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Vaccine-preventable diseases in migrants to Europe: a systematic review

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Migrant populations in Europe are at increased risk of under-immunisation and therefore likely to be at high risk of vaccine-preventable diseases (VPD), yet the relationship between migration and VPD incidence is not fully understood. This study aimed to explore

the prevalence of VPDs in migrant populations in Europe and to define at-risk groups. Following PRISMA guidelines, Embase, MEDLINE and Global Health were searched for peer-reviewed papers published from 1st January 2010. Inclusion criteria comprised primary research on VPD cases (measles, mumps, rubella, diphtheria, pertussis, tetanus) among migrants to/within EU/EEA and Switzerland. We defined migrants as foreign-born nationals. Forty-seven eligible studies from 15 EU/EEA countries and Switzerland were included, with a total of 1357 migrant VPD cases reported. Analysis revealed 1357 migrant cases across measles (28 publications; 926 cases), pertussis (9; 267 cases), mumps (9; 107 cases), diphtheria (11; 67 cases), rubella (2; 6 cases imported from Romania and Pakistan), tetanus (2; 2 cases). Over-representation of measles cases was observed among migrant children and adolescents, predominantly from the WHO Europe region (particularly Bulgaria, Bosnia and Herzegovina and Serbia). Migrants of East African origin were over-represented among diphtheria cases. This study underscores the association between migration and VPD cases in EU/EEA and Switzerland, establishing a clear association between European migrant children and adolescents in measles outbreaks, and adult migrants from East Africa in diphtheria cases. This study suggests strengthening systems for targeted catch-up vaccination for migrants is imperative upon arrival in European countries to align them with national schedules, alongside the need to improve data collection and surveillance systems to inform effective public health interventions.

Key messages:

- Migrant populations in Europe face heightened risk of vaccine-preventable diseases and need to be better incorporated into catch-up vaccination initiatives on arrival.
- Improved data collection and surveillance systems are crucial for informing effective public health interventions targeting migrant populations.