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# HIV/AIDS IN ROMANIA – A SHORT HISTORY AND UPDATE, 2021

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## ABSTRACT

Human immunodeficiency virus (HIV) poses a medical, social, and economic problem. In Romania since 2002, the prevention of HIV transmission and the care for HIV-positive people have been overseen by Governmental Law. HIV infection in Romania has some particularities, such as the high number of HIV-infected patients under treatment and the high percentage of long-term survivors. Romania reported its first case of AIDS to the World Health Organization in 1985, and its first case in the pediatric population in 1989. A year later, a new case definition, based on local possibilities was formulated together with the World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC, Atlanta, GA). According to the latest report of the Compartment for Monitoring and Evaluation of HIV/AIDS in Romania, the cumulative number of HIV cases registered between 1985-2021 was 26,171, while the number of people living with HIV at the end of December 2021 was 17,271.

**Keywords:** HIV, AIDS, public health surveillance

## REZUMAT

Virusul imunodeficienței umane (HIV) reprezintă o problemă medicală, socială și economică. Din 2002 există legea care reglementează prevenirea transmiterii HIV și îngrijirea persoanelor infectate HIV. Infecția HIV în România prezintă unele particularități, precum numărul mare de persoane infectate HIV aflate sub tratament și un procent ridicat de supraviețuitori de lungă durată. România a raportat către Organizația Mondială a Sănătății primul caz de SIDA diagnosticat în 1985. Primul caz în populația pediatrică a fost raportat în 1989. Un an mai târziu a fost formulată împreună cu Organizația Mondială a Sănătății (OMS) și Centrul de Control și Prevenire a Bolilor (CDC, Atlanta, GA), o nouă definiție de caz, bazată pe posibilitățile locale. Conform ultimului raport al Compartimentului pentru Monitorizare și Evaluarea HIV/SIDA din România numărul înregistrat de cazuri între anii 1985-2021 a fost de 26.171 iar numărul celor aflați în viață la sfârșitul anului 2021 a fost 17.271.

**Cuvinte-cheie:** HIV, SIDA, supraveghere pentru sănătatea publică

Human Immunodeficiency Virus (HIV) infection represents not only a medical problem, but also a social and economic one, proving itself a great challenge for the infected person as well as the whole society [1].

In order to increase support for people living with HIV/AIDS (PLWHA), in 2002 a law was passed to oversee the HIV infection prevention measures and the care for infected persons, as well as grant them free medical treatment and nutritional supplements [2].

The infection started to gain attention in the early '80s when both the *Center for Disease Control and Prevention* (CDC) and the *Public*

*Health Office* in England reported the rise in opportunistic infections in men having sex with men in journal articles published in *The New England Journal of Medicine* and *Lancet* [2].

The HIV/AIDS problem in Romania has some particularities [2]. According to a report published in 2004 by the Romanian Ministry of Health, Romania had the largest number of PLWHA under treatment in the Central and South-Eastern European areas [2]. Moreover, Romania has a large number of long-term survivors belonging to the cohort of children born between 1987-1990 (non-vertically infected), which was the main age group

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where HIV/AIDS cases were diagnosed [2]. After 1994, the increase in vertical transmission cases has led to measures like the medical monitoring of all pregnant women, as well as a governmental effort to implement and popularise prophylaxis [2].

Another particular aspect was represented by the rapid increase of new heterosexual transmission cases registered among adults, 19 to 49 years old [2].

In 2000, HIV/AIDS was declared a public-health national priority, and the *National Plan for Universal Access to Treatment and Care* was launched [2]. Two years later, the *National Multisectoral HIV/AIDS Commission* was founded [2].

In 1985 Romania was among the first countries in the Eastern and Central European area, that diagnosed and reported an AIDS case to the *World Health Organization (WHO)'s AIDS Surveillance Centre* in Paris [2]. It was in 1987 that the Minister of Health issued the order number 200/1987 which stipulated the mandatory report of all HIV/AIDS confirmed cases by "*Prof. Dr. Victor Babeş*" *Infectious Diseases Hospital* in Bucharest [2-3]. The notice would also be sent to public-health district authorities, who would then perform epidemiological investigations: contact identification and epidemiological surveillance of HIV-infected people [2]. In the next 3 years, only 13 AIDS cases were recorded (in adults) [2-3]. The first cases of HIV/AIDS in children were diagnosed and reported in 1989, respectively in 1990 internationally [2].

In 1990, experts from WHO, CDC, and Romania formulated a new case definition, considering the real possibilities of laboratory diagnosis in our country, based mainly on serology and the diagnosis of opportunistic infections [2-3]. This was an adaptation of the Bangui clinical

definition (1985), based on major and minor clinical signs, and it also included a confirmation protocol for the HIV infection diagnosis – the use of two ELISA tests (each of them based on a different principle) and, where available, the Western Blot supplementary test [2-3].

Another measure consisted in facilitating the development of authorized diagnostic clinics all over the country, which required the professional training of personnel in the reference HIV testing laboratories from the "*Ştefan Nicolau*" and "*Cantacuzino*" Institutes [2-3]. Before this, only three laboratories in Bucharest performed HIV serologic testing, and the ELISA kits were not covered by state-issued funds [2-3].

In the same year, 1990, the Preventive Medicine Department of the Ministry of Health developed a national database to ensure the uniformity and safe management of data processing [2-3]. Moreover, mandatory HIV and HBV testing of donated blood were introduced, with an important emphasis on ensuring the confidentiality of the results [2].

In 1993, HIV testing was introduced for patients with pathologies most frequently associated with the HIV infection, mainly patients suffering from tuberculosis or other sexually transmitted infections [2-3].

In 1998, routine HIV testing was recommended for long-haul truck drivers, sailors, and travellers arriving back in the country after more than 6 months spent abroad [2-3].

According to the latest report available from the Compartment for Monitoring and Evaluation of HIV/AIDS, the known number of cases of PLWHA in December 2021 was 17,271 (Table 1), but there might be more cases yet undetected, due to underreporting caused by the COVID-19 pandemic. [4].

**Table 1. General data regarding HIV infection in Romania**

Number of HIV/AIDS cases between 1985 and 2021	26,171
Number of AIDS cases between 1985 and 2021	17,444
Loss to follow-up (at the beginning of the 1990s)	805
Total number of deaths between 1985 and 2021	8,095
People living with HIV/AIDS (PLWHA)	17,271
New cases reported between 01.01.2021 and 31.12.2021	559
Number of deaths reported between 01.01.2021 and 31.12.2021	129

Adapted after: General data available at 31st of December 2021. The Compartment for Monitoring and Evaluation of HIV/AIDS Infection in Romania. “Prof. Dr. Matei Balș” National Institute of Infectious Diseases. Ministry of Health (available in Romanian). [4]

In 2021 there were counties in Romania with zero cases reported (for example Sălaj), but also counties with more than 10 cases reported (Bucharest, Timiș, Brăila, Cluj, Constanța, Iași) [4]. A detailed map showing the number of cases reported in each county may be found at the official site of the Compartment for Monitoring and Evaluation of HIV/AIDS at <https://www.cnlas.ro/images/doc/31122021.pdf>.

In regard to the sex distribution of the new number of cases in the above-mentioned period, one quarter were females (24% of 559) [4].

Between 01.01.2021 and 31.12.2021, most of the new HIV infected cases were young adults, between 20 and 49 years of age (Fig. 1), and according to the probable transmission pathway the majority were included in the following groups: heterosexual, MSM, intravenous drug

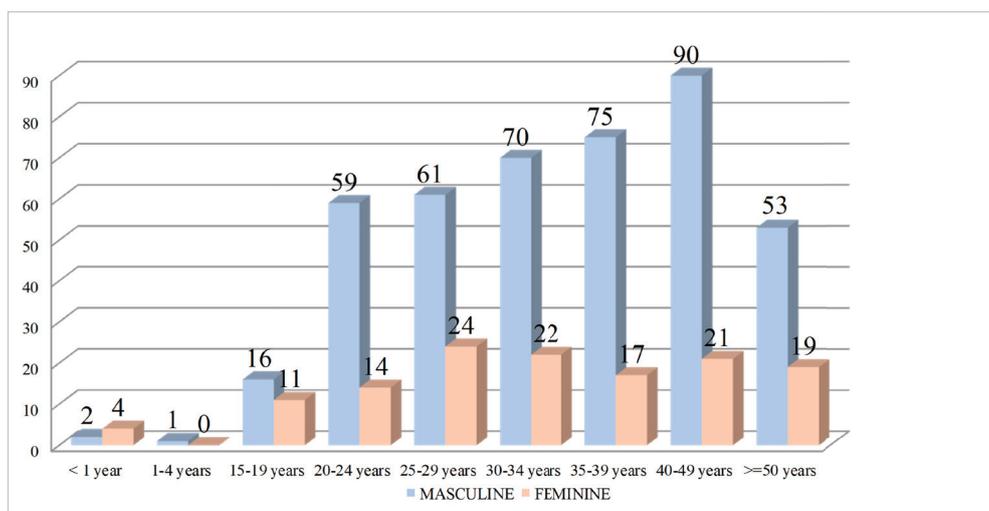


Fig. 1. Age group and sex distribution of new HIV cases between 01.01.2021 and 31.12.2021. Adapted after [4]

users [4].

In the same period of time, the highest proportion of positive results was seen in intimate partners of HIV-positive persons (unprotected sexual contact among

heterosexual partners), intravenous drug users, maternity wards, and people suffering from other sexually transmitted infections (Table 2) [4]. In pregnant women, most of the HIV-positive cases were detected in mothers

Table 2. HIV positive tests between 01.01.2021-31.12.2021, on risk groups. Adapted after [4]

Risk group	Tests performed	Positive results (%)
Sexually transmitted infections	666	7 (1.05)
Tuberculosis	5,028	48 (0.95)
Maternity	256	16 (6.25)
Pregnant women	99,181	90 (0.09)
Pre-nuptial control	4,693	4 (0.09)
Drug users	7	0 (0)
Inmates	344	8 (2.33)
Intimate partners of HIV-positive persons (unprotected sex)	451	70 (15.52)
Sailors	791	1 (0.13)
Tests performed on demand	80,975	280 (0.35)
Occasional tests	31,584	413 (1.31)
Total tests	223,976	937 (0.42)

between 20 and 34 years of age [4]. During 2011-2013, an increase in the number of intravenous drug users with HIV was noticed [5].

Among blood donors, the majority of HIV-positive tests were identified in first-time donors (Table 3) [4].

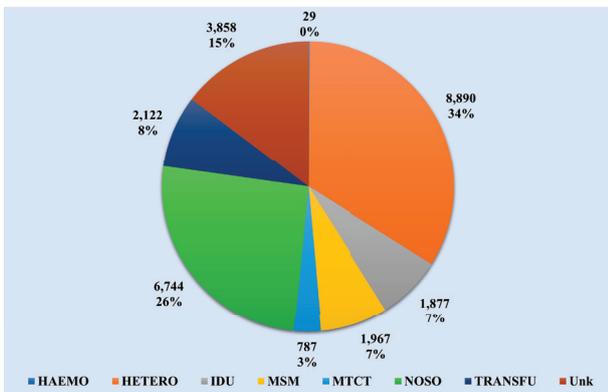
**Table 3. Blood donor HIV tests between 01.01.2021-31.12.2021**

Donor group	Total number of tests	Positive
First-time donors	106,460	28
Repeat donors	182,447	18
Occasional donors	69,323	0
<b>Total</b>	<b>386,288</b>	<b>46</b>

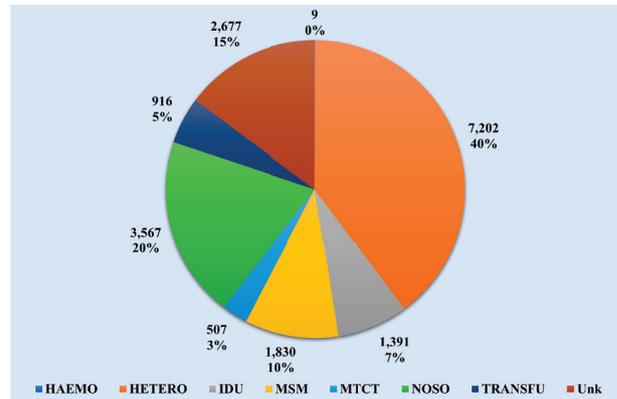
Data from [4] and from “Prof. C. T. Nicolau” National Haematology Transfusion Institute

Regarding the total number of cases in children, between 1985 and 2021, most of them were possibly infected due to the

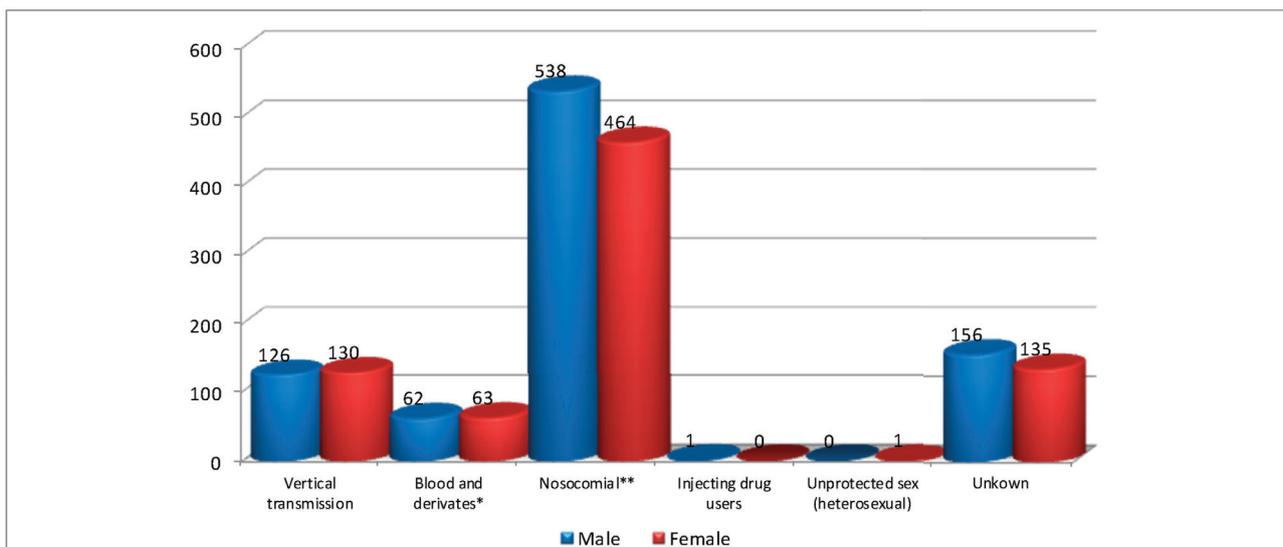
epidemiological accident in 1989-1990 (non-vertically infected children) (Fig. 2, 3, 4, 5) [4].



**Fig. 2. HIV/AIDS number of cases in Romania depending on their possible way of transmission, between 1989 and 2021. Adapted after [4].**



**Fig. 3. HIV/AIDS number of living cases in Romania depending on their possible way of transmission, between 1989 and 2021. Adapted after [4].**



**Fig. 4. Probable way of transmission in children (0-14) with HIV. Data available from [4].**

\*Received transfusions in the late 1980s and early 1990s

\*\*Repeated admissions and/or multiple parenteral treatments the late 1980s and early 1990s

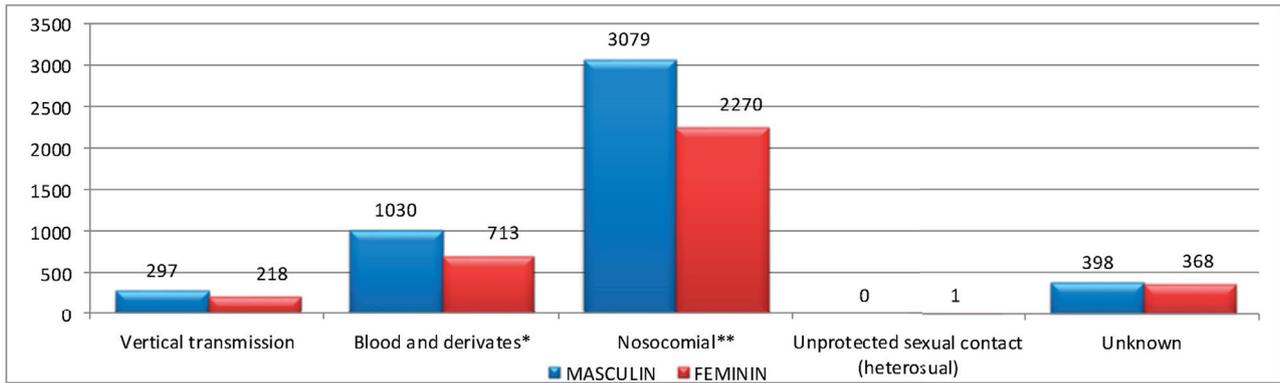


Fig. 5. Probable ways of transmission in children with AIDS (0-14 years at the date of diagnostic). Data available from [4].

\*Received transfusions in the late 1980s and early 1990s

\*\*Repeated admissions and/or multiple parenteral treatments the late 1980s and early 1990s

The main way of transmission in adults is unprotected sexual contact between heterosexual partners and men who have sex with other men (Fig. 6, 7, 8, 9, 10) [4].

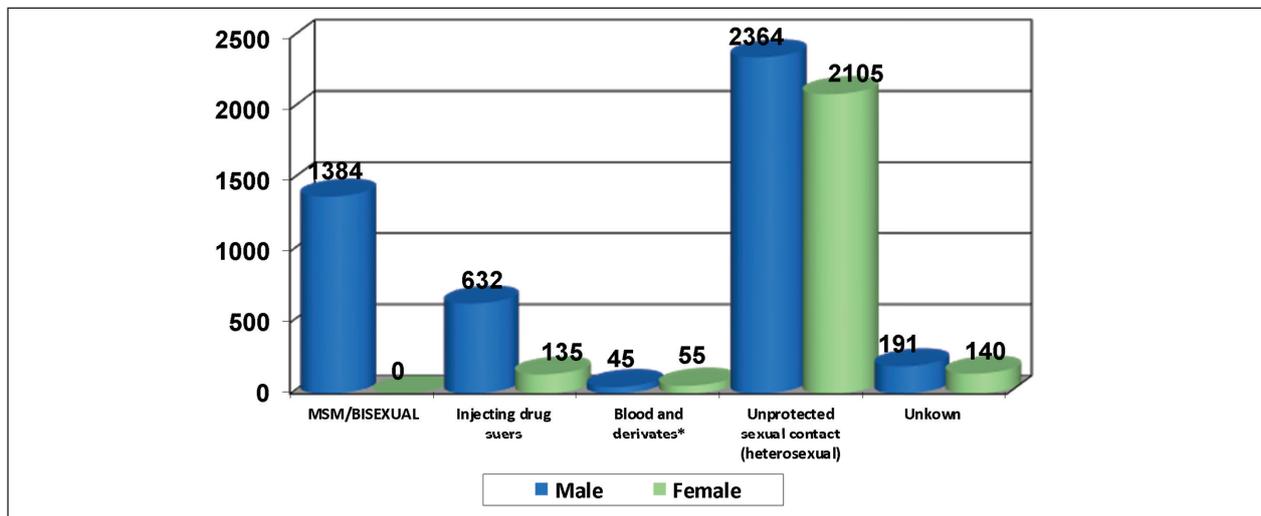


Fig. 6. Probable way of transmission in adults with HIV (>14 years at the date of diagnostic) 31 December 2021 (cumulative total 1989-2021) Data available from [4].

\*Received transfusions in the late 1980s and early 1990s

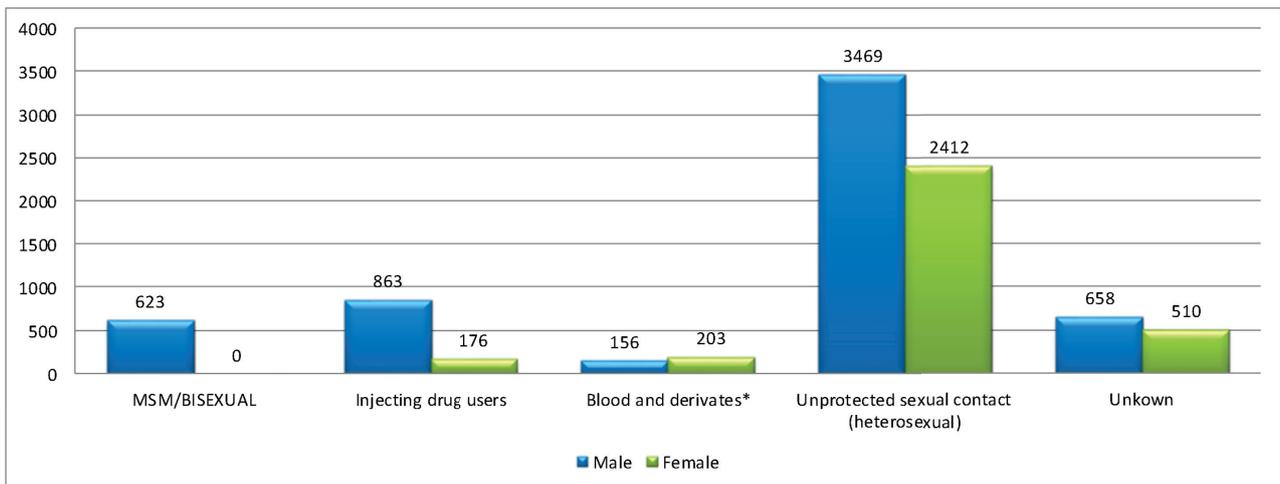


Fig. 7. Probable way of transmission in adults with AIDS (>14 years at the date of diagnostic). Data available from [4].

\*Received transfusions in the late 1980s and early 1990s

Age at date of diagnosis/notification  
Cumulative total 1985-2021

Distribution by age of PLWHA

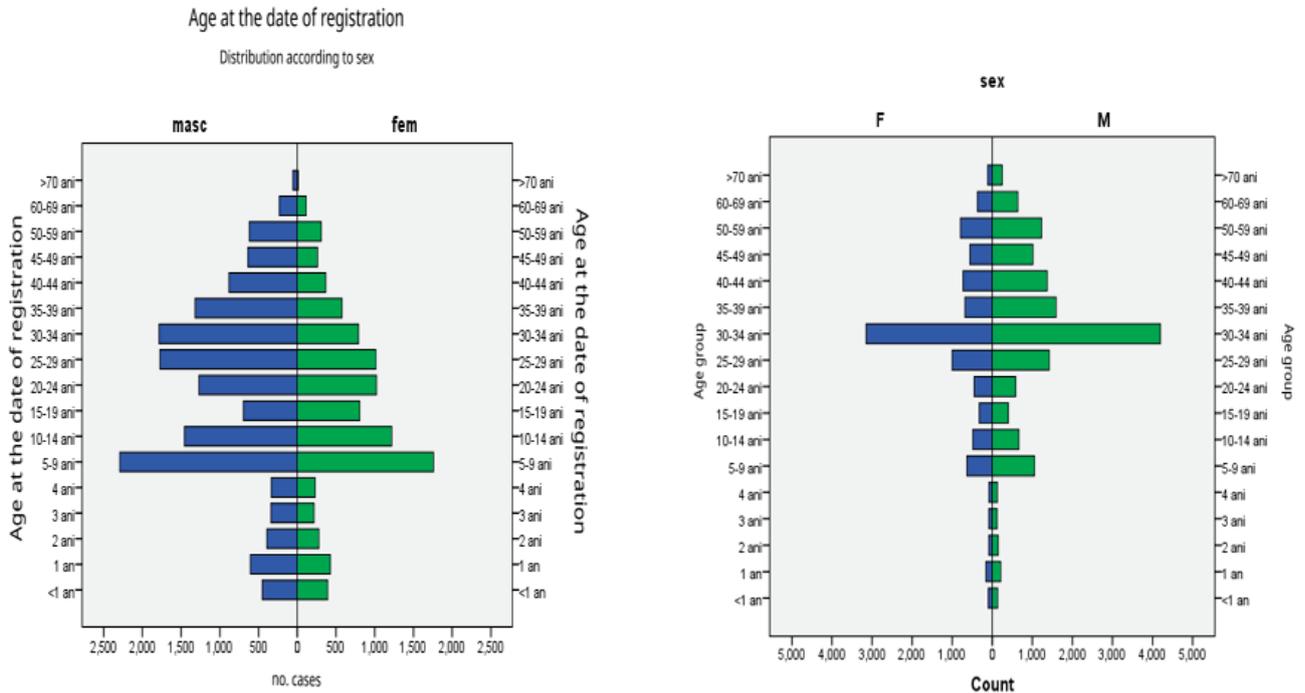


Fig. 8. Distribution of ages at the time of diagnostics and current age-cumulative total. Data available from [4].

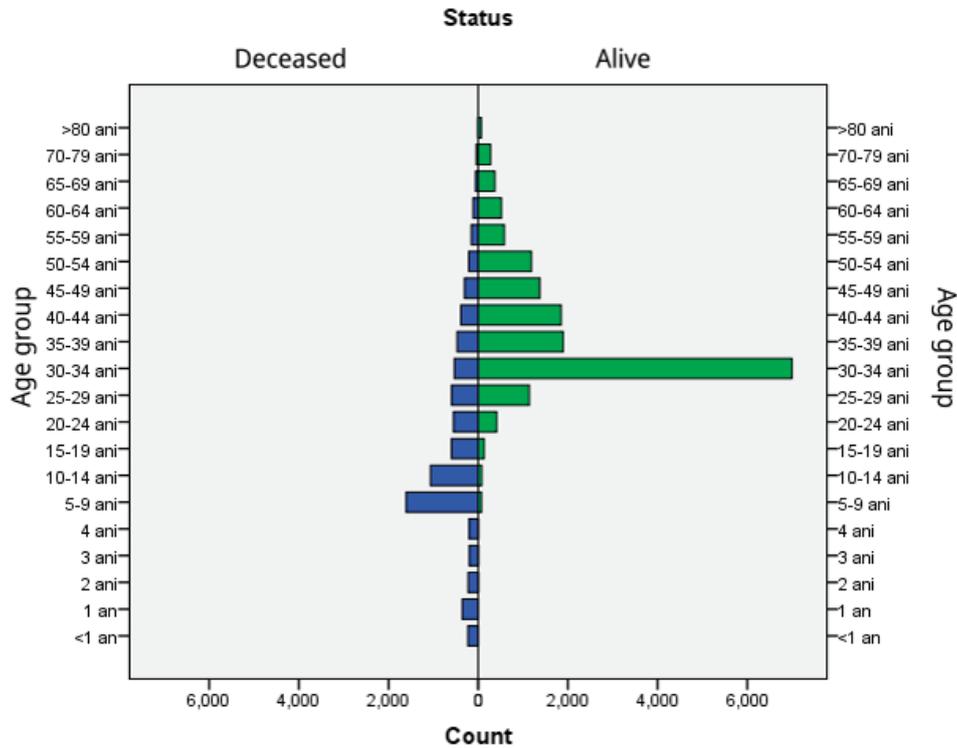


Fig. 9. Distribution of deaths vs. PLWHA Cumulative total. Data available from [4].

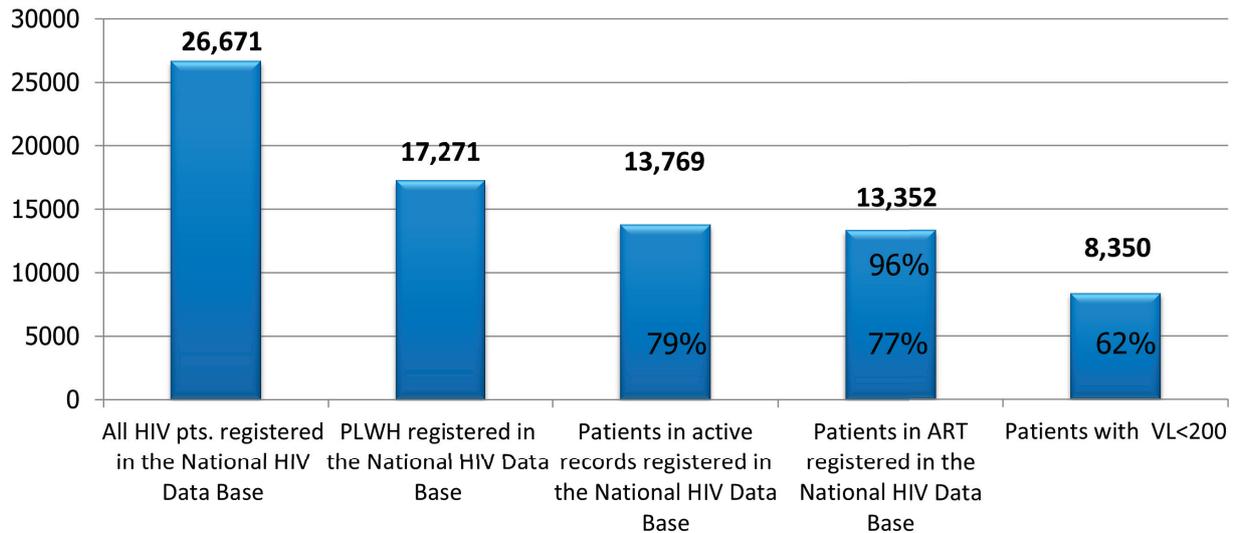


Fig. 10. 90-90-90+90 status, Romania, 2021. Data available from [4].

The number of HIV diagnoses among MSM in countries consistent in reporting has been declining since the end of 2014, even after adjusting for reporting delays. However, despite this overall declining trend, case numbers have increased largely during the same period in one-third of EU/EEA countries (Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Iceland, Lithuania, Romania, Slovakia) [5].

Regarding the AIDS-indicative diseases diagnosed in 2020 in the European Union the most frequently encountered were *Pneumocystis pneumonia*, pulmonary and/or extrapulmonary tuberculosis, wasting syndrome due to HIV and oesophageal candidiasis; in Romania 34% of cases presented with tuberculosis [5].

## CONCLUSION

The Romanian health system has made considerable efforts to scale down its number of HIV cases in order to provide an optimal management of patients, especially children detected in the late 1980s and early 1990s. Moreover, universal access to specific antiretroviral treatment has been ensured since 2001. This measure contributed to an increase in life expectancy and in the quality of life of people living with HIV/AIDS.

Currently, the main challenges that our country faces concerning the HIV infection

are therapeutic fatigue in long-term survivors, increase in number of cases in persons from vulnerable groups, and formation of psychology and psychiatry networks for drug users.

Given the abovementioned challenges and the new epidemiological context arising in Romania, as in many other countries, our health system has to be reconsidered to accommodate all of these changes and provide adapted care to persons living with HIV and their families.

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