30 years of HIV experience in Romania
UNAIDS objectives

Fast-Track Targets

by 2020
90-90-90
Treatment
500 000
New infections among adults
ZERO
Discrimination

by 2030
95-95-95
Treatment
200 000
New infections among adults
ZERO
Discrimination

Source:
Europe 2013
Geographical/epidemiological division of the WHO European Region

### Characteristics of HIV diagnoses reported in the WHO European Region, the EU/EEA, and by geographical area, 2013

<table>
<thead>
<tr>
<th>Geographical areas</th>
<th>WHO European Region*</th>
<th>West</th>
<th>Centre</th>
<th>East*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reporting countries/Number of countries</td>
<td>50/53 (51/53)</td>
<td>23/23</td>
<td>15/15</td>
<td>13/15 (14/15)</td>
</tr>
<tr>
<td>Number of HIV diagnoses</td>
<td>56 507 (136 235)</td>
<td>26 847</td>
<td>4166</td>
<td>25 494 (105 222)</td>
</tr>
<tr>
<td>Rate per 100 000 population</td>
<td>7.8 (15.7)</td>
<td>6.3</td>
<td>2.2</td>
<td>22.7 (41.2)</td>
</tr>
<tr>
<td>Percentage age 15-24 years</td>
<td>10.2%</td>
<td>10.3%</td>
<td>14.4%</td>
<td>9.5%</td>
</tr>
<tr>
<td>Male-to-female ratio</td>
<td>2.2 (1.7)</td>
<td>3.3</td>
<td>4.9</td>
<td>1.3 (1.4)</td>
</tr>
</tbody>
</table>

### Transmission mode

<table>
<thead>
<tr>
<th>Transmission mode</th>
<th>WHO European Region*</th>
<th>West</th>
<th>Centre</th>
<th>East*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men who have sex with men</td>
<td>23.6% (10.1%)</td>
<td>43.1%</td>
<td>30.1%</td>
<td>2% (0.8%)</td>
</tr>
<tr>
<td>Heterosexual</td>
<td>46.1% (30.6%)</td>
<td>33.6%</td>
<td>24.8%</td>
<td>62.7% (30.0%)</td>
</tr>
<tr>
<td>Injecting drug use</td>
<td>16.2% (21.3%)</td>
<td>4.1%</td>
<td>5.9%</td>
<td>30.6% (26.3%)</td>
</tr>
<tr>
<td>Mother to child transmission</td>
<td>0.9% (0.6%)</td>
<td>0.7%</td>
<td>1.1%</td>
<td>1.1% (0.6%)</td>
</tr>
<tr>
<td>Unknown</td>
<td>13% (37.3%)</td>
<td>18.2%</td>
<td>37.9%</td>
<td>3.6% (42.2%)</td>
</tr>
</tbody>
</table>

Data received from Lichtenstein, Turkmenistan or Uzbekistan.

*Figures including Russia are presented for the WHO Region and East in (brackets)
From Dublin to Rome: 10 years of responding to HIV in Europe and Central Asia

<table>
<thead>
<tr>
<th>CD4 Threshold</th>
<th>Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>500 cells/mm³</td>
<td>Austria, Belgium, Bosnia and Herzegovina, Czech Republic, Estonia, Finland, France, Georgia, Iceland, Israel, Malta, Netherlands, Poland, Romania, Slovakia, Spain, Sweden, Turkey</td>
</tr>
<tr>
<td>350 cells/mm³</td>
<td>Albania, Armenia, Azerbaijan, Belarus, Bulgaria, Croatia, Cyprus, Denmark, Germany, Greece, Hungary, Ireland, Italy, Kazakhstan, Kosovo, Kyrgyzstan, Lithuania, Luxembourg, Moldova, Montenegro, Norway, Portugal, Serbia, Slovenia, Switzerland, Tajikistan, Ukraine, United Kingdom, Uzbekistan</td>
</tr>
<tr>
<td>200 cells/mm³</td>
<td>Latvia</td>
</tr>
<tr>
<td>No data reported</td>
<td>Andorra, The former Yugoslav Republic of Macedonia, Liechtenstein, Monaco, Russia, San Marino, Turkmenistan</td>
</tr>
</tbody>
</table>
From Dublin to Rome: 10 years of responding to HIV in Europe and Central Asia

From Dublin to Rome: 10 years of responding to HIV in Europe and Central Asia

Source:
ROMANIA 2014
• Since 1985, 20,146 cases of HIV/AIDS have been diagnosed in Romania. 65% of them were children younger than 14 years of age at the time of the diagnosis, constituting the Romanian cohort exposed to nosocomial and horizontal HIV transmission.

• 12,866 people are living with HIV/AIDS in Romania as of December 31st 2014.
  — 45% belong to the 25-29 age group accounting for the Romanian cohort born in the late 80s’.

• 2014 registered the highest number ever of new cases of HIV/AIDS:
  • Almost 2 out 3 cases were male (72%).
  • 41% of all cases were in the group age 25-34 and 21% in the group age 15-24.
  • 13 cases have been diagnosed among children younger than 4 years of age
  • 7% were among people of 50 years and older.

Source:
GARP 2015: Narrative Report Romania
Compartment for Monitoring & Evaluation of HIV/AIDS Data in National Institute for Infectious Diseases “Prof. Dr. Matei Bals”, Bucharest
As in the previous years, in 2014 the main route of HIV transmission remains the heterosexual unprotected sexual contact:
- 59% of all new cases,
- followed by injection drug use (21%) and
- MSM transmission (16%).

The majority of new cases had a low CD4 count at the time of diagnosis. 56% from the total number of new cases registered a CD4 count <350 cells/mm3.

Source:
GARP 2015: Narrative Report Romania
Compartment for Monitoring & Evaluation of HIV/AIDS Data in National Institute for Infectious Diseases “Prof. Dr. Matei Bals”, Bucharest
The IDUs diagnosed in 2014 are mostly men and 74% are between 25 and 39 years old.
- 40% of IDUs are using both heroine and new substances with psychoactive properties (known as “ethnobotanical drugs”).
- 19% are using heroine
- 11% “ethnobotanical” drugs.
- Overall, 60% mix any two or three of the following: ethnobotanical drugs, heroin, cocaine, ecstasy.
- 82% presented HIV- HCV co-infection and 16% HIV-TB co-infection.

At the end of 2014 out of 11,708 patients in active surveillance:
- 9,571 (82%) were under specific ART treatment, of which:
  - 52% of women and 47% of men had > 500 CD4/cell.

Source:
GARP 2015: Narrative Report Romania
Compartment for Monitoring & Evaluation of HIV/AIDS Data in National Institute for Infectious Diseases “Prof. Dr. Matei Bals”, Bucharest
TRENDS OF REPORTED HIV INFECTIONS,
BY TRANSMISSION MODE AND YEAR OF DIAGNOSIS WHO
EUROPEAN REGION: CENTRE 2004-2013
ARITHMETIC SCALE

TRENDS OF REPORTED HIV INFECTION,
BY TRANSMISSION MODES IN ROMANIA
2007-2014
ARITHMETIC SCALE

Source: Compartment for Monitoring and Evaluation of HIV/AIDS Infection in Romania INBI “Prof.Dr.M.Balș”
Distribution of ages

Age at the time of detection/notification
Cumulative total 1985-2014

Distribution of PLWHA by age groups 2014

Source: Compartment for Monitoring and Evaluation of HIV/AIDS Data in Romania— INBI “Prof.Dr.M.Baș”
Epidemiology/trends in the WHO European Region and in Romania 2014

Percentage of new diagnoses in the 19-24 age group, by EU/EEA countries, 2013

Distribution of PLWHA from the Romanian cohort, by age groups 2014

Source: Compartment for Monitoring and Evaluation of HIV/AIDS Data in Romania– INBI “Prof.Dr.M.Balş”
HIV in IVDU...a new epidemic?

Change in drug use

- 2009 → 97% heroin
- 2010 → 1/3 amphetamine-type stimulants
  - More frequent injections
  - More likely to share needles
  - access to sterile needles

2014: 82% HIV+HCV  1,82% HIV+HBV  8.4% HIV+HCV+HBV  24.24% STI+HI  16% TB+HIV

Compartment for Monitoring and Evaluation of HIV/AIDS Data in Romania [link]
Epidemiology/ key population /trends - WHO European Region 2013
Percentage of CD4 count <350/mm and <200/mm by mode of transmission, EU/EEA 2013 (p.5)

Figure 1: Percentage of reported cases with a CD4 cell count <350/mm³ and <200/mm³ at presentation, by transmission mode, EU/EEA, 2013 (n=17526)

Epidemiology/ key population/trends/ Percentage of CD4 count
Romania 2014

CD4 values in new HIV/AIDS cases at adults- 2014

- <350: 17%
- 351-500: 21%
- >500: 6%
- Not assessed: 56%

CD4 in IDUs diagnosed with HIV/AIDS in 2014

- <350: 62%
- 351-500: 14%
- >500: 23%
- Not assessed: 1%

Source: Component for Monitoring and Evaluation of HIV/AIDS Infection in Romania INBI “Prof.Dr.M.Balș”
ADULTS (≥ 15 YEARS):
NUMBER OF ARV SCHEMES, PRIOR TO THE CURRENT ONE
CD4 values in patients in ART, by gender

Male
- < 350: 47%
- 351-500: 34%
- > 500: 19%

Female
- < 350: 52%
- 351-500: 30%
- > 500: 18%

Source: Compartiment for Monitoring and Evaluation of HIV/AIDS Infection in Romania INBI “Prof.Dr.M.Balș”
ART schemes at 31 December 2014

Assessment on 7200 patients.
Currently the entire cohort is under assessment, in terms of treatment, for 2014.

Source: Compartment for Monitoring and Evaluation of HIV/AIDS Infection in Romania INBI “Prof.Dr.M.Baľš”
Distribution of the three most common AIDS-indicative diseases per transmission mode, WHO, European Region, Centre, 2013

Epidemiology/ key population /trends Romania 2013

AIDS indicative diseases

- Pulmonary tuberculosis
- Extra-pulmonary tuberculosis
- Toxoplasmosis
- Wasting syndrome
- Recurrent sepsis
- Recurrent pneumonia
- Pneumocystis carinii pneumonia
- Unspecified lymphoma
- Burkitt Lymphoma
- PML
- Recurrent bacterial infections
- Herpes Simplex virus infection
- HIV encephalopathy
- Cryptosporidiosis
- Cryptococcus
- Pulmonary candidiasis
- Esophageal candidiasis
- CMV

Source: Compartiment for Monitoring and Evaluation of HIV/AIDS Infection in Romania INBI "Prof.Dr.M.Balș"
WHERE DID WE LEAVE FROM AND WHERE ARE WE NOW?
Pediatric Milestones

YPLWHA

1989
1990
1995
1997-8
2001
2012
2014

Long term survivors late 1980s’-present- The Romanian Cohort

Children HIV+*
Children HIV+ Outbreak (epidemiological accident)
AZT
HAART MTCT Nat. program.
Universal access to ARVT Treat. Like prev.

• MTCT <5% but,
• Perinatal exposure to drugs in new cases in young women
• IVDU

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.

PLWHA
MTCT
ART Use
IDUs

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).

New psychoactive drugs
New approach for the case management of the adult and the newborn to HIV mothers who use new drugs.

Source: A. Streinu-Cercel. cnlas.ro: Specific Challenges of the Hiv Epidemic in Romania. EACS M. Mardarescu. Challenges and issues in young women. 5th International Workshop on HIV & women from adolescence to menopause. 21-22 February, Seattle
CASCADE OF CARE – 31 DECEMBER 2014
ROMANIA

Source: Compartment for Monitoring and Evaluation of HIV/AIDS Infection in Romania INBI “Prof.Dr.M.Balș”
The impact of HIV and ART on YPLWHA in Romania, long terms survivors and national efforts

• Behavioural studies on YPLWHA from the Romanian cohort*:
  – Survey on HIV risk behaviours among young people and adults infected, living with HIV/AIDS in Romania- Romanian Angel Appeal, 2011

• Mother to child transmission of HIV**:
  – The National Registry of HIV Infected Pregnant women, implemented since 1 January 2014 and coordinated by National Institute for Infectious Diseases “Prof. Dr. Matei Bals” , through Compartment for Monitoring and Evaluation of HIV/AIDS Data in Romania.

• Neurocognitive impairment
  – The Romanian National Screening Program for Neurocognitive Disorders, coordinated by National Institute for Infectious Diseases “Prof. Dr. Matei Bals”- ongoing and initiated in 2013***.
  – 2 NIMH funded grants aiming to evaluate the long term effects of chronic HIV Infection on the Developing Brain, coordinated by “Dr. Victor Babes” Hospital Bucharest ** **

* www.raa.ro
** M. Mardarescu. Challenges and issues in young women. 5th International Workshop on HIV&women from adolescence to menopause. 21-22 February, Seattle.
The impact of HIV and ART on YPLWHA in Romania, long terms survivors and national efforts

• National adherence project ***

• National Evaluation Program of Adherence ****

• Cardiovascular impairment

• Osteo-renal impairment
  – Ongoing pilot study initiated in March 2015.

*** Duiculescu D, Blaglosov A, Luca A, Ene L, Rugina S., Streinu-Cercel A, and The Romanian Adherence Group, Evaluation of adherence to antiretroviral regimen- containing Kaletra in a group of adolescents with chronic HIV-1 infection from Romania, XVII International AIDS Conference, 4-8 August 2008, Mexico City, Mexic;

**** O. Chirila, S. Petrea, C. Schiopu, National Program of Adherence Assessment, Scientific Days of Matei Bals Institute “From Pasteur at mass-spectrometry”, 13 – 16 October 2010, Bucharest.
The Romanian care system addressed to the HIV/AIDS cohort has been founded, during the last two decades, on multiple social and psychological determinants, among which:

- The patients’ age at the moment of diagnosis:
- Living with the biological family (YES or NO);
- The family’s level of education;
- Acceptance on behalf of the society/level of discrimination;
- The transition from the paediatric ward to the adult ward is accepted with difficulties by the young patients;
- The social behaviour - the same as the uninfected young population;
- ART adherence that depends entirely on the time of initiation >20 years in Romania
- ART treatment - difficult to individualise and adapt during the early 1990s
- Counselling on self perception, on body image and acceptance of one’s status
- Marital status, serodiscordant couples, unplanned pregnancies
- They want children and families of their own, but are not prepared for this due to their health status
- Specialized family planning services
TAKE HOME MESSAGES...
Most PLWHA in Romania are YPLWHA.

- “Long term survivors”, infected at the end of the 1980s;
- From the new cases registered during the last years- most are young persons, with sexually acquired HIV and I.V. drug use.
- Dynamic increase in new cases in MSMs

Multiple therapeutic regimens since 1995 - impact on ART resistance.

- Serodiscordant couples who require special attention and specific cares.
- Raising awareness for optimal selection of proper contraception methods, in order to avoid unplanned pregnancies.
- In 2014 MTCT rate represented 2% of the new reported cases.
- Further efforts are made to keep the MTCT rate at low values.
Take home messages

The importance of managing the following aspects in PWLHA:

• 56% of the new HIV cases in 2014 were late presenters, with CD4<350.
• ART in TB/HIV coinfection
• ART in HIV and HBV/HCV coinfection

• Particularities of new HIV-IDUs with psycho-active substances (“ethnobotannical” drugs).

• ART in neurocognitive disorders ➔ young by age old by treatment

• ART in cardio-metabolic risks ➔ young by age old by treatment

Source: Compartmen for Monitoring and Evaluation of HIV/AIDS Infection in Romania INBI “Prof.Dr.M.Balș”
References

- www.cnlas.ro
- [http://www.womenforpositiveaction.org/resource-centre](http://www.womenforpositiveaction.org/resource-centre)

Warm thanks to our patients and their parents, long distance runners who have been joining their efforts together with the medical staff, for the past 25 years...
The data is collected from the HIV/AIDS charts, sent by the nine Regional Centers for Evaluation and Monitoring of HIV/AIDS Data and by County Public Health Authorities, further processed by Compartment for Monitoring and Evaluation of HIV/AIDS data in Romania, in National Institute for Infectious Diseases “Prof. Dr. Matei Bals”
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