World Health Organization

Malaria elimination certification in Paraguay

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What were the key elements to Paraguay's malaria elimination success that helped the country reach zero indigenous cases of the disease?

Paraguay is the first country in the Americas since Cuba in 1973 to be certified malaria-free, representing a significant public health achievement not only for Paraguay but for the Americas as a whole. Achieving elimination in Paraguay required substantial levels of political commitment and leadership, as well as sustained investments in its national malaria programme over a period spanning more than 50 years. Notable aspects of its approach include:

Rapid and targeted response

With free universal health services in Paraguay and a strong malaria surveillance system, malaria cases were detected early, investigated promptly and classified correctly.

Dedicated elimination strategy

After reporting its last case of malaria in 2011, Paraguay launched a 5-year plan to consolidate the gains, prevent re-establishment of transmission and prepare for elimination certification. Activities centred on strengthening epidemiological surveillance, robust case management, and a public information campaign on the diagnosis, treatment, and prevention of malaria to promote behaviour change among populations in at-risk areas.

Integration

During 2015 and 2016, as part of a broader health reform, malaria surveillance, diagnosis and treatment activities were integrated within Paraguay's general health services, with the aim of expanding health coverage to at-risk populations and preventing re-establishment.

Strengthening surveillance skills

A 3-year initiative to hone the skills of front-line health workers in the country's 18 health regions was launched in 2016 to keep the malaria surveillance system sustainable over the long term. Supported by The Global Fund to Fight AIDS, Tuberculosis and Malaria, the project addresses disease prevention, identification of suspected cases, accurate diagnosis and prompt treatment to respond to the on-going threat of malaria importation from endemic countries in the region and Africa.

Front-line health workers are key to ensure malaria surveillance is sustainable over the long term
PAHO

How has Paraguay managed to stay malaria-free since 2012? What are the systems in place that made this possible and how long will the country keep those systems operational?

As part of the WHO elimination certification process, countries must demonstrate that they have the capacity to prevent the re-establishment of malaria transmission. The availability of free universal health services in Paraguay and a strong malaria surveillance system ensure imported cases of malaria are detected and responded to in a timely manner to prevent local transmission.

The inclusion of the national malaria programme within the National Malaria Eradication Service (SENEPA, in the Spanish acronym), the institution within the ministry of health responsible for the control of vector-borne diseases, helps guarantee the programme's future existence.

Further, congressional legislation provides predictable and long-term financing for the national malaria programme: by law, 1.5% of annual income from Paraguay's social security programme is allocated to SENEPA. Together, these elements ensure that efforts to prevent the re-establishment of malaria transmission can be sustained in the decades to come.

What are the benefits of malaria elimination for Paraguay?

Eliminating malaria in Paraguay means that no one will fall ill or die from local transmission of the disease, bringing about tangible health benefits at the individual and community levels, as well as broader socio-economic outcomes.

What role did national leadership, political will, civil society and international partners play in Paraguay's success?

Eliminating malaria is a collective effort, requiring the sustained engagement of many partners at the national, regional and global levels. However, achieving elimination is a country-driven process. For elimination efforts to succeed, government stewardship is essential, together with the engagement and participation of affected communities.

Does Paraguay coordinate cross-border surveillance activities to prevent importation of malaria cases and do they provide antimalarial treatment to visitors and migrants?

Paraguay provides free treatment to all citizens, visitors and migrants, regardless of their nationality or residency status. The national malaria programme has identified three populations at greatest risk: the military, Brazilian students attending universities in Paraguay and Paraguayans travelling to

Africa. Targeted interventions include strengthening passive detection systems, promotion of health education, and providing prophylaxis to travellers heading to and returning from malaria-endemic regions in Africa.

To step up cross-border collaboration, the Pan American Health Organization (PAHO) funded a project focused on strengthening entomological surveillance and control of vector-borne diseases in the 'triple border' area of Argentina, Brazil and Paraguay. A key outcome of the project, which ran from 2010 to 2012, was the development of an *Anopheles* mosquito range map, a tool that shows the geographic distribution of malaria-carrying mosquitoes.

What are the lessons learned from Paraguay's experience that can be applied in other countries looking to eliminate malaria?

Paraguay provides universal free health services to all, one of the critical elements that helps drive a country towards malaria elimination. Sustained political commitment and robust financial support are further keys to success. Continued surveillance of suspected cases, targeted community engagement and education, as well as strengthening skills of front-line health workers, are recommended strategies that WHO encourages countries to adopt as part of their national malaria elimination programmes.

Is Paraguay replicating its elimination strategy with other infectious and mosquito-borne diseases?

Paraguay has an integrated approach to entomological surveillance activities, taking into account several vector-borne diseases including dengue, leishmaniasis and Zika virus. Integration of malaria surveillance into the general health system had been a challenging task in Paraguay, but the lessons and experiences learned from other vector-borne diseases have contributed to the smooth integration and transition of the malaria programme. At the same time, the approach used to eliminate malaria is now being applied to eliminate Chagas disease and schistosomiasis.