



## MALARIA 2004

No. 19, 2005

2004 saw a total of 106 cases of imported malaria notified from Danish laboratories, [table 1](#). Of all cases where travel destination was stated, 89% (70/79) were from Sub-Saharan Africa. The majority, 98% (59/60), of cases caused by *Plasmodium falciparum* were likewise acquired in Africa. A total of eight cases of malaria were acquired in Asia, all caused by *P. vivax*.

The median age was 35 years (3-66), with a slight predominance of males (58%).

A total of 53% of the patients were of Danish origin, 44% were of foreign origin; in 3% of cases, origin was not stated.

### Primary prophylaxis

Primary prevention of mosquito bites is always important. When staying in malaria regions, use of mosquito repellent is recommended from dusk till dawn. This provides protection for some hours, dependent on type. Careful application on all areas of bare skin is important. The agents may have a local irritant effect, especially when used for prolonged periods. They should be used with caution for children under 3 years, and the agents must not be used for infants. Indoor spraying with insecticides and use of permethrin-impregnated mosquito nets over the bed will similarly reduce the risk of malaria.

### Pharmacological prophylaxis

When staying in a malaria region, especially in Sub-Saharan Africa, the use of effective chemoprophylaxis is important to reduce the risk of falciparum malaria in particular. No malaria agent is without adverse effects, and particularly in the event of long-term travel and posting abroad, it is important to discuss the choice of chemoprophylaxis thoroughly in order to secure high compliance.

### Prophylaxis levels

From 2005, the recommendations for malaria prophylaxis have four levels, corresponding to the WHO categorisation:

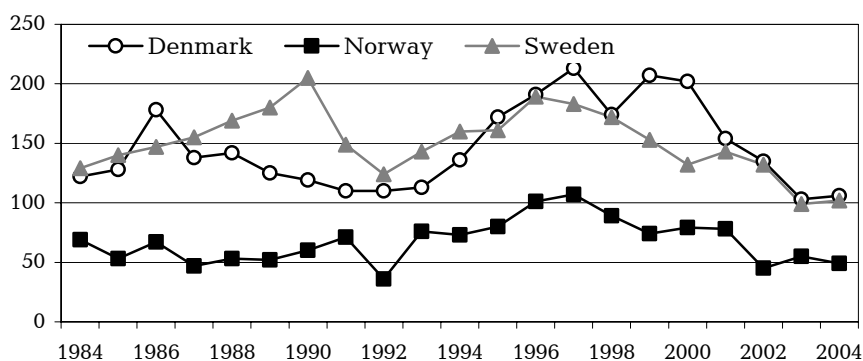
- I) Primary prophylaxis alone is used in regions with sporadic and irregular occurrence of malaria.
- II) Chloroquine alone is used in the Middle East and Central America.
- III) Chloroquine + proguanil (Paludrine) is used in regions where resistance to chloroquine has been reported as sporadic.
- IV) Atovaquone/proguanil (Malarone), mefloquine (Lariam) or doxycy-

**Table 1. Number of imported malaria cases in Denmark, 2004**

	Africa	Asia	South/Central America	Oceania	Not stated *)	Total 2004	Total 2003
<i>P. falciparum</i>	59	0	1	0	21	81	70
<i>P. vivax</i>	4	8	0	0	4	16	18
<i>P. ovale</i>	2	0	0	0	2	4	7
<i>P. malariae</i>	4	0	0	0	0	4	4
Mixed	1	0	0	0	0	1	2
Not stated	0	0	0	0	0	0	2
<b>Total</b>	<b>70</b>	<b>8</b>	<b>1</b>	<b>0</b>	<b>27</b>	<b>106</b>	<b>103</b>

\*) Including travellers to more than one continent

**Figure 1. Number of imported malaria cases in Scandinavia, 1984-2004 (Source: WHO Europe office)**



line is used in regions with high risk for infection with chloroquine-resistant *P. falciparum*. This occurs particularly commonly in Africa and South-East Asia. The three drugs are equally effective, but in Denmark, Malarone is still only licensed for use for up to 28 days. This limitation is based on the studies which were the basis of licensing in the EU. Several later studies have shown that use for up to 12 weeks is without risk of serious adverse effects. This is recommended by national expert committees in countries including the UK and France, cf.

[www.eurosurveillance.org/ew/2004/040311.asp](http://www.eurosurveillance.org/ew/2004/040311.asp).

An updated list of country-specific recommendations for chemoprophylaxis will be published in a later edition of EPI-NEWS.

### Pregnant women and children

Generally, pregnant women should be advised not to travel to areas with high incidence of chloroquine-resistant falciparum malaria. Chemoprophylaxis for small children requires careful consideration. Malarone can be given to children with a body weight down to 11 kg. Lariam can be given to children with a body weight down to 5 kg (1/4 tablet). However, this

represents a relative overdose compared to adult dosage. Lariam should only be used after thorough consideration and in full agreement with the parents. Doxycycline is contraindicated in pregnant women and children under 12 years of age.

### Comments

The number of malaria cases in 2004 was at the same level as in 2003, and is thus in accordance with the declining number of cases of malaria observed in recent years, [figure 1](#). The decline is mainly due to a decreasing number of cases caused by *P. falciparum*.

An almost equivalent development has been seen in Sweden and Norway, where, as in Denmark, there was an increase in the number of cases during the 1980s, followed by a decline over the last 7-8 years. The decline may be explained by a declining number of travellers to Africa. As regards Denmark, the decline also coincides with the introduction of Malarone in 1998, to which travellers probably have greater compliance because of the relatively few and mild side effects of this drug.

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## Individually notifiable diseases

Number of notifications received in the Department of Epidemiology, SSI (2005 figures are preliminary)

Table 1	Week 18 2005	Cum. 2005 <sup>1)</sup>	Cum. 2004 <sup>1)</sup>
AIDS	3	28	12
Creutzfeldt-Jakob	0	2	4
Food-borne diseases	6	100	159
of these, infected abroad	1	18	20
Gonorrhoea	4	195	100
Hepatitis A	0	34	49
of these, infected abroad	0	8	9
Hepatitis B (acute)	0	19	12
Hepatitis B (chronic)	4	51	57
Hepatitis C (acute)	0	1	1
Hepatitis C (chronic)	3	101	130
HIV	2	118	108
Legionella pneumonia	1	20	26
of these, infected abroad	0	2	3
Leptospirosis	1	9	1
Meningococcal disease	0	29	38
of these, group B	0	19	24
of these, group C	0	2	5
of these, unspec. + other	0	8	9
Mumps	0	3	1
Neuroborreliosis	0	16	50
Ornithosis	0	7	2
Pertussis (children < 2 years)	2	73	66
Purulent meningitis			
Haemophilus influenzae	0	0	1
Listeria monocytogenes	0	1	1
Streptococcus pneumoniae	1	43	48
Other aethiology	1	3	3
Unknown aethiology	0	5	9
Under registration	3	29	-
Shigellosis	1	34	25
of these, infected abroad	1	31	20
Syphilis	0	34	60
Tetanus	0	2	0
Tuberculosis	7	150	134
Typhoid/paratyphoid fever	0	11	8
of these, infected abroad	0	10	6
VTEC/HUS	0	49	47
of these, infected abroad	0	21	8

## Selected laboratory diagnosed infections

Number of specimens, isolates, and/or notifications received at Statens Serum Institut

Table 2	Week 18 2005	Cum. 2005 <sup>2)</sup>	Cum. 2004 <sup>2)</sup>
Bordetella pertussis (all ages)	7	235	248
Gonococci	4	152	106
of these, females	0	23	13
of these, males	4	129	93
Listeria monocytogenes	0	10	11
Mycoplasma pneumoniae			
Resp. specimens 3)	4	561	59
Serum specimens 4)	7	442	164
Streptococci 5)	0	55	57
Group A streptococci	0	20	23
Group C streptococci	0	8	7
Group G streptococci	0	46	37
S. pneumoniae	21	534	625

Table 3	Week 16 2005	Cum. 2005 <sup>2)</sup>	Cum. 2004 <sup>2)</sup>
Pathogenic int. bacteria 6)			
Campylobacter	42	576	657
S. Enteritidis	10	107	96
S. Typhimurium	5	93	103
Other zoon. salmonella	3	141	136
Yersinia enterocolitica	5	63	49

Table 1, notes

In 2005, none of the following cases have been reported: Anthrax, botulism, cholera, diphtheria, haemorrhagic fever, leprosy, measles, plague, polio, rabies, rubella, typhus.

1) Cumulative no. 2005 and corresponding period 2004

Tables 2 & 3, notes

2) Cumulative no. 2005 and corresponding period 2004

3) Respiratory specimens with positive PCR

4) Serum specimens with pos. complement fixation test

5) Isolated in blood or spinal fluid

6) See also [www.germ.dk](http://www.germ.dk)

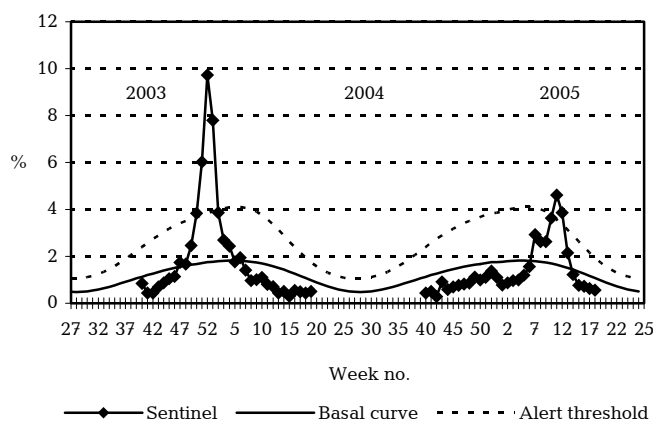
## Patients with laboratory diagnosed chlamydia, by county and gender, 4th quarter 2004

County	2004			2003
	M	F	Total	Total
Cph. & Frb. Municipalities	418	693	1,113 *)	1,043
Copenhagen	214	371	587 *)	509
Frederiksborg	107	205	313 *)	213
Roskilde	69	159	228	171
West Zealand	95	164	259	222
Storstrøm	48	135	183	146
Bornholm	8	20	28	27
Funen	159	331	490	415
South Jutland	86	181	268 *)	231
Ribe	100	174	274	220
Vejle	115	222	337	300
Ringkøbing	81	146	227	194
Aarhus	319	466	786 *)	582
Viborg	65	109	174	186
North Jutland	198	333	531	439
Whole country	2,082	3,709	4,685 *)	4,898

\*) Gender unknown in a few cases

## Sentinel surveillance of the influenza activity

Weekly percentage of consultations, 2003/2004/2005



Sentinel: Influenza consultations (as percentage of total consultations)

Basal curve: Expected frequency of consultations under non-epidemic conditions

Alert threshold: Possible incipient epidemic