We present for the first time evidence on HIV acquisition among migrants born outside their country of diagnosis in four European countries.

**BACKGROUND**

In a single year, millions of people migrate within Europe and to Europe. Although the majority of migrants are healthy, some communities are more vulnerable to ill-health including HIV infection.

The European Centre for Disease Control and Prevention (ECDC) reports that two in every five people living with HIV in Europe were born outside of the European country where they were first diagnosed. Whilst it is often assumed that migrants have acquired their infection in their country of origin, particularly where HIV prevalence is high, there is growing evidence that people acquired HIV post migration. Understanding place of HIV acquisition is critical in informing local, national and international prevention and testing programmes.

**AIM**

Using a novel methodology developed by Public Health England, we provide country-specific estimates of post-migration acquisition among newly diagnosed persons born outside their country of diagnosis.

**METHODS**

We analysed new HIV-diagnosis reports among migrants (defined by country of birth/origin) diagnosed in the United Kingdom (UK), Belgium, Sweden and Italy in 2011.

We estimated a probable period of HIV seroconversion among these cases by applying their first CD4-cell count at diagnosis to a modelled expected decline of CD4 counts built using seroconverters from the UK and Sweden. An anchor date 3 months post diagnosis was used to reduce potential biases in CD4 ‘dips’ during seroconversion illness (Fig 1). People in the study were classified as having acquired HIV post-migration if their estimated year of seroconversion was before the year of arrival in their destination country. The model provides lower, central and upper estimates of post-migration HIV acquisition.

**RESULTS**

A total of 2,351 people born outside their country of diagnosis were included in the analyses: The majority were aged 25–44 years (>70%), heterosexual (>70%), born in Africa (>60%) and arrived in their destination country after 2005 (>60%). Persons who had migrated to the UK accounted for the largest number of cases in the analyses.

In 2011, an estimated 38% (range: 32–46%) of migrants diagnosed with HIV infection had acquired HIV post-migration.

Figure 2 shows the results for each country. The UK had the highest estimate of the proportion of post migration acquisition; 43% (36–52%) followed by Belgium 29% (26–34%), Sweden 24% (21–30%) and Italy 23% (20–27%).

The majority of people who acquired HIV post-migration in the UK were born in an African country (64%) while 16% were European born. These findings were similar for Belgium (60% and 21% respectively). In Sweden 36% of migrants who acquired HIV post migration were African-born, 22% were European-born and 42% were Asia-born. The corresponding figures for Italy were 52%, 27% and 21%.

Overall an estimated 42% (203/481; 38–50%) of men who have sex with men probably acquired HIV post-migration compared to 38% (658/1,713; 32–47%) among people who probably acquired their infection heterosexually. Figure 3 shows estimates by risk exposure and region of birth.

**LIMITATIONS**

- Due to unavailability of data, CD4 declines are based on UK and Sweden seroconverters only and donot include people who inject drugs.
- Some negative HIV test results and dates of year of arrival may be subject to patient recall biases.
- This technique relies on the availability of year of arrival and a CD4-cell count at HIV diagnosis. These data were not complete for all migrants, particularly in Sweden and Italy, and may have resulted in selection biases.

**CONCLUSIONS**

- We present for the first time multi-country estimates of probable place of HIV-acquisition among migrants living with HIV in Europe.
- More than a third of migrants diagnosed in these four European countries acquired HIV post-migration in 2011, and this proportion was high for both men who had sex men and men and women who acquired HIV heterosexually.
- Our findings call for targeted prevention efforts to reduce HIV transmission among migrant populations living in Europe.