

**Title**

Ageing of the growing HIV-infected population in the Netherlands

**Authors**

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B53 Pharmacoeconomics of care and treatment

**Objectives:** As a result of successful treatment with HAART in the western world, the HIV-infected population is ageing but also still growing. We studied the changes in the HIV-infected population and the costs of treatment in the Netherlands expected until 2015.

**Methods:** Differential equations were used to describe populations over calendar time. Homosexual men and heterosexual men and women were modelled separately, as were patients originating from the Netherlands, sub-Saharan Africa, or other regions. Model parameters and distributions of age, gender and region of origin of newly diagnosed patients between 2000 and 2005 were obtained from the ATHENA national observational HIV cohort.

**Results:** In 2000, the total population consisted of 5259 patients of whom 918 (17.5%) were  $\geq 50$  years and 762 (14.5%) were  $\leq 30$  years. Between 2000 and 2005, the average annual number of diagnoses was 389 for heterosexuals and increased from 337 to 495 for homosexual men. During the same period, in the heterosexual population, the proportion of newly diagnosed sub-Saharan Africans decreased from 52% to 40%, whereas the proportion of Dutch patients increased from 22% to 31%. According to the model, assuming that currently observed trends continue after 2006, the HIV-infected population in 2015 would consist of 15,114 patients, of whom 5822 (38.5%)  $\geq 50$  years, and 1129 (7.5%)  $\leq 30$  years. Given the annual costs of HIV treatment of 12,500 euro (price level 2003) per patient per year, annual costs would increase from 66 million euro in 2000 to 189 million euro in 2015.

**Conclusions:** By 2015, the size of the HIV-infected population as well as the costs of care in the Netherlands will have tripled. However, costs of care might increase even further as the population  $\geq 50$  years increases 6 fold and older age affects the course of HIV infection as well as the response to treatment.

296 words