

HIGH PROPORTION OF BORN-ABROAD MSM ACQUIRE HIV AFTER MIGRATION IN FRANCE: FIRST RESULTS FROM THE ANRS-MIE GANYMEDE STUDY

Andrés Arias-Rodríguez¹, Lambert Assomou¹, Olivia Rousset Torrente², Caroline Lascoux-Combe³, Jade Ghosn⁴, Thibault Chiarabini⁵, Annie Velter⁶, Mohamed Ben Mechia⁷, Lydie Béniguel¹, Martin Duracinsky⁸, Virginie Supervie¹ and Romain Palich⁹

¹INSERM, Sorbonne Université, Institut Pierre Louis d'Epidémiologie et de Santé Publique, F75012, Paris, France, ²Université Paris cité, Epidémiologie, Paris, France, ³Université Paris cité, Hôpital Saint-Louis, Maladies infectieuses, Paris, France, ⁴Université Paris cité, Hôpital Bichat, Maladies infectieuses, Paris, France, ⁵Sorbonne Université, Hôpital Saint Antoine, Maladies infectieuses, Paris, France, ⁶Santé Publique France, Paris, France, ⁷Agence nationale de recherches sur le sida et les hépatites virales et maladies infectieuses émergentes (ANRS-MIE), Paris, France, ⁸Université Paris cité, Hôpital Kremlin-Bicêtre, Maladies infectieuses, Paris, France, ⁹Sorbonne Université, Hôpital Pitié-Salpêtrière, Maladies infectieuses, Paris, France



Background

- In France, born-abroad men who have sex with men (MSM) represents the group with the highest incidence and prevalence of HIV, and the highest prevalence of undiagnosed HIV [1].
- About 50% of born-abroad HIV-infected MSM live in Paris region.
- Recent findings suggested that MSM have the highest proportion of HIV acquisition after migration in several European countries [2]. No data are available in France.

Objective

- We aimed to estimate the (minimum) proportion of post-migration HIV acquisition among born-abroad MSM treated for HIV in the Paris region, and describe the social conditions on arrival in France, based on data collected in the ANRS-MIE GANYMEDE study.

Methods

Study design:

- The ANRS-MIE GANYMEDE study is a cross-sectional retrospective life-event and clinical data survey conducted in 16 HIV centres in the Paris region, from a random sample of born-abroad MSM living with HIV.
- Data on migration history, socio-economic conditions, sexual activity, health before, after and at the time of migration in France, were collected through self-administered questionnaires and medical records.

Inclusion criteria:

- Cis-gender men who reported having sex with men.
- Over 18 years of age.
- Type 1 HIV infected.
- Born in a country other than France:
 - Participants who arrived in France before the age of 15 did not answer the questionnaire and only clinical data were collected from medical records.
 - Participants who arrived in France at the age of 15 or later were eligible to answer the questionnaire, and clinical data were also collected.
- Followed in the Paris region for HIV treatment.
- Consent to participate in the research.

Exclusion criteria:

- Somatic or psychiatric pathology making it impossible to participate in the research.

How was determined the likely place of HIV infection?

The main outcome of the ANRS-MIE GANYMEDE study is the post-migration HIV acquisition in the study population. This proportion is to be estimated using data collected through questionnaires and medical records, and mathematical modelling based on the CD4 count on arrival in France for individuals whose time of HIV acquisition is undetermined. We present here estimations only based on data from questionnaires and medical records.

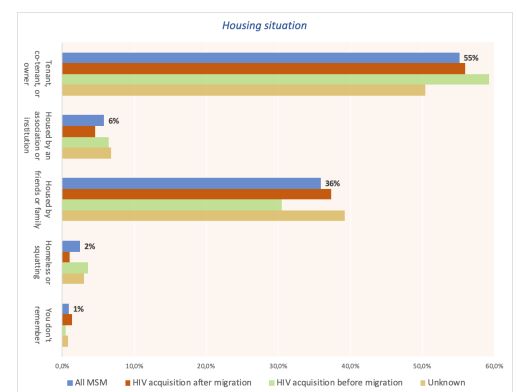
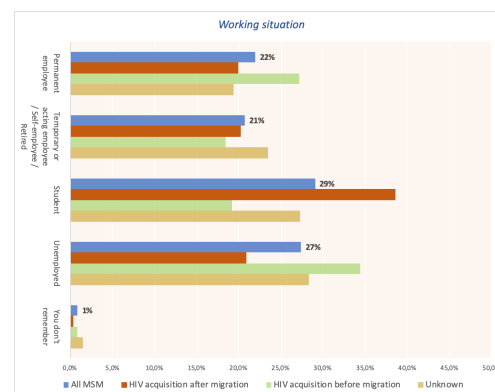
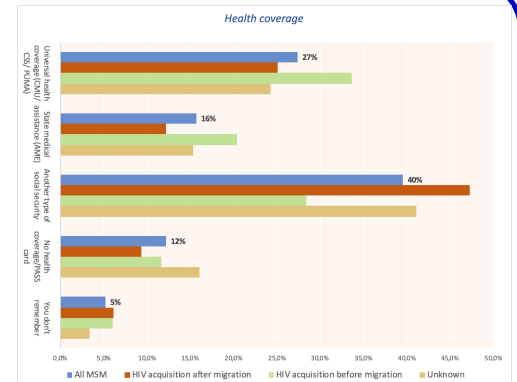
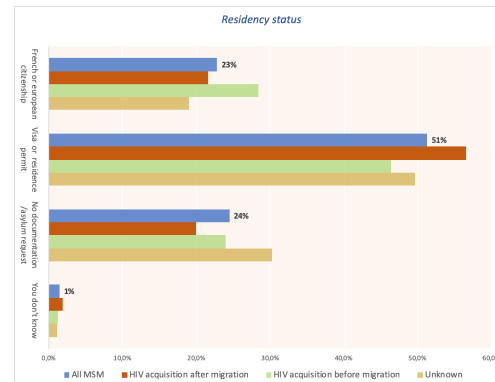
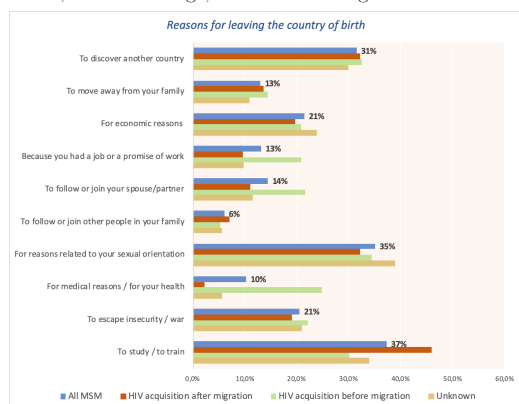
- Among the participants who arrived in France at the age of 15 or later, HIV infection was assumed to have occurred before migration if participants reported to have learnt about their HIV-positive status in a country different to France (self-questionnaire), and if this information was confirmed with: (i) a year of HIV diagnosis before the year of arrival in France (self-questionnaire), or (ii) a year of ART initiation before the year of arrival in France (self-questionnaire).
- Among the participants who did not satisfy the previous conditions, we classified them in the post-migration HIV acquisition category in case of: (i) first sexual intercourse in France (self-questionnaire), (ii) negative HIV test in France (self-questionnaire), or (iii) diagnosis of primary infection at least one year after arrival in France (medical records). Otherwise the timing of HIV acquisition remained unknown.
- Finally, for participants who arrived in France at the age of 15 or later, we used medical records to identify the timing of HIV acquisition.

Results

- A total of 997 born-abroad MSM were included in the study, of which 28.7% originated from Latin America and the Caribbean, 20.9% from Europe, 17.4% from North Africa, 14.8% from Asia, 14.5% from Sub-Saharan Africa, 3.4% from North America and 0.3% from Oceania.
- Of 997 participants, 829 (83%) migrated after the age of 15, among them the median age was 27 (IQR:23-33).

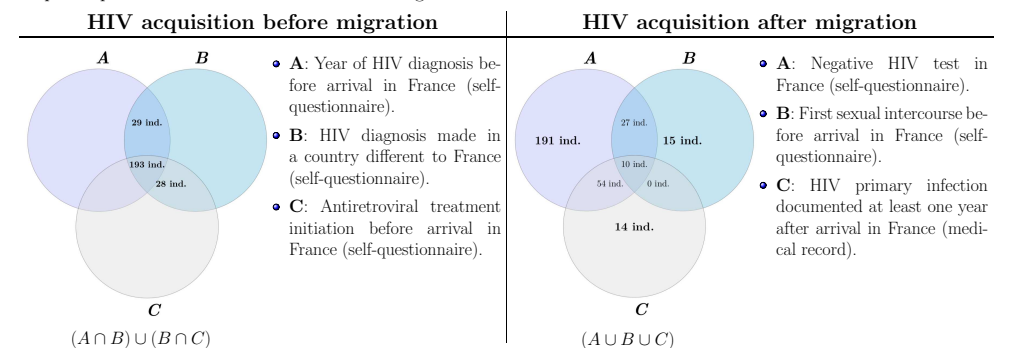
Reasons for leaving the country of birth, and social conditions on arrival in France:

Here we describe situation of the participants at their arrival in France, including their motivations to leave the country of birth, residency status, health coverage, work and housing situation.



Classification of premigration and postmigration HIV acquisition

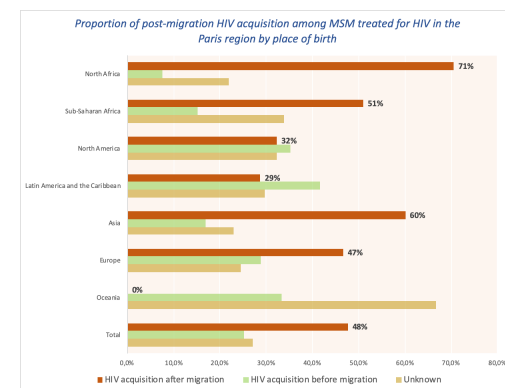
For participants who arrived in France at the age of 15 or later:



- Of the 168 participants who arrived in France before the age of 15, 164 have HIV diagnosis after the arrival in France. There are 4 individuals with missing information about the date of HIV diagnosis in the medical records, then we concluded that at least 98% of the MSM who arrived in France before the age of 15, acquired HIV after the migration.

Proportion of post-migration HIV acquisition

Of the 829 participants who arrived in France at the age of 15 or later, at least 38% acquired HIV after migration. Taking into account the participants who arrived in France before the age of 15, the minimum proportion of post-migration HIV acquisition was 48%, the proportion of pre-migration HIV acquisition was 25%, and the timing of HIV acquisition remained unknown in 27% of cases.



Conclusion and perspectives

- These high proportions of post-migration HIV acquisition, and administrative and social insecurity on arrival in France, highlight the need for improved HIV policies targeting MSM migrants.
- Stochastic process models and CD4⁺ T-cell counts will be used to estimate the HIV seroconversion time for participants with unknown timing of HIV acquisition. This will allow a better estimation of the proportions of post-migration HIV acquisition.

Acknowledgments: Caby Fabienne (C.H. Victor Dupouy, Argenteuil), Duvivier Claudine (Hôpital Necker-Enfants Malades, Paris), Goujard Cécile (Hôpital de Bicêtre, Le Kremlin-Bicêtre), Cailhol Johann (Hôpital Jean Verdier, Bondy), Pialoux Gilles (Hôpital Tenon, Paris), Cordel Hugues (Hôpital Avicenne, Bobigny), Karmochkine Marina (Hôpital européen Georges Pompidou HEGP, Paris), Salmon-Ceron Dominique (Hôpital de l'Hôtel Dieu, Paris), Vindrios William (Hôpital Henri Mondor, Créteil), Katlama Christine (Hôpital Pitié-Salpêtrière, Paris), Lacombe Karine (Hôpital Saint Antoine, Paris), Molina Jean-Michel (Hôpital Saint Louis, Paris), Yazdpanah Yazdan (Hôpital Bichat-Claude Bernard, Paris), Rouveix Elisabeth (Hôpital Ambroise Paré, Boulogne), Ohayon Michel (Centre de Santé < Le 190 >, Paris), Viard Jean Paul (Hôpital de l'Hôtel Dieu, Paris).

References

[1] L. Marty, F. Cazein, H. Panjo, J. Pillonel, D. Costagliola, V. Supervie and HERMETIC study group. Baldwin, Richard (2016). *Revealing geographical and population heterogeneity in HIV incidence, undiagnosed HIV prevalence and time to diagnosis to improve prevention and care: estimates for France*. Journal of the International AIDS Society. 2018; 21(3):e25100.

[2] D. Alvarez-del Arco, I. Facova, C. Thomadakis, N. Pantazis, G. Touloumi, A-F. Gennotte, F. Zuure, H. Barros, C. Saethelin, S. Gopel, C. Boesecke, T. Prestileo, A. Volny-Anne, F. Burns, J. del Amo, aMASE study group *High levels of postmigration HIV acquisition within nine European countries* AIDS. 2017; 31(14):1979-88.

