

Country profile of Georgia

In Georgia, transmission of *Plasmodium vivax* malaria was interrupted in 2010. Two imported cases were detected in 2011 and 2012; no locally acquired cases were reported in 2013. Georgia is now in the “prevention of malaria reintroduction” phase.

The main and secondary vectors are *Anopheles maculipennis*, *An. superpictus*, *An. sacharovi*, *An. atroparvus*, *An. hyrcanus*, *An. claviger* and *An. melanoon* (1,2).¹

Short history of malaria and malaria control

In ancient times, malaria was widespread and epidemic in Georgia. In the 1920s, approximately 30% of the population was infected ($\geq 80\%$ in the lowlands), and the mortality rate was 0.2% in 1924–1928. Comprehensive, nationwide antimalarial measures led to a sharp decrease in morbidity by 1954 and interruption of local transmission and sustained malaria elimination by 1970.

In the middle of the 1990s, a resurgence of malaria began, with imported cases from large-scale malaria epidemics in neighbouring countries due to social and economic collapse in the region after the disintegration of the former Soviet Union, which resulted in the breakdown of public health networks, including the malaria prevention and control infrastructure. In 1996, the first three autochthonous *P. vivax* cases were detected in a settlement bordering Azerbaijan. In subsequent years, the number of cases due to local transmission of *P. vivax* gradually increased, from 14 in 1998 to 35 in 1999, 164 in 2000 and peaks of 437 cases in 2001 and 474 cases in 2002 (3,4) (Fig. 1).

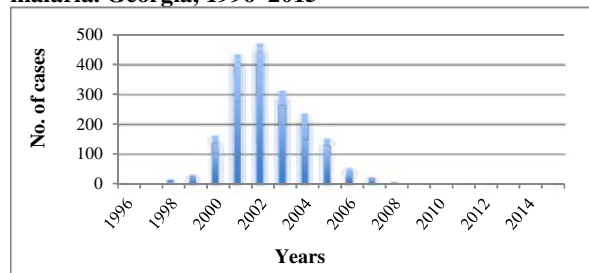
Malaria situation between 2000 and the present

The malaria situation deteriorated (Fig. 1), with increasing numbers of indigenous *P. vivax* cases and active foci. Most cases occurred in the eastern part of the country, due to importation from endemic areas of neighbouring Azerbaijan; however, there were also single cases and an outbreak (26 people affected in 2001) in the formerly endemic territories of western Georgia. Altogether, 1868 indigenous cases were reported in the period 2000–2009. With accelerated, large-scale malaria control interventions supported by both internal and external resources, the number of cases has decreased steadily since the peak in 2002. The last indigenous case was officially reported in 2009.

Importation of malaria from endemic countries continued in 2010–2015, with four to seven cases annually. Two cases in local citizens in 2011 and 2012 were classified as “introduced” by the National Malaria

Programme. Prompt responses by public health facilities prevented complications and secondary cases. In 2015, a case of induced *P. falciparum* malaria was reported in a local nurse who was infected during venepuncture of a patient with imported tropical malaria.

Fig. 1. Numbers of cases of indigenous *P. vivax* malaria. Georgia, 1996–2015



Source: Centre for Disease Control and Prevention, Georgia

Strategies, policies and interventions

After the resurgence of malaria in 1996, the Ministry of Health started intensive scaling-up of control and surveillance activities. In 2000, the National Malaria Control Programme was established, according to the WHO Roll Back Malaria strategy, with the support of the WHO Regional Office for Europe. The programme began with only limited funds; however, financial support was provided by the Global Fund to Fight AIDS, Tuberculosis and Malaria between 2004 and 2012.

Georgia has succeeded in containing outbreaks and interrupting local malaria transmission after malaria resurgence, with the following main approaches and interventions:

- strengthened institutional capacity of the National Malaria Control Programme and general health services and enhanced capacity for decision-making on malaria;
- better capacity for and access to timely case detection, early diagnosis and adequate treatment of malaria;
- a national treatment protocol, which is updated regularly, in which all cases positive for vivax malaria are radically treated with a standard course of 3 days of chloroquine and 14 days of primaquine on an outpatient basis, free of charge, with a sufficient stock of drugs ensured;
- reinforced surveillance mechanisms;
- cost-effective, sustainable vector control;
- improved capacity for timely response and prevention of malaria outbreaks and epidemics;
- increased community awareness and participation in malaria prevention;
- cross-border cooperation with neighbouring Azerbaijan; and
- operational research on the effectiveness of interventions (e.g. vector bionomics, malaria stratification, integrated vector control) and on cultural, social and economic factors (knowledge,

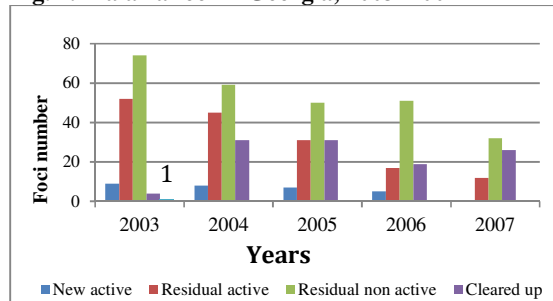
¹ Iosava M. Malaria situation in Georgia. Presented at the WHO Regional Office for Europe meeting on the progress of malaria elimination in the WHO European Region, Dushanbe, Tajikistan, 10–12 August 2015 [in Russian].

attitudes and perceptions and other behavioural studies).

In 2005, Georgia endorsed the Tashkent Declaration and prepared a strategy and plan of action for malaria elimination in Georgia, in line with the new WHO regional strategy and other WHO documents (5–9).

In accordance with the strategy, the country strengthened malaria surveillance for timely detection of each case and to clear up the last foci (Fig. 2). A central malaria database was created to register cases and foci and compile annual reports, in accordance with WHO recommendations, in preparation for WHO certification of Georgia as a country free of malaria.

Fig. 2. Malaria foci in Georgia, 2003–2007



Source: Centre for Disease Control and Prevention, Georgia

Prevention of reintroduction of malaria

After successful interruption of local malaria transmission, work has been reoriented to sustain the results and prevent reintroduction. A programme for the prevention of malaria reintroduction has been incorporated in the State surveillance programme (2012), supported financially by the Government.²

Outlook

Successful interruption of the resurgence of local malaria transmission in Georgia was due to strong political commitment, expertise, integrated approaches and sustainable resources. It was a long process, involving 14 years of continuous work by public and general health services, many other organizations and the entire population. Now, when the country has eliminated malaria, it should continue work to reduce receptivity and vulnerability, maintain adequate vigilance and ensure a timely response if needed.

References

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² Iosava M. Malaria situation in Georgia. Presented at the WHO Regional Office for Europe meeting on the progress of malaria elimination in the WHO European Region, Dushanbe, Tajikistan, 10–12 August 2015 [in Russian].