

# Continued improvements in clinical outcomes in the



## current ART era:

# epidemiology of a complete clinic population

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## Background

Significant improvements in morbidity and mortality amongst HIV-positive individuals were seen with the introduction of combination antiretroviral therapy. Maintaining these favourable outcomes is clearly important.

Furthermore, timely diagnosis and enrolment into care of HIV-positive individuals is essential to ensure the best possible outcomes for individuals.

## Methods

We studied the clinical, virological and immunological outcomes of a complete single clinic population (the Royal Free Hospital, London) from its establishment in 1992 until the present day.

A 100% audit of the clinical notes is performed annually to obtain accurate information on antiretroviral therapy, clinical events, hospitalisations and demographics. Laboratory data is transferred directly from the appropriate laboratory.

## Results

There have been dramatic increases in the numbers of individuals under care over time from 325 in 1992 to 2447 in 2009. There have been changes in the demographic make-up of the population; in 1992, 83% were male, 71% MSM, 22% heterosexual, 81% white and 13% black African. By 2009, these values were 75% male, 58% MSM, 39% heterosexual, 61% white and 25% black African

Figure 1: Antiretroviral use in the clinic population

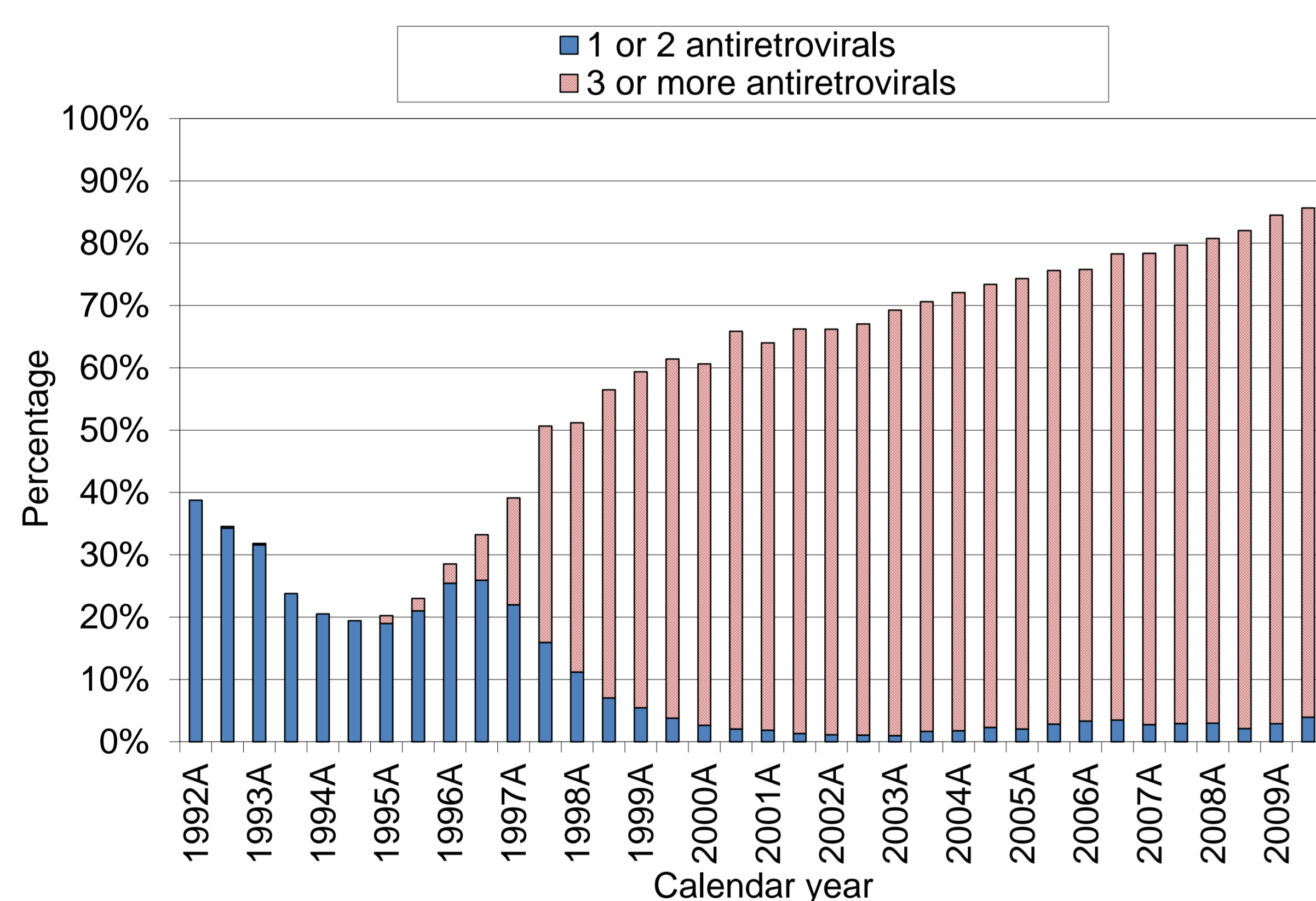


Figure 2: Median CD4 count and percentage with viral load >50 copies/ml

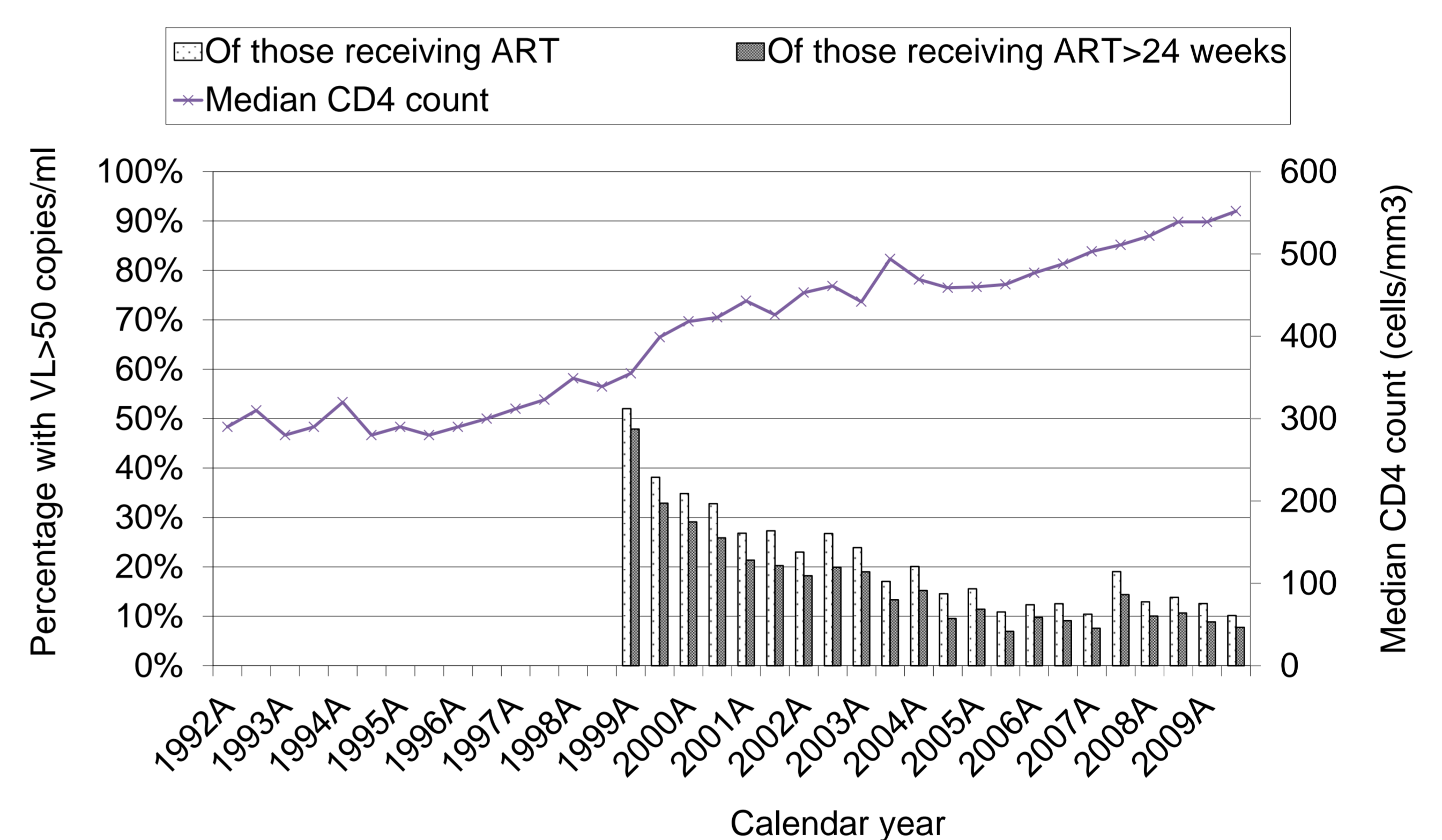


Figure 3: Rates of deaths, AIDS and in-patient hospitalisations amongst HIV positive individuals, 1992-2009

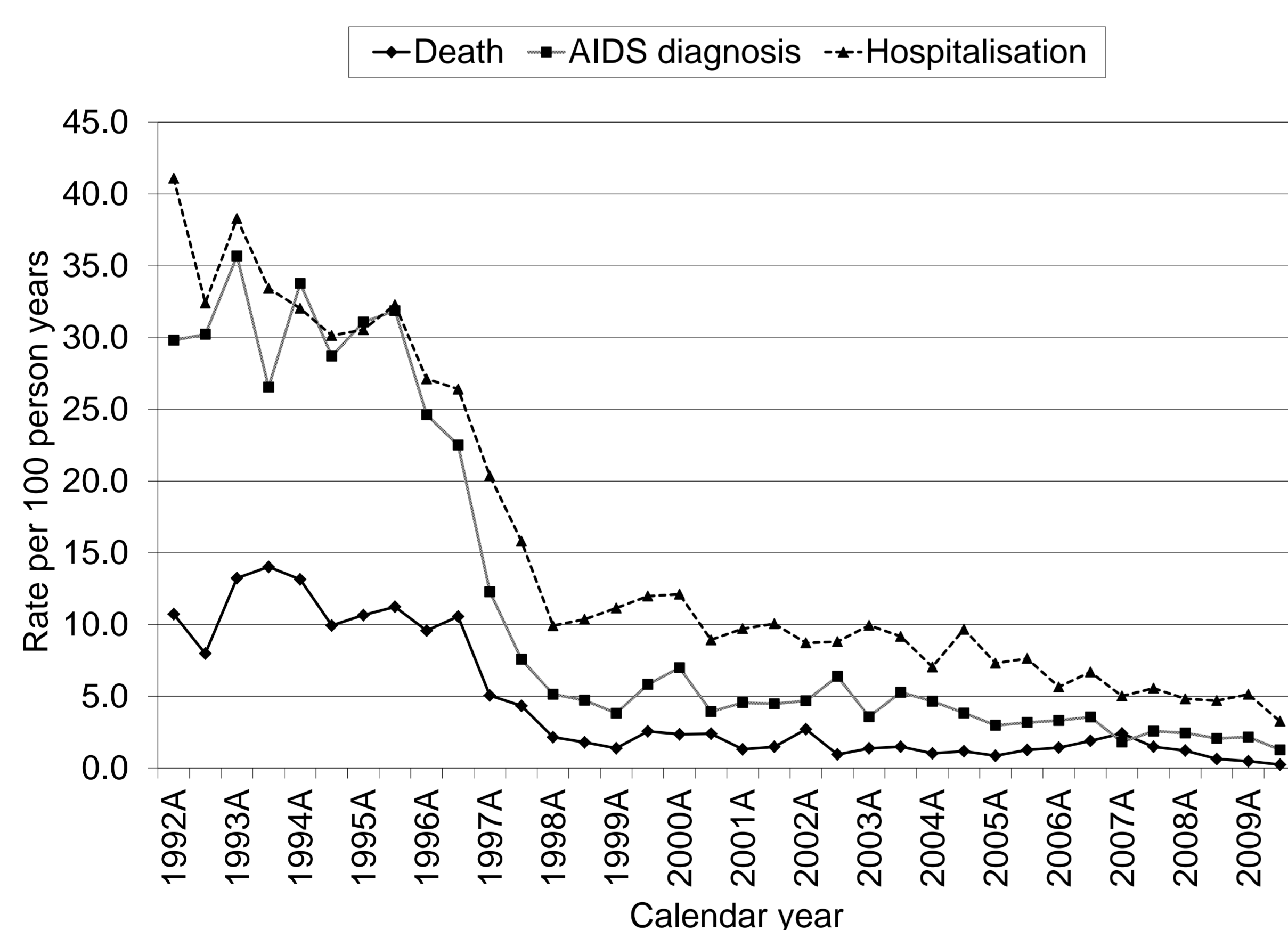


Table 1: Characteristics of individuals newly diagnosed with HIV

	1992	1997	2001	2005	2007	2009
Total	73	117	136	129	113	95
<b>Clinical characteristics of recently diagnosed</b>						
CD4<200 cells/mm <sup>3</sup>	25%	30%	32%	30%	29%	27%
CD4<50 cells/mm <sup>3</sup>	10%	9%	14%	11%	12%	14%
AIDS or death within 6 months	15%	20%	20%	22%	22%	19%
<b>Demographics of recently diagnosed</b>						
Female	18%	26%	31%	34%	24%	32%
Heterosexual	23%	33%	55%	54%	43%	42%
Homosexual	74%	63%	45%	45%	56%	51%
Black African	14%	24%	36%	37%	28%	28%
White	77%	62%	48%	43%	49%	46%
Age (years); median (IQR)	31 (18, 68)	33 (18, 57)	34 (17, 70)	35 (19, 61)	38 (19, 69)	40 (22, 70)

## Conclusion

The rates of AIDS, death and in-patient admissions observed amongst HIV positive people with the introduction of successful HAART have been maintained, and even declined further in the past ten years.

Rates of viral failure fell to low levels by 2005 and have been maintained since. Despite this, there remains a small proportion of individuals who continue to experience high viral loads. Further efforts to intervene in this group is ongoing.

A large proportion of individuals are still presenting for the first time for care with a late diagnosis. Strikingly, this has not improved over time since 1992. Further efforts are required to diagnose individuals at an earlier time point.