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“A country is more than its capital” - a geo-spatial gap analysis of oral PrEP awareness, eligibility and use, and intention to use long-acting PrEP in France, based on PROTECT survey data

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Geo-spatial gap analysis

- Aggregated national data can gloss over regional differences
- “Draw effect” of large capital cities
- Benefits of regional approaches to HIV prevention:
 - Region-specific access to PrEP interventions
 - More efficient allocation of healthcare budgets



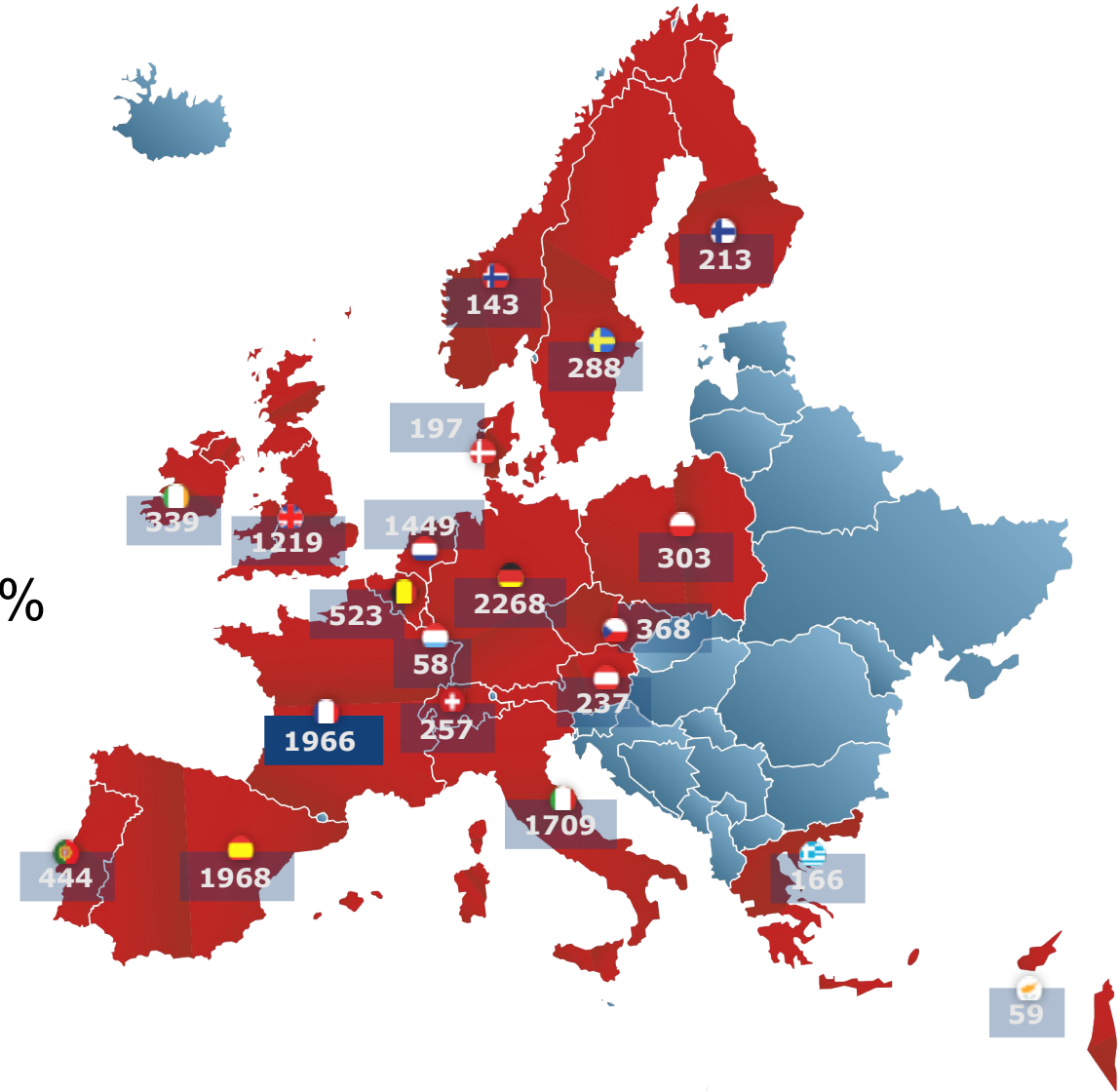
Model-based small area estimation

- Bayesian spatial modelling
 - Well-suited for small-area estimations (Wang et al., 2023, SpatialSpatio-temp Epi, HIV prevalence in NL; Wang et al. 2023 JIAS, spatio-temporal PrEP uptake in France; Wang et al., 2022; tobacco use in pregnant women in South Limburg, NL)
 - Bias correction of spatial autocorrelation and proximity
 - Integrate Nested Laplace Approximation (Blangiardo et al. 2013)
 - Penalized Complexity Prior
 - Besag-York-Mollie (BYM2) model to specify the spatially structured residual using intrinsic conditional autoregressive distribution

PROTECT: focus France

1966 Cis-MSM participated

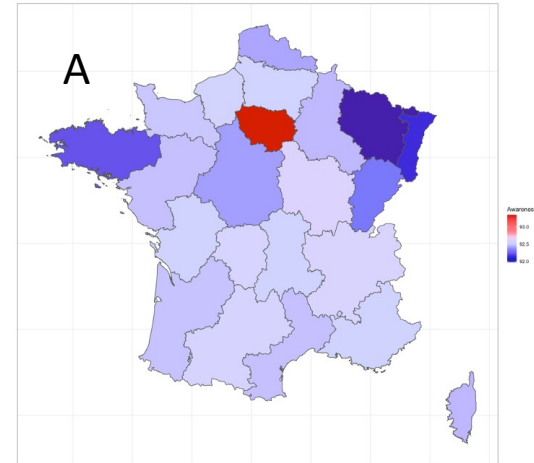
- Median age of 40 (IQR 32-49)
- Predominantly identify as “gay” (84%)
- 44% were dating, 27% were in an open, 19% were in a monogamous relationship
- 11% report engaging in chemsex
- 87% local population, 10% first generation, 3% second generation migrant background
- 55% were currently using oral PrEP, 7% former users, and 38% were PrEP naive



Results

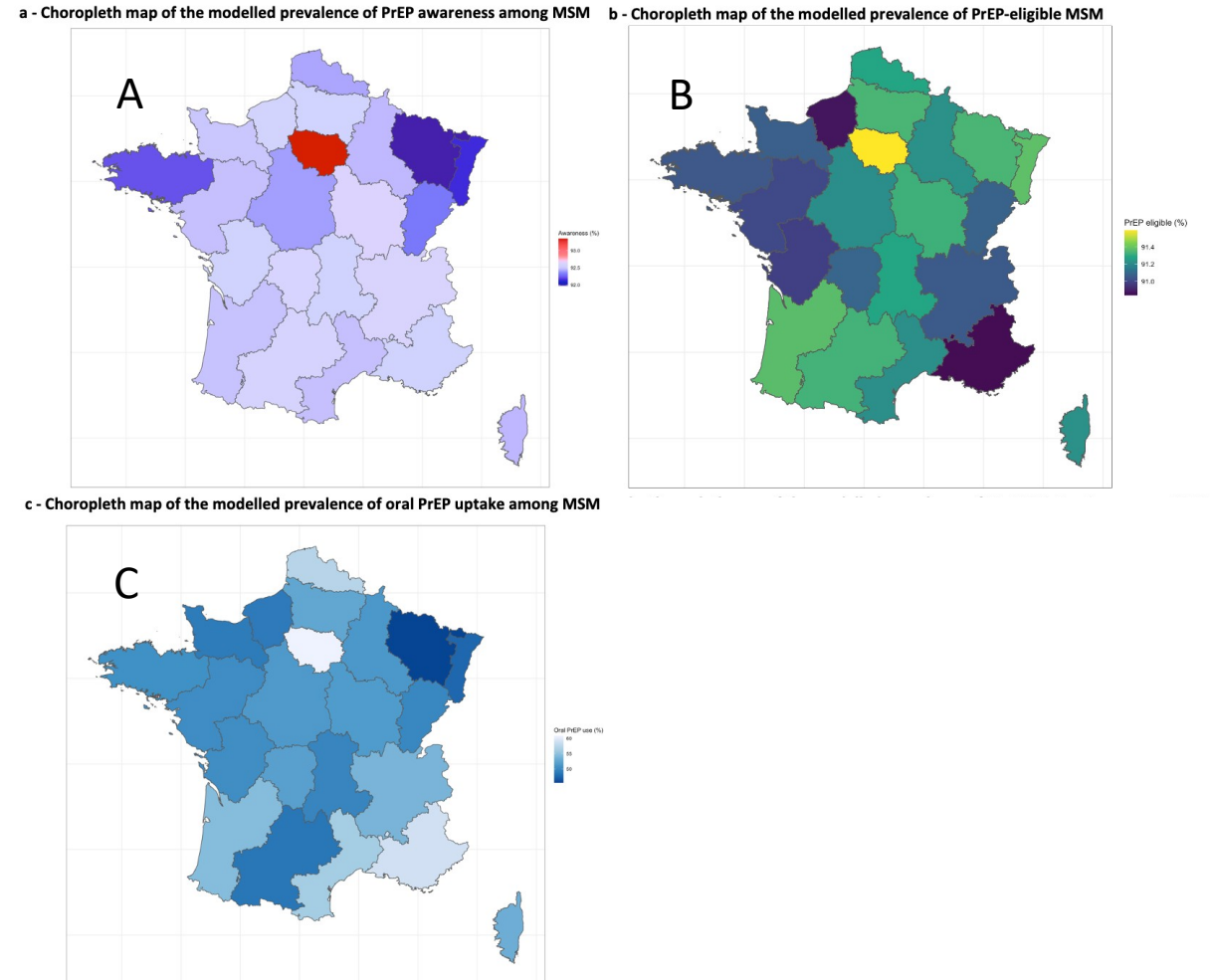
- PrEP awareness is overall high, highest in Ile-de-France/Paris, lowest in Lorraine (A)

a - Choropleth map of the modelled prevalence of PrEP awareness among MSM



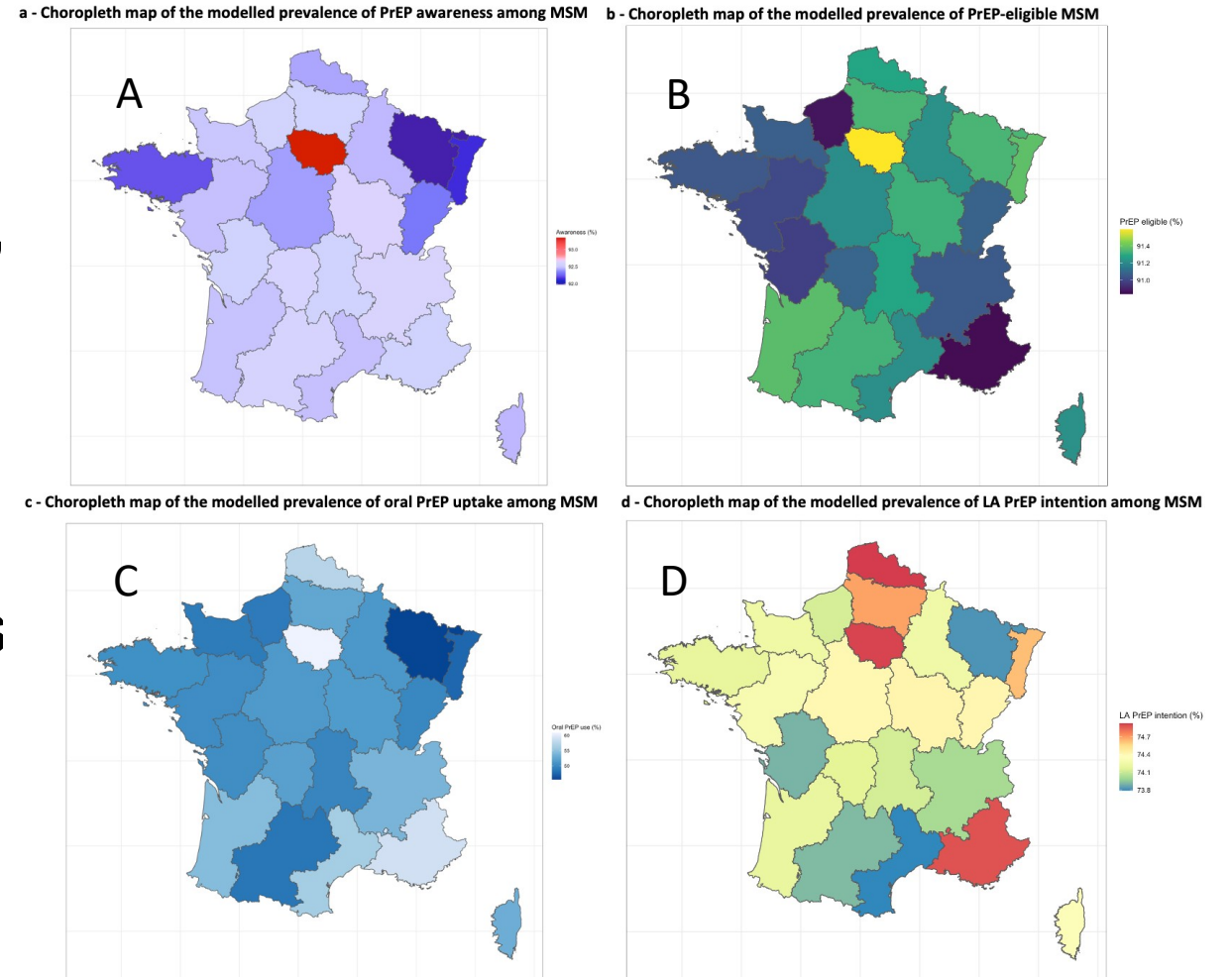
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- PrEP awareness is overall high, highest in Ile-de-France/Paris, lowest in Lorraine (A)
- Oral PrEP eligibility and use overall matching, but reconfirming regional disparities (B-C)



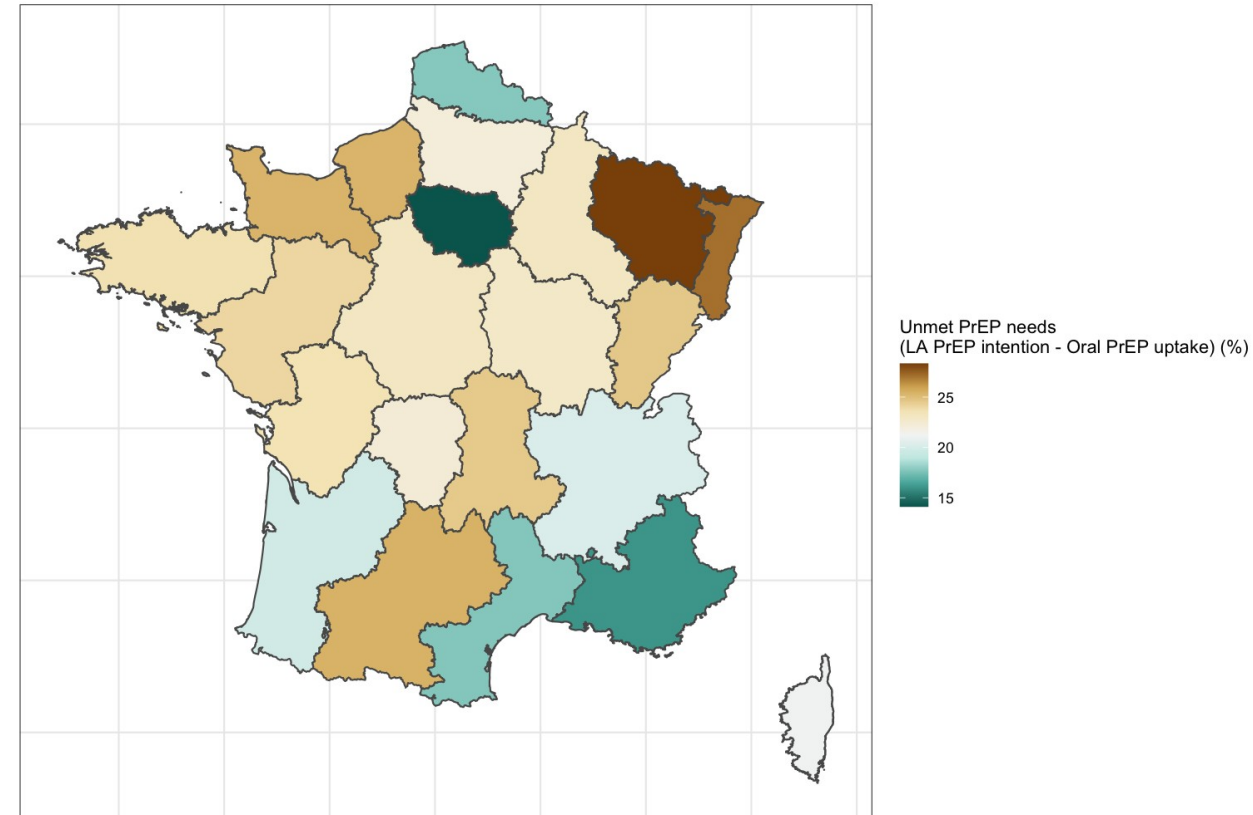
Results

- PrEP awareness is overall high, highest in Ile-de-France/Paris, lowest in Lorraine (A)
- Oral PrEP eligibility and use overall matching, but reconfirming regional disparities (B-C)
- LA-PrEP intention regionally more diverse (D)



Mapping unmet needs: oral to long-acting PrEP gap

- Substantial unmet needs in
 - Lorraine & Alsace
 - Normandie (Basse/Haute)
 - Midi-Pyrénées
- Provence-Alpes-Côte d'Azur could be a link to Ile-de-France due to a “vacation home effect”



Summary and Implications

- **Analysis reveals a more nuanced picture of regional oral PrEP eligibility and use disparities**
- **Long-acting PrEP intention is regionally diverse**
- **Regional hot-spots of unmet needs could be identified**
 - **Oral PrEP eligibility vs. uptake**
 - **Oral PrEP uptake vs. long-acting PrEP intention**
- **Potential for tailored regional HIV prevention**

Thank you

Further Information

Project website: <https://protect-study.eu/>

Contact Information

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