				
Sweden	8 320				
Switzerland	16 600				
United Kingdom	101 400				

[12] Andorra, Iceland, Liechtenstein, Norway (West); Cyprus, Hungary, Kosovo, Poland, Turkey (Centre); Latvia, Uzbekistan (East).
[13] Bosnia & Herzegovina, San Marino and Turkmenistan.
[14] Latest data available reported by countries in March 2016. See Annex 2 showing which year the reported data concerns.

Stage 2. Number of people living with diagnosed HIV

In the 40 countries reporting data within Europe and Central Asia for both stage 1 and stage 2, an estimated 2 165 454 people are living with HIV, 1 724 600 of whom (80%; range 46–100%) have been diagnosed (Table 6). In these countries, one in five (20%; range 0–54%) people living with HIV in Europe and Central Asia are therefore unaware of their HIV status. Overall, the proportion of undiagnosed people living with HIV is highest in countries of the East WHO sub-region and lowest in those of the West sub-region.

In the 19 West sub-region countries with data for both stages, an estimated 776 086 people are living with HIV, 672 268 of whom have been diagnosed (87%; range 75–100%). This means that one in eight PLHIV (13%; range 0–25%) in these countries have an undiagnosed HIV infection. This is fairly consistent with the ECDC modelled estimate of the undiagnosed proportion of PLHIV in the 31 countries of the EU/EEA which concluded that 15% of PLHIV, or 122 000 people, are undiagnosed.[15]

In the ten Centre sub-region countries with data for both stages, an estimated 31 427 people are living with HIV, 26 234 of whom have been diagnosed (83%; range 46–90%). This means that one in six people living with HIV (17%; 10–54%) in these countries have undiagnosed HIV infection.

In the 11 East sub-region countries with data for both stages, an estimated 1 357 941 people are living with HIV, 1 026 098 of whom have been diagnosed (76%; range 48–94%). This means that one in four PLHIV (24%; range 6–52%) in these countries have undiagnosed HIV infection.

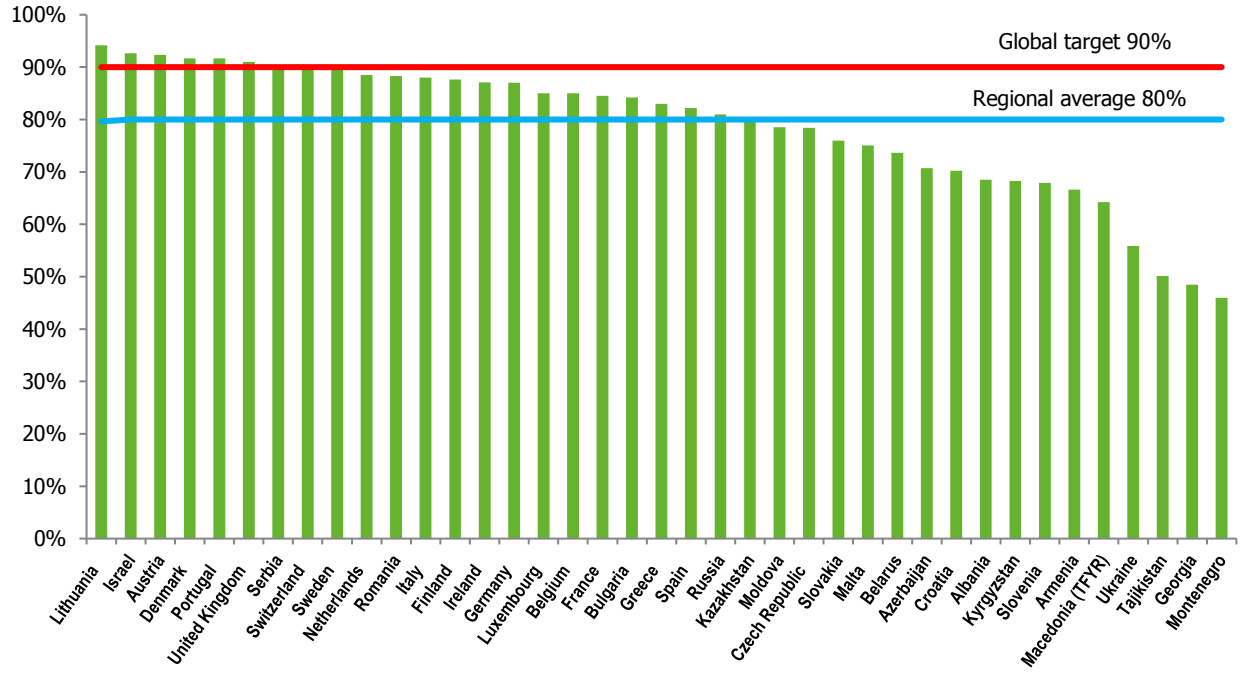
Table 6. Number and percentage of people living with HIV with diagnosed and undiagnosed HIV infection in 40 countries in Europe and Central Asia, 2018

Countries	Estimated number of PLHIV (range)	Number of PLHIV diagnosed (range)	% of PLHIV diagnosed (range)	% of PLHIV undiagnosed (range)
West (n=19)	776086 (47-156600)	672268 (47-132400)	87% (75-100%)	13% (0-25%)
Centre (n=10)	31427 (383-17000)	26234 (201-15009)	83% (46-90%)	17% (10-54%)
East (n=11)	1357941 (2761-998525)	1026098 (2265-808823)	76% (48-94%)	24% (6-52%)
All countries (n=40)	2165454 (47-998525)	1724600 (47-808823)	80% (46-100%)	20% (0-54%)

A total of 10 of the 40 countries (Austria, Denmark, Israel, Lithuania, Monaco, Portugal, Sweden, Switzerland, Serbia and the United Kingdom) have achieved the first of the UNAIDS targets with 90% or more of all PLHIV knowing their status (Figure 3). Of the other 30 countries, 14 are above the regional average, reporting that 80% or more (range 80–89%) of PLHIV know their status (10 West; 2 Centre; 2 East), and 16 countries are below the regional average, reporting that fewer than 80% (range 46–79%) of PLHIV know their status (1 West; 7 Centre; 8 East).

[15] Estimating HIV incidence and number of undiagnosed individuals living with HIV in the European Union/European Economic Area, 2015. Pharris A, Quinten C, Noori T, Amato-Gauci AJ, van Sighem A, ECDC HIV/AIDS Surveillance and Dublin Declaration Monitoring Networks. Euro Surveill. 2016 Dec 1; 21(48)

Figure 3. Percentage of all people living with HIV who know their status in 39 countries of Europe and Central Asia, 2018[16]



Stage 3. Number of people diagnosed who are on treatment

In the 41 countries that reported data for both stage 2 and stage 3 within Europe and Central Asia, an estimated 1 742 631 PLHIV have been diagnosed, of whom 1 115 687 (64%; range 30–100%) are reported to be on treatment (Table 7). Based on available data, at least one in three people (36%; range 0–70%) with diagnosed HIV infection in Europe and Central Asia are therefore not currently receiving ART.

In the 19 West sub-region countries that reported data for both stage 2 and stage 3, an estimated 668 935 PLHIV have been diagnosed, 611 640 of whom (91%; range 69–100%) are reported to be on treatment. This means that around one in 10 PLHIV (9%; range 0–31%) who have been diagnosed in these countries are not benefitting from HIV treatment.

In the 10 Centre sub-region countries that reported data for both stages, an estimated 26 234 people living with HIV have been diagnosed, 19 190 of whom (73%; range 50–85%) are reported to be on treatment. This means that just over one in four people living with HIV (27%; range 15–50%) who have been diagnosed in these countries are not benefitting from HIV treatment.

In the 12 East sub-region countries that reported data for both stages, an estimated 1 047 462 people living with HIV have been diagnosed, 484 857 of whom (46%; range 30–95%) are reported to be on treatment. This means that around one in two PLHIV (54%; range 5–70%) who have been diagnosed in these countries are not benefitting from HIV treatment.

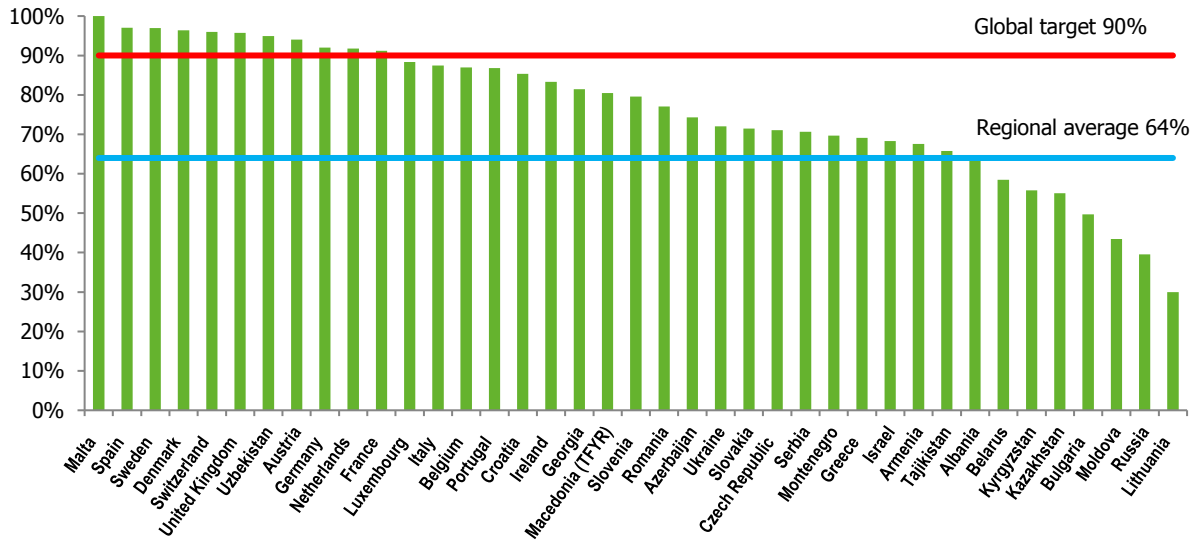
Table 7. Number and percentage of people living with diagnosed HIV who are on treatment in 41 countries in Europe and Central Asia, 2018

Countries	Number of PLHIV diagnosed (range)	Number of PLHIV diagnosed on ART (range)	% of PLHIV diagnosed on ART (range)	% of PLHIV diagnosed currently not on ART (range)
West (n=19)	668 935 (47-132400)	611 640 (47-120700)	91% (69-100%)	9% (0-31%)
Centre (n=10)	26 234 (201-15009)	19 190 (140-11570)	73% (50-85%)	27% (15-50%)
East (n=12)	1 047 462 (2265-808823)	484 857 (780-319613)	46% (30-95%)	54% (5-70%)
All countries (n=41)	1 742 631 (47-808823)	1115 687 (47-319613)	64% (30-100%)	36% (0-70%)

[16] Monaco was excluded from this figure due to too few cases.

In total, 13 of the 41 countries (Andorra, Austria, Denmark, France, Germany, Malta, Monaco, the Netherlands, Spain, Sweden, Switzerland, the United Kingdom, Uzbekistan) have achieved the second of the UNAIDS targets: 90% of PLHIV know their status and are on treatment (Figure 4). Of the other 28 countries, 21 are above the regional average, reporting that 64% or more (range 64–88%) of PLHIV who know their status are on treatment (7 West; 9 Centre; 5 East), and seven are below the regional average, reporting that fewer than 64% (range 30–58%) of PLHIV who know their status are on treatment (1 Centre; 6 East).

Figure 4. Percentage of all people living with diagnosed HIV who are on treatment in 39 countries of Europe and Central Asia, 2018[17]



Stage 4. Viral suppression among people living with HIV on treatment

In the 35 countries across Europe and Central Asia that reported data for both stage 3 and stage 4, an estimated 1 093 732 PLHIV are on treatment, 938 156 of whom (86%; range 42–100%) are virally suppressed (Table 8). Around one in seven people (14%; range 0–58%) currently on ART in Europe and Central Asia have therefore not achieved viral suppression.

In the 16 West sub-region countries with data for both stages, an estimated 596 891 PLHIV are on treatment, 553 227 of whom (93%; range 85–100%) are virally suppressed. This means that one in 14 (7%; range 0–15%) currently on ART in these countries are not virally suppressed.

In the eight Centre sub-region countries with data for both stages, an estimated 16 926 PLHIV are on treatment, 12 734 of whom (75%; range 55–99%) are virally suppressed. One in four PLHIV (25%; range 1–45%) currently on ART in these countries are not virally suppressed.

In the 11 East sub-region countries with data for both stages, an estimated 479 915 PLHIV are on treatment, 372 195 of whom (78%; range 42–86%) are virally suppressed. Around one in five PLHIV (22%; range 14–58%) currently on ART in these countries are not virally suppressed.

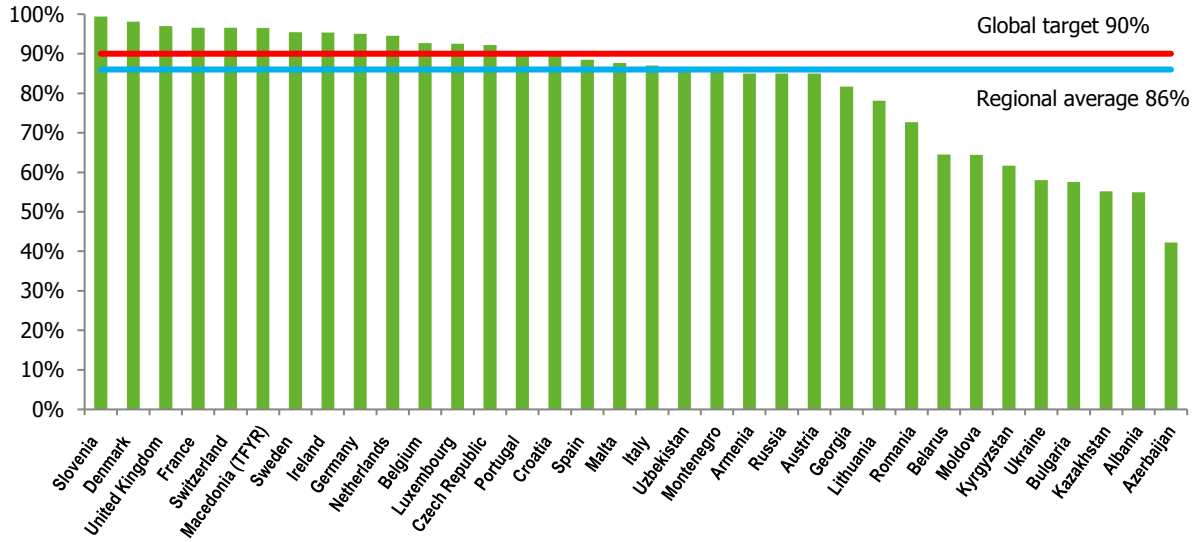
Table 8. Number and percentage of people on treatment who are virally suppressed in 35 countries across Europe and Central Asia, 2018

Countries	Number of PLHIV on ART (range)	Number of PLHIV virally suppressed (range)	% of PLHIV on ART who are virally suppressed (range)	% of PLHIV diagnosed on ART who are not virally suppressed (range)
West (n=16)	596 891 (47-120700)	553 227 (47-116600)	93% (85-100%)	7% (0-15%)
Centre (n=8)	16 926 (140-11570)	12 734 (121-8409)	75% (55-99%)	25% (1-45%)
East (n=11)	479 915 (780-319613)	372 195 (609-271671)	78% (42-86%)	22% (14-58%)
All countries (n=35)	1 093 732 (47-319613)	938 156 (47-271671)	86% (42-100%)	14% (0-58%)

[17] Monaco and Andorra were excluded from this figure due to too few cases.

In all, 15 of the 35 countries (Belgium, the Czech Republic, Denmark, France, Germany, Ireland, Luxembourg, the former Yugoslav Republic of Macedonia, Monaco, the Netherlands, Portugal, Slovenia, Sweden, Switzerland and the United Kingdom) have achieved the third of the UNAIDS targets: 90% of PLHIV who are on treatment are virally suppressed (Figure 5). Of the other 20 countries, six are above the regional average, reporting that 86% or more (range 86–89%) of PLHIV who are on treatment are virally suppressed, and 14 are below the regional average, reporting that fewer than 86% (range 42–85%) of PLHIV who are on treatment are virally suppressed.

Figure 5. Percentage of people on treatment reaching viral suppression in 34 countries of Europe and Central Asia, 2018[18]



Viral suppression among all people living with HIV

As noted above, in 2018, 34 countries (16 West; 8 Centre; 10 East) reported data on all four stages of the continuum of HIV care, compared with 29 countries in 2016 (Table 2 and Figure 2). Based on data reported by these countries for stage 1 and 4, an estimated 2 118 175 people are living with HIV, 920 626 of whom (43%; range 22–100%) are virally suppressed (Table 9). This means that over half of PLHIV (57%; range 0–78%) in Europe and Central Asia have therefore still not achieved viral suppression.

In the 16 West sub-region countries with data for all four stages, an estimated 747 502 people are living with HIV, 553 227 of whom (74%; range 66–100%) are virally suppressed. This means that around one in four (26%; range 0–34%) PLHIV in these countries are not virally suppressed.

In the eight Centre sub-region countries with data for all four stages, an estimated 27 732 people are living with HIV, 12 734 of whom (46%; range 24–54%) are virally suppressed. This means that more than one in two (54%; range 46–76%) PLHIV in these countries are not virally suppressed.

In the 10 East sub-region countries with data for all four stages, an estimated 1 342 941 people are living with HIV, 354 665 of whom (26%; range 22–36%) are virally suppressed. This means that around three in four (74%; range 64–78%) PLHIV in these countries are not virally suppressed.

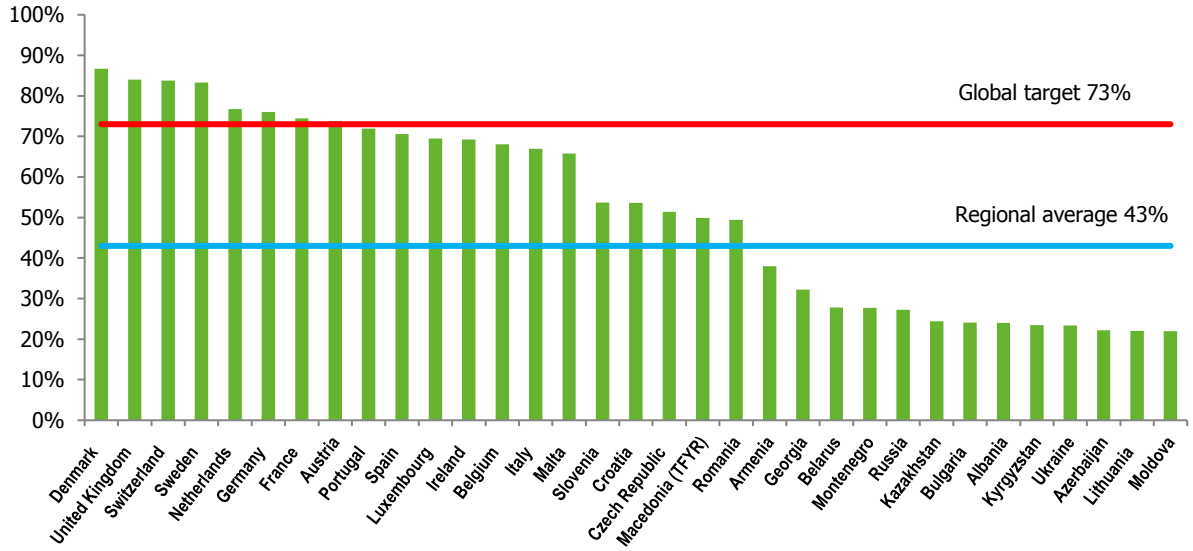
Table 9. Number and percentage of people living with HIV who are virally suppressed in 34 countries of Europe and Central Asia, 2018

Countries	Estimated number of PLHIV (range)	Estimated number of people virally suppressed (range)	% of all PLHIV who are virally suppressed (range)	% of all PLHIV who are not virally suppressed (range)
West (n=16)	747502 (47-156600)	553227 (47-116600)	74% (66-100%)	26% (0-34%)
Centre (n=8)	27732 (383-17000)	12734 (121-8409)	46% (24-54%)	54% (46-76%)
East (n=10)	1342941 (2761-998525)	354665 (609-271671)	26% (22-36%)	74% (64-78%)
All countries (n=34)	2118175 (47-998525)	920626 (47-271671)	43% (22-100%)	57% (0-78%)

[18] Monaco was excluded from this figure due to too few cases.

Nine of these 34 countries (Austria, Denmark, France, Germany, Monaco, the Netherlands, Sweden, Switzerland, the United Kingdom) have achieved the UNAIDS substantive target of 73% viral suppression among all people estimated to be living with HIV (Figure 6). Among the remaining 25 countries, 12 are above the regional average, reporting that over 43% (range 49–72%) of all estimated PLHIV are virally suppressed, and 13 are below the regional average, reporting that fewer than 43% (range 22–38%) of all estimated PLHIV are virally suppressed.

Figure 6. Percentage of all people living with HIV who know their status, are on treatment and are virally suppressed in 33 countries across Europe and Central Asia 2018[19]



Progress over time

For the 25 countries[20] reporting all four stages of the continuum of HIV care at the national level in both 2016 and 2018, the data showed that in 2018, 85% of all PLHIV were diagnosed, 75% were treated and 68% were virally suppressed against the global substantive targets of 90-81-73. This compares to 82%, 70% and 62% reported in 2016 (Figure 3), demonstrating good progress since the last reporting round[21]. These figures differ slightly from those reported above because they are calculated using data only from those countries that reported in both 2016 and 2018.

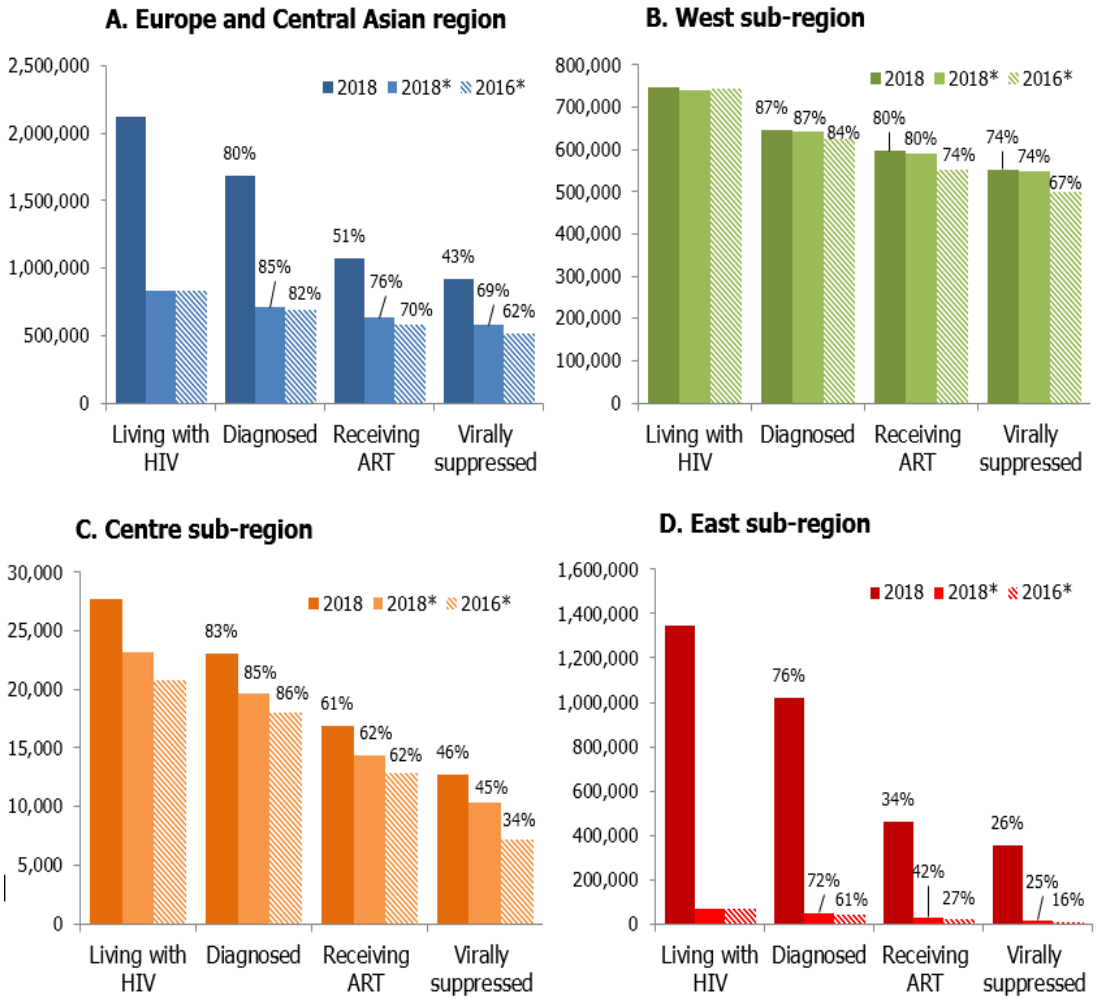
For countries able to report data for both years, in 2018 the West sub-region reported the highest values across the continuum, with 74% of all PLHIV virally suppressed (exceeding the UNAIDS substantive target of 73%), and this was higher than the 67% reported in 2016. In the Centre sub-region, the proportion of PLHIV who were virally suppressed was 45% in 2018 compared to 34% reported in 2016. In the East sub-region, while the proportion of PLHIV who were virally suppressed was higher than that reported in 2016 (16%), only one in four PLHIV were virally suppressed in 2018 (25%).

It is important to note that each sub-region showed improvements in the continuum of care outcomes for 2018 compared to 2016. The only exception to this is the decline in the proportion diagnosed in the Centre sub-region by one percent – which can be attributed to the upward revisions of the estimates for undiagnosed populations in Montenegro and Romania. Consequently, data provided in 2018 are likely to provide a more realistic picture of the situation across Europe.

Annex 4 provides a full overview of what data were provided by which countries at each stage, and their performance against the global substantive targets.

[19] Monaco was excluded from this figure due to too few cases.
[20] These countries are Austria, Belgium, Denmark, France, Germany, Italy, Luxembourg, Malta, the Netherlands, Portugal, Spain, Sweden, Switzerland, the United Kingdom from the West sub-region; Albania, Bulgaria, Croatia, Montenegro and Romania from the Centre sub-region; and Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan and Moldova from the East sub-region.
[21] These figures differ from those reported as the overall performance for 2016 in ECDC's 2017 report *Continuum of HIV Care* https://ecdc.europa.eu/sites/portal/files/documents/Continuum-of-HIV-care-2017.pdf due to countries that reported in 2016 but not in 2018 being excluded from the analysis.

Figure 7. Continuum of HIV care (substantive), overall and by WHO sub-region, in 2018, and comparison between 2018 and 2016



* Countries providing data for both years.

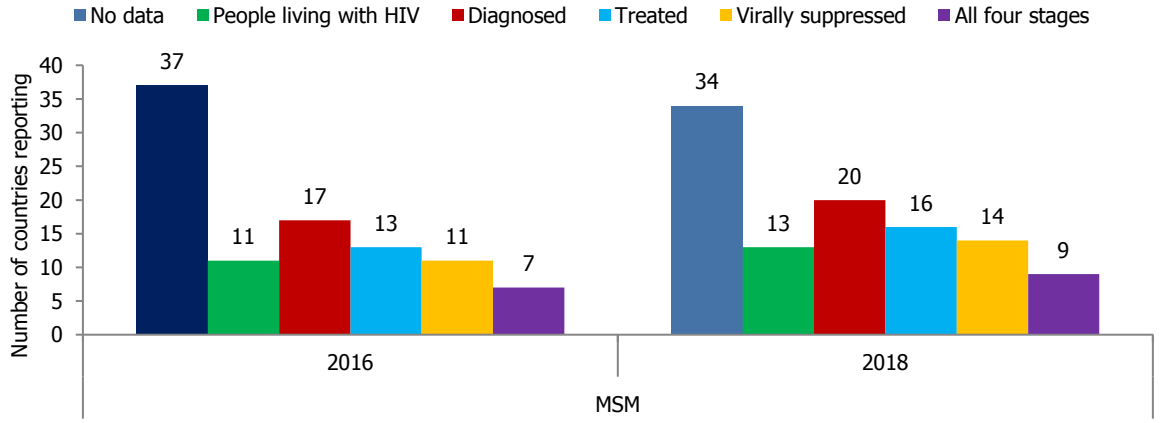
For all four graphs y-axis shows number of people living with HIV

Key populations

Men who have sex with men (MSM)

In 2018, all four stages were reported by nine countries for MSM compared to seven countries in 2016 (Figure 8). At least two consecutive stages were reported by 19 countries. Between 2016 and 2018, there was an increase in the number of countries reporting data for each stage of the continuum for MSM, particularly for stages 3 and 4. There has also been a reduction in the number of countries who are unable to report data for any stages of the continuum of care with regard to MSM.

Figure 8. Number of countries reporting data for different stages of the HIV continuum of care for men who have sex with men (MSM), Europe and Central Asia, reported in 2016 and 2018

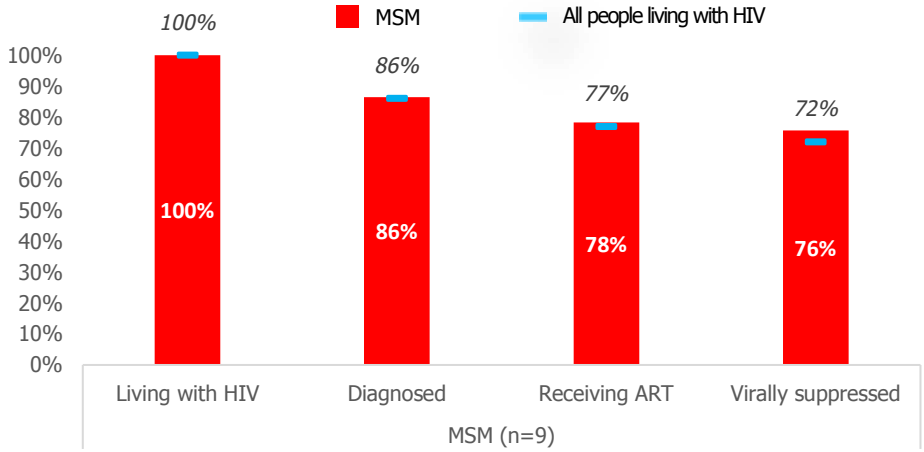


Among the nine countries[22] that were able to report data on all four stages of the continuum for MSM in 2018, the proportion of all MSM living with HIV who were diagnosed was 86%, the proportion treated was 78% and the proportion virally suppressed was 76%, meeting the substantive global targets for viral suppression (Figure 9). The equivalent figures for all PLHIV at the national level (for the nine countries reporting MSM data only) were 86%, 77% and 72% respectively. A summary of the continuum of care for countries reporting MSM data is provided in Annex 5.

Compared to the other countries in the region, a higher proportion of people newly diagnosed in the countries of the West sub-region probably acquired their HIV infection through sex between men. Annex 5 summarises the variation in outcomes within regions. Five of the nine countries reporting all four stages of the data for MSM were from the West sub-region. Overall, this sub-region accounted for 94% (124 841/132 620) of all the MSM estimated to be living with HIV in the countries able to report data. Consequently, potential inequalities in the continuum of HIV care outcomes for MSM in the East and Centre sub-regions may be masked at the European and Central Asian level.

[22] These countries were the Czech Republic and the former Yugoslav Republic of Macedonia from the Centre sub-region, Azerbaijan and Belarus from the East sub-region, and Austria, France, Luxembourg, the Netherlands, and the United Kingdom from the West sub-region.

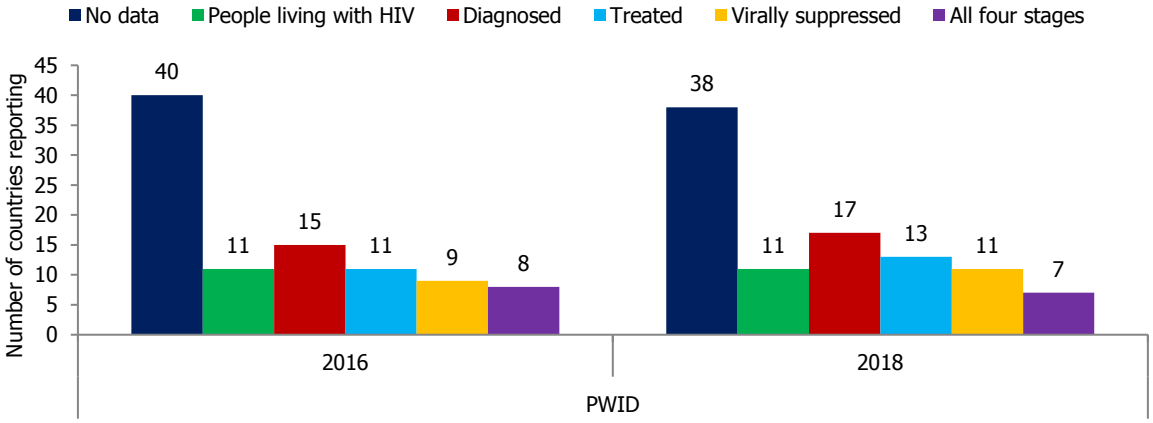
Figure 9. Comparison of the continuum of HIV care for MSM against the national continuum of all people living with HIV, Europe and Central Asia, reported in 2018



People who inject drugs (PWIDs)

In 2018, all four stages were reported by seven countries[23] for PWIDs, one less than in 2016 (Figure 10). At least two consecutive stages were reported by 16 countries. However, between 2016 and 2018, there was an increase in the number of countries reporting data for stages 2, 3 and 4 of the continuum for PWIDs. There was also a reduction in the number of countries who were unable to report data for any stages of the continuum of care for PWIDs.

Figure 10. Number of countries reporting data for different stages of the HIV continuum of care for people who inject drugs (PWIDs), Europe and Central Asia, reported in 2016 and 2018



In the seven countries reporting all four stages, 87% of all PWIDs living with HIV were reported to be diagnosed, 61% reported to be treated and 51% virally suppressed (global substantive targets). The proportion diagnosed (87%) was above the 86% reported for all PLHIV at the national level (in the countries able to report PWID data) but the proportion treated and the proportion virally suppressed were substantially lower; 77% and 71% respectively (Figure 11, Annex 5).

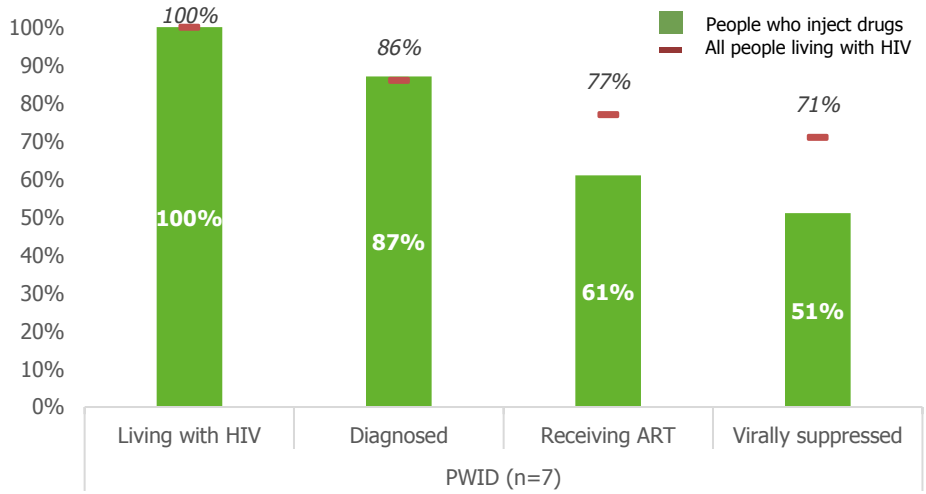
The West sub-region constituted 49% of all PWIDs reported to be living with HIV in 2018 (in the countries able to report all four stages of data). The East sub-region contributed 51% of all PWIDs reported to be living with HIV in 2018 (in the countries able to report all four stages data). Data were not reported from the Centre sub-region (Annex 5).

Whilst outcomes for PWIDs were actually better than the outcomes for PLHIV overall in western European countries (with the exception of the United Kingdom), in the three reporting countries from the East sub-region PWIDs had consistently worse outcomes compared outcomes for PLHIV overall for stages 3 and 4. Collecting these data means that the three countries are better able to focus their prevention, testing and treatment efforts to

[23] These countries were Azerbaijan, Belarus and Kazakhstan from the East sub-region, and Austria, France, Luxembourg, and the United Kingdom from the West sub-region.

address the disparity between outcomes for PWID and the overall population of PLHIV. In contrast, the lack of disaggregated data for PWID in many countries, particularly in the East sub-region where they disproportionately bear the burden of the HIV epidemic, is a serious omission and concern.

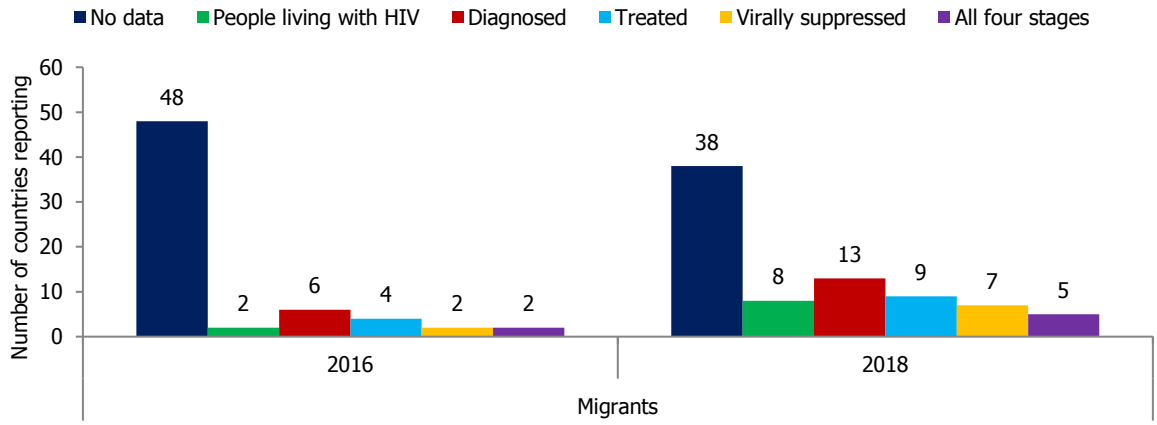
Figure 11. Comparison of the continuum of HIV care for PWIDs against the national continuum for all people living with HIV, Europe and Central Asia, reported in 2018



Migrants

In 2018, all four stages were reported by five countries[24] for migrants (defined as people born abroad) compared with two countries in 2016 (Figure 12). At least two consecutive stages were reported by ten countries. Between 2016 and 2018, there was an increase in the number of countries reporting data for each stage of the continuum for migrants, particularly for stages 3 and 4. There has also been promising a reduction in the number of countries unable to report data for any stage of the continuum of care for migrants.

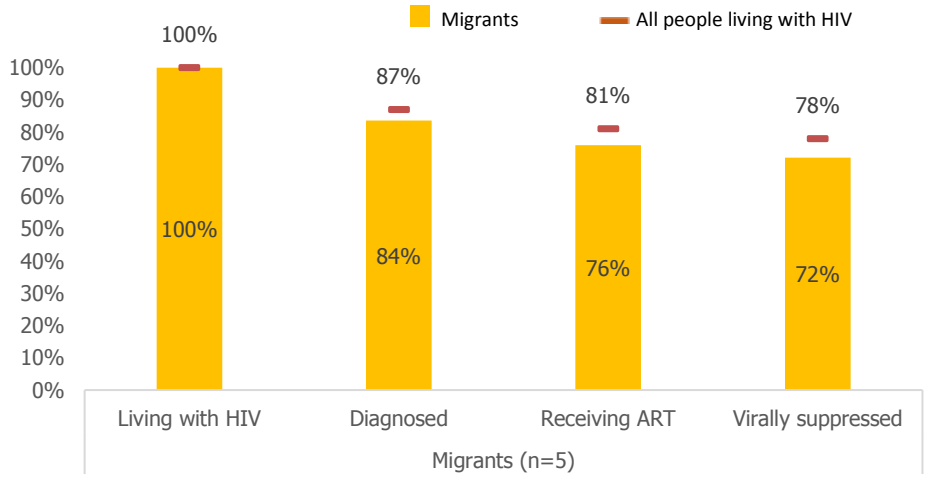
Figure 12. Number of countries reporting data for different stages of the HIV continuum of care for migrants, Europe and Central Asia in 2016 and 2018



Of the five countries reporting all four stages for migrants, the continuum of HIV care against the global substantive targets was reported as 84% of all PLHIV having been diagnosed, 76% receiving treatment and 72% virally suppressed. These values are only slightly lower than those reported at the national level (in countries providing migrant data); 87%, 81% and 78% respectively. Data from the West sub-region comprised 98% of all reported migrants living with HIV; consequently the estimated continuum in the West is in line with the overall continuum of care for these five countries and may not reflect the overall situation in the East and Centre sub-regions.

[24] These countries were the Czech Republic from the Centre sub-region, and Austria, France, Luxembourg and the United Kingdom from the West sub-region.

Figure 13. Comparison of the continuum of HIV care for migrants against the national continuum of all people living with HIV, Europe and Central Asia, reported in 2018



It is important to note that the countries that were able to monitor the continuum of care in key populations were also likely to be the countries with better HIV outcomes overall. Consequently, the data presented almost certainly overestimates the outcomes experienced by key populations in the region as a whole. Annex 5 provides a full overview of continuum of HIV care outcomes for key populations reported in 2018 compared with the global substantive and 90:90:90 targets.

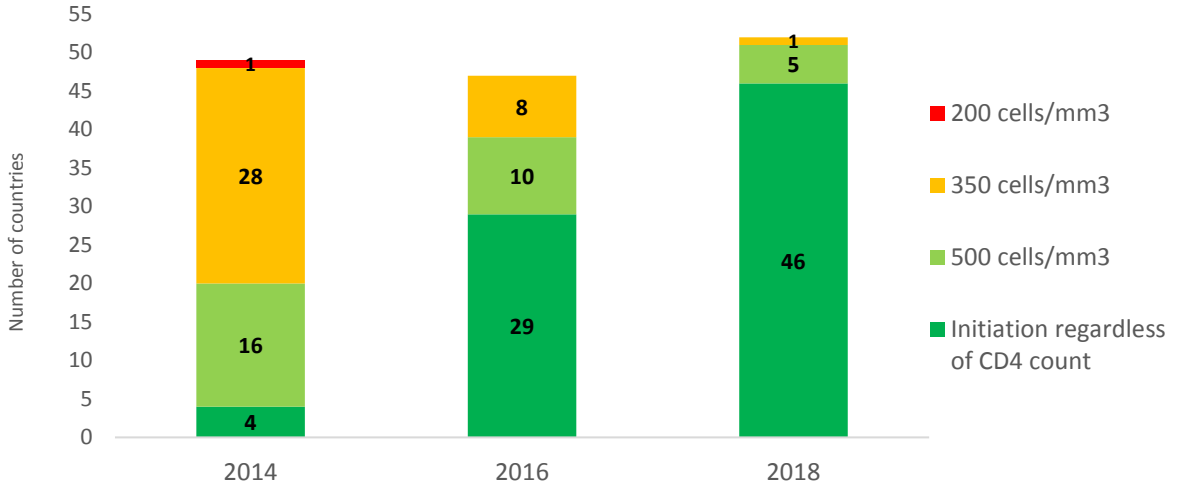
Factors accompanying outcomes along the continuum of HIV care

A number of factors that may be relevant in driving improvement along the continuum were also collected as part of the Dublin Declaration survey. The extent to which the continuum is successful alongside specific drivers or national policy may provide an indication of what is working in specific countries and what could be replicated in different settings.

Increasing treatment coverage among people living with HIV

Figure 14 shows the number of countries that have changed their policy on ART initiation. Between 2014 and 2018 there was a rapid change in policy. In 2014, only four countries recommended treatment initiation regardless of CD4 count. By 2016, that number had increased to 29, and by 2018 to 46, with only six countries reporting ART initiation at a specific CD4 count.

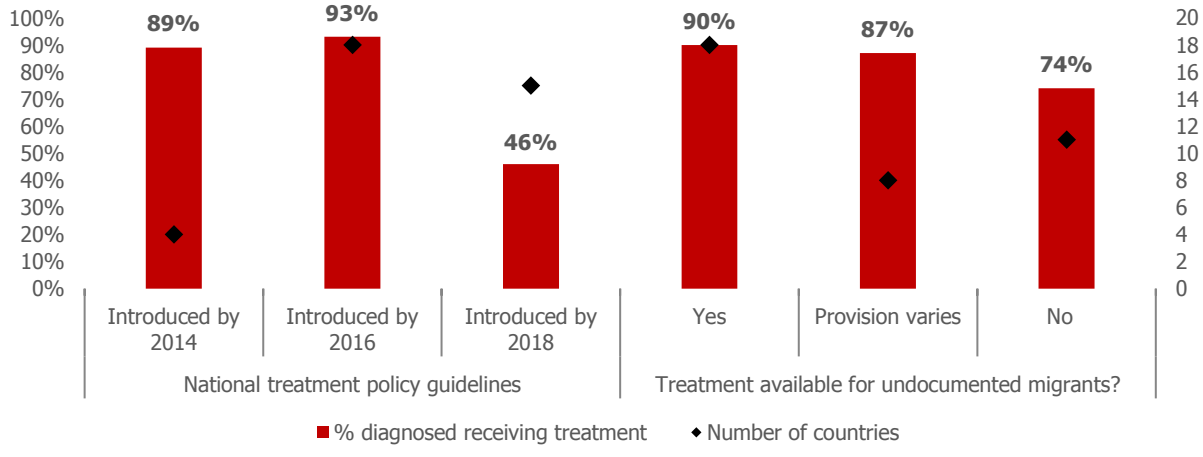
Figure 14. Changing policy on initiation of ART by CD4 count



The association between treatment policy and treatment coverage is clear. Countries that introduced guidelines recommending immediate treatment earlier have higher treatment outcomes for 2018 than those who introduced them later (in 2018). Other factors will, of course, also influence these outcomes but it is reasonable to assume that the extra time that countries which introduced guidelines in 2014 and 2016 have had to implement them has contributed to their better performance in terms of access to treatment.

As seen in Figure 15, countries offering access to ART regardless of migration status also have a higher ART coverage among the diagnosed population.

Figure 15. Comparison of treatment outcomes in 2018 with year that guidelines on immediate treatment initiation were introduced



The estimated number of people with transmissible levels of HIV virus

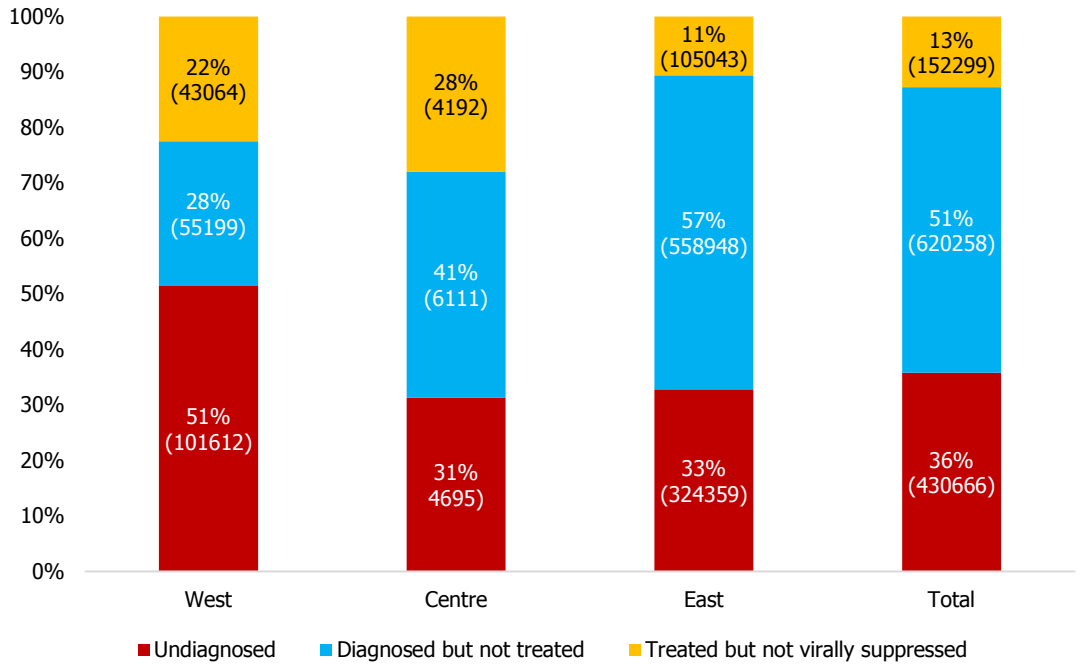
Viral suppression is key to the UNAIDS 90-90-90 model of eliminating the HIV epidemic by 2030. It is well-known that ART is now so effective that those who are treated and have an undetectable viral load (<200 copies/ml) have levels of virus that are untransmittable, even if having sex without condoms. This is sometimes referred to as U=U (undetectable = untransmittable). Understanding the number of people with transmissible levels of virus and whether they are undiagnosed, diagnosed but untreated or treated but not virally suppressed is therefore a useful way of identifying where countries should be focusing their efforts to improve viral suppression outcomes.

The number of people with transmissible levels of virus can be calculated by adding together the number of PLHIV who are estimated to be undiagnosed, diagnosed but untreated and treated but not virally suppressed. Using data from the countries that provided all four stages of the continuum, this is estimated to be 1.2 million PLHIV in the reporting countries, equivalent to 57% of all PLHIV. The reality for the overall region will be higher since not all countries could provide data for all four stages of the continuum.

In 2018, country respondents reported that 36% of people living with transmissible levels of virus were estimated to be undiagnosed, 51% were estimated to be diagnosed but untreated and 13% were estimated to be on treatment but have an unsuppressed viral load. This indicates that the greatest impact in reducing the number of people with transmissible levels of virus could be achieved through rapid and sustained scale-up of treatment, along with further efforts to increase HIV testing.[25]

Figure 16 shows the breakdown of the number of people with transmissible levels of virus by WHO sub-region. There were clear differences between sub-regions; in the West, over half of those with transmissible levels of virus were estimated to be undiagnosed. In the East sub-region, almost three fifths were diagnosed but untreated and in the Centre, the proportion undiagnosed and the proportion treated but not virally suppressed was around 30% each.

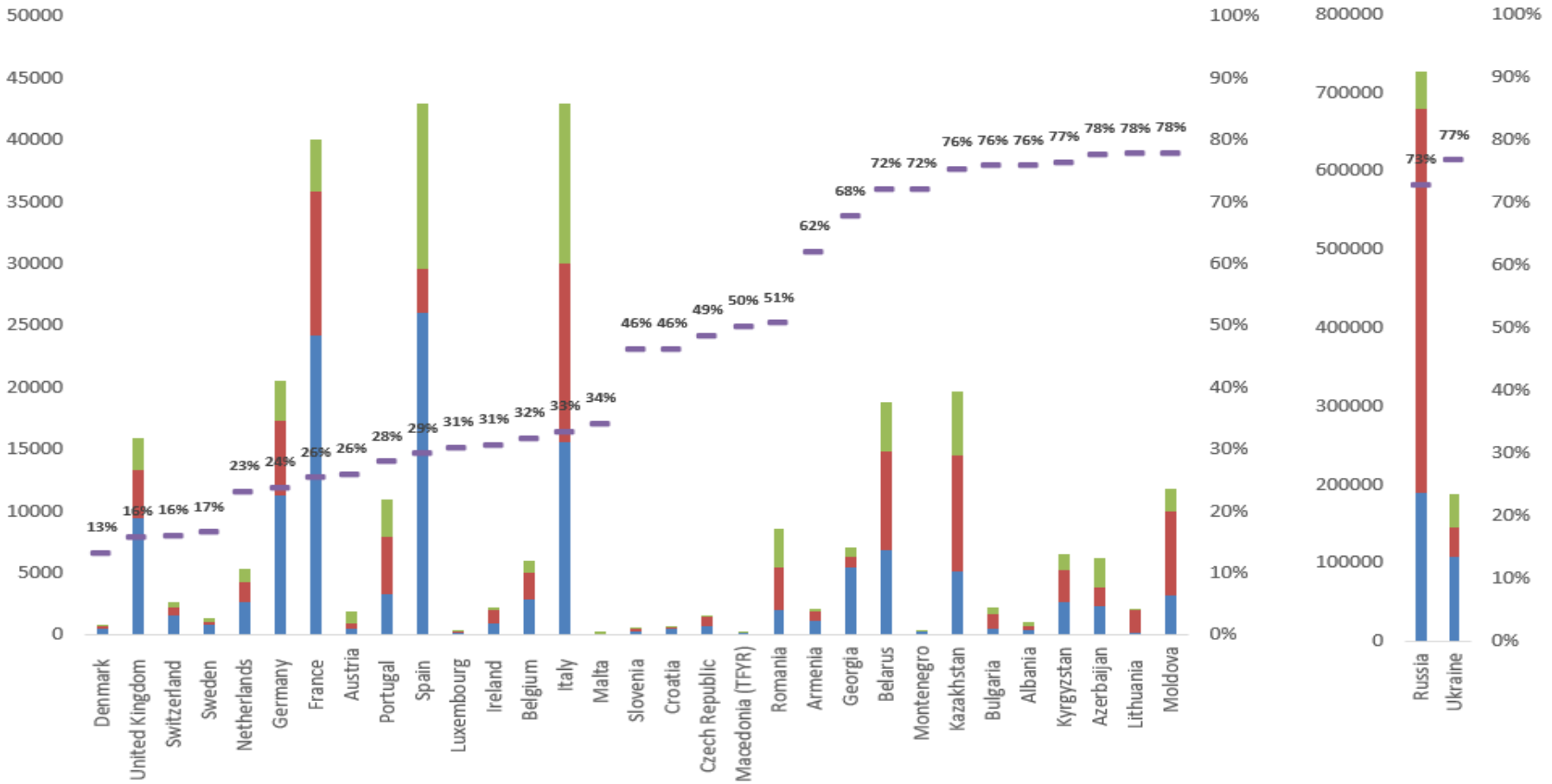
Figure 16. Distribution of people with transmissible levels of virus, by WHO sub-region, and Europe and Central Asia overall, reported in 2018



At country level, the relationship between the number of people living with transmissible levels of virus and the proportion of all PLHIV with transmissible levels of virus is not linear (Figure 18). In western countries, the relative success of testing policies and treatment access means that there are lower proportions of people with transmissible HIV. However, these low proportions still translate into significant numbers for some countries because they have older epidemics with higher numbers of PLHIV overall.

[25] This supports the conclusions made in Porter et al (2018) based on data collected through the previous monitoring round in 2016.

Figure 17. **The number and proportion of people with transmissible levels of virus, Europe and Central Asia, reported in 2018**



Conclusions and priorities for action

Limitations

Data comparability has its limitations. Although countries were asked to report data using the definitions agreed by the Dublin Declaration advisory group, in practice some countries use slightly different definitions, so caution is required when drawing comparisons. There are also variations in data sources, timeframes, analysis and quality, which limit the scope for directly comparing data between countries.

How countries model their estimates can also affect what data they can produce. It is important to note that Spectrum, the tool that 20 countries use to estimate the total number of PLHIV (both diagnosed and undiagnosed), does not allow for disaggregation by key population. This helps to explain the even lower numbers reporting data for stage 1 of the continuum of care (and thus also for all four stages) in key populations.

Reporting of data

There has been an encouraging increase in the number of countries reporting continuum of care data to the Dublin Declaration survey, with 34 countries being able to report on all four stages of the continuum in 2018 compared with 29 in 2016. The numbers are higher still for countries able to report at least two consecutive stages, with 40 countries reporting both stage 1 and 2, 41 countries reporting both stage 2 and 3, and 35 countries reporting both stage 3 and 4 – all indicating positive progress since the 2016 reporting round. It is good to witness such a growing commitment to the gathering, reporting and sharing of information 14 years on from the original Dublin Declaration in 2004. It is also good to see improvements in data availability across the continuum for every sub-region (West, Centre and East).

Nevertheless, there is further progress to be made. For example, eight countries reported no data for any stage of the continuum (three West, four Centre, one East sub-regions). Furthermore, a significant proportion of countries were unable to provide data on each of the individual stages of the continuum; around one third of countries did not have complete continuum data.

Lack of continuum data is most pronounced for stage 1 (people living with HIV) and stage 4 (viral suppression). Given the importance of accurately estimating the population size for all those living with HIV, both to provide the baseline for the continuum and to inform planning and budgeting for national HIV programmes, there is an urgent need to ensure that all countries in the region can generate these estimates. Moreover, in view of the importance of monitoring viral suppression to assess the effectiveness of HIV testing, treatment and care, there is also an urgent need to ensure that all countries can collect data on viral suppression. In addition, data for both stage 1 and stage 4 are essential if countries are to be able to monitor viral suppression among all those estimated to be living with HIV, not just among those who have been diagnosed and are on treatment.

In relation to key populations, reporting remains poor, with limited progress between 2016 and 2018. A large majority of countries were unable to provide information on key populations for any stage of the continuum of care (34 for MSM, 38 for PWIDs, and 38 for migrants). There have been only very small increases in the numbers of countries able to report at each stage and at all stages. It is of course pertinent that Spectrum does not allow for disaggregation by key population and some countries will not have large enough numbers of all three key population groups to produce estimates for the continuum of care. However, even when these constraints are taken into account, there is still considerable room for improvement.

Lack of knowledge of outcomes across the continuum of care for specific key populations means countries are less able to target interventions effectively to specific groups. Significant health inequalities can be obscured where outcomes are known only for the overall population of PLHIV. Progress towards the 90-90-90 targets for the overall population of PLHIV can be stalled because the necessary interventions for key populations are neglected.

Overall progress in the continuum of care

In 2018, the overall performance of the European and Central Asian region against the global 90-90-90 targets was 80% of all PLHIV diagnosed, 64% of those diagnosed with HIV on treatment and 86% of those on treatment virally suppressed. More progress is needed to meet the substantive target of 73% of all PLHIV being virally suppressed, with performance for the overall region currently at 43%.

At the WHO sub-regional level, the West sub-region has met two of the three global 90-90-90 targets, with 87% of all PLHIV diagnosed, 91% of people living with diagnosed HIV on treatment, and 93% of those on treatment virally suppressed. This indicates that the focus in this region should be on reducing the undiagnosed fraction by scaling up testing and implementing effective combination prevention. The fact that the West sub-region has exceeded the

substantive target of 73%, with 74% of all PLHIV virally suppressed, is very good news although it should be noted that this overall figure masks the variation in performance between countries, ranging between 66% and 100%.

The Centre sub-region is performing at 83%, 73% and 75% respectively, indicating that this region needs to widen access to treatment and promote adherence through the implementation of support services, in addition to scaling up testing and prevention efforts. However, it is of some concern that only 46% of all PLHIV are virally suppressed in the Centre region, meaning that more than one in two PLHIV are at risk of ill-health and can still pass on the virus.

Finally, the East sub-region is performing at 76%, 46%, and 78% respectively, indicating that promoting linkage to care and immediate access to treatment is a particular requirement for this region in their response to the epidemic. As with the Centre region, the low level of PLHIV who are virally suppressed is of concern – with only 26% virally suppressed, nearly three out of four PLHIV in the East sub-region are not benefitting from viral suppression.

Significant progress was made towards meeting the global substantive targets of 90-81-73 between 2016 and 2018. For the countries able to submit data for both years, there was improvement across the continuum of care outcomes from 2016 to 2018 in each sub-region. This is especially marked in the East sub-region where there was the greatest need for progress, with the number of people virally suppressed increasing in the two years from 14% to 25%. However, the substantial drop-off between stages in the Centre and East sub-regions, especially between those diagnosed and those receiving ART, is a cause for serious concern. Limited access to treatment means higher rates of early and preventable death, serious illness and onward transmission which fuels the epidemic.

In those countries which did report data on key populations it is encouraging to see that continuum of care outcomes for MSM and migrants are the same or very nearly the same as for the overall population of PLHIV. However, PWIDs do not do as well as the overall population of PLHIV among reporting countries. There are two reporting countries (Azerbaijan and Belarus) in particular which account for this disparity and having these data allows the two countries to identify and address the problem. Nevertheless, the number of countries reporting for these key populations is too small to draw any general conclusions about how well countries across Europe and Central Asia, or in any of the three sub-regions, are doing with the continuum of care in relation to these populations.

Further analysis is needed to explain why some countries can do so much better than others in ensuring that those diagnosed receive ART, adhere to treatment and achieve a suppressed viral load. This is particularly true for the Centre sub-region which has almost the same rates of diagnosis as the West but does not fare so well in providing treatment access and viral suppression. The slow rate of progress in the Centre sub-region since 2016 is a cause for concern, given the distance still to travel to meet the 90-90-90 target.

There are some apparent factors from surveillance data which have an effect on progress along the continuum of care. Treatment policies clearly influence treatment outcomes, with Figure 15 showing how early introduction of immediate treatment policies and enabling access to ART for undocumented migrants is associated with higher treatment outcomes.

Each country will need to examine its own continuum of care data against other outcomes for other countries and sub-regions, and consider how to maintain and increase rates of progress. Significant variation exists within sub-regions, which group countries with similar contexts and epidemics. This shows that there are policy and implementation issues which need to be addressed. As has been stated in previous Dublin reporting rounds, improved implementation of multifaceted testing strategies, effective linkage into care, adherence and retention support and a policy of treatment on diagnosis, all in the context of a human rights-based supportive environment for those affected by and living with HIV, will deliver improvements in performance across the continuum of care.

Beyond the continuum of care

The continuum of care is a powerful tool for assessing progress towards the elimination of HIV as a public health threat and towards meeting the obligation to secure the highest attainable standard of healthcare for those living with the condition. Any analysis, however, should also acknowledge the limitations of such an approach, and look beyond the continuum of care.

The continuum of care does not give us a comprehensive picture of how countries are doing at HIV prevention. One key element in a combination prevention approach is, of course, treatment as prevention and this requires high rates of diagnosis and viral suppression, captured in continuum of care data. However, other interventions such as condom use, pre-exposure prophylaxis (PrEP) and health promotion also remain essential. Achieving the first 90–90% of PLHIV being diagnosed depends not only on the implementation of testing but also on effective prevention to reduce the rate of newly acquired HIV in the population. A separate report is planned on the implementation of combination prevention across the region.

It should also be noted that viral suppression is only one element in the well-being of someone living with HIV, albeit an immensely important one. There is an increasing emphasis on the broader quality of life for PLHIV (e.g. side-effects, emotional and mental health, stigma, deprivation, co-morbidities) which the continuum of care does not capture. For the first time we asked a question as to whether countries were using measures on the quality of life for PLHIV and only seven countries reported that they were. The continuum of care may be the 'basics' of the HIV response – but there is much more to be done if PLHIV are to live well.

Aggregating continuum of care data by region and sub-region provides useful snapshots and a valuable overview of how the whole region compares with the UNAIDS targets and other regions of the world, as well as highlighting significant variation across sub-regions. However, this masks significant variation between countries, evident in the individual stage analyses (Figures 3–6). Individual countries also skew the overall sub-regional and regional continua (with the welcome inclusion of Russia in this reporting round being one example of that effect).

Finally, the 90 must not mean neglect of the ten. In addition to ensuring that the benefits of 90-90-90 are shared equitably across all key populations, it is also important not to just meet these targets. It is worth remembering that lower percentages of people with transmissible levels of HIV can mask significant absolute numbers. For example, Figure 17 shows significant numbers with transmissible virus in Italy, France, Spain, Germany and the UK. This has implications both for the health of those individuals and for efforts to control the spread of HIV. Furthermore, recent modelling has suggested that we need to achieve viral suppression of 90% of all PLHIV (significantly above the UNAIDS target of 73%) if we are to reduce HIV incidence significantly[26]. The 'last 10 per cent' will include people who are significantly marginalised from healthcare services, where progress will not be made without intensive focus, efforts and investment. We must continue to work on 'getting to zero'.

[26] Phillips AN, Cambiano V, Miners A, Lampe FC, Rodger A, Nakagawa F, et al. Potential impact on HIV incidence of higher HIV testing rates and earlier antiretroviral therapy initiation in MSM. AIDS. 2015;29(14):1855-62. DOI: 10.1097/QAD.0000000000000767 PMID: 26372391

Annex 1. Continuum of care for people living with HIV in the countries of Europe and Central Asia: number of people and targets reported, 2016 and 2018

		Numbers				Global 90-90-90 Targets			
WHO region	Country	All PLHIV	Diagnosed	Treated	Virally suppressed	% of PLHIV who are diagnosed	% of PLHIV who are undiagnosed	% of diagnosed PLHIV who are on ART	% on ART who are virally suppressed
West	Andorra		68	68				100%	
	Austria	7079	6537	6145	5223	92%	8%	94%	85%
	Belgium	18758	15885	13763	12759	85%	15%	87%	93%
	Denmark	6000	5500	5300	5200	92%	8%	96%	98%
	Finland	3880	3401			88%	12%		
	France	156600	132400	120700	116600	85%	15%	91%	97%
	Germany	86100	74800	68800	65500	87%	13%	92%	95%
	Greece	16665	13866	9594		83%	17%	69%	
	Iceland								
	Ireland	7205	6276	5227	4986	87%	13%	83%	95%
	Israel	8039	7448	5087		93%	7%	68%	
	Italy	130000	114400	100000	87000	88%	12%	87%	87%
	Liechtenstein								
	Luxembourg	1081	919	812	751	85%	15%	88%	92%
	Malta	453	340	340	298	75%	25%	100%	88%
	Monaco	47	47	47	47	100%	0%	100%	100%
	Netherlands	22900	20264	18599	17580	88%	12%	92%	95%
	Norway								
	Portugal	38959	35709	31000	28007	92%	8%	87%	90%
	Spain	146000	120000	116408	103000	82%	18%	97%	88%
	Sweden	8320	7489	7261	6930	90%	10%	97%	95%
	Switzerland	16600	15000	14400	13900	90%	10%	96%	97%
	United Kingdom	101400	91987	88089	85446	91%	9%	96%	97%
	Total*	**776086**	**672336**	**611640**	**553227**	**87%**	**13%**	**91%**	**93%**
Centre	Albania	1300	891	568	312	69%	31%	64%	55%
	Bulgaria	2862	2410	1198	689	84%	16%	50%	58%
	Croatia	1533	1077	919	822	70%	30%	85%	89%

		Numbers				Global 90-90-90 Targets			
WHO region	Country	All PLHIV	Diagnosed	Treated	Virally suppressed	% of PLHIV who are diagnosed	% of PLHIV who are undiagnosed	% of diagnosed PLHIV who are on ART	% on ART who are virally suppressed
	Cyprus								
	Czech Republic	3230	2533	1800	1660	78%	22%	71%	92%
	Hungary								
	Kosovo				15				
	The former Yugoslav Republic of Macedonia	383	246	198	191	64%	36%	80%	96%
	Montenegro	437	201	140	121	46%	54%	70%	86%
	Poland								
	Romania	17000	15009	11570	8409	88%	12%	77%	73%
	Serbia	2700	2441	1724		90%	10%	71%	
	Slovakia	995	756	540		76%	24%	71%	
	Slovenia	987	670	533	530	68%	32%	80%	99%
	Turkey								
	Total*	**31427**	**26234**	**19190**	**12749**	**83%**	**17%**	**73%**	**75%**
East	Armenia	3400	2265	1530	1304	67%	33%	68%	85%
	Azerbaijan	8003	5661	4207	1778	71%	29%	74%	42%
	Belarus	26120	19231	11242	7253	74%	26%	58%	65%
	Estonia	7900		4109					
	Georgia	10500	5090	4144	3383	48%	52%	81%	82%
	Kazakhstan	26000	20841	11482	6338	80%	20%	55%	55%
	Kyrgyzstan	8500	5805	3237	1995	68%	32%	56%	62%
	Latvia								
	Lithuania	2761	2601	780	609	94%	6%	30%	78%
	Moldova	15132	11887	5162	3324	79%	21%	43%	64%
	Russia	998525	808823	319613	271671	81%	19%	40%	85%
	Tajikistan	15000	7516	4942		50%	50%	66%	
	Ukraine	244000	136378	98237	57010	56%	44%	72%	58%
	Uzbekistan		21364	20281	17530			95%	86%
	Total*	**1365841**	**1047462**	**488966**	**372195**	**76%**	**24%**	**46%**	**78%**
	Grand total*	**2173354**	**1746032**	**1119796**	**938171**	**80%**	**20%**	**64%**	**86%**

**Totals and subtotals only calculated where two consecutive elements of the continuum are included.*
Colour coding: *green indicates that all four stages of data have been provided, amber that data has been partially provided for one or more stages of the continuum, and red that no data has been provided.*

Annex 2. Continuum of care for people living with HIV in the countries of Europe and Central Asia: methodology, data sources and level of confidence for estimates reported in 2018

	Country	PLHIV			Diagnosed			Treated			Virally suppressed		
		Year	Method	Confidence	Year	Method	Confidence	Year	Method	Confidence	Year	Method	Confidence
West	Andorra	NA	NA	NA	2014	Cohort data	High	2014	Cohort data	High	NA	NA	NA
	Austria	2016	ECDC modelling	High	2016	Cohort data	High	2016	Cohort data	High	2016	Cohort data	High
	Belgium	2015	Other estimate	High	2015	Cohort data	High	2015	Cohort data	High	2015	Cohort data	High
	Denmark	2016	ECDC modelling	High	2016	Cohort data	Medium	2016	Cohort data	High	2016	Cohort data	High
	Finland	2017	ECDC modelling	Medium	2017	Other source	Medium	NA	NA	NA	NA	NA	NA
	France	2014	Other modelling	Medium	2014	Other source	Medium	2014	Other source	Medium	2014	Other source	Medium
	Germany	2016	Other modelling	High	2016	Surveillance data	High	2016	Other source	High	2016	Cohort data	Medium
	Greece	2016	ECDC modelling	Medium	2017	Surveillance data	High	2017	Surveillance data	High	NA	NA	NA
	Ireland	2017	SPECTRUM	High	2017	Other source	High	2017	Other source	High	2017	Other source	High
	Israel	2013	Other estimate	Medium	2016	Surveillance data	High	2016	Other source	High	NA	NA	NA
	Italy	2016	SPECTRUM	High	2016	Other source	High	2016	Other source	High	2016	Other source	High
	Luxembourg	2017	Other modelling	High	2017	Cohort data	High	2017	Cohort data	High	2017	Cohort data	High
	Malta	2017	ECDC modelling	High	2017	Surveillance data	High	2017	Other source	High	2017	Surveillance data	High
	Monaco	2017	Other estimate	High	2017	Other source	High	2017	Other source	High	2017	Other source	High
	Netherlands	2016	ECDC modelling	High	2016	Other source	High	2016	Other source	High	2016	Other source	High
	Portugal	2016	ECDC modelling	High	2016	Surveillance data	High	2016	Surveillance data	High	2016	Surveillance data	High
	Spain	2016	SPECTRUM	High	2013	Other source	High	2016	Other source	Medium	2016	Other source	Medium
	Sweden	2015	Other estimate	Medium	2017	Other source	High	2017	Other source	High	2017	Other source	High
	Switzerland	2017	Other estimate	Medium	2017	Other source	High	2017	Other source	High	2017	Other source	High
	United Kingdom	2016	Other modelling	Medium	2016	Surveillance data	High	2016	Surveillance data	High	2016	Surveillance data	High
Centre	Albania	2017	SPECTRUM	Medium	2017	Surveillance data	High	2017	Surveillance data	High	2017	Surveillance data	Low
	Bulgaria	2017	ECDC modelling	High	2017	Other source	High	2017	Other source	High	2017	Other source	High
	Croatia	2015	ECDC modelling	Medium	2015	Surveillance data	High	2015	Cohort data	High	2015	Cohort data	High
	Czech Republic	2016	ECDC modelling	Medium	2016	Surveillance data	High	2016	Surveillance data	Medium	2016	Surveillance data	Medium
	The former Yugoslav Republic of Macedonia	2017	SPECTRUM	Medium	2017	Surveillance data	Medium	2017	Surveillance data	High	2017	Surveillance data	High
	Montenegro	2015	SPECTRUM	Medium	2017	Surveillance data	Medium	2017	Surveillance data	High	2017	Surveillance data	High
	Romania	2016	SPECTRUM	Medium	2017	Surveillance data	High	2017	Surveillance data	High	2017	Surveillance data	High
	Serbia	2017	SPECTRUM	High	2017	Surveillance data	High	2017	Other source	High	NA	NA	NA
	Slovakia	2017	ECDC modelling	Medium	2017	Surveillance data	Medium	2017	Surveillance data	Medium	NA	NA	NA

	Slovenia	2016	ECDC modelling	Medium	2016	Surveillance data	Medium	2016	Cohort data	High	2016	Cohort data	High
East	Armenia	2017	SPECTRUM	High	2017	Other source	High	2017	Other source	High	2017	Other source	High
	Azerbaijan	2017	SPECTRUM	Medium	2017	Cohort data	High	2017	Cohort data	High	2017	Cohort data	High
	Belarus	2017	SPECTRUM	High	2017	Surveillance data	High	2017	Surveillance data	High	2017	Surveillance data	High
	Estonia	2015	SPECTRUM	High	NA	NA	NA	2017	Other source	High	NA	NA	NA
	Georgia	2017	SPECTRUM	High	2017	Surveillance data	High	2017	Surveillance data	High	2017	Surveillance data	High
	Kazakhstan	2016	SPECTRUM	High	2017	Surveillance data	High	2017	Surveillance data	High	2017	Surveillance data	High
	Kyrgyzstan	2017	SPECTRUM	Medium	2017	Surveillance data	High	2017	Surveillance data	High	2017	Surveillance data	High
	Lithuania	2017	SPECTRUM	High	2017	Surveillance data	High	2017	Surveillance data	High	2017	Surveillance data	High
	Moldova	2017	SPECTRUM	Medium	2017	Surveillance data	Medium	2017	Surveillance data	High	2017	Surveillance data	High
	Russia	2017	SPECTRUM	NA	2017	Surveillance data	NA	2017	Surveillance data	NA	2017	Surveillance data	NA
	Tajikistan	2017	SPECTRUM	High	2017	Surveillance data	High	2017	Surveillance data	High	NA	NA	NA
	Ukraine	2017	SPECTRUM	Medium	2017	Surveillance data	High	2017	Surveillance data	High	2017	Surveillance data	High
	Uzbekistan	NA	NA	NA	2017	Surveillance data	NA	2017	Other source	NA	2017	Surveillance data	NA

Annex 3. Continuum of care for people living with HIV in countries of Europe and Central Asia reported in 2018: exclusion of out-migration and/or deaths

WHO sub-region	Country	Outmigration				Death			
		PLHIV	Diagnosed	Treated	Virally suppressed	PLHIV	Diagnosed	Treated	Virally suppressed
West	Andorra	NA	Don't know	Don't know	NA	NA	Don't know	Don't know	NA
	Austria	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Belgium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Denmark	Partially	Partially	Partially	Partially	Partially	Partially	Partially	Partially
	Finland	No	No	NA	NA	Yes	Partially	NA	NA
	France	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Germany	Partially	Partially	Partially	Yes	Yes	Yes	Yes	Yes
	Greece	Don't know	Don't know	Don't know	NA	Don't know	Partially	Partially	NA
	Ireland	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Israel	Partially	Partially	Partially	NA	Partially	Partially	Partially	NA
	Italy	No	No	No	No	Yes	Yes	Yes	Yes
	Luxembourg	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Malta	Partially	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Monaco	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Netherlands	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Portugal	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Spain	No	No	No	No	Yes	No	No	No
	Sweden	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Switzerland	Partially	Partially	Partially	Partially	Partially	Partially	Partially	Partially
	United Kingdom	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Centre	Albania	Don't know	Yes	Yes	Yes	Don't know	Yes	Yes	Yes
	Bulgaria	No	No	No	No	Partially	Partially	Partially	Partially
	Croatia	Partially	Partially	Partially	Partially	Yes	Yes	Yes	Yes
	Czech Republic	No	No	No	No	Yes	Yes	Yes	Yes
	Kosovo	NA	NA	NA	Yes	NA	NA	NA	Yes
	The former Yugoslav Republic of Macedonia	Partially	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Montenegro	Don't know	Yes	Yes	Yes	Don't know	Yes	Yes	Yes
	Romania	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Serbia	Don't know	No	No	NA	Partially	Yes	Yes	NA
	Slovakia	Partially	Partially	Partially	NA	Yes	Yes	Yes	NA
	Slovenia	Partially	Partially	Partially	Partially	Partially	Partially	Partially	Partially
East	Armenia	No	No	No	No	Yes	Yes	Yes	Yes
	Azerbaijan	Don't know	Yes	Yes	Yes	Don't know	Yes	Yes	Yes
	Belarus	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Estonia	No	Yes	Yes	NA	Yes	Yes	Yes	NA
	Georgia	Don't know	Yes	Yes	Yes	Don't know	Yes	Yes	Yes
	Kazakhstan	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Kyrgyzstan	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Lithuania	Partially	Partially	Partially	Partially	Yes	Yes	Yes	Yes
	Moldova	No	Yes	Yes	Yes	Partially	Yes	Yes	Yes
	Tajikistan	Yes	Yes	Yes	NA	Yes	Yes	Yes	NA
	Ukraine	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

***Colour coding:** green indicates that a country was able to exclude out-migration or deaths for all four stages of the continuum, amber indicates that a country was able to partially exclude out-migration or deaths and red indicates that the country respondent was unable to exclude out-migration or deaths (or was unable to confirm that this was the case).

Annex 4. Continuum of care for people living with HIV in the countries of Europe and Central Asia: number of people and global substantive targets reported in 2016 and 2018

WHO sub-region	Country	2018							2016						
		Number				Global substantive targets			Number				Global substantive targets		
		PLHIV	Diagnosed	Treated	Virally suppressed	% of PLHIV who are diagnosed	% of PLHIV who are on ART	% of PLHIV who are virally suppressed	PLHIV	Diagnosed	Treated	Virally suppressed	% of PLHIV who are diagnosed	% of PLHIV who are on ART	% of PLHIV who are virally suppressed
West	Andorra		68	68											
	Austria	7079	6537	6145	5223	92%	87%	74%	6,527	5,745	4,891	3,718	88%	75%	57%
	Belgium	18758	15885	13763	12759	85%	73%	68%	17,744	14,977	12,540	11,965	84%	71%	67%
	Denmark	6000	5500	5300	5200	92%	88%	87%	5,500	5,000	4,700	4,400	91%	85%	80%
	Finland	3880	3401			88%									
	France	156600	132400	120700	116600	85%	77%	74%	153,100	128,300	114,825	104,108	84%	75%	68%
	Germany	86100	74800	68800	65500	87%	80%	76%	84,700	72,000	60,700	56,400	85%	72%	67%
	Greece	16665	13866	9594		83%	58%		14,200	11,096	7,488	5,499	78%	53%	39%
	Iceland														
	Ireland	7205	6276	5227	4986	87%	73%	69%	6,180	5,253	4,728		85%	77%	
	Israel	8039	7448	5087		93%	63%		6,720	7,171	4,928		107%	73%	
	Italy	130000	114400	100000	87000	88%	77%	67%	127,324	112,222	98,755	85,917	88%	78%	67%
	Liechtenstein														
	Luxembourg	1081	919	812	751	85%	75%	69%	1,065	927	696	635	87%	65%	60%
	Malta	453	340	340	298	75%	75%	66%	394	295	284	244	75%	72%	62%
	Monaco	47	47	47	47	100%	100%	100%							
	Netherlands	22900	20264	18599	17580	88%	81%	77%	22,900	20,083	17,721	16,456	88%	77%	72%
	Norway														
	Portugal	38959	35709	31000	28007	92%	80%	72%	59,365	41,793	28,020	21,965	70%	47%	37%
	Spain	146000	120000	116408	103000	82%	80%	71%	141,000	115,620	106,370	96,606	82%	75%	69%
	Sweden	8320	7489	7261	6930	90%	87%	83%	7,718	6,946	6,605	6,299	90%	86%	82%
	Switzerland	16600	15000	14400	13900	90%	87%	84%	16,500	13,500	12,300	11,900	82%	75%	72%
	United Kingdom	101400	91987	88089	85446	91%	87%	84%	101,200	87,700	83,900	78,900	87%	83%	78%
	Total*	**776086**	**672336**	**611640**	**553227**	**87%**	**80%**	**74%**	**772137**	**648628**	**569451**	**505012**	**84%**	**74%**	**67%**
Centre	Albania	1300	891	568	312	69%	44%	55%	1,400	698	456	144	50%	33%	10%
	Bulgaria	2862	2410	1198	689	84%	42%	24%	3,543	2,267	824	715	64%	23%	20%
	Croatia	1533	1077	919	822	70%	60%	54%	1,680	1,097	953	834	65%	57%	50%
	Cyprus														
	Czech Republic	3230	2533	1800	1660	78%	56%	51%		2,281	1,616	1,367			
	Hungary														
	Kosovo				15										
	The former Yugoslav Republic of Macedonia	383	246	198	191	64%	52%	50%							

WHO sub-region	Country	2018							2016						
		Number				Global substantive targets			Number				Global substantive targets		
		PLHIV	Diagnosed	Treated	Virally suppressed	% of PLHIV who are diagnosed	% of PLHIV who are on ART	% of PLHIV who are virally suppressed	PLHIV	Diagnosed	Treated	Virally suppressed	% of PLHIV who are diagnosed	% of PLHIV who are on ART	% of PLHIV who are virally suppressed
	Montenegro	437	201	140	121	46%	32%	28%	194	147	99	68	76%	51%	35%
	Poland														
	Romania	17000	15009	11570	8409	88%	68%	49%	14,000	13,766	10,551	5,386	98%	75%	38%
	Serbia	2700	2441	1724		90%	64%		3,100	1,956	1,300	1,235	63%	42%	40%
	Slovakia	995	756	540		76%	54%		850	674			79%		
	Slovenia	987	670	533	530	68%	54%	54%		541	492	406			
	Turkey														
	Total*	**31427**	**26234**	**19190**	**12749**	**85%**	**62%**	**45%**	**20817**	**17975**	**12883**	**7147**	**86%**	**62%**	**34%**
East	Armenia	3400	2265	1530	1304	67%	45%	38%	3,600	1,714	941	638	48%	26%	18%
	Azerbaijan	8003	5661	4207	1778	71%	53%	22%	8,798	4,704	2,960	1,542	53%	34%	18%
	Belarus	26120	19231	11242	7253	74%	43%	28%							
	Estonia	7900		4109			52%		11,000	9,263	3,715		84%	34%	
	Georgia	10500	5090	4144	3383	48%	39%	32%	9,600	4,339	3,044	2,369	45%	32%	25%
	Kazakhstan	26000	20841	11482	6338	80%	44%	24%	23,000	17,726	6,285	3,416	77%	27%	15%
	Kyrgyzstan	8500	5805	3237	1995	68%	38%	23%	8,500	4,767	2,109	1,030	56%	25%	12%
	Latvia														
	Lithuania	2761	2601	780	609	94%	28%	22%	3,100	2,173	646		84%	34%	
	Moldova	15132	11887	5162	3324	79%	34%	22%	17,985	10,213	3,850	2,667	57%	21%	15%
	Russia	998525	808823	319613	271671	81%	32%	27%							
	Tajikistan	15000	7516	4942		50%	33%		16,000	6,117	3,135	995	38%	20%	6%
	Ukraine	244000	136378	98237	57010	56%	40%	23%	223,000	126,604	60,753		57%	27%	
	Uzbekistan		21364	20281	17530				36,553	19,026	13,186		52%	36%	
	Total*	**1365841**	**1047462**	**488966**	**372195**	**72%**	**42%**	**25%**	**71483**	**43463**	**19189**	**11662**	**61%**	**27%**	**16%**
Grand total*		**2173354**	**1746032**	**1119796**	**938171**	**85%**	**76%**	**69%**	**837337**	**686546**	**584379**	**518322**	**82%**	**70%**	**62%**

* Totals and subtotals only include numbers where all four elements of the continuum of care were reported in both 2016 and 2018. Grey areas denote no data provided.

Annex 5. Summary of the global substantive and 90:90:90 continuum of HIV care outcomes for key populations, Europe and Central Asia, reported in 2018

			Numbers				90-90-90 Targets			Global Substantive Targets		
Key population	WHO region	Country	MSMLHIV	Diagnosed	Treated	Virally suppressed	% of MSMLHIV who are diagnosed	% of diagnosed MSMLHIV who are on ART	% on ART who are virally suppressed	% of all MSMLHIV who are diagnosed	% of all MSMLHIV who are treated	% of all MSMLHIV who are virally suppressed
MSM	West	Andorra	-	-	-	-	-	-	-	-	-	-
		Austria	2920	2709	2546	2190	93%	94%	86%	90%	74%	63%
		Belgium	-	5977	5171	5022	-	87%	97%	-	-	-
		Denmark	-	-	-	-	-	-	-	-	-	-
		Finland	1084	1035	-	-	95%	-	-	95%	-	-
		France	61700	52500	48000	46900	85%	91%	98%	85%	78%	76%
		Germany	59000	49800	-	-	84%	94%[27]	95%[1]	84%	-	-
		Greece	-	6671	5776	-	-	87%	-	-	-	-
		Iceland	-	-	-	-	-	-	-	-	-	-
		Ireland	-	-	-	-	-	-	-	-	-	-
		Israel	2038	1941	-	-	95%	-	-	95%	-	-
		Italy	-	-	-	-	-	-	-	-	-	-
		Liechtenstein	-	-	-	-	-	-	-	-	-	-
		Luxembourg	421	358	326	315	85%	91%	97%	85%	77%	75%
		Malta	-	210	-	-	-	-	-	-	-	-
		Monaco	-	-	-	-	-	-	-	-	-	-
		Netherlands	13800	12421	11673	11157	90%	94%	96%	90%	85%	81%
		Norway	-	-	-	-	-	-	-	-	-	-
		Portugal	-	7138	-	-	-	-	-	-	-	-
		Spain	-	-	-	-	-	-	-	-	-	-
		Sweden	-	2319	2291	2134	-	99%	93%	-	-	-
		Switzerland	-	-	-	-	-	96%	99%	-	-	-
		United Kingdom	46000	39900	38700	37500	87%	97%	97%	87%	84%	82%
		Total*	**124841**	**107888**	**101245**	**98062**	**86%**	**94%**	**97%**	**86%**	**81%**	**79%**
MSM	Centre	Albania	-	-	-	-	-	-	-	-	-	-
		Bulgaria	-	-	451	331	-	-	73%	-	-	-
		Croatia	-	-	-	-	-	-	-	-	-	-
		Cyprus	-	-	-	-	-	-	-	-	-	-
		Czech Republic	2130	1790	1330	1250	84%	74%	94%	84%	62%	59%

[27] Germany: The percentages for stage 2/3 and stage 3/4 are extracted from EMIS 2017. Since this is cohort data and extrapolated, absolute numbers were not submitted. This data was therefore not included in the calculations for the substantive targets or the sub-totals and totals.

			Numbers				90-90-90 Targets			Global Substantive Targets		
Key population	WHO region	Country	MSMLHIV	Diagnosed	Treated	Virally suppressed	% of MSMLHIV who are diagnosed	% of diagnosed MSMLHIV who are on ART	% on ART who are virally suppressed	% of all MSMLHIV who are diagnosed	% of all MSMLHIV who are treated	% of all MSMLHIV who are virally suppressed
		Hungary	-	-	-	-	-	-	-	-	-	-
		Kosovo	-	-	-	-	-	-	-	-	-	-
		The former Yugoslav Republic of Macedonia	321	162	141	134	50%	87%	95%	50%	44%	42%
		Montenegro	-	-	-	-	-	-	-	-	-	-
		Romania	-	-	-	-	-	-	-	-	-	-
		Serbia	-	-	-	-	-	-	-	-	-	-
		Slovakia	645	490	351	-	76%	72%	-	76%	54%	-
		Slovenia	-	-	-	-	-	-	-	-	-	-
		Turkey	-	-	-	-	-	-	-	-	-	-
		Poland	-	-	-	-	-	-	-	-	-	-
		Total*	**2451**	**1952**	**1471**	**1384**	**80%**	**75%**	**94%**	**80%**	**60%**	**56%**
MSM	East	Armenia	-	-	-	-	-	-	-	-	-	-
		Azerbaijan	707	148	82	73	21%	55%	89%	21%	12%	10%
		Belarus	4621	4621	1000	900	100%	22%	90%	100%	22%	19%
		Estonia	-	-	-	-	-	-	-	-	-	-
		Georgia	-	640	479	389	-	75%	81%	-	-	-
		Kazakhstan	-	453	286	173	-	63%	60%	-	-	-
		Kyrgyzstan	-	-	-	-	-	-	-	-	-	-
		Latvia	-	-	-	-	-	-	-	-	-	-
		Lithuania	-	-	-	-	-	-	-	-	-	-
		Moldova	-	-	-	-	-	-	-	-	-	-
		Russia	-	-	-	-	-	-	-	-	-	-
		Tajikistan	-	-	-	-	-	-	-	-	-	-
		Ukraine	-	-	-	-	-	-	-	-	-	-
		Uzbekistan	-	-	-	-	-	-	-	-	-	-
		Total*	**5328**	**4769**	**1082**	**973**	**90%**	**23%**	**90%**	**90%**	**20%**	**18%**
		Grand total*	**132620**	**114609**	**103798**	**100419**	**86%**	**91%**	**97%**	**86%**	**78%**	**76%**
PWID	West	Andorra	-	-	-	-	-	-	-	-	-	-
		Austria	980	997	877	657	103%	93%	82%	94%	83%	67%
		Belgium	-	293	208	189	-	71%	91%	-	-	-
		Denmark	-	-	-	-	-	-	-	-	-	-
		Finland	315	302	-	-	96%	-	-	96%	54%	52%
		France	12100	11800	11000	10700	98%	93%	97%	98%	91%	88%
		Germany	9100	8300	-	-	91%	-	93%[28]	-	-	-
		Greece	-	1660	1187	-	-	72%	-	-	-	-
		Iceland	-	-	-	-	-	-	-	-	-	-

[28] Germany: The percentage for stage 3/4 is extracted from cohort data and the number of PWIDs taking ART cannot be determined from ART prescription data because these data do not contain information on transmission risk. This percentage was therefore not included in the calculations for the substantive targets or the sub-totals and totals.

			Numbers				90-90-90 Targets			Global Substantive Targets		
Key population	WHO region	Country	MSMLHIV	Diagnosed	Treated	Virally suppressed	% of MSMLHIV who are diagnosed	% of diagnosed MSMLHIV who are on ART	% on ART who are virally suppressed	% of all MSMLHIV who are diagnosed	% of all MSMLHIV who are treated	% of all MSMLHIV who are virally suppressed
		Ireland	-	-	-	-	-	-	-	-	-	-
		Israel	938	849	-	-	11.4%	-	-	-	-	-
		Italy	-	-	-	-	-	-	-	-	-	-
		Liechtenstein	-	-	-	-	-	-	-	-	-	-
		Luxembourg	127	108	95	89	85%	88%	94%	85%	75%	70%
		Malta	-	3	3	-	-	100%	-	-	-	-
		Monaco	-	-	-	-	-	-	-	-	-	-
		Netherlands	-	-	-	-	-	-	-	-	-	-
		Norway	-	-	-	-	-	-	-	-	-	-
		Portugal	9420	8839	-	-	94%	-	-	-	-	-
		Spain	-	-	-	-	-	-	-	-	-	-
		Sweden	-	397	373	336	-	94%	90%	-	-	-
		Switzerland	-	-	-	-	-	97%[29]	98%[3]	-	-	-
		United Kingdom	2490	1870	1700	1600	75%	91%	94%	75%	68%	64%
		Total*	**3597**	**2975**	**2672**	**2346**	**83%**	**90%**	**88%**	**83%**	**74%**	**65%**
PWID	Centre	Albania	-	-	-	-	-	-	-	-	-	-
		Bulgaria	-	382	134	42	-	35%	31%	-	-	-
		Croatia	-	-	-	-	-	-	-	-	-	-
		Cyprus	-	-	-	-	-	-	-	-	-	-
		Czech Republic	-	-	-	-	-	-	-	-	-	-
		Hungary	-	-	-	-	-	-	-	-	-	-
		Kosovo	-	-	-	-	-	-	-	-	-	-
		The former Yugoslav Republic of Macedonia	-	-	-	-	-	-	-	-	-	-
		Montenegro	-	-	-	-	-	-	-	-	-	-
		Romania	-	-	-	-	-	-	-	-	-	-
		Serbia	-	-	-	-	-	-	-	-	-	-
		Slovakia	-	-	-	-	-	-	-	-	-	-
		Slovenia	-	-	-	-	-	-	-	-	-	-
		Turkey	-	-	-	-	-	-	-	-	-	-
		Poland	-	-	-	-	-	-	-	-	-	-
		Total*										
PWID	East	Armenia	-	-	-	-	-	-	-	-	-	-
		Azerbaijan	3749	3006	1268	698	80%	42%	55%	80%	34%	19%
		Belarus	10033	10033	1185	9	100%	12%	0.09%	100%	12%	0%
		Estonia	-	-	-	-	-	-	-	-	-	-

[29] Switzerland: The percentages for stage 2/3 and stage 3/4 are based on cohort data and extrapolated so absolute numbers were not provided. This data was therefore not included in the calculations for the substantive targets or the sub-totals and totals.

			Numbers				90-90-90 Targets			Global Substantive Targets		
Key population	WHO region	Country	MSMLHIV	Diagnosed	Treated	Virally suppressed	% of MSMLHIV who are diagnosed	% of diagnosed MSMLHIV who are on ART	% on ART who are virally suppressed	% of all MSMLHIV who are diagnosed	% of all MSMLHIV who are treated	% of all MSMLHIV who are virally suppressed
		Georgia	-	1843	1435	1173	-	78%	82%	-	-	-
		Kazakhstan	11500	9138	4340	2318	79%	47%	53%	79%	38%	20%
		Kyrgyzstan	-	-	-	-	-	-	-	-	-	-
		Latvia	-	-	-	-	-	-	-	-	-	-
		Lithuania	-	-	-	-	-	-	-	-	-	-
		Moldova	-	-	-	-	-	-	-	-	-	-
		Russia	-	-	-	-	-	-	-	-	-	-
		Tajikistan	-	-	-	-	-	-	-	-	-	-
		Ukraine	-	-	-	-	-	-	-	-	-	-
		Uzbekistan	-	-	-	-	-	-	-	-	-	-
		Total*	**25282**	**22177**	**6793**	**3025**	**88%**	**31%**	**45%**	**88%**	**27%**	**12%**
		Grand total*	**28879**	**25152**	**9465**	**5371**	**87%**	**38%**	**57%**	**87%**	**33%**	**19%**
Migrants	West	Andorra	-	-	-	-	-	-	-	-	-	-
		Austria	2744	2376	2186	1792	87%	92%	82%	87%	80%	65%
		Belgium	-	6092	4991	4682	-	82%	94%	-	-	-
		Denmark	-	-	-	-	-	-	-	-	-	-
		Finland	1632	1364			84%			84%	0%	0%
		France	49700	39400	35000	33200	82%	89%	96%	79%	70%	67%
		Germany	-	12080	-	-	-	-	93%[30]	-	-	-
		Greece	-	2818	1408	-	-	50%	-	-	-	-
		Iceland	-	-	-	-	-	-	-	-	-	-
		Ireland	-	-	-	-	-	-	-	-	-	-
		Israel	4147	5413	-	-	73%	-	-	-	-	-
		Italy	-	-	-	-	-	-	-	-	-	-
		Liechtenstein	-	-	-	-	-	-	-	-	-	-
		Luxembourg	767	652	576	522	85%	88%	80%	85%	75%	68%
		Malta	-	281	-	-	-	-	-	-	-	-
		Monaco	-	-	-	-	-	-	-	-	-	-
		Netherlands	-	-	-	-	-	-	-	-	-	-
		Norway	-	-	-	-	-	-	-	-	-	-
		Portugal	-	-	-	-	-	-	-	-	-	-
		Spain	-	-	-	-	-	-	-	-	-	-
		Sweden	-	4692	4510	4175	-	96%	93%	-	-	-
		Switzerland	-	-	-	-	-	95%[31]	97%[5]	-	-	-
		United Kingdom	19700	18700	18000	17400	95%	96%	97%	95%	91%	88%
		Total*	**72911**	**61128**	**55762**	**52914**	**84%**	**91%**	**95%**	**84%**	**76%**	**73%**

[30] Germany: The percentage for stage 3/4 is extracted from cohort data and so absolute numbers were not provided. This data was therefore not included in the calculations for the substantive targets or the sub-totals and totals.
[31] Switzerland: The percentages for stage 2/3 and stage 3/4 are based on cohort data and extrapolated so absolute numbers were not provided. This data was therefore not included in the calculations for the substantive targets or the sub-totals and totals.

			Numbers				90-90-90 Targets			Global Substantive Targets		
Key population	WHO region	Country	MSMLHIV	Diagnosed	Treated	Virally suppressed	% of MSMLHIV who are diagnosed	% of diagnosed MSMLHIV who are on ART	% on ART who are virally suppressed	% of all MSMLHIV who are diagnosed	% of all MSMLHIV who are treated	% of all MSMLHIV who are virally suppressed
Migrants	Centre	Albania	-	-	-	-	-	-	-	-	-	-
		Bulgaria	-	-	-	-	-	-	-	-	-	-
		Croatia	-	-	-	-	-	-	-	-	-	-
		Cyprus	-	-	-	-	-	-	-	-	-	-
		Czech Republic	948	607	350	320	64%	58%	91%	64%	37%	34%
		Hungary	-	-	-	-	-	-	-	-	-	-
		Kosovo	-	-	-	-	-	-	-	-	-	-
		The former Yugoslav Republic of Macedonia	1	-	-	-	-	-	-	-	-	-
		Montenegro	-	-	-	-	-	-	-	-	-	-
		Romania	-	-	-	-	-	-	-	-	-	-
		Serbia	-	-	-	-	-	-	-	-	-	-
		Slovakia	-	20	15	-	-	75%	-	-	-	-
		Slovenia	-	-	-	-	-	-	-	-	-	-
		Turkey	-	-	-	-	-	-	-	-	-	-
		Poland	-	-	-	-	-	-	-	-	-	-
		Total*	**948**	**607**	**350**	**320**	**64%**	**58%**	**91%**	**64%**	**37%**	**34%**
Migrants	East	Armenia	-	-	-	-	-	-	-	-	-	-
		Azerbaijan	-	-	-	-	-	-	-	-	-	-
		Belarus	-	-	-	-	-	-	-	-	-	-
		Estonia	-	-	-	-	-	-	-	-	-	-
		Georgia	-	-	-	-	-	-	-	-	-	-
		Kazakhstan	-	-	-	-	-	-	-	-	-	-
		Kyrgyzstan	-	-	-	-	-	-	-	-	-	-
		Latvia	-	-	-	-	-	-	-	-	-	-
		Lithuania	-	-	-	-	-	-	-	-	-	-
		Moldova	-	-	-	-	-	-	-	-	-	-
		Russia	-	-	-	-	-	-	-	-	-	-
		Tajikistan	-	-	-	-	-	-	-	-	-	-
		Ukraine	-	-	-	-	-	-	-	-	-	-
		Uzbekistan	-	-	-	-	-	-	-	-	-	-
		Total*	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
		Grand total*	**73859**	**61735**	**56112**	**53234**	**84%**	**91%**	**95%**	**84%**	**76%**	**72%**

* Totals and subtotals only include numbers where all four elements of the continuum of care were reported.

European Centre for Disease Prevention and Control (ECDC)

Gustav III:s Boulevard 40
169 73 Solna, Sweden

Tel. +46 858 60 1000
Fax +46 858 60 1001
www.ecdc.europa.eu

An agency of the European Union
www.europa.eu

Subscribe to our publications
www.ecdc.europa.eu/en/publications

Contact us
publications@ecdc.europa.eu

Follow us on Twitter
@ECDC_EU

Like our Facebook page
www.facebook.com/ECDC.EU

ECDC is committed to ensuring the transparency and independence of its work

In accordance with the Staff Regulations for Officials and Conditions of Employment of Other Servants of the European Union and the ECDC Independence Policy, ECDC staff members shall not, in the performance of their duties, deal with a matter in which, directly or indirectly, they have any personal interest such as to impair their independence. Declarations of interest must be received from any prospective contractor(s) before any contract can be awarded.
www.ecdc.europa.eu/en/about-us/transparency

HOW TO OBTAIN EU PUBLICATIONS

Free publications:

- one copy:
  EU Publications (http://publications.europa.eu)
- more than one copy or posters/maps:
  from the European Union's representations (http://ec.europa.eu/represent_en.htm);
  from the delegations in non-EU countries (http://eeas.europa.eu/delegations/index_en.htm);
  by contacting the Europe Direct service (http://europa.eu/europedirect/index_en.htm) or calling 00 800 6 7 8 9 10 11 (freephone number from anywhere in the EU) (*).
  (*) The information given is free, as are most calls (though some operators, phone boxes or hotels may charge you).

Priced publications:

- EU Publications (http://publications.europa.eu).

Publications Office