

## **EPIDEMIOLOGICAL SURVEILLANCE OF HIV IN SPAIN**

### **NEW HIV DIAGNOSES IN SPAIN 2003-2009**

INFORMATION SYSTEMS ON NEW HIV DIAGNOSES (SINIVIH)

NATIONAL CENTRE OF EPIDEMIOLOGY

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## SUMMARY

### Objectives:

- To quantify new diagnoses of HIV infection and their evolution over time.
- To describe the epidemiological characteristics of persons newly diagnosed with HIV infection.
- To contribute to the international epidemiological surveillance of HIV.

### Geographic setting, population and period of study:

The study includes all new diagnoses of HIV reported in the Autonomous Regions of the Balearic Islands, Canary Islands, Catalonia, Extremadura, La Rioja, Navarre, the Basque Country, and the autonomous city of Ceuta from 2003 to 30 June 2010; in Galicia, since 2004; in Asturias and Madrid, since 2007; in Aragon and the autonomous city of Melilla, since 2008; and in Cantabria and Castilla- Leon, since 2009. The population covered has increased progressively from 13,409,246 in 2003 to 28,530,190 in 2009 (64% of the total population of Spain).

### Methodology and data analysis:

The information was sent to the National Centre of Epidemiology without personal identifiers; consequently, although duplicates within each Autonomous Region have been identified and eliminated, it was not possible to eliminate duplicates among them.

Late presentation was defined as a CD4 count of fewer than 350 cells/ $\mu$ l at the time of presentation for care.

The analysis for 2009 used cases reported by the 15 Autonomous Regions that had this information system implemented in that year. The analysis of trends used cases only from those Autonomous Regions that provided data regularly from 2004 to 2009. The variables used were: age, sex, mechanism of transmission, CD4 at presentation, reporting Autonomous Region, country of origin, and year of diagnosis.

The results presented have not been adjusted for reporting delay.

### Principal results:

**2009:** From the 15 participating Autonomous Regions, 2,264 reports of new diagnoses of HIV were received for the year, which represents a rate of 79.3/million population. Almost 80% were men and the mean age was 37 years. Transmission in men who have sex with men (MSM) was the most frequent transmission category, 42.5%, followed by heterosexual transmission, 34.5%, and injecting drug users (IDU), 8.1%. Some 37.6% of new diagnoses of HIV infection were made in persons who were originally from other countries.

Overall, 50.2% of new diagnoses were late presenters.

**2004-2009:** Trends in incidence of new HIV diagnoses differed by mechanism of transmission: a downward trend was observed in new diagnoses of HIV in IDU (18.7/million population in 2004 versus 7.4/million in 2009); in heterosexual transmission the rates tend to be stable (41.8/million in 2004 versus 39.2 in 2008, and 30.5 in 2009), especially taking into account reporting delay; and there was a clear increase in new diagnoses in MSM (27.3/million in 2004 versus 39.9 in 2008, and 30.5 in 2009). Given the increasing weight of the latter transmission category with regard to all new diagnoses, the rise in these rates affects the overall rates.

Although the number of foreign persons increased only moderately in absolute terms during the period (472 in 2004 versus 502 in 2009), they represent an increasing percentage of new diagnoses.

Delayed presentation declined in MSM from 51% in 2004 to 45% in 2009, which affects the overall rates.

### Conclusions:

- The rates of new HIV diagnoses are similar to those of other Western European countries, but higher than the overall mean for the European Union.
- HIV is transmitted primarily by the sexual route.
- Transmission among MSM is the largest category, and its influence is growing year by year.
- Persons from other countries represent a substantial portion of new HIV diagnoses.
- Late presentation is very important, and has declined only among MSM.

## 1. METHODOLOGY

### 1.1. Population and study subjects

This report presents the results of the analysis of data provided by the surveillance systems for new HIV diagnoses of the Autonomous Regions of the Balearic Islands, Canary Islands, Catalonia, Extremadura, La Rioja, Navarre, the Basque Country and the autonomous city of Ceuta since 2003; from the Region of Galicia since 2004; from the Regions of Asturias and Madrid since 2007; and from the Region of Aragon and the autonomous city of Melilla since 2008; and from the Regions of Cantabria and Castilla- Leon since 2009. Accordingly, the population covered by this surveillance system has grown progressively, from 13,409,246 inhabitants in 2003 (32% of the total population in Spain) to 28,530,190 inhabitants in 2009 (64% of the total population).

[http://www.ine.es/jaxi/table.do?path=/t20/p251/proy\\_2001/I0/&file=02002a.px&type=pcaxis](http://www.ine.es/jaxi/table.do?path=/t20/p251/proy_2001/I0/&file=02002a.px&type=pcaxis)

The information was sent to the National Centre of Epidemiology in individual databases without personal identifiers. Thus, although duplicate cases were identified and eliminated within each Region, it was not possible to do eliminate duplicates among the different Autonomous Regions.

The cases of AIDS reported to the National AIDS Register by the 15 aforementioned Autonomous Regions represent 70% of the total cases reported in 2009. With respect to HIV transmission groups, these 15 Autonomous Regions were responsible for 80% of the cases of AIDS attributed to sexual relations between men; 72% of those attributed to heterosexual transmission, and 65% of those due to injecting drug use.

All these facts should be kept in mind when interpreting the results presented.

### 1.2. Variables

After comparing the information available in each Autonomous Region, the variables used for the analysis were as follows:

- Reporting Autonomous Region
- Year of HIV diagnosis
- Age at HIV diagnosis
- Sex
- Transmission category
- Geographic area of origin
- Number of CD4 lymphocytes at HIV presentation for care.

### 1.3. Analysis and study period

A data descriptive analysis was made, and the rates of new HIV diagnoses/million population studied were calculated using the Population Projections of the National Statistics Institute based on the 2001 Census (scenario 2). The rates by transmission category were also calculated using the corresponding general population as the denominator.

[http://www.ine.es/jaxi/table.do?path=/t20/p251/proy\\_2001/I0/&file=02002a.px&type=pcaxis](http://www.ine.es/jaxi/table.do?path=/t20/p251/proy_2001/I0/&file=02002a.px&type=pcaxis).

Characterisation of new HIV diagnoses in 2009 was done using the cases reported by the 15 Autonomous Regions providing data that year. For the study of trends, data from the 9 Autonomous Regions that reported cases regularly from 2004 to 2009 were used. The results presented have not been adjusted for reporting delay.

In addition to the temporal trend, special attention was paid in the analysis to the geographic area of origin and to late presentation. The CD4 lymphocyte count in the first test performed after HIV diagnosis was used as an approximation of late presentation. **It should be noted that, following international criteria, the definition has changed this year**, so that late presentation is now considered to be a count of fewer than 350 cells/ $\mu$ l in the first test after diagnosis, instead of fewer than 200 cells/ $\mu$ l, the definition previously used.

## 2. RESULTS

Since 2003, and as additional Autonomous Regions have been incorporated into the system, a total of 12,844 diagnoses of HIV infection have been reported: 1,276 in 2003, 1,521 in 2004, 1,452 in 2005, 1,591 in 2006, 2,216 in 2007, 2,524 in 2008, and 2,264 in 2009 (Table 1). These figures represent **annual rates** of new diagnoses per million population of 95.20 in 2003, 93.10 in 2004, 87.80 in 2005, 95.10 in 2006, 92.50 in 2007, 99.31 in 2008, and 79.35 in 2009 (Table 2).

### 2.1. NEW HIV DIAGNOSES IN 2009

Up to 30 June 2010, the 15 participating Autonomous Regions reported 2,264 new diagnoses of HIV in 2009. The mean age ( $\pm$  standard deviation [SD]) at HIV diagnosis was  $36.7 \pm 10.7$  years, with men slightly older ( $37.0 \pm 10.7$  years) than women ( $35.3 \pm 10.8$  years). Overall, men represented 79.5% of new HIV diagnoses in the 15 Regions analysed (Figure 1). This larger proportion of men is found in all the Regions.

#### 2.1.1. Transmission category

Transmission in men who have sex with men (MSM) was the most frequent route of infection (42.5%), followed by heterosexual transmission, which represented 34.5%, and injecting drug users (IDU), who made up 8.1% (Figure 2). Thus, 77% of new HIV diagnoses in 2009 have their origin in sexual transmission. The distribution by Autonomous Region is heterogeneous; of note is the percentage of homo/bisexual transmission in Madrid, the Canary Islands, Asturias and Catalonia (62%, 60.6%, 53.1% and 42.7%, respectively), as well as the large percentage of diagnoses due to heterosexual transmission in La Rioja, Aragon and Navarre (81%, 62% and 54.8%, respectively) (Table 3).

Breaking down the transmission categories by sex, in men, MSM represented 53.4% of new HIV diagnoses in 2009, with heterosexual transmission making up 23%. In women, heterosexual transmission was the primary route, with 79% of new diagnoses (Figure 3).

#### 2.1.2. New diagnoses of HIV in immigrants in 2009

In 2009, 37.6% of new diagnoses of HIV infection were in persons from other countries (Table 4 and Figure 4). The most frequent groups, after persons of Spanish origin, were those from Latin America (19.4%), Sub-Saharan Africa (9.4%), and western Europe (3.4%). In the case of women, over 50% of new diagnoses were in immigrants. Of persons from Sub-Saharan Africa diagnosed during 2009, 86% acquired the infection through heterosexual transmission, versus 26.5% in the group of Spanish origin (Table 5 and Figure 5). In contrast, in cases from Latin America and Western Europe, MSM transmission is over-represented, constituting 52.6% and 59.7% of new diagnoses, respectively, versus 46.5% in the group of Spanish origin.

Most of the new diagnoses of HIV infection were made in Spaniards (62.4%), a finding that is repeated in all transmission categories except for heterosexual transmission, in which over 50% of persons were from countries other than Spain (Table 6 and Figure 6). Looking at the distribution of cases by transmission category and geographic area of origin, it can be seen that the group with the largest proportion of diagnoses in homosexual/bisexual men, after persons of Spanish origin (68.3%), are those from Latin America (24%). In the heterosexual category, both Sub-Saharan (23.4%) and Latin American (20.2%) origin weigh heavily. Among immigrants who were infected by sharing drug injection material, those from Eastern Europe make up the most important group (8.7%).

#### 2.1.3. Late presentation in 2009

For 87% of new HIV diagnoses in 2009, a CD4 lymphocyte count at the time of entry to care was available. The median CD4 count was 347 (IQR, 152-555). About 30.4% of the cases had severe immunosuppression ( $<200$  CD4) at presentation, with a clear risk of suffering serious disease and the consequent diagnosis of AIDS. Moreover, 19.8% had a CD4 count of between 200 and 350. Accordingly, 50.2% of new HIV diagnoses met the definition of late presentation and, were already candidates for antiretroviral treatment (Figure 7).

The percentage of late presenters was somewhat higher in immigrants overall (56%) than in persons of Spanish origin, in whom the proportion was 47% (Figure 8). In the analysis of late presentation by sex, a similar percentage was seen in men (50.1%) and women (50.8%) (Figure 9).

According to transmission category, the proportion of late presenters was highest in heterosexual men (64%), and lowest in MSM (42%). The figure for heterosexual women was intermediate between these two (52%), as was that for IDU (59%) (Figure 10).

To assess late presentation by age, the registers were regrouped into five categories: less than 25 years, 25-34 years, 35-44 years, 45-54 years, and over 55 years. Late presentation increased considerably with age, rising from 33% in the first group to 70% in those over 55 years of age.

## **2.2. TRENDS IN NEW HIV DIAGNOSES**

Nine Autonomous Regions (Balearic Islands, Canary Islands, Catalonia, Ceuta, Galicia, Extremadura, Navarre, Basque Country and La Rioja) have reported their cases consistently since 2004. Accordingly, only data provided by these Autonomous Regions have been used to analyse the trends in new diagnoses of HIV.

The number of cases reported annually by these 9 Autonomous Regions since 2004 and their distribution by sex are shown in Figure 11. A slight reduction in the percentage of women can be observed, from 25% in 2004 to 22% in 2009.

Different trends in new diagnoses can be seen by transmission category. In the IDU group a progressive downward trend in the rates per million population is seen during the period, from 18.7 in 2004 to 7.4 in 2009. (Table 9 and Figures 12 and 13). In the case of heterosexual transmission, although there was a decline in the percentage of new diagnoses from this cause, the rates are quite stable (41.8 in 2004 versus 39.2 in 2008, and 30.5 in 2009), especially considering that they have not been adjusted for delayed reporting. In contrast, a clear increase is seen in the rates per million population in the case of MSM transmission (27.3 in 2004 to 39.9 in 2008, and 30.5 in 2009) (Table 10 and Figure 13). Given the increasing weight of the latter transmission category in new diagnoses overall, the rise in these rates has an effect on the global rates.

The percentage of persons diagnosed who are from other countries is increasingly large, from 31% in 2004 to 36.3% in 2009 (Figure 15). But this percent increase is not accompanied by an important increase in the number of cases, which was 472 in 2004 and 502 in 2009. The percentage of new HIV diagnoses in persons of Latin American origin has experienced an upward trend with respect to all diagnoses in the period analysed, whereas diagnoses in persons from Sub-Saharan Africa have remained stable (Table 11).

In the analysis of the distribution of cases by area of origin and transmission category it can be seen that, among Spaniards, homosexual transmission has been in first place since 2005. In persons from other countries transmission is predominantly heterosexual; however, it has tended to stabilise whereas new diagnoses in MSM show an upward trend (Figure 16). In short, after stratifying the data by sex and country of origin, a clear upward trend in MSM can be observed, in both Spaniards and immigrants. There also appears to be a clear downward trend in IDU, both in Spaniards and foreigners, and in men as well as women. With regard to heterosexual transmission, although a downward trend is seen in men and women of Spanish origin, the trend in recent years is toward stabilisation in immigrants (Figures 17 and 18).

In analysing how the percentage of late presenters has evolved over the study period, a downward trend is seen, from 56% of cases in 2004 to 51% in 2009. This decline is observed in all transmission categories, but is most evident in MSM, with a decrease from 51% in 2004 to 45% in 2009 (Figure 19).

### 3. SUMMARY AND CONCLUSIONS

The data presented in this report came from 15 Autonomous Regions for 2009 and from 9 Autonomous Regions for the period 2004-2009; they provide information that is essential for the prevention of HIV transmission in Spain. Nevertheless, when interpreting these data the following considerations must be kept in mind:

- The rates of new HIV diagnoses are an approximation of the incidence of HIV infection, but it must be recalled that a new diagnosis is not the same as a new infection.
- These results cannot be extrapolated directly to the rest of the country since both the level and patterns of HIV transmission in the participating Autonomous Regions could differ from those of areas without information on new HIV diagnoses.
- Although duplicate data within Autonomous Regions have been eliminated, it was not possible to evaluate whether there is data duplication among them, due to the lack of identifiers in the aggregate registers.
- In some participating Autonomous Regions, notification of new diagnoses is voluntary, therefore reporting may be incomplete if some physicians have not provided these data.
- The data analysed are not adjusted for reporting delay, therefore the numbers provided for the most recent years may be underestimates.
- When comparing information on late presentation with that provided in previous reports, it must be taken into account that the definition has changed this year.

Bearing in mind the previously noted points, the following **conclusions** can be drawn:

- The overall rate of new diagnoses of HIV in Spain is similar to that of some other Western European countries like France, Belgium or Ireland. However, despite the unquestionable improvement with respect to past decades, the rates in Spain are higher than the mean for all European Union countries.
- Regarding transmission mechanisms, whereas a downward trend is seen in IDUs, the rates of new HIV diagnoses in the case of heterosexual transmission have tended to stabilise, and transmission in MSM is clearly on the rise. Given the increasing weight of the latter transmission category in new diagnoses overall, these rising rates have an effect on the overall rates.
- HIV is currently an infection transmitted primarily by the sexual route. Thus, without neglecting other forms of transmission, effective actions that are appropriate to the situation must be implemented and strengthened to prevent transmission by this route,
- In the overall data, unprotected sexual relations between men are the leading mechanism of infection. They are also the primary cause of infection in persons born in Spain and in men, whether of Spanish or foreign origin. Thus, MSM are a priority group for prevention programmes.
- Consistent with the growth of the immigrant population in Spain in recent years, persons of non-Spanish origin make up over one third of new HIV diagnoses. This underlines the need to diversify prevention programmes to adapt them to the needs of this group, which is socially and culturally very heterogeneous and particularly vulnerable.
- The HIV test in Spain is free and confidential for everyone. However, 50% of persons diagnosed with HIV infection for the first time in 2009 had indications of late presentation. It is essential that both health professionals and population be aware that anyone with risk behaviours is vulnerable to HIV, and that it is important to diagnose the infection as early as possible.
- With the three new Autonomous Regions that have joined the reporting system for new HIV diagnoses, the data are more representative than in previous years, but it is still necessary to achieve national coverage.



## TABLES

Table 1: Number of new diagnoses of HIV, by reporting Autonomous Region and year of diagnosis. Data from 15 Autonomous Regions, 2003-2009. Data not adjusted for reporting delay.

Reporting Autonomous Region	Year of diagnosis							Total
	2003	2004	2005	2006	2007	2008	2009	
BALEARIC ISLANDS	121	128	138	169	125	175	150	1,006
CANARY ISLANDS	168	199	229	264	275	300	180	1,615
CATALONIA	690	739	630	690	664	682	560	4,655
CEUTA	1	2	2	3	1	2	0	11
EXTREMADURA	37	32	21	35	40	39	30	234
NAVARRRE	36	37	32	35	33	27	31	231
BASQUE COUNTRY	182	146	156	153	176	200	207	1,220
LA RIOJA	41	29	33	29	28	20	21	201
GALICIA		209	211	213	214	209	203	1,259
ASTURIAS					79	120	98	297
MADRID					581	647	500	1,728
ARAGON						100	108	208
MELILLA						3	2	5
CASTILLA AND LEON							140	140
CANTABRIA							34	34
Total	1,276	1,521	1,452	1,591	2,216	2,524	2,264	12,844

Table 2: New diagnoses of HIV infection: number of cases and rate per million population. Data from 15 Autonomous Regions, 2003-2009. Data not adjusted for reporting delay.

Population of participating Autonomous Regions	Year of HIV diagnosis						
	2003	2004	2005	2006	2007	2008	2009
BALEARIC ISLANDS	919,144	944,644	969,466	992,574	1,010,478	1,023,160	1,034,419
CANARY ISLANDS	1,843,750	1,883,907	1,920,952	1,955,527	1,982,622	2,002,145	2,019,541
CATALONIA	6,566,774	6,698,863	6,817,596	6,927,772	7,009,889	7,063,587	7,109,746
CEUTA	71,603	71,654	71,576	71,494	71,350	71,140	70,901
EXTREMADURA	1,062,955	1,067,643	1,070,772	1,073,568	1,074,998	1,074,981	1,074,597
NAVARRRE	569,014	576,733	583,899	590,604	595,746	599,309	602,424
BASQUE COUNTRY	2,090,808	2,097,213	2,101,879	2,106,124	2,108,492	2,108,835	2,108,505
LA RIOJA	285,198	290,843	295,668	300,156	303,533	305,791	307,736
GALICIA		2,707,701	2,710,691	2,712,702	2,710,952	2,705,319	2,698,619
ASTURIAS					1,052,185	1,047,828	1,043,165
MADRID					6,044,312	6,085,910	6,119,861
ARAGON						1,259,903	1,261,284
MELILLA						66,665	66,522
CASTILLA AND LEON							2,448,111
CANTABRIA							564,759
<b>Total population in participating Autonomous Regions</b>	<b>13,409,246</b>	<b>16,339,201</b>	<b>16,542,499</b>	<b>16,730,521</b>	<b>23,964,557</b>	<b>25,414,573</b>	<b>28,530,190</b>
<b>Number of reported cases</b>	<b>1,276</b>	<b>1,521</b>	<b>1,452</b>	<b>1,591</b>	<b>2,216</b>	<b>2,524</b>	<b>2,264</b>
<b>Rate per million population</b>	<b>95.16</b>	<b>93.03</b>	<b>87.77</b>	<b>95.10</b>	<b>92.47</b>	<b>99.31</b>	<b>79.35</b>

Table 3: Distribution of new diagnoses of HIV, by reporting Autonomous Region and transmission category. Data from 15 Autonomous Regions, 2009. Data not adjusted for reporting delay.

Reporting Autonomous Region	Transmission category												Total	
	MSM		IDU		Mother-child		Hetero.		Other		Unknown /NA			
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
ARAGON	4	3.7%	11	10.2%	2	1.9%	67	62.0%			24	22.2%	108	100.0%
ASTURIAS	52	53.1%	11	11.2%	1	1.0%	25	25.5%	1	1.0%	8	8.2%	98	100.0%
BALEARIC ISLANDS	49	32.7%	16	10.7%			57	38.0%			28	18.7%	150	100.0%
CANARY ISLANDS	109	60.6%	6	3.3%			59	32.8%	1	.6%	5	2.8%	180	100.0%
CANTABRIA	8	23.5%	2	5.9%	2	5.9%	4	11.8%	3	8.8%	15	44.1%	34	100.0%
CASTILLA AND LEON	34	24.3%	19	13.6%			57	40.7%			30	21.4%	140	100.0%
CATALONIA	239	42.7%	52	9.3%			192	34.3%			77	13.8%	560	100.0%
EXTREMADURA	9	30.0%	3	10.0%	1	3.3%	7	23.3%			10	33.3%	30	100.0%
GALICIA	70	34.5%	26	12.8%	2	1.0%	72	35.5%	1	.5%	32	15.8%	203	100.0%
MADRID	310	62.0%	15	3.0%	2	.4%	108	21.6%	2	.4%	63	12.6%	500	100.0%
NAVARRRE	8	25.8%	2	6.5%			17	54.8%			4	12.9%	31	100.0%
BASQUE COUNTRY	70	33.8%	18	8.7%			98	47.3%	5	2.4%	16	7.7%	207	100.0%
LA RIOJA			3	14.3%			17	81.0%	1	4.8%			21	100.0%
CEUTA														
MELILLA							2	100.0%					2	100.0%
<b>Total</b>	<b>962</b>	<b>42.5%</b>	<b>184</b>	<b>8.1%</b>	<b>10</b>	<b>.4%</b>	<b>782</b>	<b>34.5%</b>	<b>14</b>	<b>.6%</b>	<b>312</b>	<b>13.8%</b>	<b>2,264</b>	<b>100.0%</b>

MSM=Men who have sex with men; IDU=Injecting drug users; Hetero.=High-risk heterosexual relations; Other=Other risk exposures; Unknown/NA=Risk exposures unknown or not available

Table 4: Distribution of new diagnoses of HIV, by sex and area of origin. Data from 15 Autonomous Regions, 2009. Data not adjusted for reporting delay.

Sex	Geographic area of origin														Total	
	Spain		Western Europe		Eastern Europe		Latin America		Sub-Saharan Africa		North Africa		Other/NA			
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Male	1,187	65.9%	73	4.0%	47	2.6%	345	19.2%	106	5.9%	27	1.5%	15	.8%	1,800	100.0%
Female	226	48.7%	4	.9%	24	5.2%	94	20.3%	106	22.8%	6	1.3%	4	.9%	464	100.0%
<b>Total</b>	<b>1,413</b>	<b>62.4%</b>	<b>77</b>	<b>3.4%</b>	<b>71</b>	<b>3.1%</b>	<b>439</b>	<b>19.4%</b>	<b>212</b>	<b>9.4%</b>	<b>33</b>	<b>1.5%</b>	<b>19</b>	<b>.8%</b>	<b>2,264</b>	<b>100.0%</b>

Table 5: Distribution of new diagnoses of HIV, by geographic area of origin and transmission category. Data from 15 Autonomous Regions, 2009. Data not adjusted for reporting delay.

Geographic area of origin	Transmission category												Total	
	MSM		IDU		Mother-child		Hetero.		Unknown/NA		Other			
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Spain	657	46.5%	146	10.3%	7	.5%	375	26.5%	221	15.6%	7	.5%	1,413	100.0%
Western Europe	46	59.7%	9	11.7%	0	.0%	14	18.2%	8	10.4%	0	.0%	77	100.0%
Eastern Europe	14	19.7%	16	22.5%	0	.0%	28	39.4%	11	15.5%	2	2.8%	71	100.0%
Latin America	231	52.6%	3	.7%	3	.7%	158	36.0%	41	9.3%	3	.7%	439	100.0%
Sub-Saharan Africa	1	.5%	0	.0%	0	.0%	183	86.3%	26	12.3%	2	.9%	212	100.0%
North Africa	3	9.1%	8	24.2%	0	.0%	18	54.5%	4	12.1%	0	.0%	33	100.0%
Other/NA	10	52.6%	2	10.5%	0	.0%	6	31.6%	1	5.3%	0	.0%	19	100.0%
<b>Total</b>	<b>962</b>	<b>42.5%</b>	<b>184</b>	<b>8.1%</b>	<b>10</b>	<b>.4%</b>	<b>782</b>	<b>34.5%</b>	<b>312</b>	<b>13.8%</b>	<b>14</b>	<b>.6%</b>	<b>2,264</b>	<b>100.0%</b>

MSM=Men who have sex with men; IDU=Injecting drug users; Hetero.=High-risk heterosexual relations; Other=Other risk exposures; Unknown/NA=Risk exposures unknown or not available

Table 6: Distribution of new diagnoses of HIV, by transmission category and geographic area of origin. Data from 15 Autonomous Regions, 2009. Data not adjusted for reporting delay.

Transmission category	Geographic area of origin														Total	
	Spain		Western Europe		Eastern Europe		Latin America		Sub-Saharan Africa		North Africa		Other/NA			
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
MSM	657	68.3%	46	4.8%	14	1.5%	231	24.0%	1	.1%	3	.3%	10	1.0%	962	100.0%
IDU	146	79.3%	9	4.9%	16	8.7%	3	1.6%	0	.0%	8	4.3%	2	1.1%	184	100.0%
Mother-child	7	70.0%	0	.0%	0	.0%	3	30.0%	0	.0%	0	.0%	0	.0%	10	100.0%
Hetero.	375	48.0%	14	1.8%	28	3.6%	158	20.2%	183	23.4%	18	2.3%	6	.8%	782	100.0%
Unknown/NA	221	70.8%	8	2.6%	11	3.5%	41	13.1%	26	8.3%	4	1.3%	1	.3%	312	100.0%
Other	7	50.0%	0	.0%	2	14.3%	3	21.4%	2	14.3%	0	.0%	0	.0%	14	100.0%
<b>Total</b>	<b>1,413</b>	<b>62.4%</b>	<b>77</b>	<b>3.4%</b>	<b>71</b>	<b>3.1%</b>	<b>439</b>	<b>19.4%</b>	<b>212</b>	<b>9.4%</b>	<b>33</b>	<b>1.5%</b>	<b>19</b>	<b>.8%</b>	<b>2,264</b>	<b>100.0%</b>

Table 7: Distribution of new diagnoses of HIV, by year of diagnosis and sex. Data from 9 Autonomous Regions, 2004-2009. Data not adjusted for reporting delay.

Year of diagnosis	Male		Female		Total	
	N	%	N	%	N	%
2004	1,141	75.0%	380	25.0%	1,521	100.0%
2005	1,105	76.1%	347	23.9%	1,452	100.0%
2006	1,233	77.5%	357	22.5%	1,590	100.0%
2007	1,216	78.1%	340	21.9%	1,556	100.0%
2008	1,292	78.1%	362	21.9%	1,654	100.0%
2009	1,078	78.0%	304	22.0%	1,382	100.0%
Total	7,065	77.2%	2,090	22.8%	9,155	100.0%

Table 8: Distribution of new diagnoses of HIV, by year of diagnosis and age group. Data from 9 Autonomous Regions, 2004-2009. Data not adjusted for reporting delay.

Year of diagnosis	Age group															
	< 15 years		15-19 years		20-29 years		30-39 years		40-49 years		50 or more		Age unknown		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
2004	5	.3%	24	1.6%	366	24.1%	636	41.8%	306	20.1%	184	12.1%	0	.0%	1,521	100.0%
2005	3	.2%	19	1.3%	328	22.6%	579	39.9%	356	24.5%	167	11.5%	0	.0%	1,452	100.0%
2006	7	.4%	19	1.2%	384	24.1%	612	38.5%	374	23.5%	192	12.1%	3	.2%	1,591	100.0%
2007	1	.1%	31	2.0%	374	24.0%	583	37.5%	356	22.9%	207	13.3%	4	.3%	1,556	100.0%
2008	4	.2%	24	1.5%	409	24.7%	604	36.5%	406	24.5%	203	12.3%	4	.2%	1,654	100.0%
2009	4	.3%	28	2.0%	340	24.6%	522	37.8%	336	24.3%	150	10.9%	2	.1%	1,382	100.0%
Total	24	.3%	145	1.6%	2,201	24.0%	3,536	38.6%	2,134	23.3%	1,103	12.0%	13	.1%	9,156	100.0%

Table 9: Distribution of new diagnoses of HIV, by year of diagnosis and transmission category. Data from 9 Autonomous Regions, 2004-2009. Data not adjusted for reporting delay.

Year of diagnosis	Transmission category																Total	
	MSM		IDU		Hemoder.*		Transfus.*		Mother-child		Hetero.		Unknown/NA		Other		N	%
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%		
2004	446	29.3%	305	20.1%					3	.2%	683	44.9%	78	5.1%	6	.4%	1,521	100.0%
2005	488	33.6%	235	16.2%			1	.1%	2	.1%	629	43.3%	96	6.6%	1	.1%	1,452	100.0%
2006	558	35.1%	229	14.4%	1	.1%	1	.1%	3	.2%	687	43.2%	107	6.7%	5	.3%	1,591	100.0%
2007	650	41.8%	151	9.7%	1	.1%	1	.1%			634	40.7%	119	7.6%			1,556	100.0%
2008	678	41.0%	150	9.1%					3	.2%	664	40.1%	156	9.4%	3	.2%	1,654	100.0%
2009	554	40.1%	126	9.1%			2	.1%	3	.2%	519	37.6%	172	12.4%	6	.4%	1,382	100.0%
<b>Total</b>	<b>3,374</b>	<b>36.9%</b>	<b>1,196</b>	<b>13.1%</b>	<b>2</b>	<b>.0%</b>	<b>5</b>	<b>.1%</b>	<b>14</b>	<b>.2%</b>	<b>3,816</b>	<b>41.7%</b>	<b>728</b>	<b>8.0%</b>	<b>21</b>	<b>.2%</b>	<b>9,156</b>	<b>100.0%</b>

MSM=Men who have sex with men; IDU=Injecting drug users; Hemoder.=Recipients of hemoderivatives; Transfus.= Recipients of blood transfusions; Hetero.=High-risk heterosexual relations; Unknown/NA=Risk exposures unknown or not available; Other=Other risk exposures  
 \*All reported cases in this transmission category had been transfused outside of Spain.

Table 10: Distribution of new diagnoses of HIV, by year of diagnosis, transmission category and sex. Data from 9 Autonomous Regions, 2004-2009. Data not adjusted for reporting delay.

Year of diagnosis	Transmission category																										Total					
	MSM		IDU				Hemoder.*				Transfus.*				Mother-child				Hetero.				Unknown/NA				Other				N	%
	Male		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female						
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%				
2004	446	29.3%	234	15.4%	71	4.7%									2	.1%	1	.1%	395	26.0%	288	18.9%	62	4.1%	16	1.1%	2	.1%	4	.3%	1,521	100.0%
2005	488	33.6%	197	13.6%	38	2.6%						1	.1%	1	.1%	1	.1%	347	23.9%	282	19.4%	72	5.0%	24	1.7%			1	.1%	1,452	100.0%	
2006	558	35.1%	186	11.7%	43	2.7%			1	.1%	1	.1%			1	.1%	2	.1%	394	24.8%	292	18.4%	90	5.7%	17	1.1%	3	.2%	2	.1%	1,590	100.0%
2007	650	41.8%	117	7.5%	34	2.2%	1	.1%			1	.1%							345	22.2%	289	18.6%	102	6.6%	17	1.1%					1,556	100.0%
2008	678	41.0%	120	7.3%	30	1.8%							1	.1%	2	.1%			371	22.4%	293	17.7%	122	7.4%	34	2.1%			3	.2%	1,654	100.0%
2009	554	40.1%	98	7.1%	28	2.0%					1	.1%	1	.1%	1	.1%	2	.1%	282	20.4%	237	17.1%	139	10.1%	33	2.4%	3	.2%	3	.2%	1,382	100.0%
<b>Total</b>	<b>3,374</b>	<b>36.9%</b>	<b>952</b>	<b>10.4%</b>	<b>244</b>	<b>2.7%</b>	<b>1</b>	<b>.0%</b>	<b>1</b>	<b>.0%</b>	<b>3</b>	<b>.0%</b>	<b>2</b>	<b>.0%</b>	<b>6</b>	<b>.1%</b>	<b>8</b>	<b>.1%</b>	<b>2,134</b>	<b>23.3%</b>	<b>1,681</b>	<b>18.4%</b>	<b>587</b>	<b>6.4%</b>	<b>141</b>	<b>1.5%</b>	<b>8</b>	<b>.1%</b>	<b>13</b>	<b>.1%</b>	<b>9,155</b>	<b>100.0%</b>

MSM=Men who have sex with men; IDU=Injecting drug users; Hemoder.=Recipients of hemoderivatives; Transfus.= Recipients of blood transfusions; Hetero.=High-risk heterosexual relations; Unknown/NA=Risk exposures unknown or not available; Other=Other risk exposures  
 \*All reported cases in this transmission category had been transfused outside of Spain.

Table 11: Distribution of new diagnoses of HIV, by year and geographic area of origin. Data from 9 Autonomous Regions, 2004-2009. Data not adjusted for reporting delay.

Year of diagnosis	Geographic area of origin														Total	
	Spain		Western Europe		Eastern Europe		Latin America		Sub-Saharan Africa		North Africa		Other/NA		N	%
	N	%	N	%	N	%	N	%	N	%	N	%				
2004	1,049	69.0%	69	4.5%	23	1.5%	173	11.4%	171	11.2%	20	1.3%	16	1.1%	1,521	100.0%
2005	968	66.7%	63	4.3%	23	1.6%	207	14.3%	148	10.2%	28	1.9%	15	1.0%	1,452	100.0%
2006	1,017	63.9%	73	4.6%	32	2.0%	245	15.4%	181	11.4%	32	2.0%	11	.7%	1,591	100.0%
2007	1,028	66.1%	66	4.2%	35	2.2%	252	16.2%	143	9.2%	18	1.2%	14	.9%	1,556	100.0%
2008	1,029	62.2%	95	5.7%	51	3.1%	274	16.6%	174	10.5%	14	.8%	17	1.0%	1,654	100.0%
2009	880	63.7%	54	3.9%	45	3.3%	232	16.8%	139	10.1%	21	1.5%	11	.8%	1,382	100.0%
<b>Total</b>	5,971	65.2%	420	4.6%	209	2.3%	1,383	15.1%	956	10.4%	133	1.5%	84	.9%	9,156	100.0%

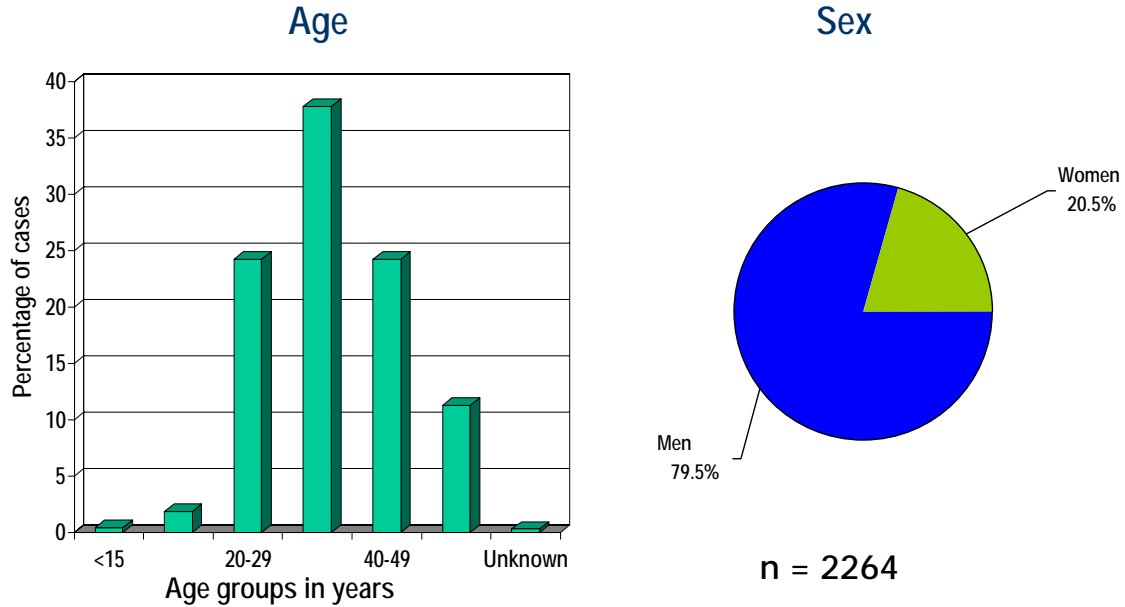




# FIGURES



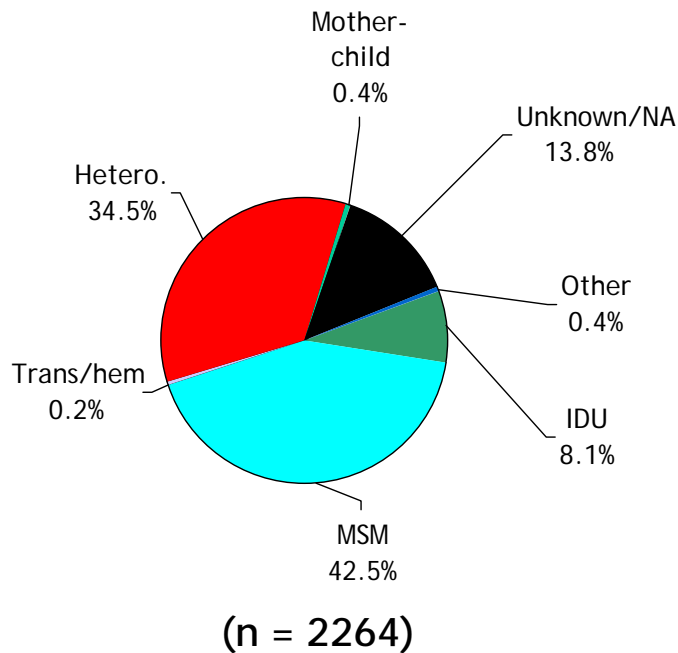
**Figure 1**  
New diagnoses of HIV. Distribution by age and sex. Spain. Data from 15 Autonomous Regions\*, 2009



\*Aragon, Asturias, Balearic Islands, Canary Islands, Cantabria, Castilla Leon, Catalonia, Ceuta, Extremadura, Galicia, La Rioja, Madrid, Melilla, Navarre, Basque Country

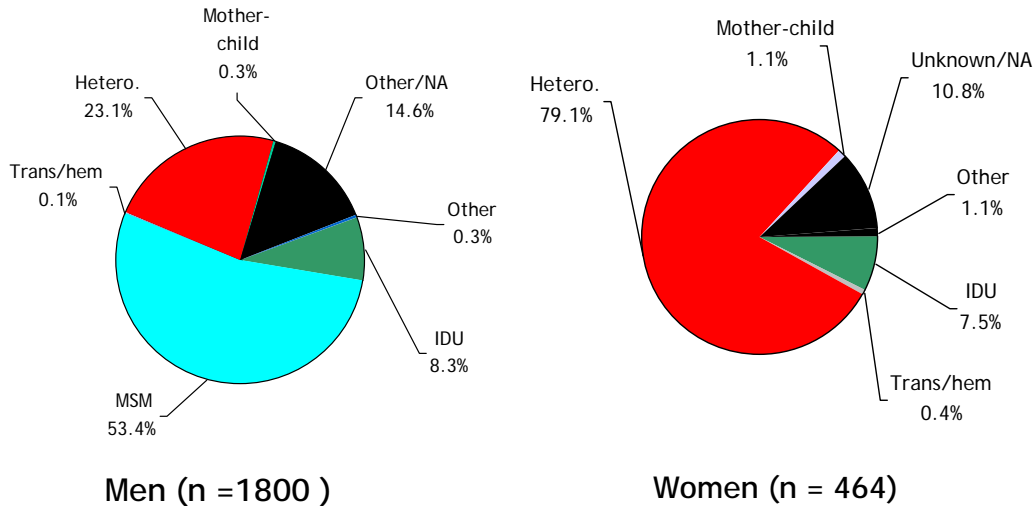


**Figure 2**  
New diagnoses of HIV. Transmission category. Spain. Data from 15 Autonomous Regions\*, 2009



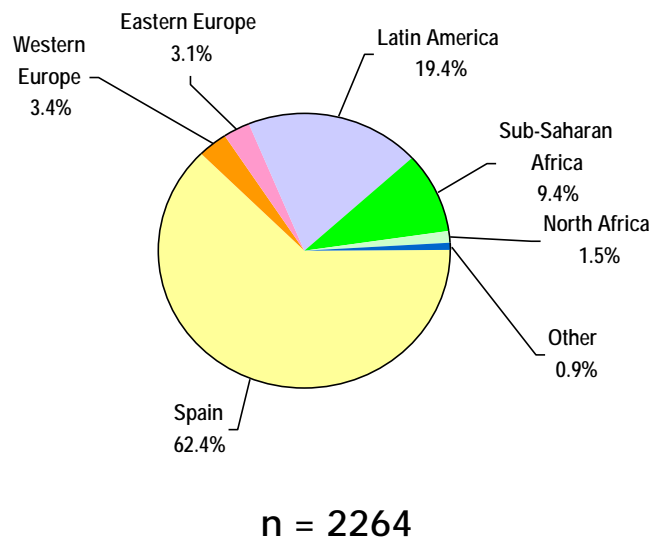
\*Aragon, Asturias, Balearic Islands, Canary Islands, Cantabria, Castilla Leon, Catalonia, Ceuta, Extremadura, Galicia, La Rioja, Madrid, Melilla, Navarre, Basque Country

**Figure 3**  
**New diagnoses of HIV. Transmission category and sex.**  
**Spain. Data from 15 Autonomous Regions\*, 2009**



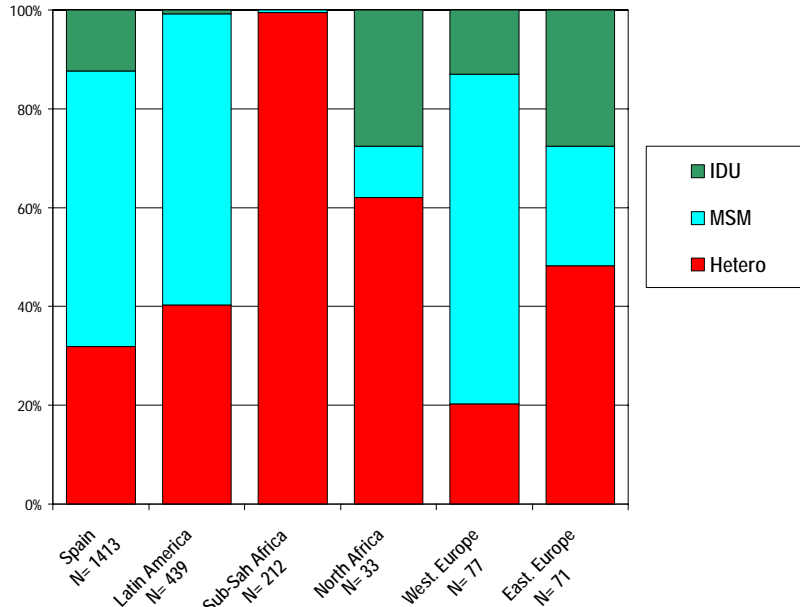
\*Aragon, Asturias, Balearic Islands, Canary Islands, Cantabria, Castilla Leon, Catalonia, Ceuta, Extremadura, Galicia, La Rioja, Madrid, Melilla, Navarre, and Basque Country

**Figure 4**  
**New diagnoses of HIV. Area of origin.**  
**Spain. Data from 15 Autonomous Regions\*, 2009**



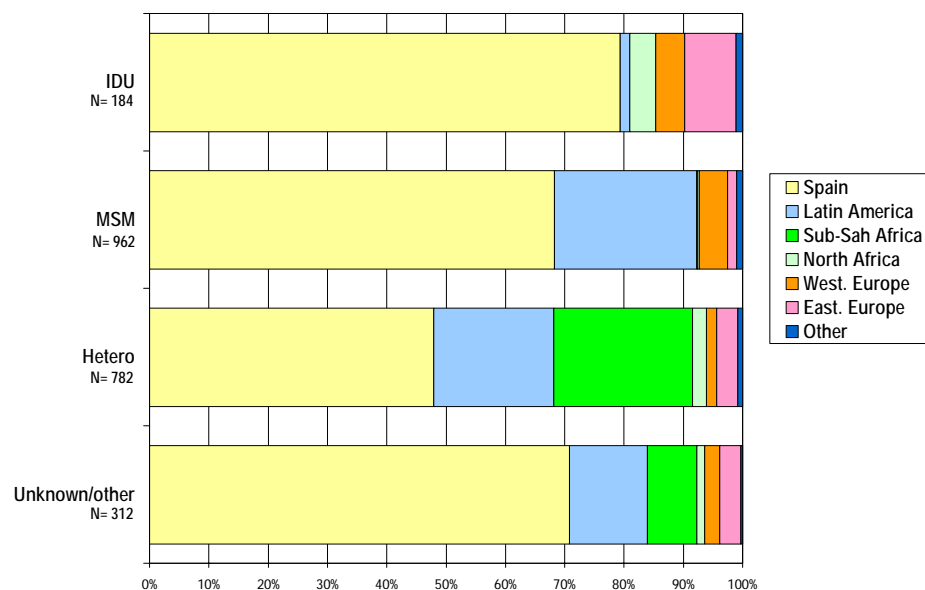
\*Aragon, Asturias, Balearic Islands, Canary Islands, Cantabria, Castilla Leon, Catalonia, Ceuta, Extremadura, Galicia, La Rioja, Madrid, Melilla, Navarre, and Basque Country

**Figure 5**  
**New diagnoses of HIV in immigrants**  
**Distribution by transmission category according to origin.**  
**Spain. Data from 15 Autonomous Regions\*, 2009**



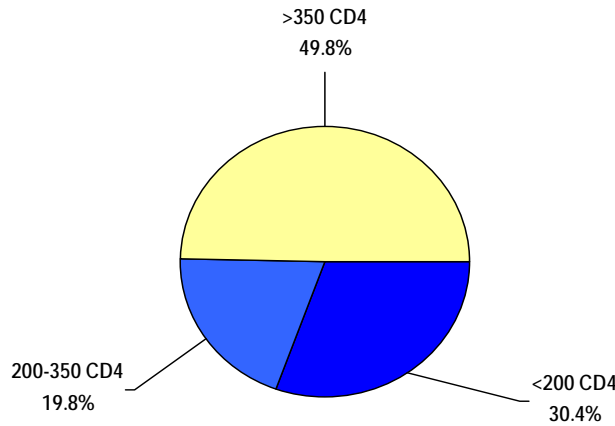
\*Aragon, Asturias, Balearic Islands, Canary Islands, Cantabria, Castilla Leon, Catalonia, Ceuta, Extremadura, Galicia, La Rioja, Madrid, Melilla, Navarre, and Basque Country

**Figure 6**  
**New diagnoses of HIV in immigrants.**  
**Distribution by origin according to transmission category.**  
**Spain. Data from 15 Autonomous Regions\*, 2009**



\*Aragon, Asturias, Balearic Islands, Canary Islands, Cantabria, Castilla Leon, Catalonia, Ceuta, Extremadura, Galicia, La Rioja, Madrid, Melilla, Navarre, and Basque Country

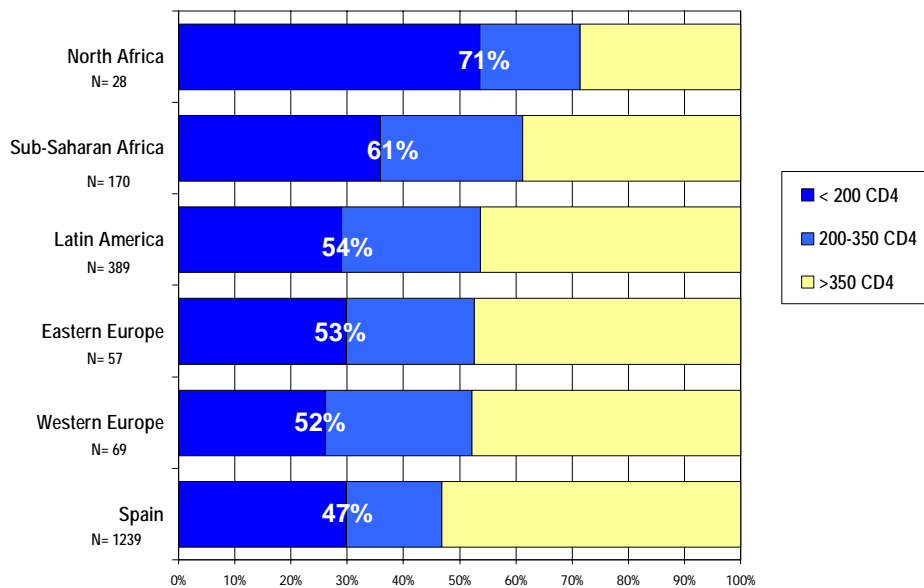
**Figure 7**  
New diagnoses of HIV. Late presentation.  
Spain. Data from 15 Autonomous Regions\*, 2009



n = 1968

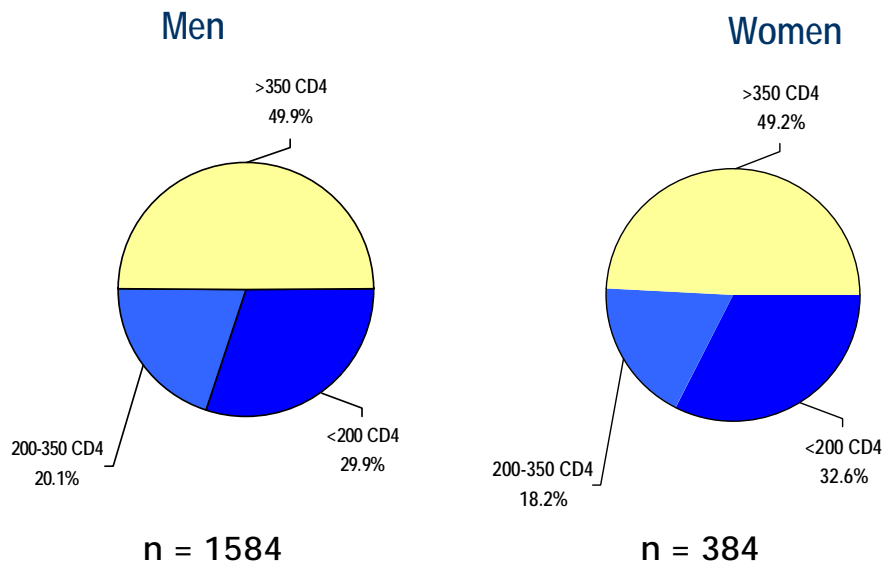
\*Aragon, Asturias, Balearic Islands, Canary Islands, Cantabria, Castilla Leon, Catalonia, Ceuta, Extremadura, Galicia, La Rioja, Madrid, Melilla, Navarre, and Basque Country

**Figure 8**  
New diagnoses of HIV. Late presentation by area of origin.  
Spain. Data from 15 Autonomous Regions\*, 2009



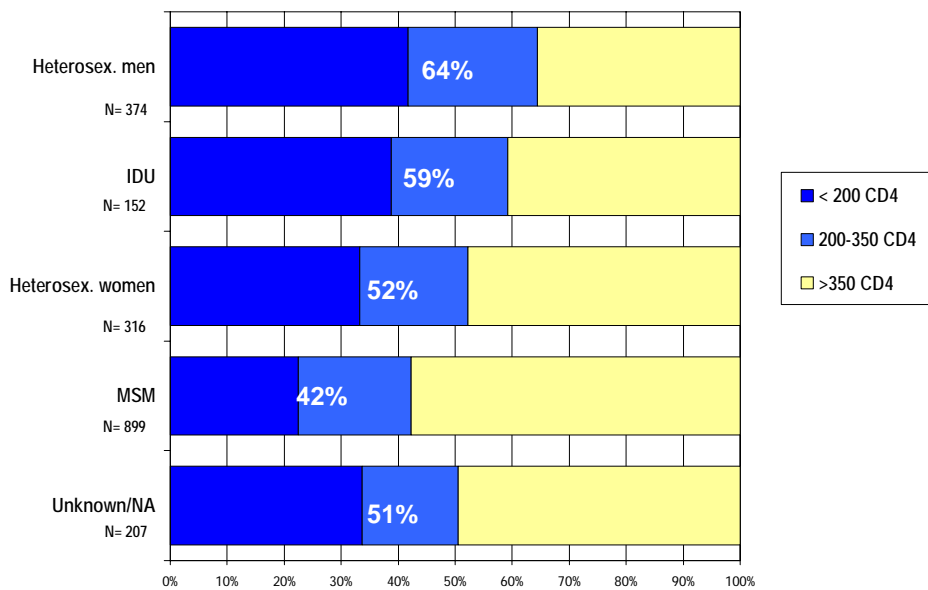
\*Aragon, Asturias, Balearic Islands, Canary Islands, Cantabria, Castilla Leon, Catalonia, Ceuta, Extremadura, Galicia, La Rioja, Madrid, Melilla, Navarre, Basque Country

**Figure 9**  
New diagnoses of HIV. Late presentation by sex.  
Spain. Data from 15 Autonomous Regions\*, 2009.



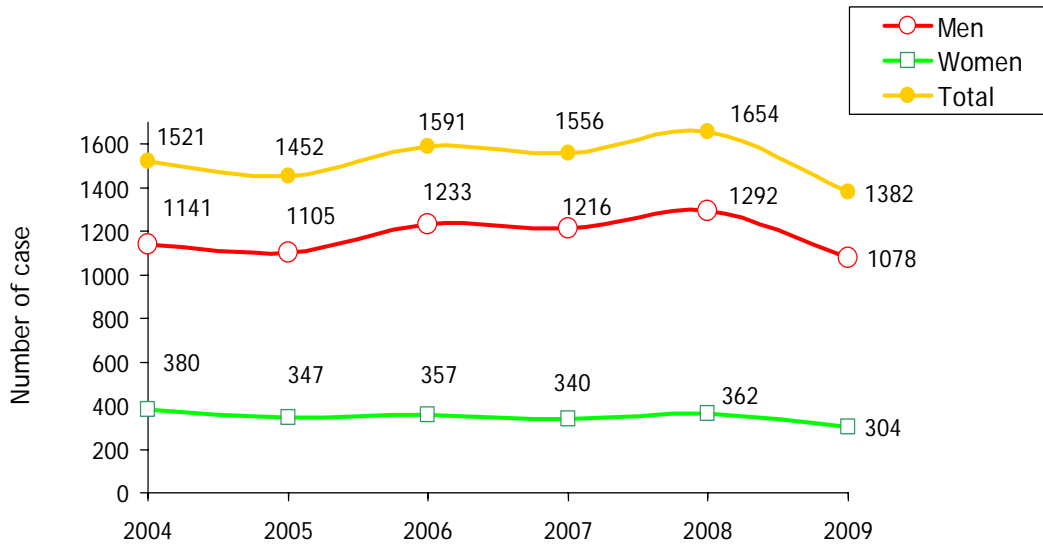
\*Aragon, Asturias, Balearic Islands, Canary Islands, Cantabria, Castilla Leon, Catalonia, Ceuta, Extremadura, Galicia, La Rioja, Madrid, Melilla, Navarre, Basque Country

**Figure 10**  
New diagnoses of HIV.  
Late presentation by transmission category.  
Spain. Data from 15 Autonomous Regions\*, 2009.



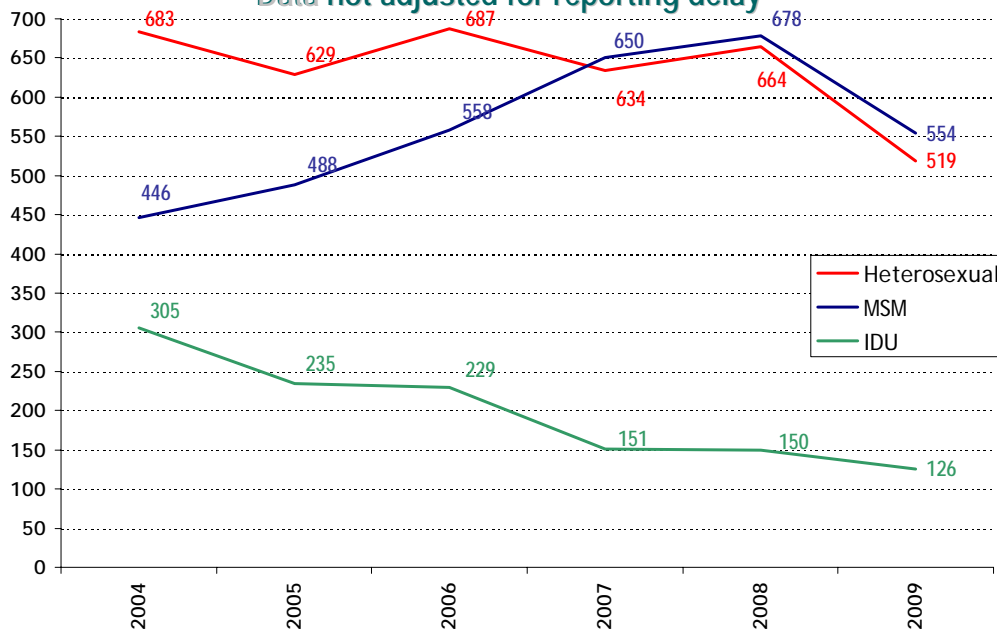
\*Aragon, Asturias, Balearic Islands, Canary Islands, Cantabria, Castilla Leon, Catalonia, Ceuta, Extremadura, Galicia, La Rioja, Madrid, Melilla, Navarre, Basque Country

**Figure 11**  
**New diagnoses of HIV.**  
Distribution by year of diagnosis and sex.  
Spain. Data from 9 Autonomous Regions\*, 2004-2009  
Data not adjusted for reporting delay



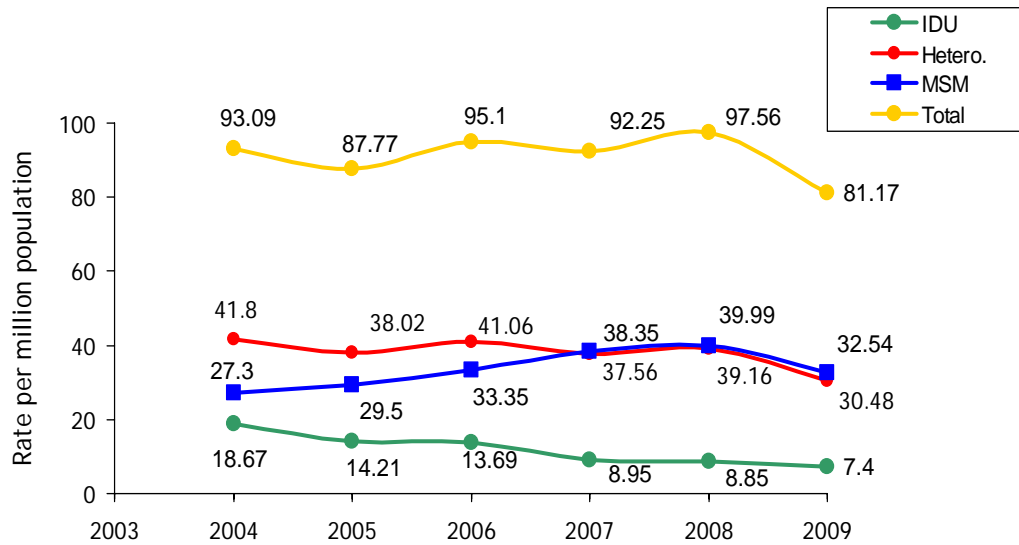
\*Balearic Islands, Canary Islands, Catalonia, Ceuta, Extremadura, Galicia, La Rioja, Navarre, Basque Country

**Figure 12**  
**New diagnoses of HIV per year, by transmission category.**  
Spain. Data from 9 Autonomous Regions\*, 2004-2009  
Data not adjusted for reporting delay



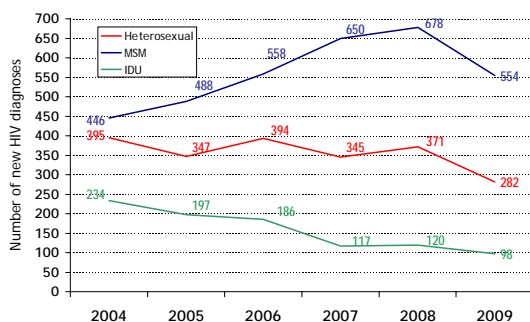
\*Balearic Islands, Canary Islands, Catalonia, Ceuta, Extremadura, Galicia, La Rioja, Navarre, Basque Country

**Figure 13**  
**Rates of new HIV diagnoses.**  
Distribution by year of diagnosis and transmission category.  
Spain. Data from 9 Autonomous Regions\*, 2004-2009  
Data not adjusted for reporting delay

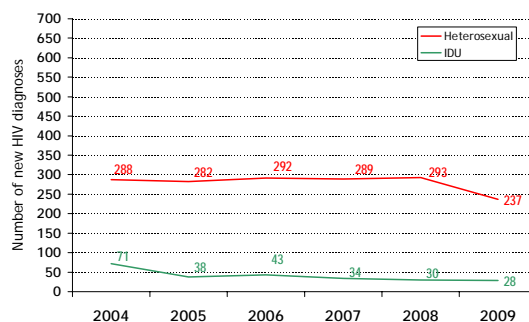


\*Balearic Islands, Canary Islands, Catalonia, Ceuta, Extremadura, Galicia, La Rioja, Navarre, Basque Country

**Figure 14**  
**New diagnoses of HIV per year, by transmission category and sex.**  
Spain. Data from 9 Autonomous Regions\*, 2004-2009  
Data not adjusted for reporting delay



Men

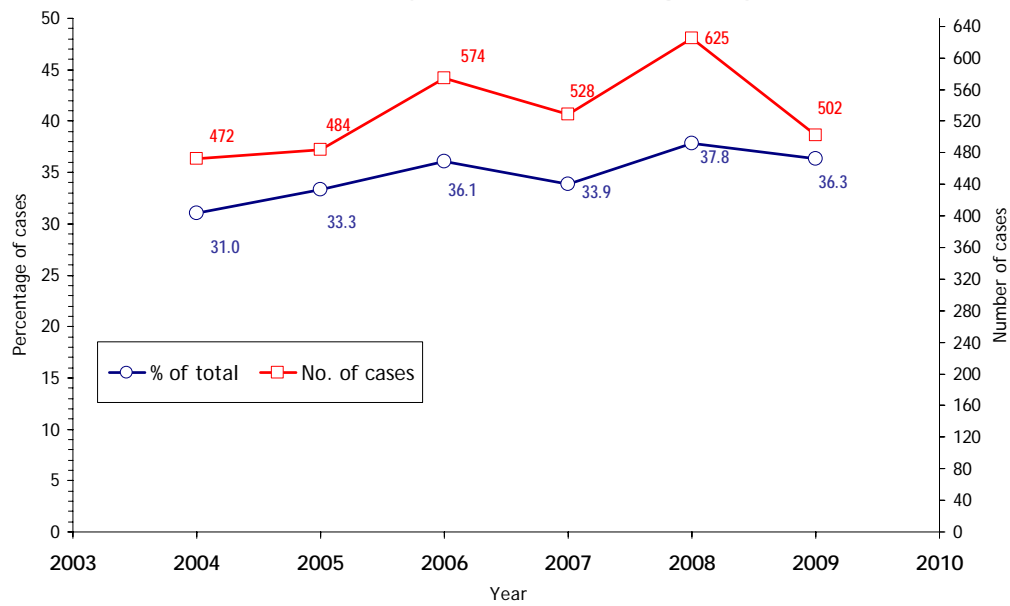


Women

\*Balearic Islands, Canary Islands, Catalonia, Ceuta, Extremadura, Galicia, La Rioja, Navarre, Basque Country

Figure 15

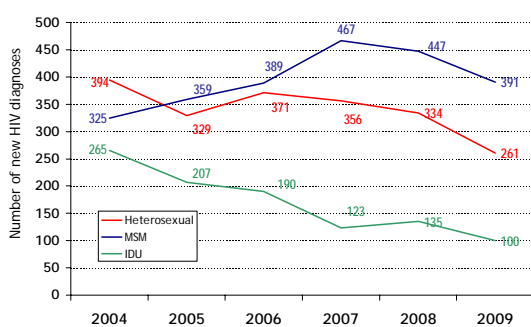
Number and percentage of new diagnoses of HIV in Spain in persons from other countries. Data from 9 Autonomous Regions\*, 2004-2009  
Data not adjusted for reporting delay



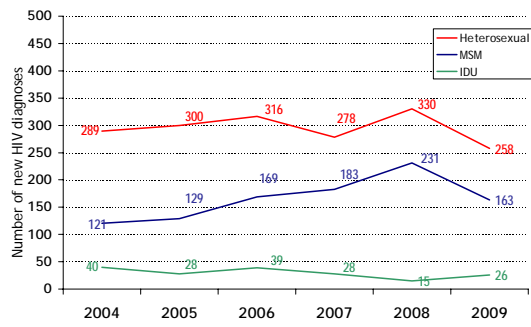
\*Balearic Islands, Canary Islands, Catalonia, Ceuta, Extremadura, Galicia, La Rioja, Navarre, Basque Country

Figure 16

New diagnoses of HIV per year, by transmission category and origin. Spain. Data from 9 Autonomous Regions\*, 2004-2009  
Data not adjusted for reporting delay



Spain



Other countries

\*Balearic Islands, Canary Islands, Catalonia, Ceuta, Extremadura, Galicia, La Rioja, Navarre, Basque Country

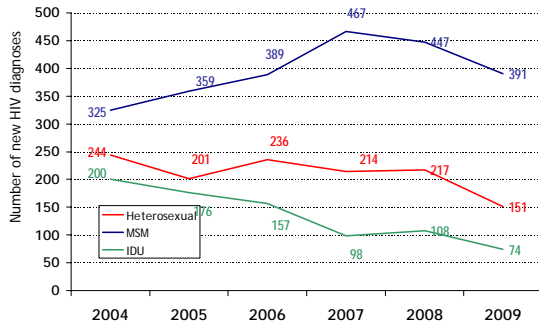


Figure 17

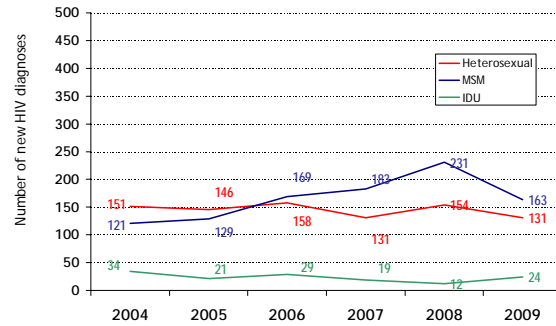
New diagnoses of HIV per year, by transmission category and origin.  
Spain. Data from 9 Autonomous Regions\*, 2004-2009

Data not adjusted for reporting delay

Men



Spain



Other countries

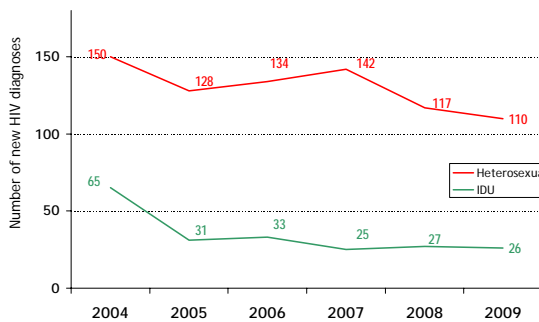
\*Balearic Islands, Canary Islands, Catalonia, Ceuta, Extremadura, Galicia, La Rioja, Navarre, Basque Country

Figure 18

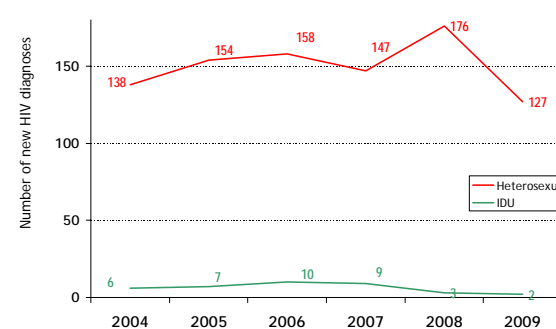
New diagnoses of HIV per year by transmission category and origin.  
Spain. Data from 9 Autonomous Regions\*, 2004-2009

Data not adjusted for reporting delay

Women



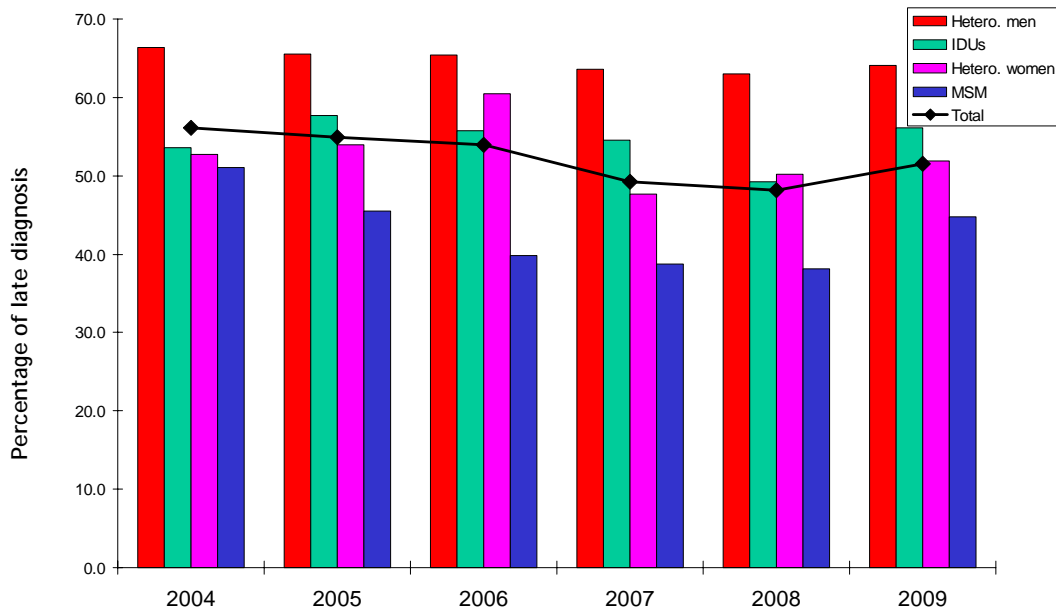
Spain



Other countries

\*Balearic Islands, Canary Islands, Catalonia, Ceuta, Extremadura, Galicia, La Rioja, Navarre, Basque Country

**Figure 19**  
**New diagnoses of HIV.**  
**Late presentation (<350 CD4) by transmission category and year of diagnosis.**  
**Spain. Data from 9 Autonomous Regions\*, 2004-2009**



\*Balearic Islands, Canary Islands, Catalonia, Ceuta, Extremadura, Galicia, La Rioja, Navarre, Basque Country

**Sistema de Notificación de Nuevos diagnósticos de VIH (SINIVIH).  
 Participants**

- Aragón
- Asturias
- Baleares
- Cantabria
- Canarias
- Castilla León
- Cataluña
- Ceuta
- Extremadura
- Galicia
- Madrid
- Melilla
- Navarra
- País Vasco
- La Rioja
- Secretaría del Plan Nacional sobre el sida /CNE
- Carmen Malo
- Ana M<sup>a</sup> Fernández
- Antonio Nicolau
- Luis Vilorio
- Ana Izquierdo
- Henar Marcos
- Nuria Vives
- Ana Rivas
- Mara Álvarez
- Javier Cereijo
- Carlos Cevallos
- Daniel Castrillejo
- Jesús Castilla
- Arantxa Arrillaga
- M<sup>a</sup> Eugenia Lezaun
- Jesús Oliva
- Mercedes Díez