

Country profile of Kyrgyzstan

Transmission of *Plasmodium vivax* malaria was interrupted in Kyrgyzstan in 2011, and the country is now in the “prevention of malaria reintroduction” phase. The process of certification of malaria elimination was initiated in 2014 and is expected to be completed by the end of 2016.

Malaria vectors in the country included *Anopheles pulcherimus*, *An. superpictus*, *An. hyrcanus*, *An. martinius*, *An. claviger* and *An. messeae* (1).

Short history of malaria and malaria control

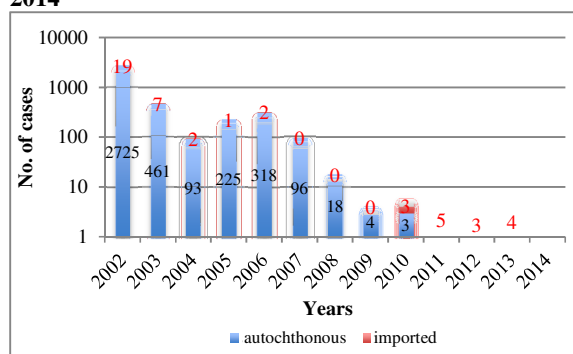
Malaria was eradicated in Kyrgyzstan in 1959, and the country was free of malaria between 1960 and 1981. A surveillance system was set up to prevent the reintroduction of malaria transmission.

In 1981, an imported case of *P. vivax* malaria was detected, and the number of imported cases continued to increase, leading to resumption of local malaria transmission and infection of the local population. Local transmission was re-established in Kyrgyzstan in 1986, when four autochthonous cases of *P. vivax* were found among nine cases registered and were classified as “introduced” (first-generation local transmission). Ten more cases were detected in 1987.

Malaria situation between 2000 and the present

In 2002, explosive resumption of *P. vivax* malaria transmission became an epidemic situation, with an incidence much higher than those reported in the past. The number of autochthonous cases rose sharply from June onwards in southern regions of the country, including Batken, Osh and Jalal-Abad provinces, reaching 2744 by the end of the year (Fig. 1). The majority of cases (2725) were due to local transmission.

Fig. 1 Numbers of malaria cases, Kyrgyzstan, 2001–2014



Source: Ministry of Health, Kyrgyzstan

The main factors in the 2002 epidemic were:

- intensive importation from endemic Tajikistan and probably from Uzbekistan by seasonal workers returning from those countries to villages in Osh, Batken and Jalal-Abad provinces (2);
- delayed detection and case management due to the weakened national malaria programme and low

level of vigilance of the general provincial and district health services due to the long absence of malaria from the country, which resulted in insufficient knowledge to make a clinical diagnosis, inadequate clinical examination of patients, weak laboratory skill in identifying plasmodia, wrong primary diagnosis (26% delayed diagnoses) and late referral of patients to hospital (52%);

- lack of antimalarial drugs and laboratory consumables for microscopic diagnosis at the beginning of the epidemic;
- understaffing of the State epidemiological service with parasitologists and assistant parasitologists, leading to delayed epidemiological investigations of cases and foci, reporting and the necessary measures;
- insufficient transport for conducting epidemiological investigations of cases and foci and control activities in malaria foci;
- lack of the necessary insecticides and spraying equipment at the beginning of the epidemic; and
- insufficient knowledge about malaria in the population, so that 52% of malaria patients delayed seeking medical assistance.

In response to this serious malaria epidemic, the Government included malaria control in its development priorities as part of the response to the Millennium Development Goals. A targeted, comprehensive malaria programme of the Ministry of Health and an action plan for malaria control and prevention were implemented in 2001–2005. The aim was to decrease malaria incidence and prevent malaria mortality.

The national malaria control programme mobilized a network of public health facilities and scaled up interventions, with technical and financial support from WHO, the French Agency for Technical Cooperation and Development, Medical Emergency Relief International in the United Kingdom, the United States Agency for International Development and other organizations, resulting in containment of the first epidemic of malaria and a significant reduction in morbidity.

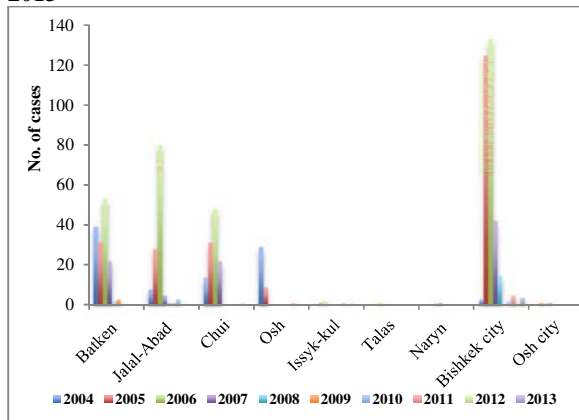
In 2003, the number of autochthonous cases was reduced to 461, due to intense control and preventive interventions. The epidemic in the southern part of the country was contained, with a tendency to stabilization, and, by 2004, the number of officially registered autochthonous cases had dropped to 93.

In 2005, however, due to large-scale internal migration, the number of reported autochthonous cases increased again to 225, with deterioration of the malaria situation in the north of the country (Fig. 2).

In October 2005, Kyrgyzstan signed the Tashkent Declaration (3).

The last three indigenous cases of malaria in Kyrgyzstan were registered in 2010. Since 2011, no autochthonous cases have been reported.

Fig. 2 Malaria cases by province, Kyrgyzstan, 2004–2013



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Strategies, policies and interventions

The epidemics in Kyrgyzstan were quickly contained by a strengthened malaria control programme and anti-epidemic activities. The main interventions were:

- comprehensive plans of action for epidemic containment prepared by the Ministry of Health and transmitted to local governments and related organizations at meetings, round-tables and other means;
- establishment of village committees for social mobilization and assistance in malaria control and prevention;
- indoor residual spraying in affected provinces;
- distribution of larvivorous *Gambusia affinis* fish in mosquito breeding sites, especially in rice fields;
- improved entomological surveillance;
- intensified active and passive case detection;
- improved, timely epidemiological investigation of cases and foci;
- timely notification of cases and reporting;
- inter-seasonal preventive treatment with primaquine (15 mg/day for 14 days) of all patients in the previous year (in Tashkomur);
- capacity-building of health staff;
- inter-sectoral collaboration;
- health education of the population; and
- cross-border collaboration.

Prevention of reintroduction of malaria

In order to maintain malaria-free status, prevent the resumption of local malaria transmission and establish effective mechanisms for the post-elimination period, a programme to prevent reintroduction of local malaria transmission, 2014–2018 was approved by the Government on 31 July 2014.

The goals of the programme are to maintain a stable malaria-free status, prevent the reintroduction of local malaria transmission and obtain international certification of the country as free from malaria. The objectives are:

- early diagnosis and notification of all cases of malaria and timely radical treatment;
- identification of all cases and causes of any reintroduction of malaria transmission;
- immediate (emergency) response in case of reintroduction of transmission;
- continuous training and retraining of health care professionals;
- increased social mobilization and coordinated intersectoral actions;
- partnerships with international and donor organizations; and
- cross-border cooperation.

Outlook

By using contemporary, scientifically based strategies, Kyrgyzstan managed to contain a malaria epidemic after resurgence of local malaria transmission, dramatically reduce the malaria burden and attain malaria elimination. This required strong political commitment, adequate funding, a well-developed surveillance system and enormous effort to set up and implement the malaria elimination programme.

To maintain its malaria-free status, the country will maintain vigilance and its rapid epidemic response system.

References

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