



Annual Epidemiological Report

October 2019

Malaria in Ireland, 2018

Key Facts

2018:

- 59 cases of malaria were notified in 2018
- 1.2 per 100,000 population crude incidence rate (CIR) in 2018
- A decrease compared to 77 cases (CIR 1.6) notified in 2017
- Visiting family of origin remains most commonly reported reason for travel
- Nigeria remains most commonly reported country of infection

Background

Malaria is a common and serious tropical disease caused by a type of parasite (protozoan) transmitted to humans by biting mosquitoes. There are four species of malarial parasite that commonly infect humans (*Plasmodium falciparum*, *P. vivax*, *P. ovale*, *P. malaria*). A further two less common and primarily zoonotic species (*P. knowlesi* and *P. cynomolgi*) are also capable of infecting humans. *P. falciparum* is the most severe form of malaria. *P. falciparum* and *P. vivax* are the most commonly encountered.

Malaria is a major public health problem in more than 100 countries, with over 2 billion people living in malarious parts of the world. More than 90% of cases occur in tropical Africa, but malaria also occurs in the Indian subcontinent, Southeast Asia, Central and South America, Hispaniola (Haiti and the Dominican Republic), the Middle East, and Oceania. For travellers and tourists, Sub-Saharan Africa probably represents the area of greatest risk of malaria.

Methods

Malaria is a notifiable disease in Ireland under the Infectious Disease Regulations and cases should be notified to the Medical Officer of Health. The [case definition](#) is outlined on the HPSC website.

Notifications are reported using the Computerised Infectious Disease Reporting system ([CIDR](#)) which is described [here](#).

Further information on the process of reporting notifiable infectious diseases is available [here](#).

Crude incidence rates (CIRs) were calculated using the 2011 Census population for the years 2009-2013 and the 2016 Census population for the years 2014-2018. All CIRs are per 100,000 population unless otherwise specified.

Epidemiology

In 2018, 59 malaria cases were notified in Ireland, corresponding to a crude incidence rate (CIR) of 1.2 and a decrease of 23% in comparison to 77 cases (CIR 1.6) reported in 2017. Among European Union (EU) member states reporting malaria data to the European Centre for Disease Prevention and Control (ECDC), Ireland had the seventh highest incidence rate for imported malaria in 2018. The highest notification rates were reported by the United Kingdom, Luxembourg, Sweden, Spain, Malta and the Netherlands. The overall CIR reported by EU member states was 1.2 per 100,000 population during 2018.

In common with the rest of the EU, males predominated with a male:female ratio of 2.0:1.0. The highest numbers of cases were aged between 35 and 54 years. The number of paediatric cases decreased during 2018, with four cases reported compared to nine cases reported during 2017. Of the four paediatric cases, only two reported details on endemic areas visited, reason for travel or on malarial prophylaxis taken. For the two paediatric cases with such details reported, both reported visiting family in their country of origin as their reason for travel to countries in Sub-Saharan Africa and neither reported taking malaria prophylaxis. Figure 1 displays the annual number of malaria notifications by age group and age specific incidence rate (ASIR) in Ireland.

Among all age groups, the category of traveller most affected in Ireland continued to be African immigrants and their families who were exposed while returning to visit family in their country of origin. This almost certainly reflects the greater frequency with which this group travels to malarious areas, but also reflects Ireland's importance as a destination for those emigrating from English speaking West Africa. Of the 20 cases (34%) in 2018 where reason for travel was reported for, 65% cited visiting family in their country of origin, all of whom travelled to Africa. Other reasons cited for travel this year were new entrant to Ireland (n=2), business/professional travel (n=2), Irish citizen living abroad (n=1), foreign student studying in Ireland (n=1) and other reason for travel (n=1).

Probable country of infection was reported for 22 cases (37%). Nigeria remained the country most frequently visited, accounting for 59% of cases where country of infection was reported. Eight of the remaining cases were exposed in seven other countries within Africa and one case was associated with travel to India.

Plasmodium falciparum accounted for 83% of infections in 2018, reflecting the dominance of exposure in Africa as the source of the majority of notifications. Four cases of *P. ovale*, two cases of *P. vivax*, one case of *P. malariae* and one case of mixed infection due to *P. falciparum* and *P. malariae* were also reported. The remaining two cases did not have *Plasmodium* species specified.

Figure 1: Annual number of malaria notifications by age group¹ and ASIR in Ireland

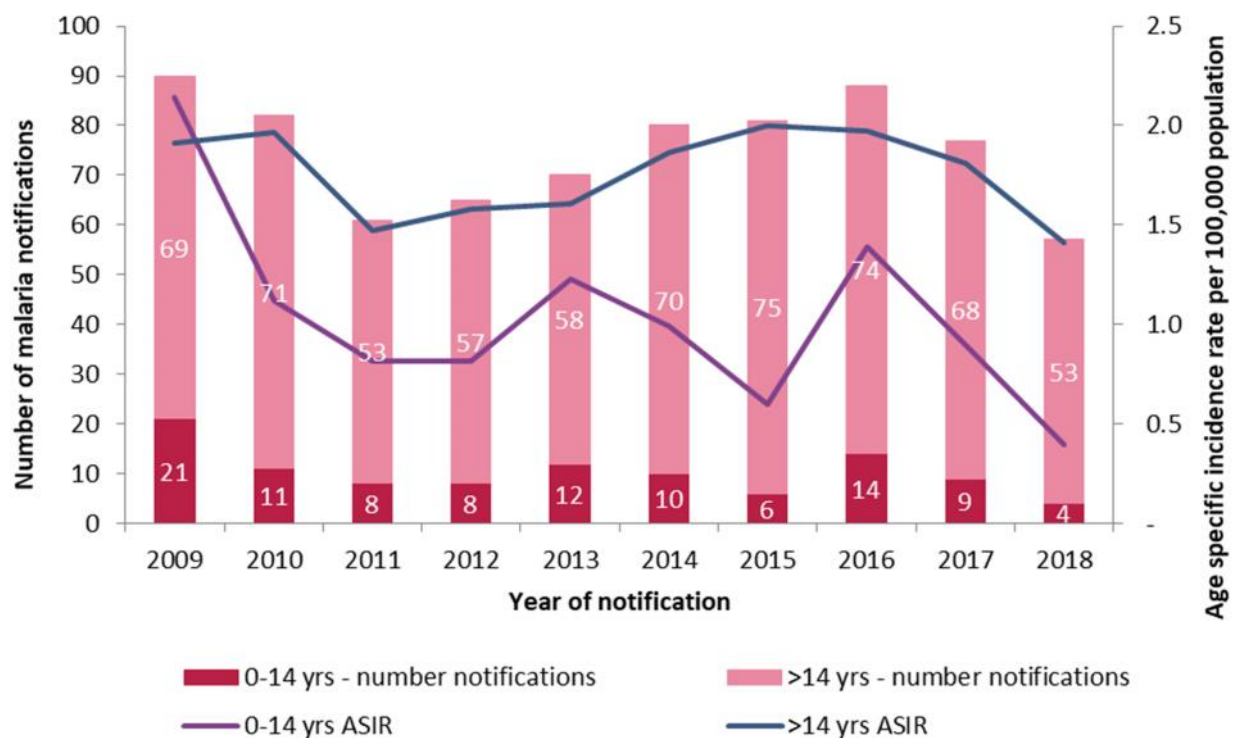
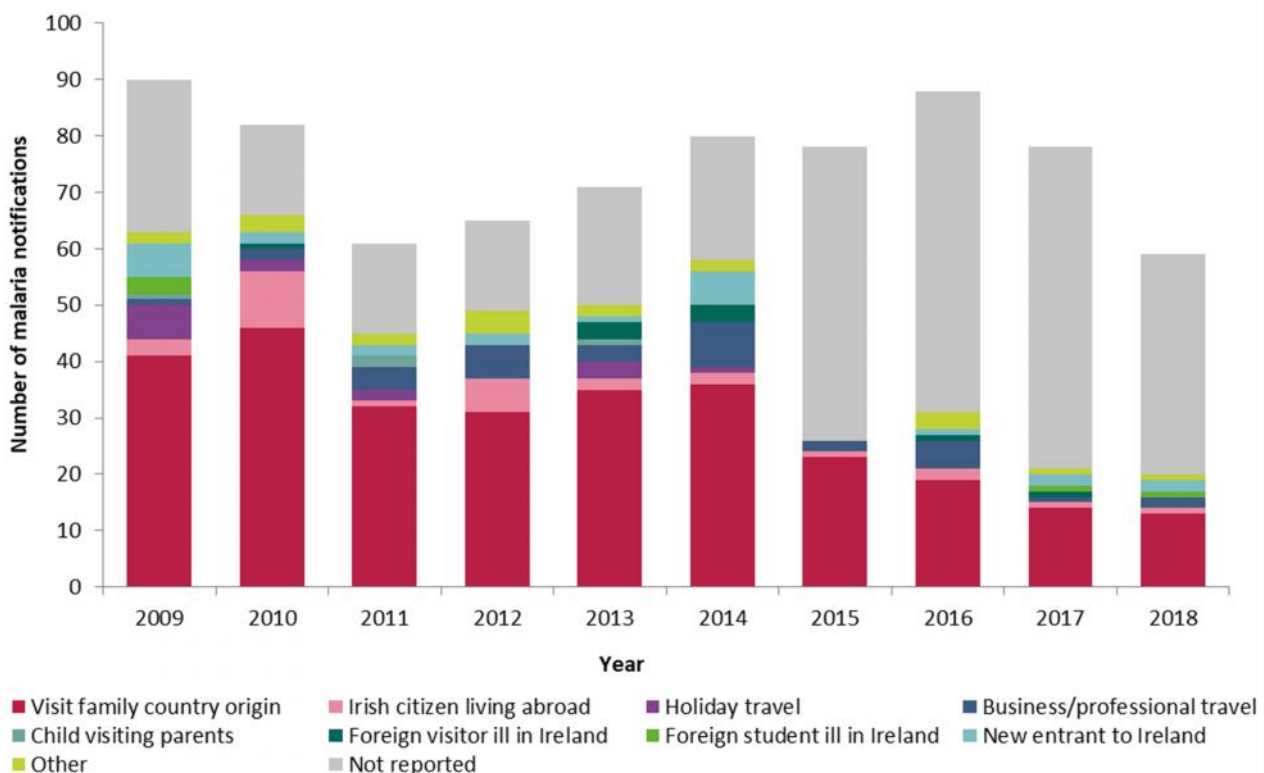


Figure 2: Annual number of notifications of malaria in Ireland by reason for travel



¹ 2 cases did not have age reported in 2018

Public health implications

HPSC resources for health professionals include a poster which can be downloaded from the HPSC website for display in GP surgeries, maternity hospitals, paediatric hospitals and Emergency departments, advising immigrant families travelling to Africa to consult their doctor about malaria before travelling. A leaflet for intending travellers, available in English and French, highlights the value of antimalarial prophylaxis and protection against mosquito bites. The poster and leaflet are available [here](#).

Further information available on HPSC website

<https://www.hpsc.ie/a-z/vectorborne/malaria/>

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