Tackling imported malaria: The elimination endgame

KEY MESSAGES

- Importation is the final challenge in elimination settings.
- Tailoring interventions requires knowing how, where, when and which people move.
- Malaria programs must target interventions at both sides of a border and during travel.
- Regional collaboration is essential to target sources of imported infections.

WHY IS IMPORTATION CRITICAL FOR MALARIA ELIMINATION?

To achieve malaria elimination countries must address imported malaria infections. Imported cases tend to comprise the majority of recorded cases in elimination settings.\(^1\) Importation has led to resurgences of malaria in several countries in recent history.\(^2\)–\(^5\) In Swaziland, research suggests that imported cases sustain local transmission.\(^6\) \textbf{With global human movement increasing, better strategies to tackle the risk of imported malaria are essential.}\n
While many malaria elimination programs attempt to address importation, we know little about what interventions they use and how effective they are. Further complicating these efforts, many countries and international organizations define and classifying imported cases differently, limiting comparisons across countries.

How, when and why people travel must inform malaria importation control strategies. The length of time of travel varies, some groups travel seasonally, while others travel weekly or monthly. The travel distance also varies. Individuals may move short or long distances, across or within national borders. Knowing these patterns of movement and understanding the groups that travel helps malaria programs target interventions more effectively.

TACKLING IMPORTATION

Malaria programs can address importation during any or all of the four general stages of movement: in the eliminating region, during transit, in the endemic region and upon return to the eliminating country (Figure 1). Each stage presents an opportunity to confront imported parasites.

STRATEGIES TO ADDRESS IMPORTATION

- Increasing free access to healthcare to high-risk groups increases the likelihood of screening, prompt diagnosis and treatment.
- Enhancing active surveillance, including focusing border screening on well-defined high-risk populations and peak importation periods, allows targeting of interventions.
RECOMMENDATIONS

- Develop standardized methods to classify imported and local cases to allow accurate comparison between settings and support the evaluation of interventions.
- Improve methods for identifying and targeting groups most at risk for importing parasites by using case-control studies, exploring the social networks of proven cases, and evaluating routine surveillance data. Researchers should use data on human movement and parasite genotyping to identify infectious sources and travel routes of high-risk groups.
- Increase the use of personal protective measures to address importation, such as mosquito nets and chemoprophylaxis, for well-defined populations, such as military personnel or employees of private companies.
- Minimize receptivity where individuals at high-risk of importing infections stay or live by spraying insecticides, distributing bed nets, removing mosquito breeding sites, improving houses, and supporting economic development.
- Support the development and growth of regional and cross-border initiatives, which are particularly effective when malaria control is part of a regional development program.
- Support the measurement of strategy impact including costs, acceptability, and feasibility.

REFERENCES