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Short Communication

Trends of the HIV/AIDS epidemic in Lyon University Hospitals from 1985 to 2011: continuous decrease since the introduction of HAART



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The HIV/AIDS epidemic remains a major public health concern, with around 35 million people living with HIV, 2.1 million newly-infected with HIV and 1.5 million HIV-related deaths per year worldwide.¹ The introduction of highly-active antiretroviral therapy (HAART) in 1996 has helped to dramatically reduce AIDS incidence and mortality.² However, the number of people living with HIV worldwide is higher than ever, reflecting two aspects of the disease. Firstly, better access to treatment that has contributed to reduce AIDS mortality and, secondly, a continued large number of people becoming infected with HIV.³ Our objective was to report long-term trends of HIV/AIDS incidence and mortality in Lyon University Hospitals (LUH), based on hospital data collected since 1985.

Epidemiological data on the HIV/AIDS epidemic were collected between January 1, 1985 and December 31, 2011 from LUH, which represents the second largest University Hospital in France and includes 14 public hospitals (N = 5,175 beds). Since 1985, data from the same hospital-based patient population were reported in 3 unlinked anonymous databases.⁴ The first involved HIV-positive patients, who are seeking HIV care for the first time at LUH. The second reported AIDS incident cases, based on the Centers for Disease Control and Prevention definitions.^{5–7} The third contained information on patients who died of HIV-related complications. Data were collected by the same team between 1985 and 2011 (P. Vanhems and D. Baratin) and no major change occurred in the method of recruitment. Segmented linear regressions were fitted to assess temporal trends according to 3 time-periods

(1985–1995, 1996–1997, 1998–2011), $p < 0.05$ was considered significant.

In total, 8,605 HIV-positive patients enrolling for care, 2,551 AIDS cases and 1,616 HIV-related deaths were identified. **Figures 1A–C** report the distribution of cases per year and linear regression modeling. The number of patients who had first contact for HIV care decreased by 176 cases/year ($p < 0.001$) in 1996–1997 and 26 cases/year ($p < 0.001$) in 1998–2011. The number of new AIDS cases declined by 144 cases/year ($p < 0.001$) in 1996–1997 and 24 cases/year ($p < 0.001$) in 1998–2011. The number of deaths due to HIV/AIDS fell by 150 cases/year ($p < 0.001$) in 1996–1997 and 19 cases/year ($p < 0.001$) in 1998–2011.

It is noteworthy that temporal trends of the 3 descriptive indicators are quite similar while natural history changed since the introduction of HAART. These findings are consistent with those of national studies, relating a decrease in AIDS incidence and AIDS-related deaths beginning in 1996, accelerating in 1997 and slowing thereafter.⁸ The number of new diagnoses of HIV infection decreased significantly between 2003 and 2008, but remained relatively high over time.⁹ Additionally, the study showed a dramatic decrease in 1997, immediately after the introduction of HAART, when screening was greatly encouraged because of the potential benefit to persons detected. The high number of patients with first contact for HIV care in the recent period could be explained by several factors, such as patients' motivation for care or increase of access to care for underprivileged patients including migrants or local population due to economic crisis.

These data confirm the decline in AIDS incidence and mortality in the Lyon area. The number of patients with first contact for HIV care at LUH has decreased since 1996 with the introduction of HAART, but remains substantial compared with 1985–1995. In

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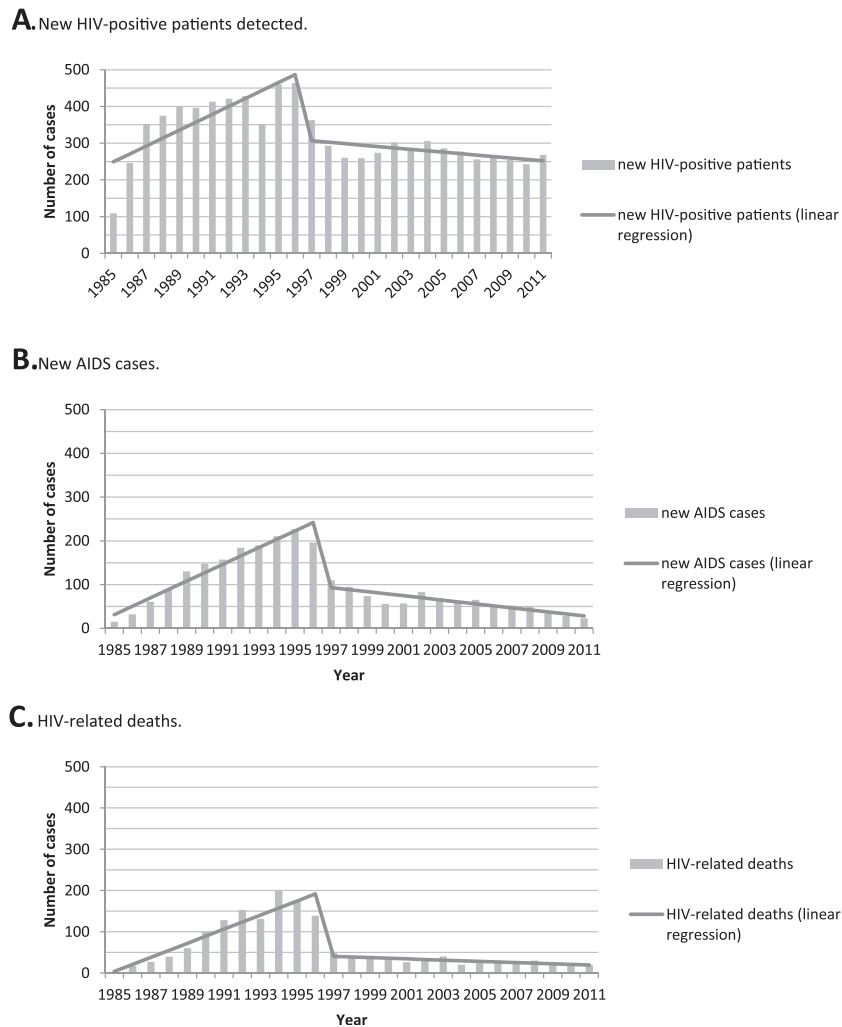


Figure 1. Number and modeling of linear regression of new HIV-positive patients detected, AIDS cases and HIV-related deaths between 1985 and 2011 at Lyon University Hospital.

France, nearly 150 000 people are living with HIV and around 7 000 new infections occur each year.⁹ Therefore, after three decades under close surveillance, monitoring of HIV infection trends is still needed to guide preventive measures and to optimize the allocation of resources.

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