INTRODUCTION

Late HIV diagnosis is related to poor prognosis, delayed ART initiation, and early death (1,3). We assessed the risk factors associated with late HIV diagnosis and other HIV health outcomes (AIDS at HIV diagnosis and mortality) among people newly diagnosed with HIV in England during the 2011-2020 period.

DEFINITIONS

- AIDS at HIV diagnosis: the presence of one or more clinical AIDS-defining illnesses within 91 days of HIV diagnosis
- ART status: taking any of the ART available in the UK
- IVDU: Intravenous drug use
- Late HIV diagnosis: having a CD4 count <350 cells/mm3 within 91 days of the first HIV diagnosis in the UK and no evidence of recent seroconversion
- Migrant: born outside the UK
- NA: North America
- NR: Not reported
- Retention in care: any attendance at HIV specialist care in two consecutive years
- Viral suppression: having less than 200 HIV copies per millilitre of blood

METHODS

Data sources:
- The HIV and AIDS New Diagnoses and Deaths Database
- The HIV and AIDS Reporting System

Population:
- Adults newly diagnosed with HIV (aged 15 years and over) in England
- Those with evidence of recent seroconversion were excluded

Statistical analysis:
- Socio-demographic, epidemiological, and clinical characteristics related to HIV outcomes were analysed by multinomial and binary logistic regression
- A sensitivity analysis was performed due to the significant number of records with missing information (19.7%)

RESULTS

From 2011 to 2020, 47,828 new HIV diagnoses were reported in England, with almost a third (29.2%) diagnosed late.

Around half of new HIV diagnoses (52.0%) and over half of the late diagnoses (57.3%) were reported in migrants.

A small proportion of newly diagnosed people were diagnosed with AIDS at HIV diagnosis (5.1%) and died during the ten-year follow-up (4.2%).

Factors associated with a late diagnosis are as follows (Fig. 1):
- Male gender (aRRR: 1.28; 95%CI: 1.20–1.36)
- > 50 years (aRRR: 3.56; 95%CI: 3.24–3.97)
- Being born in Africa (aRRR: 1.46; 95%CI: 1.37–1.56)
- Being born in Asia (aRRR: 1.57; 95%CI: 1.43–1.73)
- Being born in the Caribbean (aRRR: 1.36; 95%CI: 1.13–1.63)
- Living outside of London (aRRR: 1.42; 95%CI: 1.35–1.49)

Results were similar for AIDS at HIV diagnosis (Fig. 2). In general, migrants were less likely to die over the ten-year period than UK-born residents (Fig. 3).

The number of new HIV diagnoses and late diagnoses diminished over this time among all residents (UK and non-UK born) except for Latin American migrants (Fig. 4).

LIMITATIONS

The migrant definition is not ideal since it ignores the spectrum and complexity of migrant movements (3).

Data completeness is suboptimal. Half of the variables (7 out of 14) have missing values. The proportion of missing values ranged from 6.5% to 39.1% (length of stay in England).

Including all-cause mortality is also problematic. A time-to-event analysis should be performed to better understand death differences among groups.

Social variables (e.g., employment status, socioeconomic status, acculturation level) and ethnicity were not included in the analysis since they were not available in the datasets.

DISCUSSION

This study highlights the importance of the migrant community in the HIV epidemiology in England. Not only were most new HIV diagnoses in 2011-2020 among migrants, but also the proportion of new diagnoses in this community has increased (from 58.6% in 2011 to 71.8% in 2020) (4).

Furthermore, migrants are more likely to adopt riskier behaviours than locals (6).

CONCLUSIONS

England is successfully reducing undiagnosed HIV, but greater efforts are necessary to accomplish the 2030 zero HIV transmission goal (8).

The migrant community (particularly Latin American migrants) must be included in future public policies and categorised as an HIV key population in England.

Future research

A natural progression of this work is to analyse the migrant population by country of birth. Integrate additional socio-demographic factors (e.g., acculturation levels), incorporate diverse ethnic groups, and examine the long-term implications of the COVID-19 pandemic on the HIV epidemiology in the UK.