

Persisting and emerging challenges of late HIV diagnosis in Germany

Christoph Boesecke,¹ Sven Schellberg,² Jochen Schneider,³ Gundolf Schuettfort⁴ and Hartmut Stocker⁵

¹Bonn University Hospital, Bonn, Germany; ²Novopraxis Berlin GbR, Berlin, Germany; ³University Hospital rechts der Isar, Technical University of Munich, Munich, Germany; ⁴University Hospital Frankfurt, Frankfurt, Germany; ⁵St. Joseph's Hospital, Berlin, Germany

Background

- Late diagnosis of HIV (CD4 count of < 350 cells/mL or AIDS-defining event at diagnosis) remains a major threat to achieving further progress towards the ultimate goal of ending the HIV epidemic.²
- The proportion of people living with HIV (PLWH) in Germany who are aware of their infection status is high (90%), and the German healthcare system has been very successful at linking these patients to care, with > 90% under treatment.³
- However, as with other European nations, the proportion of HIV diagnoses that are late is still high in Germany, with ~9500 PLWH who are unaware of their infection.^{3,4}
- We aimed to identify challenges associated with late HIV diagnosis in Germany.

Methods

- A panel of five German physicians with established research expertise in HIV was assembled to identify challenges associated with late HIV diagnosis in Germany.

Results

Prevalence and characteristics of late HIV diagnosis in Germany

- Data from the HIV Regional Network (2014) indicated a prevalence of late HIV diagnosis in Germany of 55.6% (33.5% for advanced HIV disease [CD4 < 200 cells/mL or AIDS]).⁵
- Among individuals with late versus early HIV diagnosis identified from the Robert Koch Institute (RKI) and German Clinical Surveillance of HIV Disease cohort data (1999–2010):
 - older individuals, heterosexuals, individuals from Sub-Saharan Africa and migrants from countries with a high prevalence (> 1%) of HIV were significantly over-represented
 - men who have sex with men (MSM), individuals who use injecting drugs and people who live in big cities were significantly under-represented (Figure 1).⁶
- More recent RKI data (2020) indicate that, similar to other European countries, the proportion of late HIV diagnoses in Germany has not changed markedly, but the proportion of late HIV diagnoses occurring in MSM has continued to decrease.⁴

Recent and emerging challenges of late HIV diagnosis in Germany

The war in Ukraine

- Nearly 1 000 000 refugees from the war in Ukraine have entered Germany.⁷

- The prevalence of HIV in Ukraine is high (1.2%), as is the degree of HIV stigma, which increases the risk of late HIV diagnosis.^{8–10}
- Given these factors, there is potential for a substantial increase in the number of undiagnosed HIV cases, and therefore late HIV diagnoses, in Germany (Figure 2).
- Even among individuals who have been previously diagnosed and treated for HIV in Ukraine, there is an enhanced risk of being lost to care upon entering Germany, potentially leading to increased transmission and late re-presentation with HIV.

The COVID-19 pandemic

- According to RKI data, the absolute numbers of patients in Germany with advanced HIV disease at diagnosis decreased from 2019 to 2020.⁴
 - However, the proportion of advanced HIV disease diagnoses increased during this period, suggesting an exacerbation of factors that contribute to late HIV diagnosis.⁴
- Other potential impacts of the COVID-19 pandemic include:
 - loss to care (due to restricted access) of people being treated for HIV in Germany, possibly increasing rates of transmission and late re-presentation
 - reduced diagnosis of acute HIV infection due to overlap with COVID-19 symptoms (i.e. missed opportunities for early diagnosis).

Migrant access to healthcare insurance

- An additional challenge for early diagnosis of HIV in Germany is the growing number of migrants who do not have healthcare insurance, especially those from outside the EU who do not qualify for a European Health Insurance Card.
- Lack of healthcare insurance among migrants has been shown to decrease the odds of contact with the healthcare system.¹¹

Overcoming challenges of late HIV diagnosis in Germany

- Patient-initiated HIV testing has worked well in Germany (particularly among MSM), with over 90% of PLWH estimated to be aware of their HIV status.
- However, there is a lack of robust systems for provider-initiated testing.

Provider-initiated indicator HIV testing in primary care

- The vast majority of individuals (particularly women and older heterosexual men) with late HIV diagnosis in Germany have had prior contact with the healthcare system with an indicator disease but did not receive an HIV test (unpublished FindHIV data).

- To address this issue, the FindHIV initiative has developed a scoring system that can be applied by primary care physicians to trigger HIV testing based on an unbiased assessment of patient risk.¹²

Provider-initiated opt-out HIV testing in emergency departments

- Opt-out testing in emergency departments (EDs), whereby HIV testing is carried out unless patients choose to decline, offers a range of potential benefits, including:
 - removing the stigma associated with HIV testing
 - removing the need for physicians to remember to test for HIV
 - greater ease of automation versus other healthcare settings
 - higher prevalence of HIV in EDs versus other healthcare settings
 - greater potential versus indicator testing to detect HIV in individuals who are less likely to present to primary care (e.g. Ukrainian refugees, migrants without healthcare insurance)
 - greater potential versus indicator testing for re-linkage to care (e.g. Ukrainian refugees and German patients lost to care during the COVID-19 pandemic).
- Universal HIV testing in EDs is not reimbursed in Germany.
- Key actions required to advance universal HIV testing in EDs in Germany are provided in Figure 3.

Figure 3. Actions required to advance HIV testing in EDs in Germany.

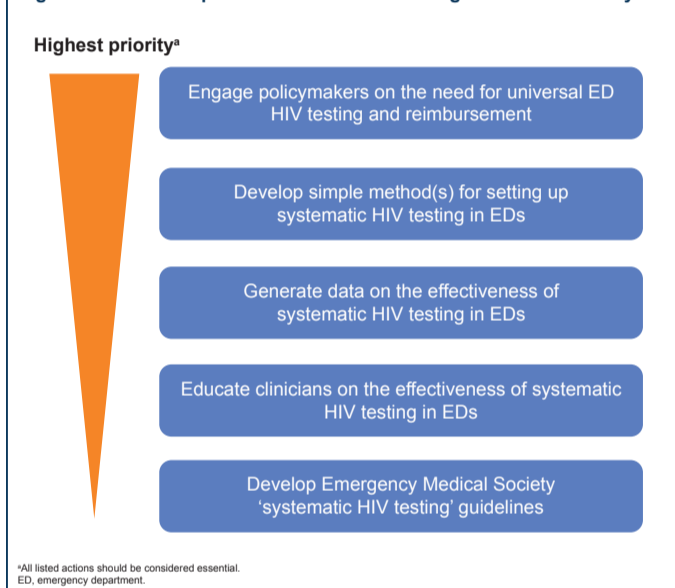


Figure 1. Characteristics of late HIV presenters in Germany from 1999 to 2010 (adapted from Zoufaly et al. 2012).⁶

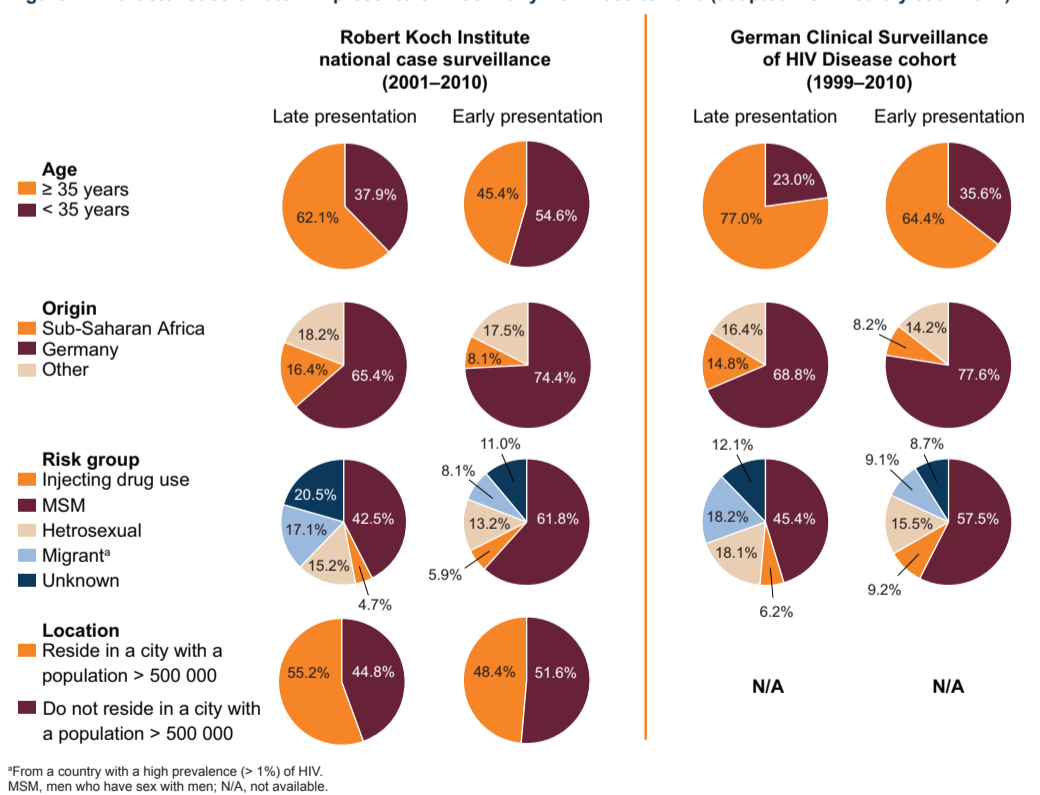
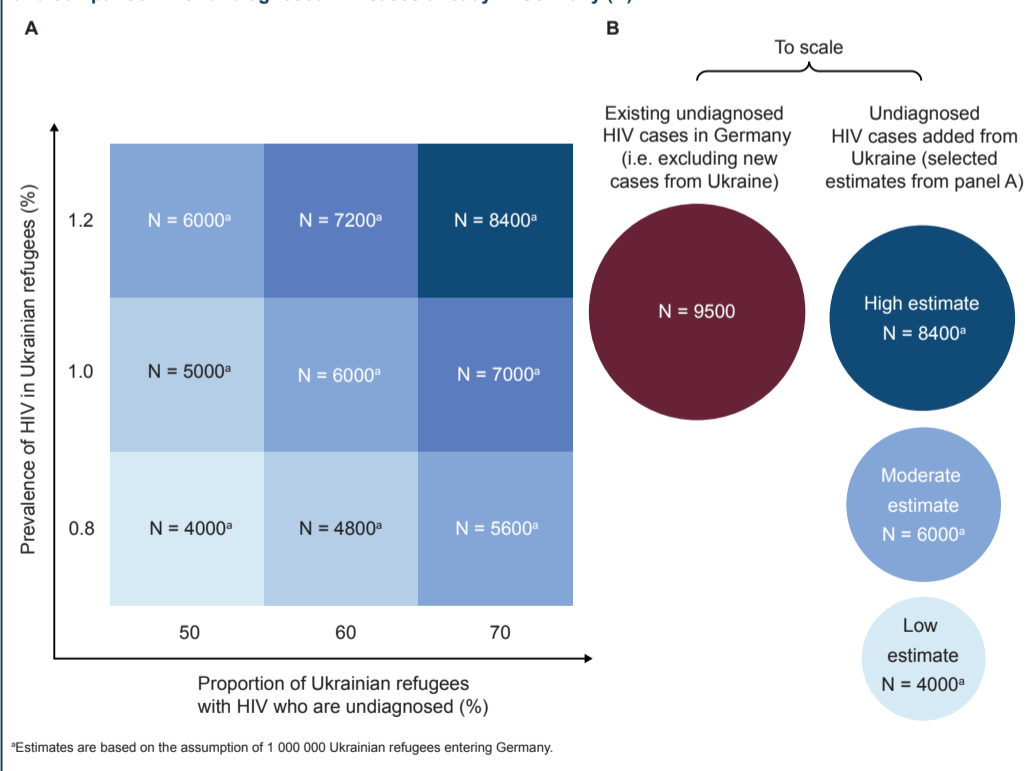


Figure 2. Estimated numbers of Ukrainian refugees entering Germany with undiagnosed HIV (A), and comparison with undiagnosed HIV cases already in Germany (B).



Conclusions

- Provider-initiated HIV testing requires optimisation in Germany.
- Tools to guide indicator HIV testing in primary care are needed to overcome bias against testing in certain subgroups, such as women and older heterosexual men.
- Universal HIV testing in EDs is required to improve early detection in individuals who are less likely to present to primary care, such as Ukrainian refugees and migrants without healthcare insurance.

References

- Antinori A et al. *HIV Med* 2011;12:61–4.
- Miranda MNS et al. *Pathogens* 2021;10:835. doi: 10.3390/pathogens10070835.
- Late Presentation Working Groups in EuroSIDA and COHERE. *BMC Infect Dis* 2020;20:728. doi: 10.1186/s12879-020-05261-7.
- Robert Koch Institute Epidemiological Bulletin. 2022. Available from: www.rki.de/DE/Content/Infekt/EpidBull/Archiv/2021/Ausgaben/47_21.pdf (Accessed 19 August 2022).
- Thomas Schleenvoigt B et al. *Gesundheitswesen* 2022. doi: 10.1055/a-1665-6762.
- Zoufaly A et al. *HIV Med* 2012;13:172–81.
- Refugees fleeing Ukraine (since 24 February 2022). 2022. Available from: <https://data.unhcr.org/en/situations/ukraine> (Accessed 12 August 2022).
- RozaNova J et al. *PLoS One* 2021;16:e0256627.
- Sereda Y et al. *J Int AIDS Soc* 2020;23:e25492.
- Gesesev HA et al. *PLoS One* 2017;12:e0173928.
- Mullerschön J et al. *BMC Int Health Hum Rights* 2019;19:10. doi: 10.1186/s12914-019-0189-3.
- Valbert F et al. *AIDS Care* 2021;33:1642–6.

Disclosures

CB has received fees from Gilead Sciences, Hexal AG, MSD and Janssen-Cilag for lectures and/or advice, and travel grants for scientific conferences from Gilead Sciences, MSD and Janssen-Cilag. SS has received grants and funding for clinical studies, advisory boards and lectures from Gilead Sciences, Viiv Healthcare, Thera Therapeutics, MSD, Janssen, Hormosan and the German Innovationsfonds. JS has received grants and/or personal fees from Gilead Sciences, Dr Falk Pharma, GmbH, MSD, Janssen-Cilag and AbbVie. GS has received funding from Gilead Sciences and fees from Viiv Healthcare, Bristol Myers Squibb, MSD and Hormosan for participation in advisory boards, data safety and monitoring boards, and for the preparation of educational materials and lectures. HS has received grants and honoraria for presentations and advisory boards from Gilead Sciences, MSD, Viiv Healthcare and Janssen.

Acknowledgements

Writing support for the development of this poster was provided by Michael Molloy-Bland PhD, of Oxford PharmaGenesis, Melbourne, Australia, and funded by Gilead Sciences, Inc., Foster City, CA, USA.