



HIV/AIDS MORTALITY. SPAIN, 1981-2008

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MORTALITY FROM HIV/AIDS IN SPAIN, 1981-2008

INTRODUCTION

Despite greatly improved survival in patients with HIV infection following the introduction of highly active antiretroviral treatments (HAART), HIV remains a serious, incurable disease. Monitoring deaths from HIV/AIDS is useful to evaluate the effectiveness of antiretroviral treatment and prevention activities aimed at combating HIV infection.

The source of information for HIV/AIDS mortality data presented in this report is the Mortality Statistics compiled by the National Statistics Institute (INE). Mortality Statistics are collected countrywide and data are obtained in a similar way in all Autonomous Regions; nevertheless, one limitation is the delay in its publication.

The International Classification of Diseases (ICD) is used to code the underlying cause of death in data files on deaths. Between 1981 and 1999 a number of changes were made in the classification criteria which have affected deaths from HIV/AIDS. Initially, the International Classification of Diseases, 9th revision (ICD-9), was used; however it contained no specific codes for HIV/AIDS infection because it was an unknown disease when this classification was established in 1975. It was not until 1989 that specific codes were defined for registration of deaths from HIV/AIDS.

Thus, until 1989 deaths from HIV/AIDS were classified under ICD-9 category 279 (Disorders involving the immune mechanism), using codes 279.1, 279.3, 279.8 and 279.9. Beginning in 1989, it was established that a death from HIV/AIDS should be classified under one of the following codes: 279.5 (AIDS), 279.6 (AIDS-related complex) or 279.8 (HIV infection). Since 1999, the International Classification of Diseases, 10th revision (ICD-10), has been applied, which includes specific codes for HIV/AIDS (B20, B21, B22, B23, B24 and R75). Accordingly, beginning in the year 2000, only these codes are considered in the calculation of mortality.

This report describes mortality from HIV/AIDS in 2008 and its evolution during the period 1981-2008.

METHODS

Descriptive study of HIV/AIDS mortality, based on mortality statistics collected by INE, selecting the specific HIV/AIDS codes for each year. Rates were calculated using the population figures provided by the INE (2).

RESULTS

a) HIV/AIDS Mortality, 2008

A total of 386,324 deaths occurred in Spain in 2008, of which 1,215 (3.2 per 1,000) were due to HIV/AIDS. Of these, 950 (78.2%) occurred in men and 265 (21.8%) in women. The overall mortality rate for HIV/AIDS was 2.74 per 100,000 population (table 1).

Table 1. Total deaths, deaths from HIV/AIDS, proportional mortality from HIV/AIDS, and HIV/AIDS mortality rate per 100,000 population, total and by sex. 2008

	Total deaths	Number of deaths from HIV/AIDS	Deaths from HIV/AIDS (‰)	HIV/AIDS mortality rate per 100,000 population
Men	199,647	950	4.76	4.35
Women	186,677	265	1.42	1.18
Total	386,324	1,215	3.15	2.74

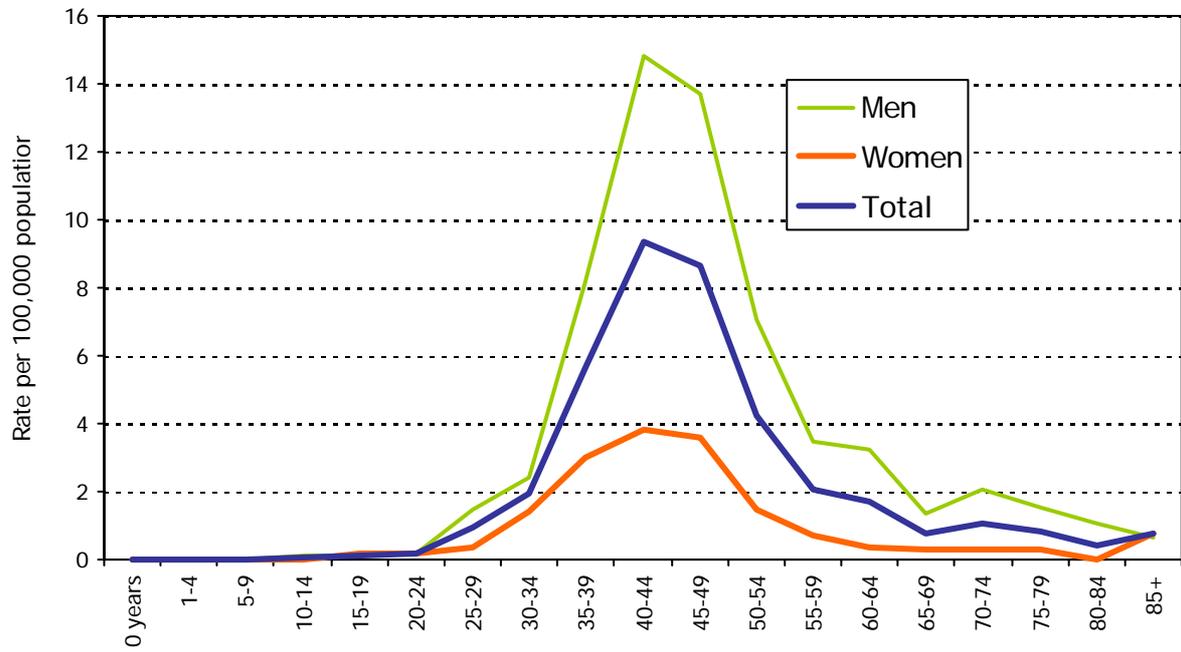
The mean age of people dying of HIV/AIDS was 45.1 years (SD: 10.1), and was higher in men (45.5 years, SD: 9.8) than in women (43.7; SD: 11.0) ($p < 0.05$).

By age group, the largest number of HIV/AIDS deaths was seen in those aged 40-44 years, with 334 deaths (27.5% of the total), followed by the 45-49 year age group with 282 deaths (23.2% of the total). This pattern is repeated in both men and women. The number of deaths and rates per age group are shown in table 2 and figure 1.

Table 2. Deaths from HIV/AIDS. Number and rates per 100,000 population, by sex and age group. 2008

Age group	Deaths from HIV/AIDS					
	TOTAL (N)	Rate per 100,000 pop.	MEN (N)	Rate per 100,000 pop.	WOMEN (N)	Rate per 100,000 pop.
0 years	-	-	-	-	-	-
1-4 years	-	-	-	-	-	-
5-9 years	-	-	-	-	-	-
10-14 years	1	0.05	1	0.10	-	-
15-19 years	3	0.14	1	0.09	2	0.19
20-24 years	4	0.15	2	0.15	2	0.16
25-29 years	31	0.92	25	1.45	6	0.36
30-34 years	75	1.93	48	2.40	27	1.43
35-39 years	212	5.67	157	8.19	55	3.02
40-44 years	334	9.38	267	14.83	67	3.81
45-49 years	282	8.64	224	13.72	58	3.56
50-54 years	120	4.24	99	7.06	21	1.47
55-59 years	52	2.07	43	3.50	9	0.70
60-64 years	40	1.73	36	3.23	4	0.33
65-69 years	15	0.79	12	1.34	3	0.30
70-74 years	20	1.08	17	2.04	3	0.30
75-79 years	14	0.84	11	1.54	3	0.31
80-84 years	5	0.42	5	1.08	-	-
>=85 years	7	0.74	2	0.66	5	0.77
TOTAL	1,215	2.74	950	4.35	265	1.18

Figure 1. Mortality rates by sex and age group, 2008



Source: National Mortality Statistics (INE)
Produced by: National Centre of Epidemiology

b) Evolution of mortality, 1981-2008

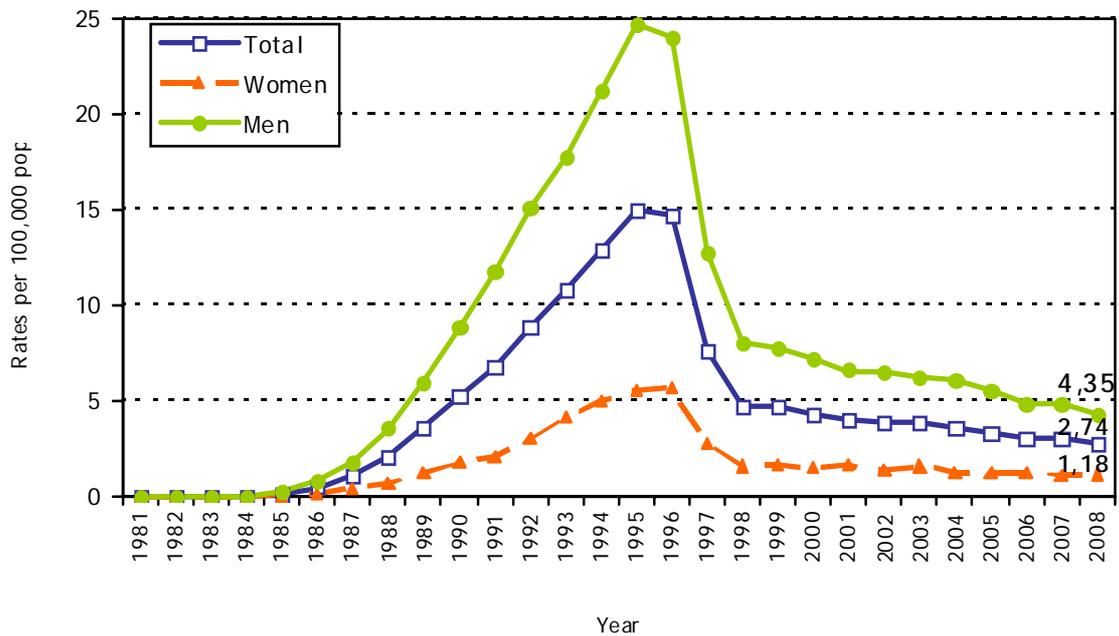
Between 1981 and 2008 there were a total of 52,147 deaths from HIV/AIDS, 81.2% in men and 18.8% in women. The number of deaths reached a peak in 1995, with 5,857 deaths. After that year, deaths decreased sharply until 1998 (a reduction of 68%); since 1999 the decline has been more gradual, particularly in recent years (table 3).

Table 3. Deaths from HIV/AIDS, total and by sex, 1981-2008

YEAR	NUMBER OF HIV/AIDS DEATHS		
	TOTAL	MEN	WOMEN
1981	4	3	1
1982	4	2	2
1983	11	9	2
1984	12	8	4
1985	69	55	14
1986	189	152	37
1987	433	348	85
1988	800	671	129
1989	1,378	1,124	254
1990	2,033	1,684	349
1991	2,657	2,241	416
1992	3,477	2,880	597
1993	4,227	3,409	818
1994	5,058	4,067	991
1995	5,857	4,741	1,116
1996	5,749	4,612	1,137
1997	3,019	2,464	555
1998	1,878	1,555	323
1999	1,844	1,517	327
2000	1,717	1,396	321
2001	1,635	1,298	337
2002	1,614	1,320	294
2003	1,635	1,292	343
2004	1,554	1,274	280
2005	1,450	1,168	282
2006	1,315	1,036	279
2007	1,313	1,064	249
2008	1,215	950	265
TOTAL	52,147	42,340	9,807

Throughout the period the mortality rate has continuously been higher in men than in women; peak mortality was reached in 1995 when the global mortality rate was 14.9 per 100,000 population (24.7 in men and 5.6 in women) (figure 2).

Figure 2. Mortality rates from HIV/AIDS, total and by sex, 1981-2008



Source: National Mortality Statistics (INE)
Produced by: National Centre of Epidemiology

CONCLUSIONS

- Mortality rates from HIV/AIDS have been declining slowly since 1998, especially in recent years.

REFERENCES

1. Secretaria del Plan Nacional sobre el sida. VIH y sida en España. Situación Epidemiológica, 2001. Madrid: Ministerio de Sanidad y Consumo, 2002
2. <http://www.ine.es>