Published: March 2010

Impact of early treatment on HIV incidence

In November 2009 the Flemish Research Fund and the Flemish Interuniversity Council approved two proposals concerning "Data-driven modelling of the impact of wide-scale, early HIV treatment on the incidence of HIV in South Africa". Both projects will be launched in 2010 and involve research and capacity building components as well as efforts to intensify the dialogue with policy makers. More specifically, a household survey will be conducted in two communities near Cape Town that are heavily burdened by HIV and TB, to capture the complex patterns of sexual age mixing and concurrency (having multiple relationships which overlap in time) among residents of these communities. Subsequently, mathematical models will be used to study the role of age disparate and concurrent relationships in translating the effect of early HIV treatment on individuals into population impact on HIV incidence. Further, these projects will allow an additional two PhD and two MSc students to be trained at SACEMA over the next 5 years. A course in applied statistics will be established as well to meet South Africa's need for strengthened capacity in statistical analysis of biomedical and epidemiological data. Lastly, a series of meetings and seminars with policy makers will be organised. In this way, the projects aim to facilitate communication and interaction between scientists and provincial as well as national government regarding the guidelines for HIV treatment initiation in South Africa.

Wim Delva, epidemiologist at SACEMA and Ghent University (Belgium) and principal investigator on the funded projects, recently completed his PhD thesis entitled "Sexual behaviour and the spread of HIV – Statistical and epidemiological modelling applications." Central in the work are six papers describing the sexual behaviour of populations at increased risk for HIV infection as well as opportunities for HIV prevention.