European AIDS Treatment Group

ageing with HIV

Testing in children and adolescents

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1. Global status of HIV

Global AIDS Update Report
June 2016

- In June 2016 The United Nations General Assembly adopted a Fast-Track Strategy to put an end to AIDS epidemic by 2030.

- The main objectives are: the reduction of new HIV infections to less than 50.000 cases by 2020, decline in the AIDS-related deaths below 50.000 by 2020 and elimination of HIV- related stigma and discrimination by 2020.

- In this context, the Global AIDS Update Report released the status of HIV in 2015, enhancing both the progresses and the remaining barriers in achieving the abovementioned HIV/AIDS targets.

Source: Global AIDS Update. UNAIDS 2016, p.3

- In 2015, approximately 33 million people were living with HIV/AIDS globally.
- Of them, about 1.5 million persons were reported in Eastern Europe and Central Asia and 2.4 million in Western and Central Europe and in North America.
- In terms of access to treatment, the evidence suggests 46% coverage worldwide, with 21% coverage in Eastern Europe and Central Asia and in Western and Central Europe and North America more than 50%.
- From the standpoint of new infections, the figures suggest a total of 1.9 million new infections annually.

Source: Global AIDS Update. UNAIDS 2016

Global summary of the AIDS epidemic | 2015

Number of people living with HIV	Total	36.7 million [34.0 million–39.8 million]
	Adults	34.9 million [32.4 million–37.9 million]
	Women	17.8 million [16.4 million–19.4 million]
	Children (<15 years)	1.8 million [1.5 million–2.0 million]
People newly infected with HIV in 2015	Total	2.1 million [1.8 million–2.4 million]
	Adults	1.9 million [1.7 million–2.2 million]
	Children (<15 years)	150 000 [110 000–190 000]
AIDS-related deaths in 2015	Total	1.1 million [940 000–1.3 million]
	Adults	1.0 million [840 000–1.2 million]
	Children (<15 years)	110 000 [84 000–130 000]

UNAIDS

Source: Global AIDS Update. UNAIDS 2016, p. 7

About 5700 new HIV infections (adults and children) a day | 2015

- About 66% are in sub-Saharan Africa
- About 400 are among children under 15 years of age
- About 5300 are among adults aged 15 years and older, of whom:
  - almost 47% are among women
  - about 35% are among young people (15–24)
  - about 20% are among young women (15–24)

Source: Global AIDS Update. UNAIDS 2016, p. 9

2. Paediatric HIV epidemiology in Europe

ECDC' Surveilance Report for 2015...

- In 2015, 153407 people were newly diagnosed with HIV in 50 of the 53 countries in the WHO European Region which corresponds to a rate of 17.6 newly diagnosed infections per 100000 population. (1)

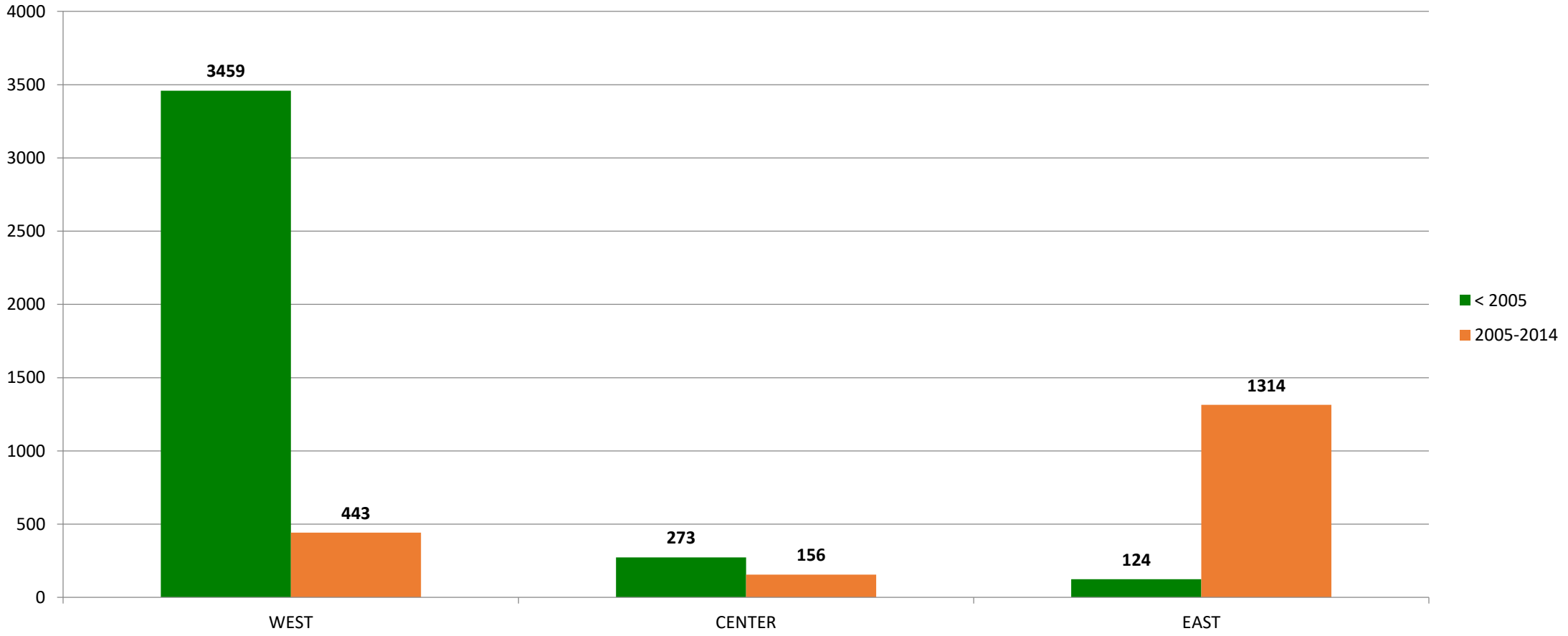
- **1 in 7 people living with HIV in the EU/EEA do not know they are infected** (2)

- ECDC estimates that currently around 122 000 people living with HIV across the region are unaware of their infection. The estimated time between HIV infection and diagnosis is four years. (1)

Sources:

1. HIV/AIDS Surveillance in Europe 2015, p. Ix
2. http://ecdc.europa.eu/en/press/news/_layouts/forms/News_DispForm.aspx?ID=1517&List=8db7286c-fe2d-476c-9133-18ff4cb1b568&Source=http%3A%2F%2Fecdc%2Eeuropa%2Eeu%2Fen%2Fhealthtopics%2Faids%2FPages%2Findex%2Easpx

Mother to child transmission
Comparison by European Regions
Number of AIDS cases reported in 2005-2014



Source: HIV/AIDS Surveillance in Europe 2015

Children and young people with perinatal HIV in Europe: epidemiological situation in 2014 and implications for the future

Writing group for the Kids to Adults Working Group and Data Management and Harmonisation Group in EuroCoord [1]

1. The members of the writing group are listed at the end of the article

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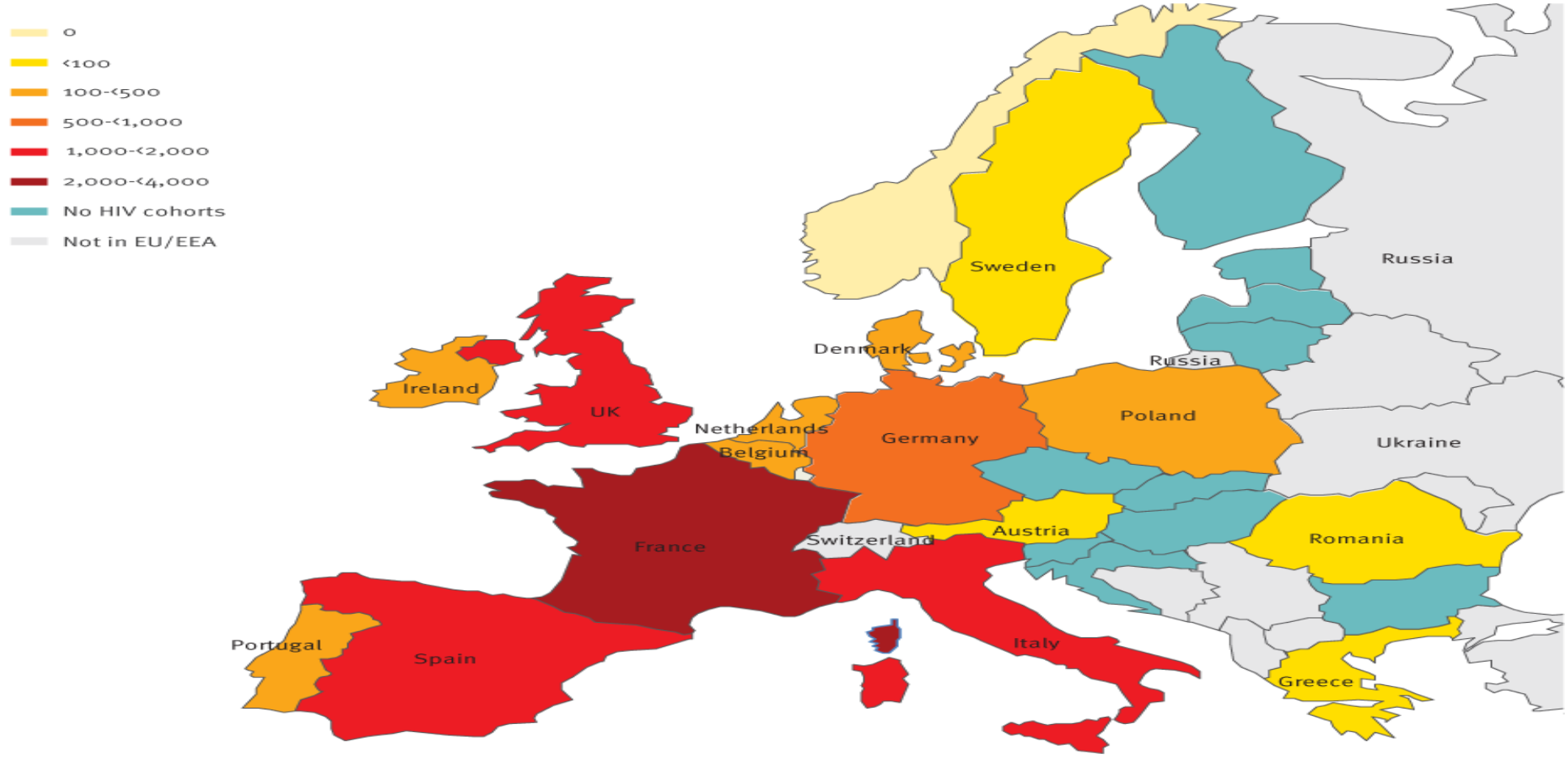
At the end of 2013, 16 countries in EuroCoord reported 8,229 pHIV patients in follow-up in cohorts, compared with 5,160 cumulative diagnoses reported by the ECDC in the same area.

It is likely that the number of diagnoses of perinatal HIV reported to ECDC is an underestimate, although this varies by country. Further work is needed to refine estimates and encourage follow-up in adult HIV cohorts to investigate long-term outcomes and improve the care of the next generation of children with HIV.

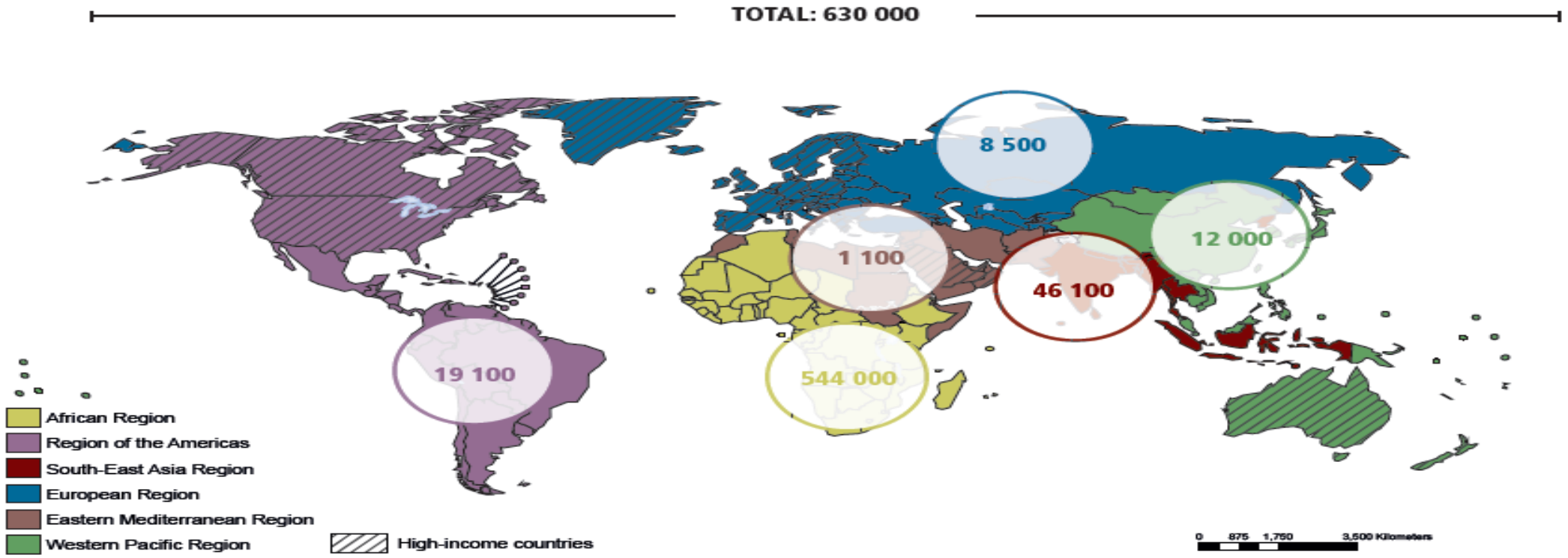
Source:
http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=21410

Number of perinatal patients in HIV cohorts in countries in the EU/EEA area, to end of 2013 (n = 8,229)



Source: EuroCoord. Children and young people with perinatal HIV in Europe: epidemiological situation in 2014 and implications for the future. Euro Surveill.
http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=21410

Number of children receiving antiretroviral therapy in low- and middle-income countries
http://www.who.int/hiv/topics/paediatric/data/en/index2.html
WHO Paediatric HIV data and statistics 2013



Source: Global AIDS Response Progress Reporting (WHO/UNICEF/UNAIDS).

3. HIV testing services

WHO's definitions on core elements for HIV testing:

Age groups and populations

The following definitions for adults, adolescents, children and infants are used in these guidelines for the purpose of implementing recommendations for specific age groups. It is acknowledged that countries may have other definitions under national laws:

- An **adult** is a person older than 19 years of age.
- An **adolescent** is a person 10–19 years of age inclusive.
- A **child** is a person 1 to younger than 10 years of age.
- An **infant** is a child younger than 1 year of age.

Sources: WHO Guidelines- Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection. *p* xiii

Key populations are groups that have a high risk and disproportionate burden of HIV in all epidemic settings. They frequently face legal and social challenges that increase their vulnerability to HIV, including barriers to accessing HIV prevention, treatment and other health and social services. Key populations include (1) men who have sex with men, (2) people who inject drugs, (3) people in prisons and closed settings, (4) sex workers and (5) transgender people.

Vulnerable populations are groups of people that are vulnerable to HIV in certain situations or contexts, such as adolescents (especially adolescent girls in sub-Saharan Africa), orphans, people with disabilities and migrant and mobile workers. They may also face social and legal barriers to accessing HIV prevention and treatment. These populations are not affected by HIV uniformly in all countries and epidemics and may include key populations. Each country should define the specific populations that are vulnerable and key to their epidemic and response, based on the epidemiological and social context.

Sources: WHO Guidelines- Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection. *p* xiv

HIV testing and prevention

Combination prevention refers to a combination of behavioural, biomedical and structural approaches to HIV prevention to achieve maximum impact on reducing HIV transmission and acquisition.

Early infant diagnosis is the testing of infants to determine their HIV status following possible exposure to HIV during pregnancy, delivery and postpartum through breastfeeding.

Point-of-care testing is conducted at or near the site at which care is being provided. The test results are usually returned rapidly so that clinical decisions can be made in a timely and cost-effective manner.

PEP of HIV is the use of ARV drugs by people who are not infected with HIV but who may have been exposed to HIV to block HIV infection.

(PrEP): Oral PrEP of HIV is the use of ARV drugs by people who are not infected with HIV to block the acquisition of HIV.

Rapid diagnostic test: in vitro immunochromatographic or immunofiltration diagnostic test for detecting HIV-1 and -2 antibodies and/or HIV p24 antigen.

Sources: WHO Guidelines- Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection. *p* xv

Romanian legislation on HIV testing & counseling

HIV testing in risk groups was implemented in 1990 (due to the local particular epidemiological situation) through Ministerial Order 1201 *"Supravegherea epidemiologica, prevenirea infectiei si asistenta medicala acordata persoanelor infectate cu virusul imunodeficientei umane"* (for children 0-13 years; adults >13 years).

Order 889/November 1998: recommends HIV testing for 9 categories of persons considered at risk for HIV infection with *pre and post –test counselling:* STD pts, pregnant women, truck drivers, sailors, people who work abroad for > 6 months, people who stay abroad >6 months, prenuptial testing.

Law 584/2002 for the protection of HIV infected persons and prevention of HIV transmission.

Law 46/2003 for patients' rights in Romania: holds a special chapter on the informed consent in the context of testing for various affections and the legal age for signing an informed consent (18 yrs). If patients are <18 years, consent must be obtained from parents or legal representatives. In emergency medical situations, when a patient is <18 years, informed consent can be signed by patients who are 16 years of age.

Sources: http://www.hivnet.ro/wp-content/uploads/2008/06/testul-hiv-si-consilierea-pre-_post-test.pdf
http://unopa.ro/files/Legislatie%20HIV.pdf

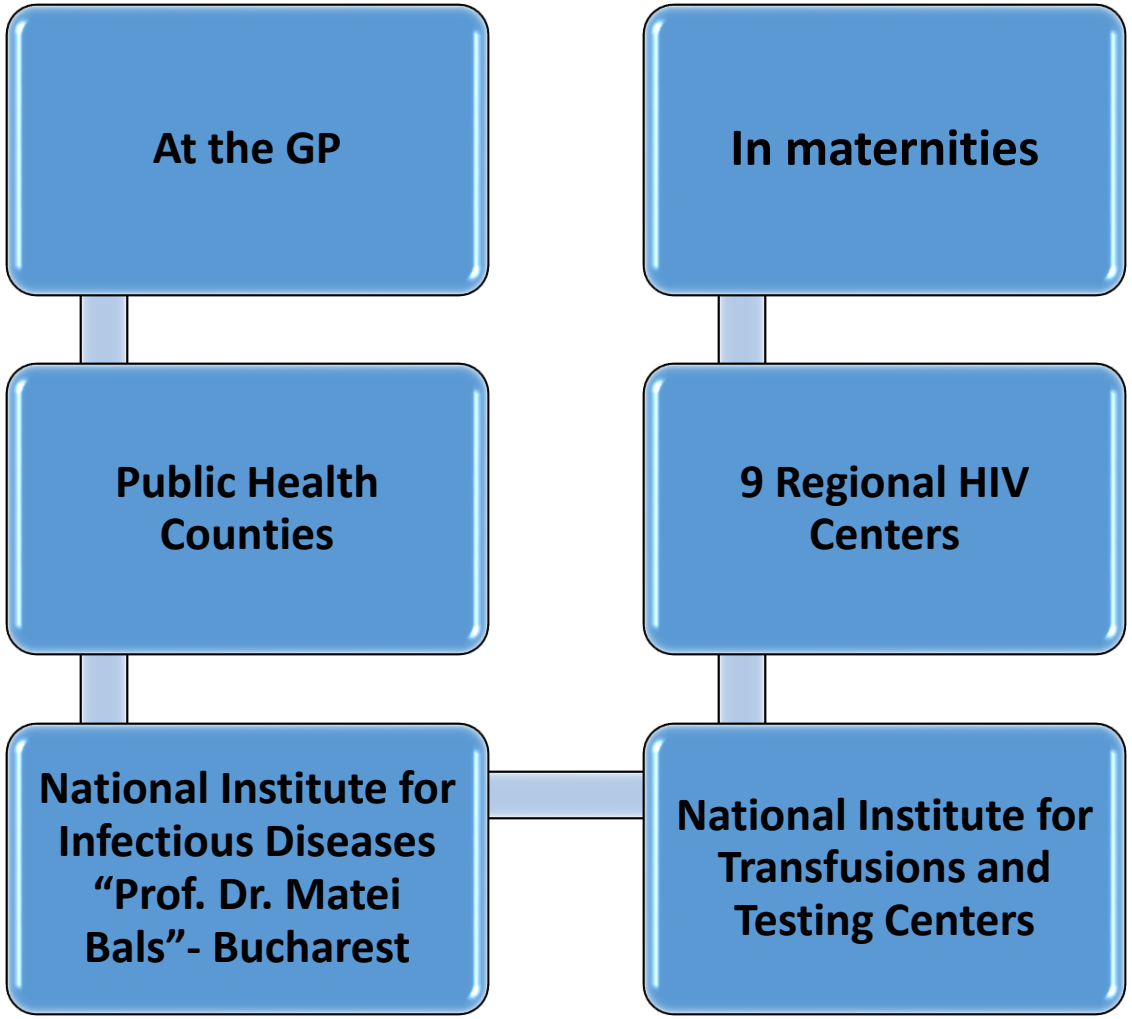
HIV assays in Romania

- Babies born to HIV-infected mothers:
  - Recommendation for testing of children, irrespective of age;
  - HIV RNA PCR at birth;
  - HIV RNA PCR at **2** weeks after cessation of PEP and a second evaluation at 6 weeks after PEP has ended.
  - HIV RNA at: 6 months, 12 months (in particular situations: 18 months of age)

- Children>18 months (not tested until this age):
  - Serological evaluation with Elisa assay, Western Blot assay , PCR.

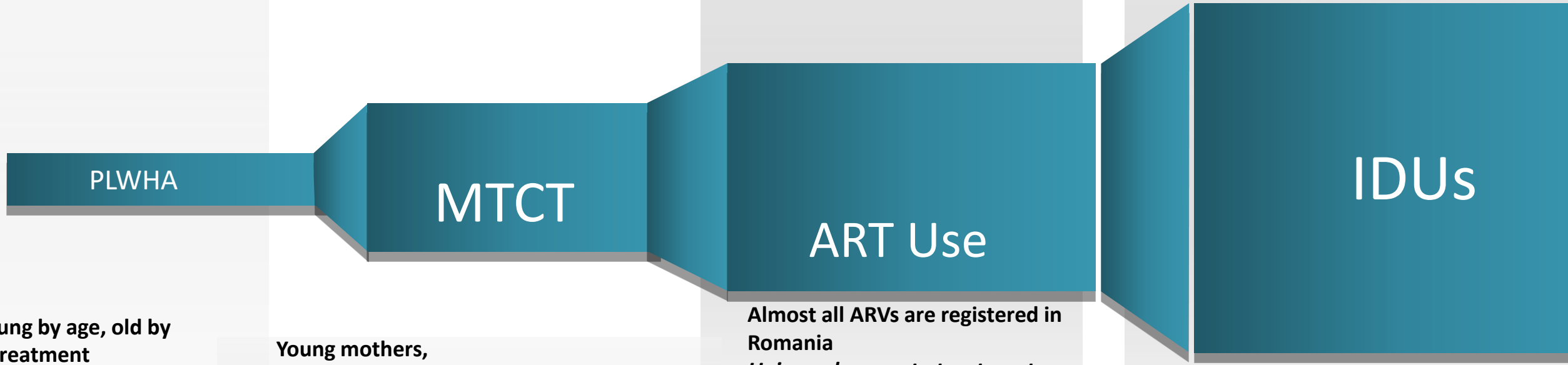
- Adolescents and young adults:
  - Rapid test: A rapid qualitative immunoassay for the detection of antibodies (IgG, IgA si IgM) generated against all subtypes of HIV-1 and HIV-2 in human serum or plasma.
  - Elisa: A 4th generation solid phase Enzyme-Linked Immunosorbent assay using a mixture of antigens and antibodies for the ,,in vitro" diagnostic screening in human serum or plasma of antibodies to HIV-1, HIV-2 and HIV-1 p24 antigen.

Where do we test for HIV in Romania?



4. Challenges in testing infants and young people in Romania

Current situation Romania 2016



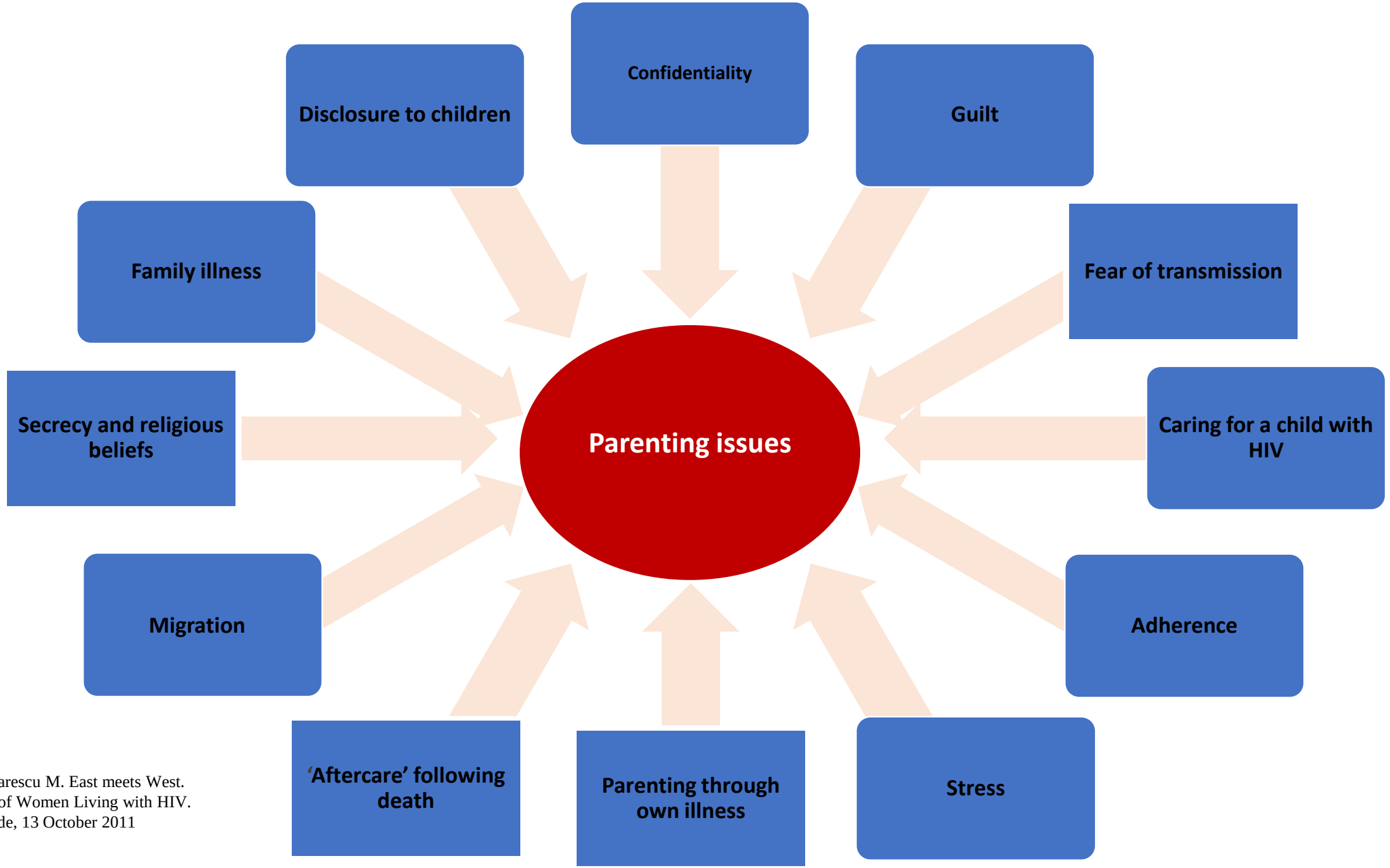
Young by age, old by treatment
Therapeutic fatigue
New cases of HIV: young persons, in their fertile age, late presenters .
MSMs: dynamic increase in no. of cases.
Aging persons by age and by HIV (aging with HIV).
A new approach HIV/HCV/TB

Young mothers, multi- experienced in ART
Mothers with unknown HIV status- should be tested and treated for HIV.
New approach for management of perinatally exposed newborns.
National Registry of the Perinatally exposed child and HIV infected women

Almost all ARVs are registered in Romania
Universal access to treatment
Treatment regardless of CD4 values.
Treatment as prevention.
Sub-optimal regimen in early childhood.
Antiretroviral associated toxicities.
Special issues in ART in young women .

New psychoactive drugs
New approach for the case management of the adult and the newborn to HIV mothers who use new drugs.
A new approach in HIV/IDU/HBV/HCV/TB and testing

Source : A. Streinu-Cercel. cnlas.ro: *Specific Challenges of the Hiv Epidemic in Romania*. EACS 2013.
M. Mardarescu. Challenges and issues in young women. 5th International Workshop on HIV&women from adolescence to menopause. 21-22 February, Seattle



Source: Mardarescu M. East meets West. Management of Women Living with HIV. EACS Belgrade, 13 October 2011

Thank you!

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