EPI-NEWS **NATIONAL SURVEILLANCE OF COMMUNICABLE DISEASES**
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MALARIA 1999 AND SUGGESTED PROPHYLAXIS

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In 1999 there were 207 laboratory-notified cases of malaria in Denmark, table 1, a figure that is largely unchanged from 1998 (181), 1997 (213) and 1996 (191). There was nevertheless an increase in cases of falciparum malaria in travellers from Africa (to 130 as against 90 in 1998, 119 in 1997 and 97 in 1996.

Statens Serum Institut is currently investigating the prophylaxis used by patients notified in 1999 as having malaria. The study is not yet complete but is indicating a preponderance of cases among those using chloroquine and proguanil. So far three patients taking Malarone have been notified as having falciparum malaria. It thus remains true that no antimalarial is 100% effective. Whether the few Malarone failures are due to resistant P. falciparum or to poor drug absorption is not known. The atovaquone component is fat-soluble, and to ensure an effective blood concentration Malarone must be taken at the same time every day together with a fatty meal.

Table 1. Laboratory-reported cases of malaria, 1999

	Africa	Asia	Central/South America	Not stated *	Total 1999	Total 1998
P. falciparum	130	6	2	6	144	104
P. vivax	8	24	1	6	39	38
P. ovale	11	1	-	-	12	30
P. malariae	1	-	-	1	2	1
Mixed	3	-	-	-	3	4
Not stated	7	-	-	-	7	4
Total	160	31	3	13	207	181

*) Includes travellers to more than one continent

Choice of prophylaxis

It should be emphasized that primary prevention of mosquito bites is still important. Several suitable mosquito repellents are now commercially available in Denmark. Pharmacological prophylaxis remains at three levels, EPI-NEWS 24a+b/00:
I. chloroquine alone; II. chloroquine + proguanil; and III. mefloquine, doxycycline or Malarone.
Mefloquine, doxycycline and Malarone are grouped together so that physicians can choose one of them in the light of the individual traveller's requirements. Chloroquine + proguanil give a lower degree of protection, but have fewer serious side effects than mefloquine. Chloroquine and proguanil can be used during pregnancy.
The three levels are denoted by **Q**, **U** and **X** in the table of suggested vaccinations in EPI-NEWS 24a+b/00.
Z denotes areas of resistance to mefloquine.
It is important to provide travellers with thorough information on malaria risk whatever the prophylactic regimen chosen, and it is important to inform travellers about possible side effects. It is still useful to start mefloquine three weeks before departure to assess whether the agent is tolerated, as 2/3 of those who get side effects experience these within the first three doses.
Malarone was registered in the autumn of 1998 and has been increasingly used during 1999. There have only been few reports of side effects during short-term use. The most frequent side effects are abdominal pain, small mouth ulcers and rashes. There is little experience with the long-term use of Malarone, but no time limit on its use was imposed when it was registered. If Malarone is to be used continuously for months, the traveller should be advised that experience is lacking.
Malarone has not been registered for use in persons weighing less than 40 kg, but paediatric tablets can be obtained by licence from the Danish-Medicines Agency, EPI-NEWS 20/99.

China

80% of P. falciparum infections are found in the border area with Thailand and Laos (Yunnan), as well as on the Hainan peninsula. In accordance with WHO recommendations, it is suggested that prophylaxis be restricted to travel in these areas. The risk of malaria is small in the rest of China and transmission is almost entirely due to P. vivax.

The Philippines

Malaria is unevenly distributed in the Philippines, as shown on the map overleaf. Prophylaxis is only suggested for the areas marked in black.

South Africa

Chloroquine + proguanil are locally recommended for travellers to the Kruger National Park, despite the fact that this is admitted to be less effective than mefloquine or doxycycline. Malarone has not been registered in South Africa, but it appears reasonable to suggest its use for Danish travellers who intend to stay for only a few days in the Kruger National Park, where there is resistance to chloroquine.

Survey of side effects

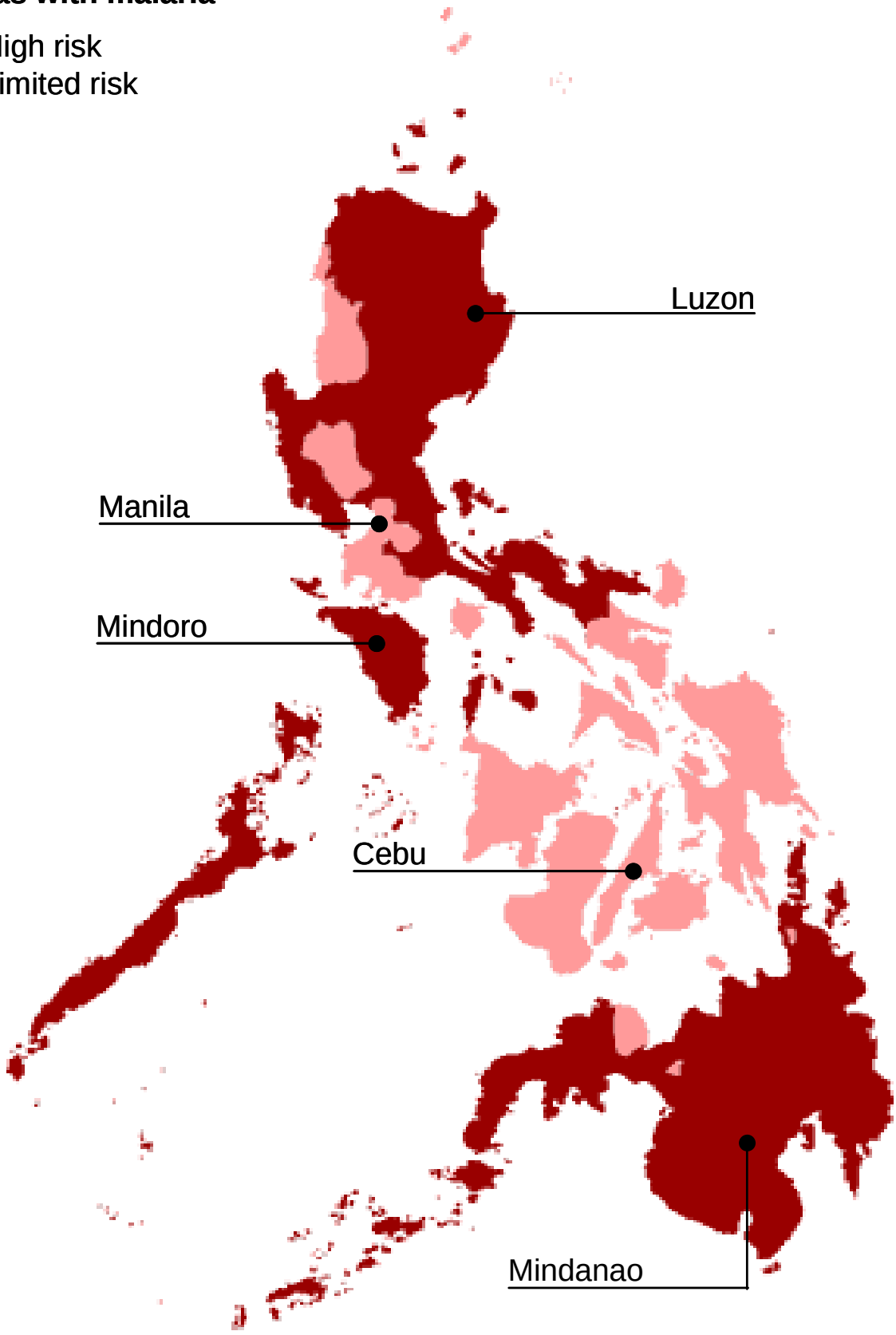
Statens Serum Institut and Copenhagen University Hospital have carried out a survey of the side effects of malaria prophylaxis in about 4500 travellers.
This showed that about 60% of travellers using chloroquine + proguanil and 70% of those using mefloquine experienced no side effects. On the other hand, about 1% of chloroquine + proguanil users and about 3% of mefloquine users had unacceptable side effects. On journeys of less than three weeks, about 3%, 6% and 6% stopped taking chloroquine, chloroquine + proguanil and mefloquine, respectively. On journeys of over three weeks, about 5%, 12% and 8% stopped the respective prophylactic regimens.
(E. Petersen, Parasitology Lab.)

AIRPORT MALARIA

Airport malaria is a rare and poorly understood form of P. falciparum transmission. It has, for example, never been demonstrated that tropical Anopheles mosquitoes are imported into Europe. Within a two-week period of July/ August 1999, four cases of malaria were diagnosed around Roissy Airport near Paris. Only one of the patients was employed at the airport, but the other three lived within a four-km radius of the airport.
Since 1977 a total of 75 cases of airport malaria have been described in western Europe, 28 of which were from France.
(P. Andersen, Dept. of Epidemiology)

Areas with malaria

High risk
Limited risk



Source: WHO