

Information flyer – **HERMETIC**

*Hiv European Research on **Mathematical Modelling** & Experimentation of HIV Testing In hidden **Communities***

Identifying
and
engaging
people who
are
unaware of
their HIV
infection to
make an
impact on
the HIV
epidemic

BACKGROUND

Over the past years, increased access to antiretroviral therapy significantly decreased HIV/AIDS-related morbidity and mortality. Yet, there is still a “hidden epidemic” of people who are unaware of their HIV infection and who are diagnosed late. They cannot benefit from effective treatment. This worsens their disease progression, but also plays a significant role in the spread of HIV. In Europe, more than half of HIV-infected people are still diagnosed late. Reality is that at least one in three people living with HIV are unaware of their status. This represents a major challenge in reaching ambitious targets, such as an “AIDS free generation”. We need new strategies to find people who are unaware of their HIV infection, offer them testing, and engage them in treatment and prevention.

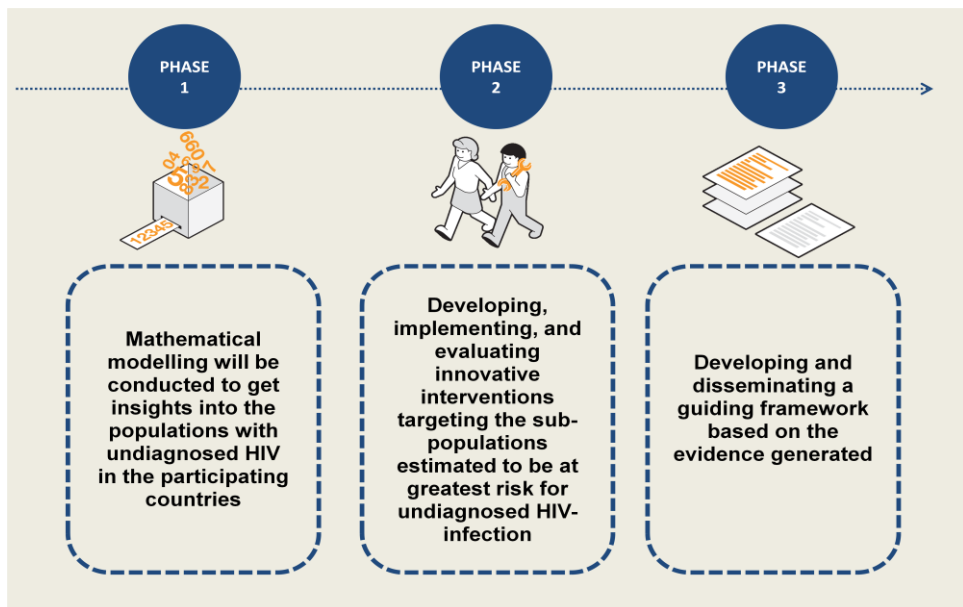
To address this problem, we must first better understand the scope and characteristics of hidden epidemics, and secondly use these results to improve interventions.

The HERMETIC project combines existing HIV surveillance data from France, Belgium, Estonia and Latvia with mathematical modelling to get sound estimations of the sub-groups who are more likely to be HIV undiagnosed in these countries. The findings combined with other evidence will be translated into innovative pilot interventions offering tailored HIV testing services to the groups that require them the most.



OBJECTIVES

HERMETIC's main goal is to characterize sub-groups are more likely to be undiagnosed in France, Belgium, Estonia and Latvia. The findings will generate a sound background for tailored interventions that offer HIV testing, and linkage to care.



SPECIFIC OBJECTIVES

- To determine the number of undiagnosed HIV cases and the HIV incidence;
- To determine the likely time-frame from HIV infection to HIV diagnosis;
- To develop and implement innovative pilot HIV-testing interventions for undiagnosed groups;
- To evaluate these HIV testing interventions through a process evaluation using mixed methods;
- To extensively document the research process to develop and disseminate a “guiding frame-work” for the translation of modelling into interventions.



METHOD AND MEANS

In the first phase, mathematical modelling will be conducted to get insights into the populations with undiagnosed HIV.

Back-calculation models using existing surveillance data on new HIV diagnoses will be used to estimate HIV incidence, the time distribution from HIV infection to diagnosis and to determine the size and the characteristics of the undiagnosed HIV-infected populations.

Depending on the surveillance data available in the participating country, two back-calculation models will be used:

- a clinical-stage based back-calculation model and
- a CD4-count based back-calculation model. The main strengths of these models are that they only require existing surveillance data on new diagnoses and take into account temporal changes in HIV test-seeking behaviours.

In a second phase, the results from the first phase will be translated into innovative interventions targeting the sub-populations estimated to be at greatest risk for undiagnosed HIV-infection.

The pilot interventions aim to offer HIV tests to these groups, and they will be developed to match the needs of the target populations.

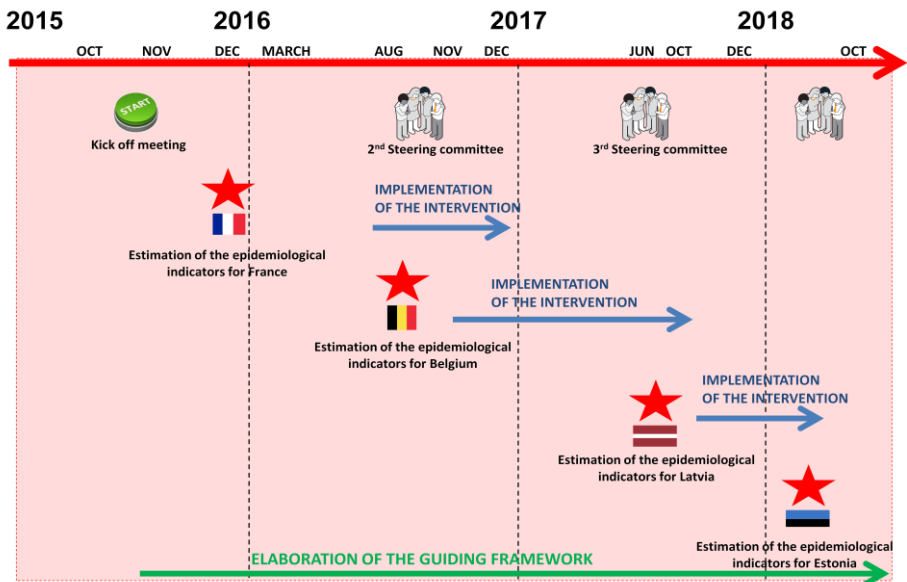
We will adopt a prospective interventional design to assess the interventions' ability to detect new cases of HIV infection and we will assess the feasibility of the testing strategy employed.

Using a participatory approach in planning and implementing these interventions means gathering the input of all relevant stakeholders including the communities themselves. The interventions will be evidence-based and evaluated using a mixed method approach combining qualitative and quantitative methods.

RESULTS AND EXPECTED OUTPUTS

- The mathematical modelling developed will identify the “hidden” populations who are unaware of their HIV infection.
- Pilot HIV testing interventions will be developed, evaluated, and made available.
- If the pilot interventions are effective and sustainable, they will in the long run have an impact on HIV incidence and improve early diagnosis and linkage to care.
- The evidence generated will be made available through a guiding framework, i.e. a toolkit to use and contextualize the developed modelling and interventions. It will be disseminated to national health authorities, national surveillance systems, the European institutions (EC, ECDC, CHAFAE, and WHO Europe) and community-based organisations at national and international level so that other European countries will be able to use the evidence generated in this project.

ZOOM ON THE AGENDA



CONTACT DETAILS

Virginie Supervie, INSERM (v.supervie@gmail.com); Daniela Rojas Castro, AIDES (drojas@aides.org), Christiana Nöstlinger, ITM (cnoestlinger@itg.be); Anda Karnite, RSU (anda.kivite@rsu.lv);
Website: <https://sites.google.com/site/hermeticproject/>