

Impact of global migration on blood safety

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Presentation outline



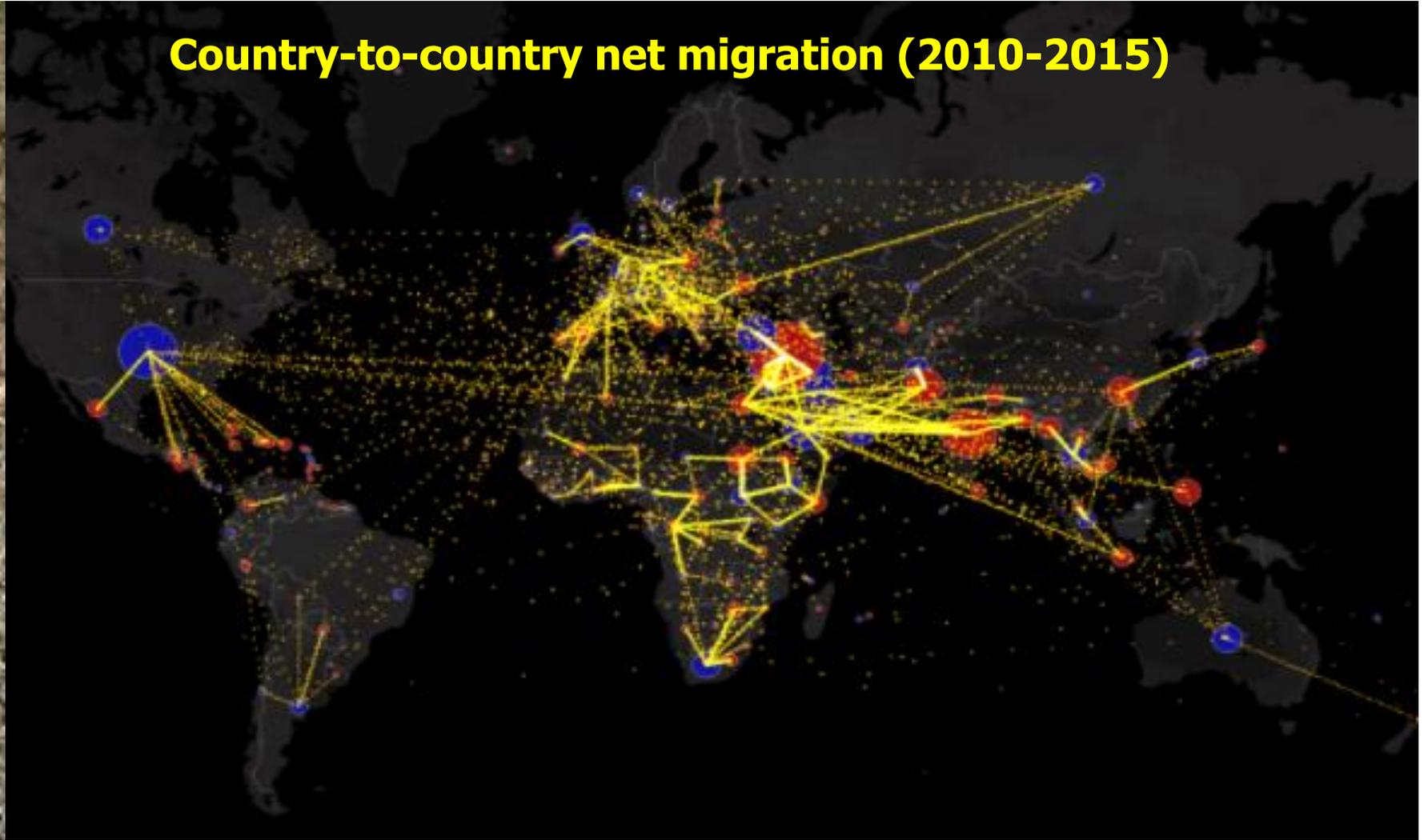
- **Human population movements**
- **Human migration in Europe**
- **Migration and blood donation**

Human population movements

3.6 million years before



Country-to-country net migration (2010-2015)



Human population movements

Part of the dynamic global process of moving biota, along with plants, animals, microorganism and other materials

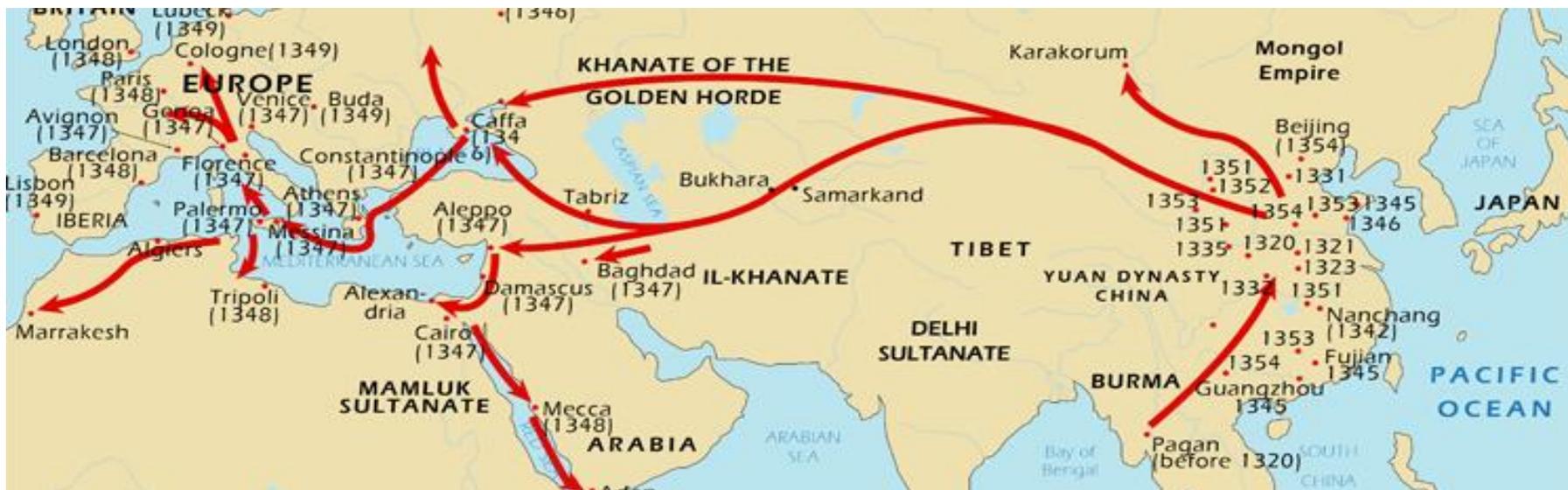
- **Increasing in numbers and speeds**

- Humans can reach almost any part of the Earth today within the incubation period for most microbes that cause disease in humans
- Travel is also discontinuous, often including many stops and layovers along the way

- **Diversity of destinations**

- **Diversity of purposes**

Spread of plague during fourteenth century



| | | | | |
|--|--|-------------------------------|--|---|
|  |  | 11:30 Capital Apt, Beijing | 15:00 Frankfurt International, Fran.. |  10h 30' → direct  9 seats left!  Check-in baggage included |
|--|--|-------------------------------|--|---|

People infected with *Y. pestis* often develop symptoms after an incubation period of one to seven days.

Human migration

Human migration is the movement of people from one place to another with the intentions of settling, permanently or temporarily in a new location in another or within the country.

- Driving forces of the contemporary human migration:

Global Economic, Environmental, Political and Social factors



Transport innovations

Most frequent Reasons for Migration

| PUSH | PULL | |
|--|--|----------------------|
| Persecution Violence War | Safety and Stability Freedom | Physical |
| Poor wages Lack of jobs | Higher wages Job prospects | Economical |
| Crop failure and famine Pollution Natural disaster | Food availability Better environment | Environmental |
| Limited opportunities Lack of services Family separation | Family Reunification Better quality of life Availability of services | Social |

Consequences of the movements – public health and social perspective

- The juxtaposition of species that have never before had physical proximity
- The establishment of species in new geographic areas (arthropods, mammals and other animals, and plants) may cause disease in the immunologically naïve population or major changes in the existing ecosystem.
- Acceptance of migrants by host population and their integration into to the new environment

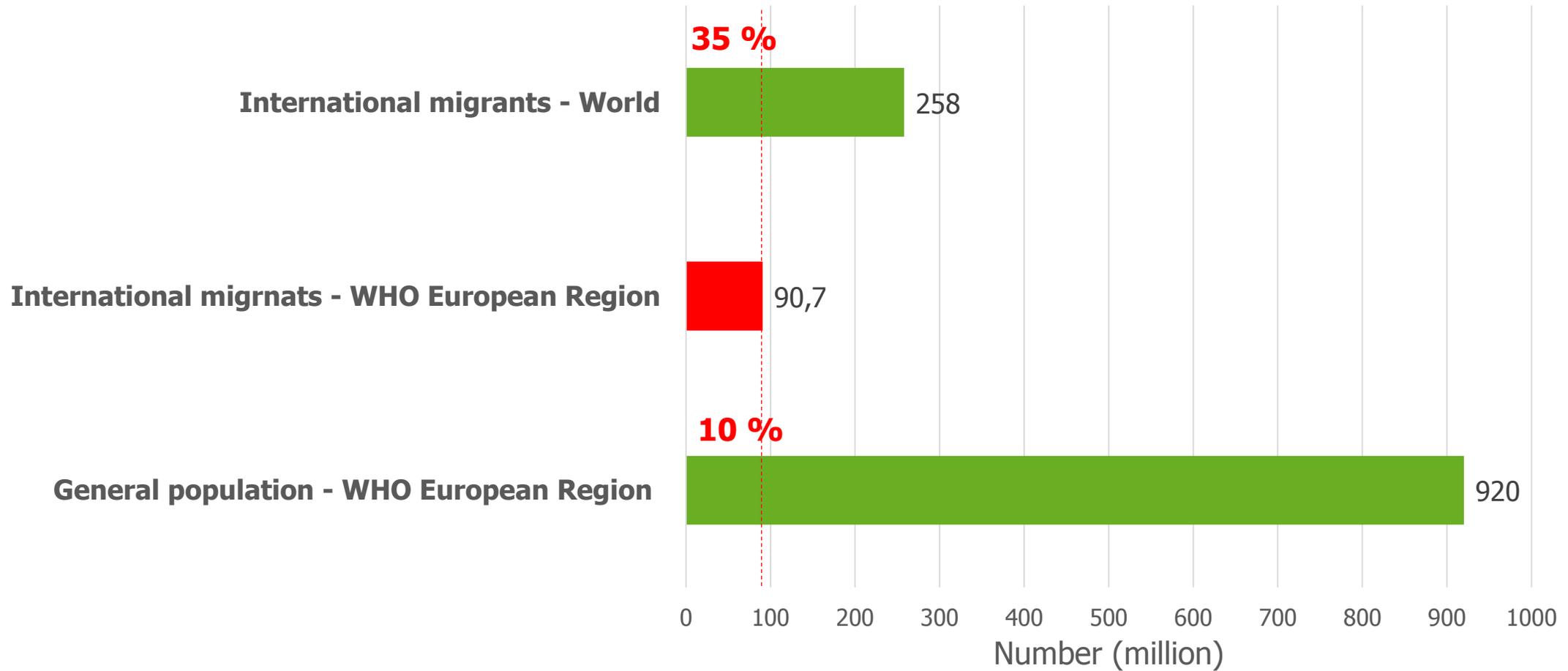
Definitions

Migrant.

The International Organization for Migration (IOM) defines a migrant as “[A]ny person who is moving or has moved across an international border or within a State away from his/her habitual place of residence, regardless of (1) the person’s legal status; (2) whether the movement is voluntary or involuntary; (3) what the causes for the movement are; or (4) what the length of the stay is”.

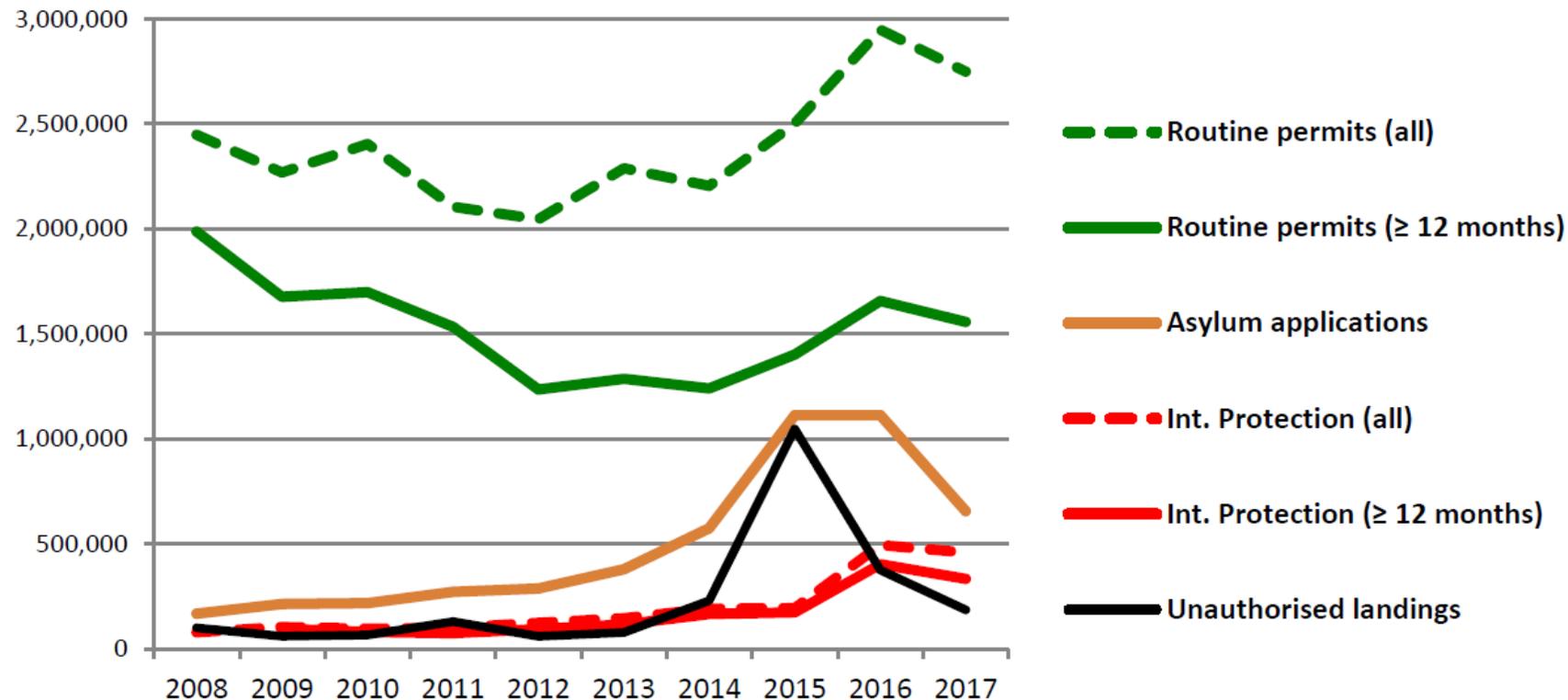
Refugee. “A person who meets the eligibility criteria under the applicable refugee definition, as provided for in international or regional refugee instruments, under the mandate of the UNHCR [Office of the United Nations High Commissioner for Refugees], and/or in national legislation”. The “applicable refugee” definition used is “a person who, owing to a well-founded fear of persecution for reasons of race, religion, nationality, membership of a particular social group or political opinions, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country” .

International migrants in the WHO European region (2018)



Annual immigration to the EU/EEA, 2008–2017

31 Member States of EU/EEA , a total population of 517 million (2017).
Migrants : 11% of this population (2017), 4% being born in another EU/EEA country
and 7% originating from outside the EU/EEA.



Top ten countries of birth of immigrants to the EU/EEA (average of 2014, 2015 and 2016)



| | EU/EEA* | |
|---------------|-----------|----|
| Total | 1 226 859 | % |
| Syria | 94 356 | 8 |
| China | 83 883 | 7 |
| India | 77 002 | 6 |
| Morocco | 50 469 | 4 |
| United States | 43 132 | 4 |
| Pakistan | 35 764 | 3 |
| Ukraine | 35 384 | 3 |
| Moldova | 29 606 | 2 |
| Russia | 24 976 | 2 |
| Brazil | 24 915 | 2 |
| Other | 727 371 | 59 |

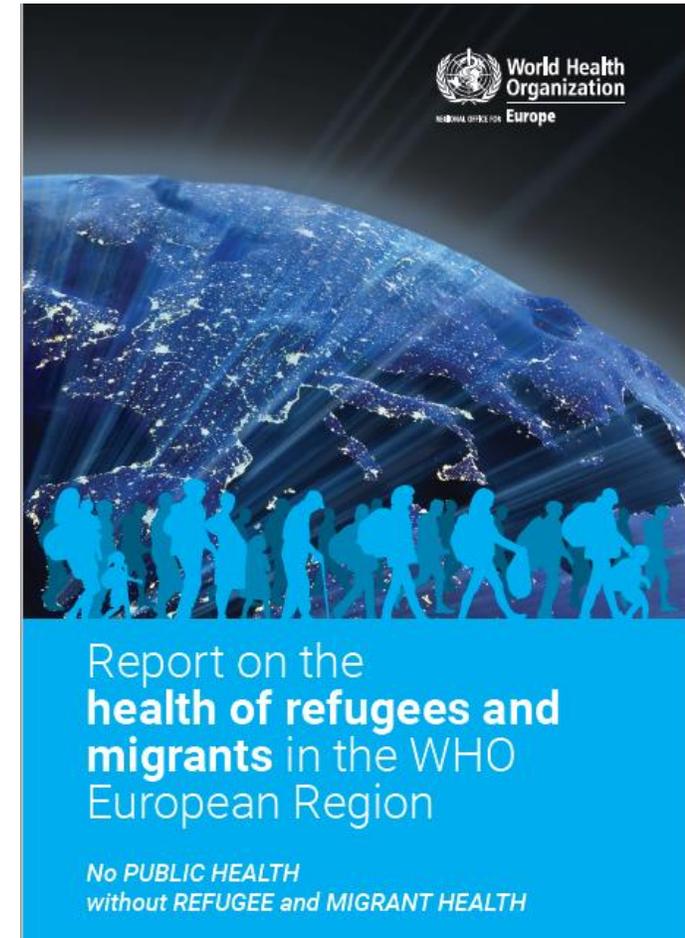
Health of refugees and migrants in the WHO European Region



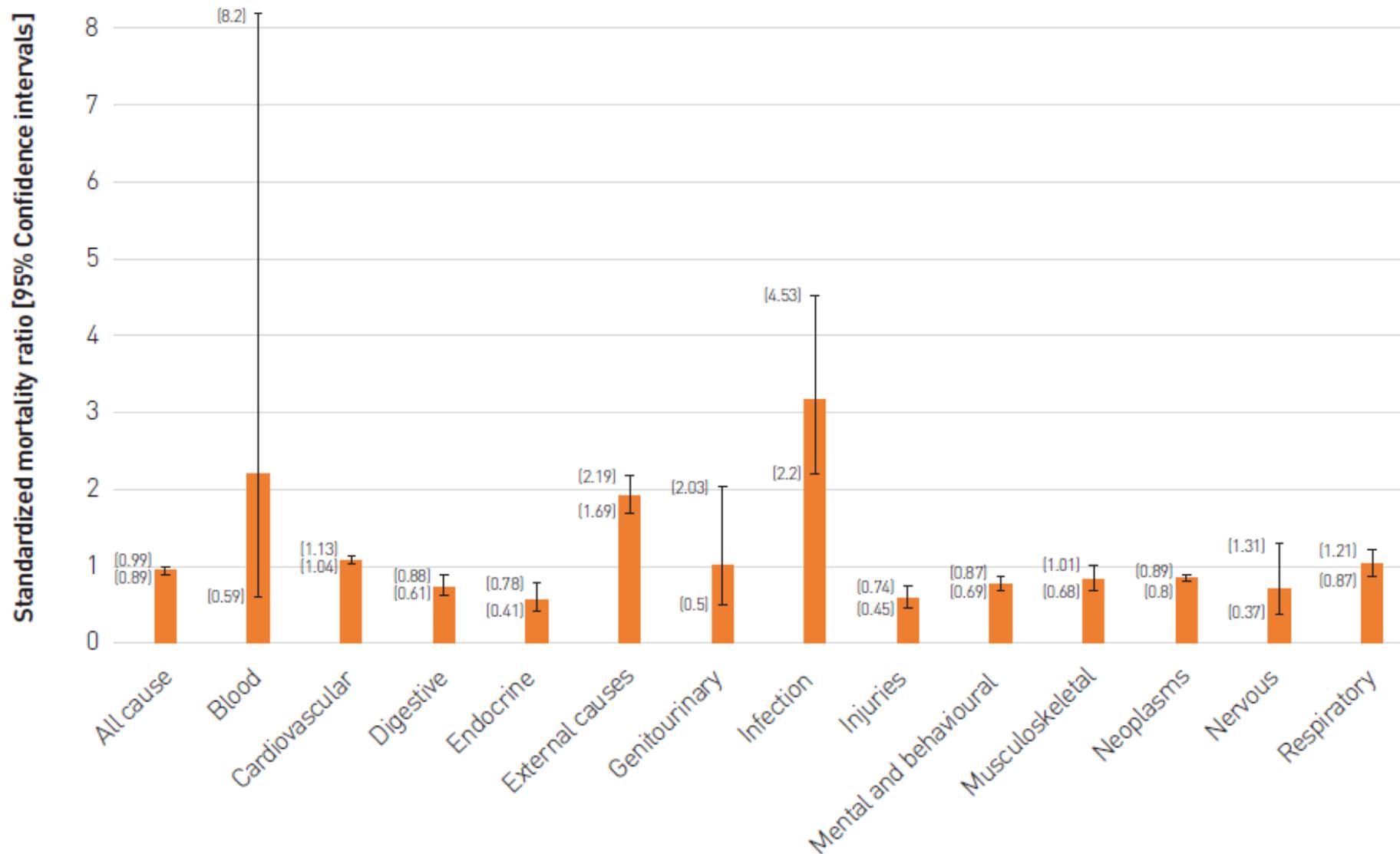
Member States of WHO European region show variability in proportion of international migrants including refugees, and migration – related programs and policy priorities.

Absence of indicators and standards for refugee and migrant health > shortage of scientifically valid and comparable health data on refugee and migrant populations

This report is intended to create an evidence base to aid Member States of the WHO European Region and other national and international stakeholders in promoting refugee and migrant health



Mortality estimates in refugees and migrants



Vulnerability to infectious diseases in migrants



- Lack of health care or interrupted care in the country of origin, because of exposure to infections and lack of care in transit, and if living conditions are poor in the destination country.
- Very low risk of transmitting communicable diseases from the refugee and migrant population to the host population in the WHO European Region.



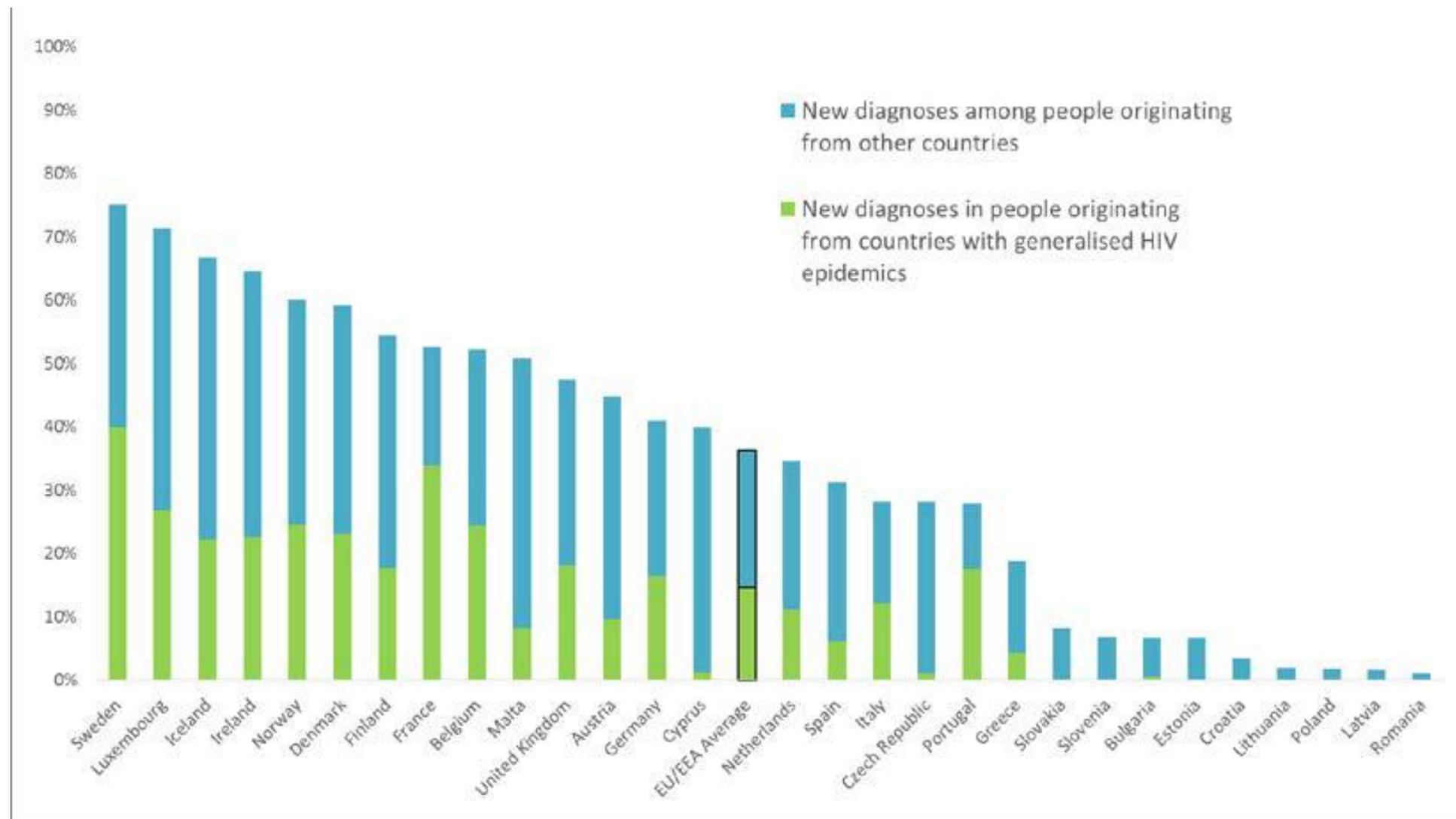
EU/EEA migrants are more affected by some infectious diseases (in particular HIV, TB, Chagas disease and, possibly, chronic hepatitis B infection) than the native-born population. Screening of child, adolescent and adult migrants for active TB and LTBI, HIV, HCV, HBV, strongyloidiasis and schistosomiasis, Enrolling migrants in vaccination programmes and ensuring catch-up vaccination where needed.



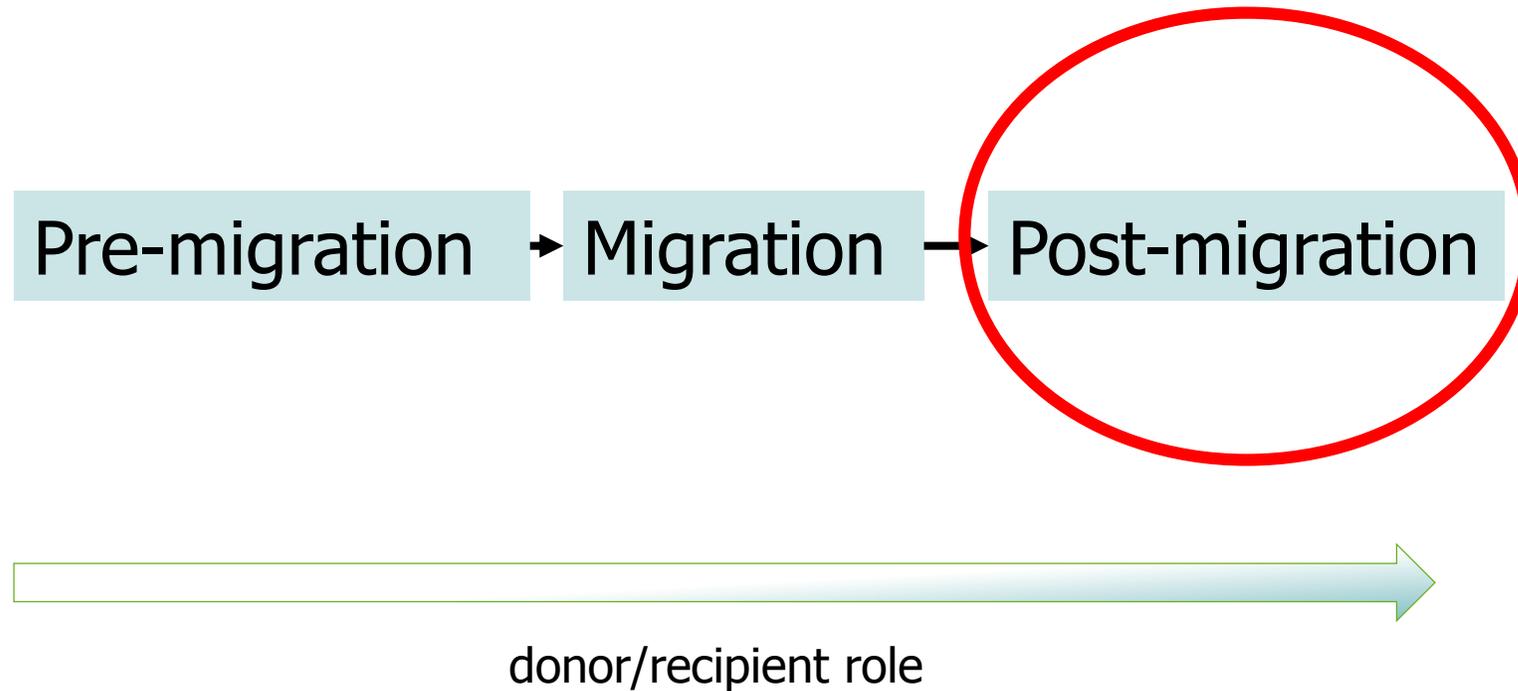
SCIENTIFIC ADVICE

Public health guidance on
screening and vaccination for
infectious diseases in newly
arrived migrants within the EU/EEA

Percentage of new HIV diagnoses among migrants of all reported cases in the EU/EEA with known country of origin, 2015



Migration process



Threats in the post-migration stage

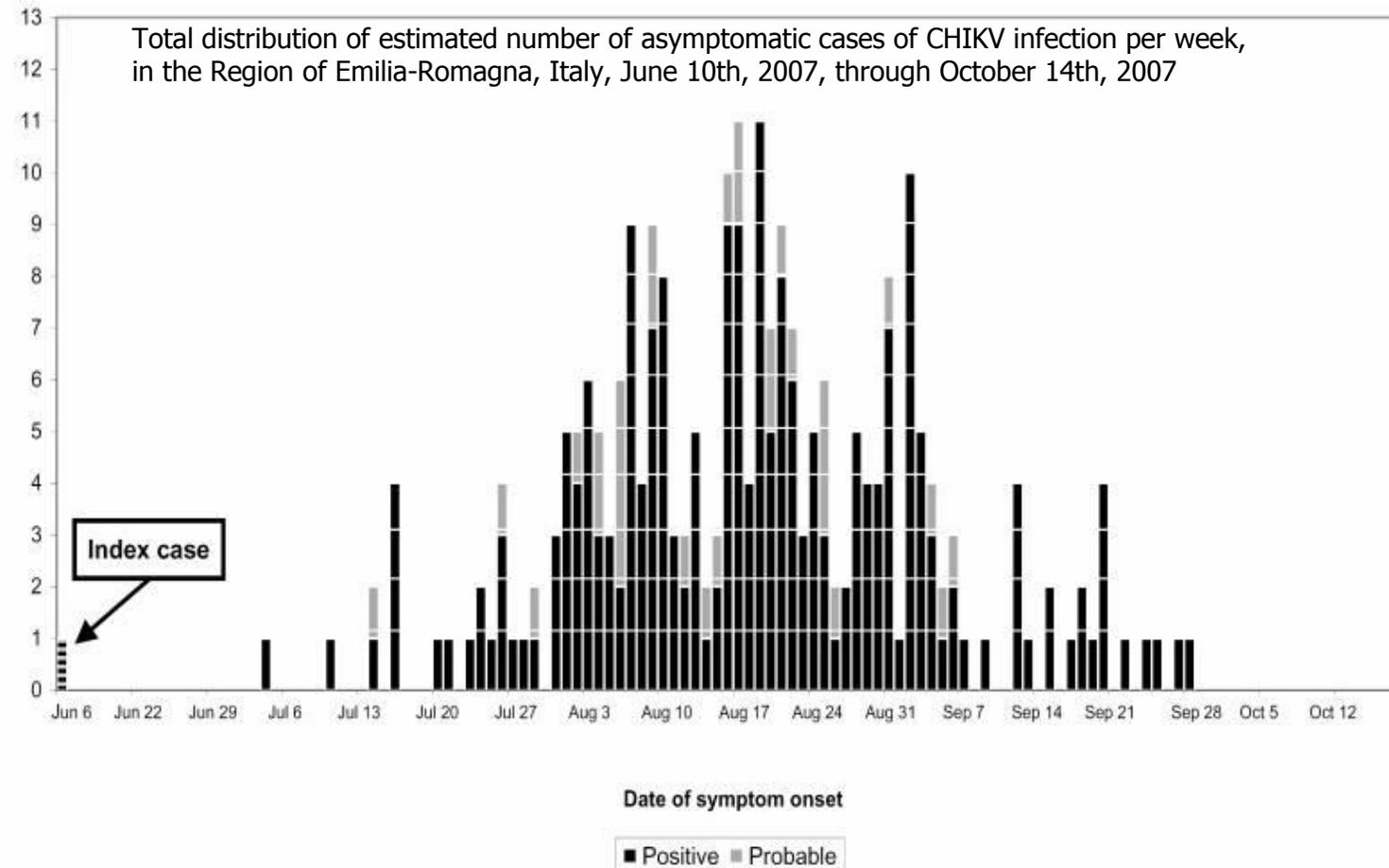
•Threats to the infectious safety of supply

- Introduction of infectious disease and trigger of an outbreak
- Infectious diseases transmission through donation

•Threats to the adequacy of supply

- Migrants under-represented in donation,
- Higher rates of rare blood types and
- Increased incidence of diseases requiring blood transfusions

Chikungunya outbreak Italy 2007



Reported cases of malaria in Greece 2009 - 2018

| Year of onset of symptoms | Case classification | | Total |
|---------------------------|---------------------|---|------------|
| | Imported cases | Locally acquired (<i>P. vivax</i>) | |
| 2009 | 44 | 7 | 51 |
| 2010 | 40 | 4 | 44 |
| 2011 | 54 | 42 | 96 |
| 2012 | 73 | 20 | 93 |
| 2013 | 22 | 3 | 25 |
| 2014 | 38 | 0 | 38 |
| 2015 | 79 | 8 | 87 |
| 2016 | 111 | 6 | 117 |
| 2017 | 100 | 7 | 107 |
| 2018 | 44 | 10 | 54 |
| Total | 605 | 109* | 714 |

*Additionally: 2 cases of unknown classification

Minority groups and migrants are frequently under-represented in blood donation



UK census and National Health Service data

White British population blood donors: 22.1 /1000

- African descent population: 1.84/ 1000
- Asian Bangladeshi descent population: 1.59/1000.

US

- White blood donors : 11 /1000,
- African American blood donors: 6/1000;
- Hispanic blood donors 3/1000 .

Population data with 2010 donor data in the US

African American community comprised 12.6% of the US general population, whereas only 4.9% of US blood donor population were members of that AA community.

Germany

Blood donation

21.1% of non-migrants v.s.11.4% of migrants.

Blood donation barriers and facilitators in migrants and minorities



BARRIERS TO BLOOD DONATION

- Lack of knowledge and awareness
- Negative attitude
- Mistrust
- Ethnic discrimination and identification
- Fear
- Deferral and exclusion factors
- Inconvenience

FACILITATORS TO BLOOD DONATION

- Altruism
- Awareness raising/recruitment strategies
- Incentives
- Health check

Conclusion

Migrants and minority groups tend to be under-represented in the blood donor population of their new country

They require transfusion sometimes more frequently or blood components of special characteristics that are not present in the indigenous population

These situations may create dis-balance between demand and supply causing inequalities in the health care.

National blood services may consider to analyse their migrant population and find appropriate way to integrate them into the blood donor population



Thank you for your attention