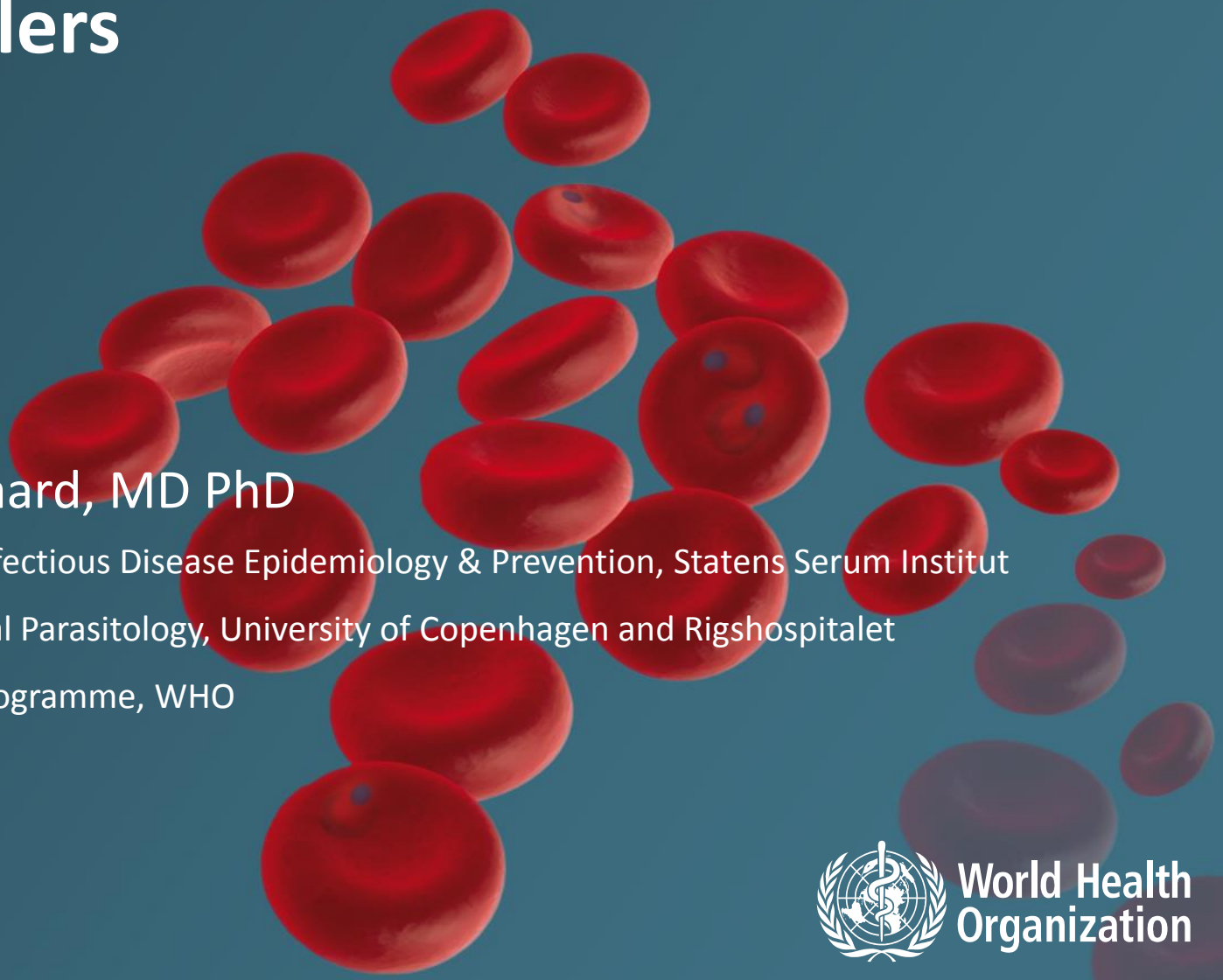
Update on malaria risk and prophylaxis for travellers



Lasse Vestergaard, MD PhD

- Department of Infectious Disease Epidemiology & Prevention, Statens Serum Institut
- Center for Medical Parasitology, University of Copenhagen and Rigshospitalet
- Global Malaria Programme, WHO

World Health Organization

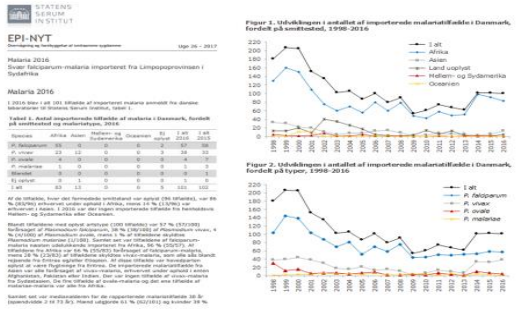
Content

1. Self-introduction
2. Status of global malaria control and elimination
3. Malaria risk for travellers
4. Recommendations on malaria prohylaxis 2017

My malaria experience

- 20 years of malaria research collaboration in Tanza

- Since 2005 keeping track of malaria imported to Denmark, shared annually in Epi-News (Epi-Nyt)

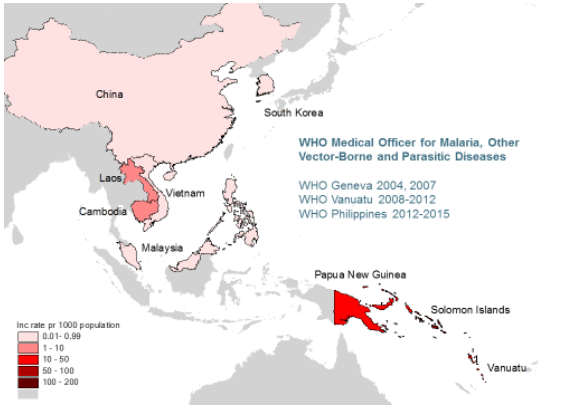


- 12 years of work in travel vaccination clinics (Rigshospitalet and SSI)

- 6 ½ years of employment as a Medical Officer in WHO's Global Malaria Programme
  - WHO Geneva, 2004 + 2006
  - WHO Vanuatu, 2008-2012
  - WHO Philippines, 2012-2015

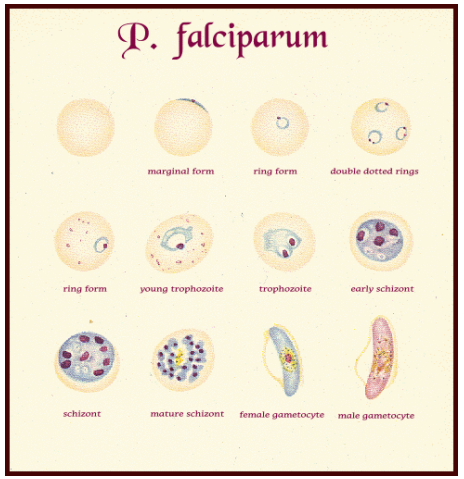
- 8 years living and working in malaria-endemic countries including with family

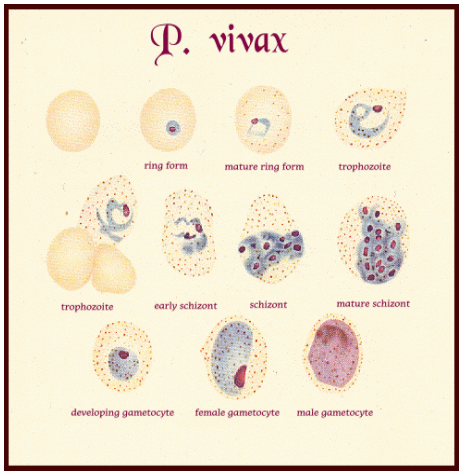
School girls in Port Vila International School, Vanuatu, 2010



The four human malaria species

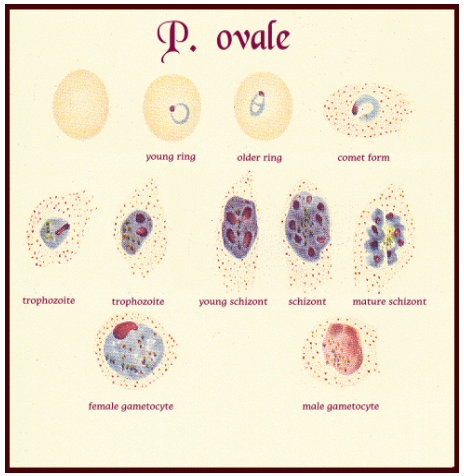
Plasmodium falciparum
P. vivax
P. ovale
P. malariae

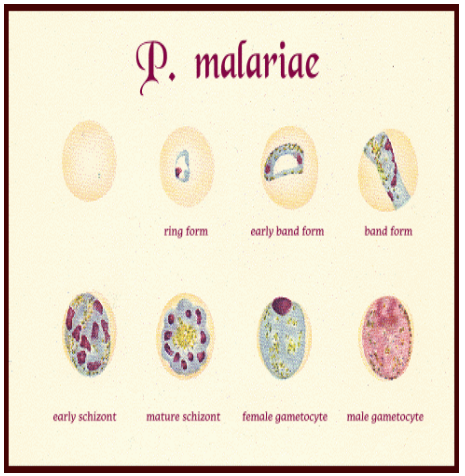




…and the fifth species:

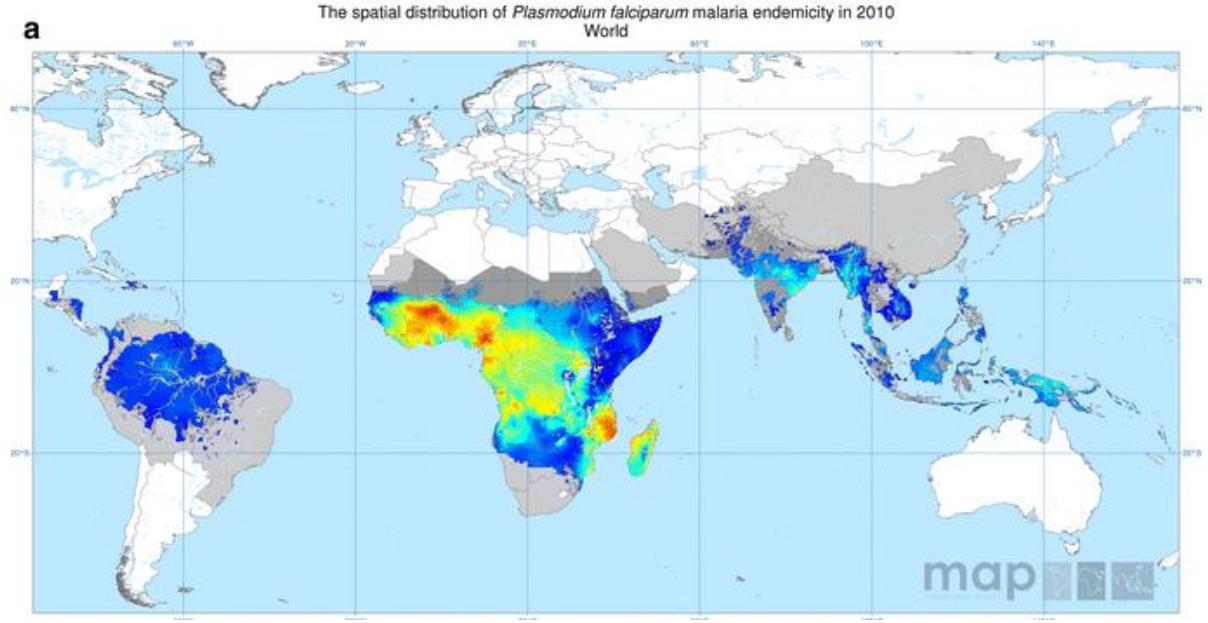
P. knowlesi

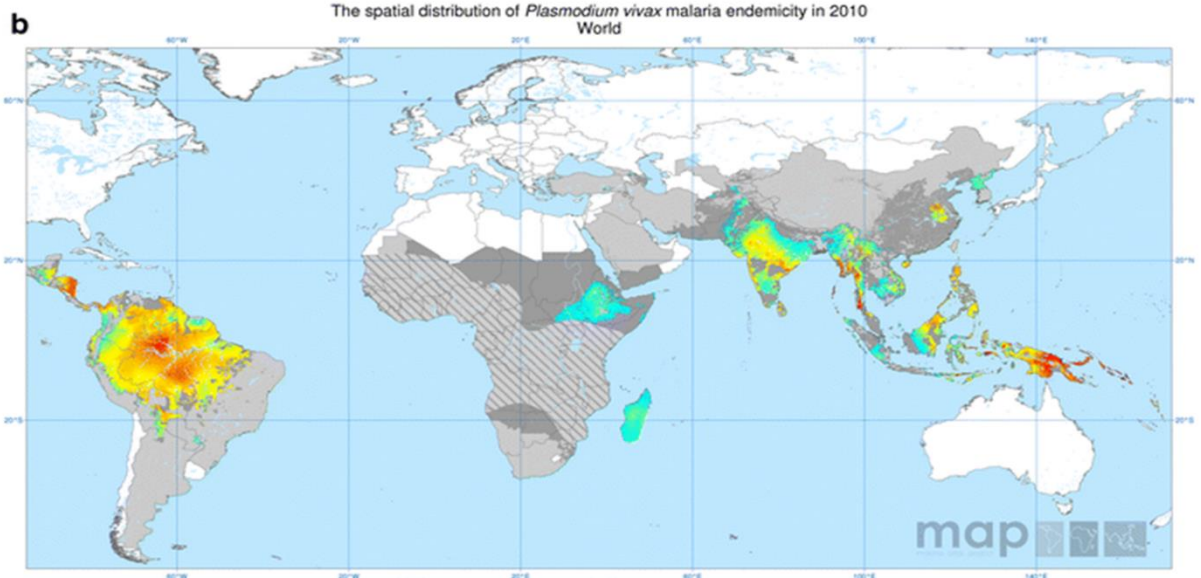




Zoonotic reservoir in Macaque monkeys in Southeast Asia

Global distribution of falciparum and vivax malaria





Dramatic reduction in malaria seen since 2000, including worst affected areas in Africa

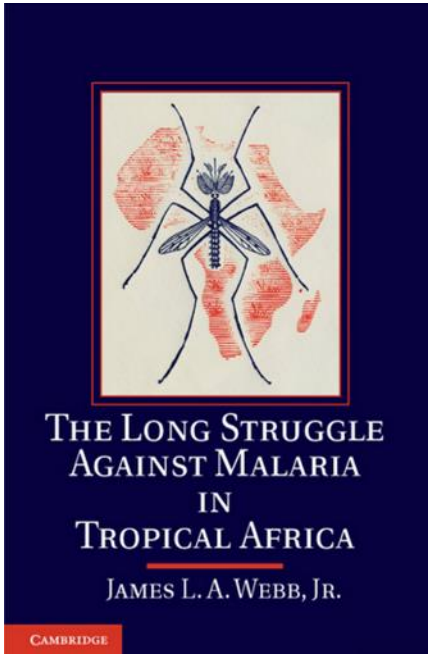
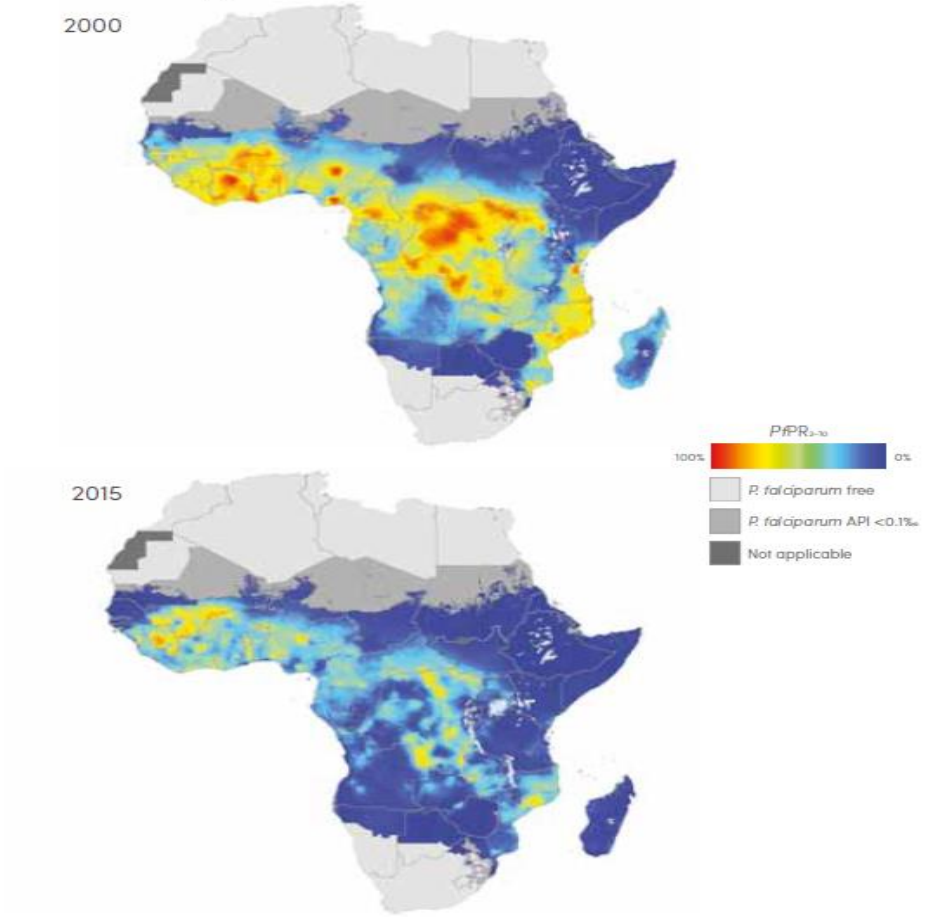


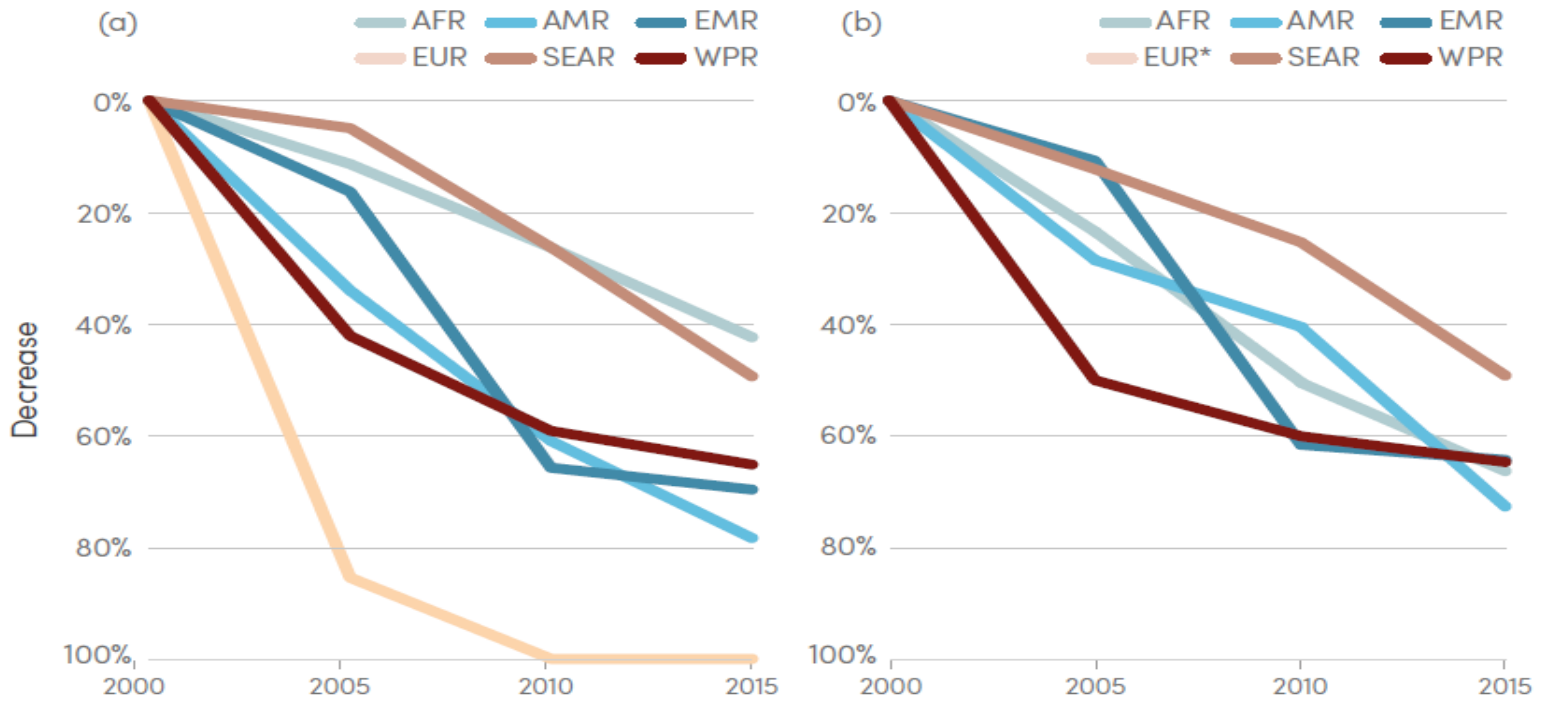
Figure 2.5 Estimated *P. falciparum* infection prevalence among children aged 2–10 years ($PfPR_{2-10}$) in 2000 and 2015



API, annual parasite index; *PfPR*, *P. falciparum* parasite rate
Source: *Malaria Atlas Project (18)*

Reductions in malaria cases and deaths, 2000 to 2015

Figure 2.2 Percentage decrease in (a) estimated malaria case incidence and (b) malaria death rate, by WHO region, 2000–2015



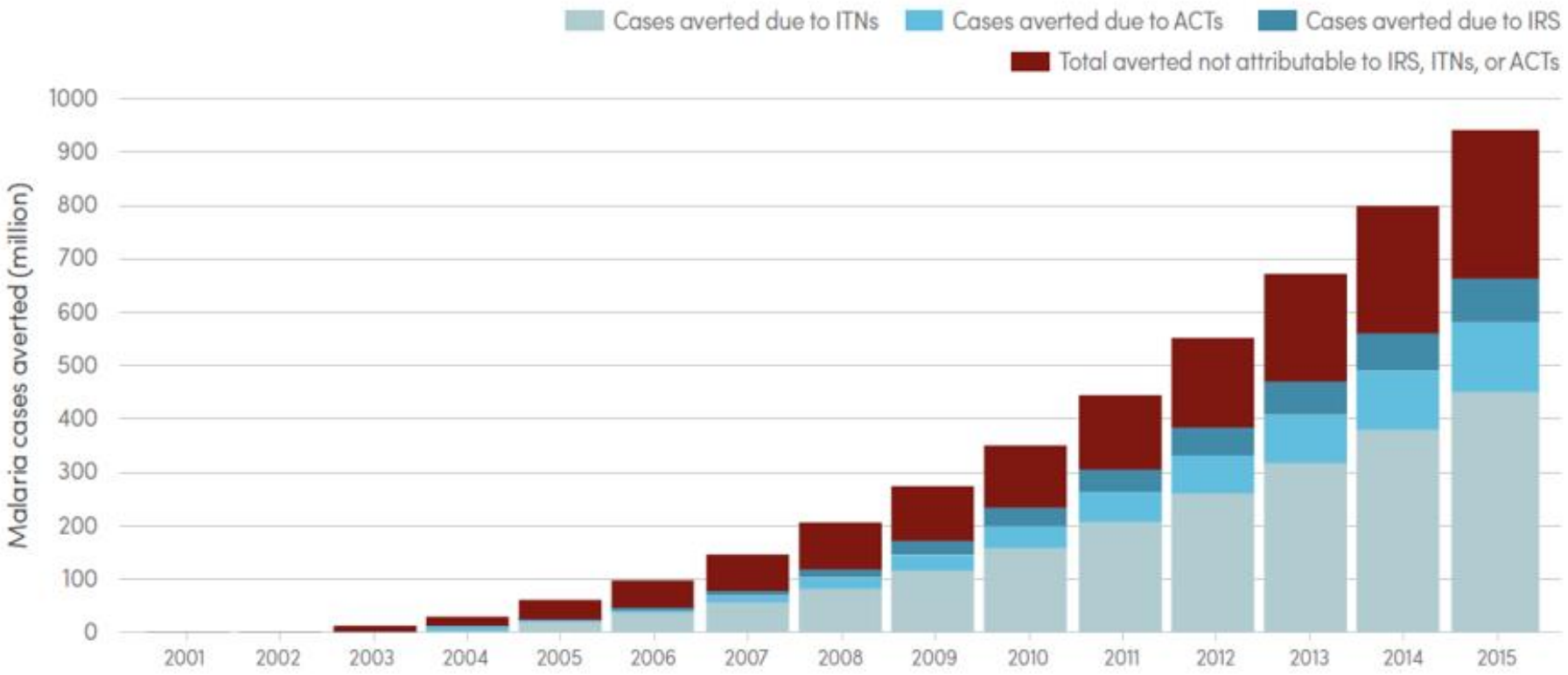
AFR, African Region; AMR, Region of the Americas; EMR, Eastern Mediterranean Region; EUR, European Region; SEAR, South-East Asia Region; WPR, Western Pacific Region

* There were no recorded deaths among indigenous cases in the WHO European Region for the years shown.

Source: *WHO estimates*

Malaria cases averted by interventions

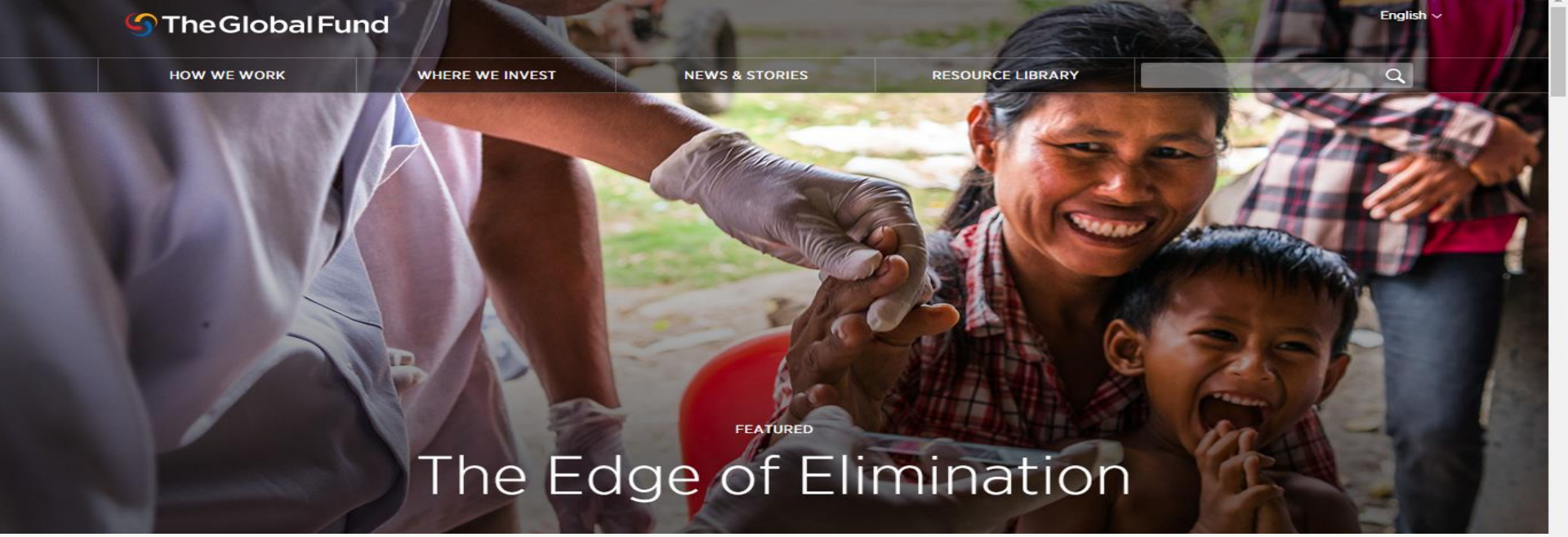
Figure 3.19 Predicted cumulative number of malaria cases averted by interventions, sub-Saharan Africa, 2000–2015



ACT, artemisinin-based combination therapy; IRS, indoor residual spraying; ITN, insecticide-treated mosquito net

Source: *Malaria Atlas Project (18) estimates of cases averted attributable to ITNs, ACTs, and IRS and WHO estimates of total cases averted*

World Malaria Report 2015, WHO



FEATURED

The Edge of Elimination

Accelerating the end of AIDS, tuberculosis and malaria as epidemics

The Global Fund partnership mobilizes and invests nearly US$4 billion a year to support programs run by local experts in countries and communities most in need.

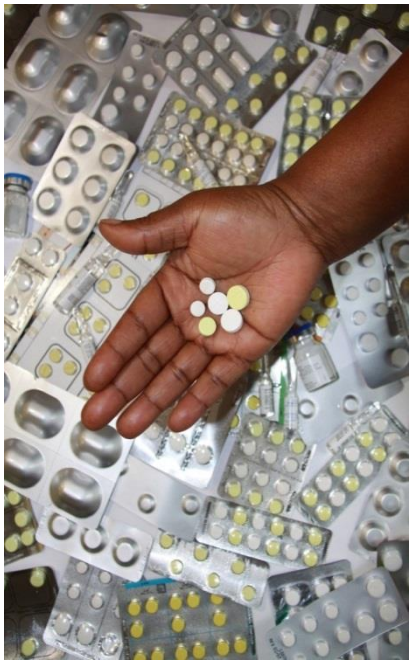
20 MILLION
LIVES SAVED THROUGH THE GLOBAL FUND PARTNERSHIP
Impact ›

10 MILLION
NUMBER OF PEOPLE CURRENTLY RECEIVING ARV THERAPY
HIV/AIDS ›

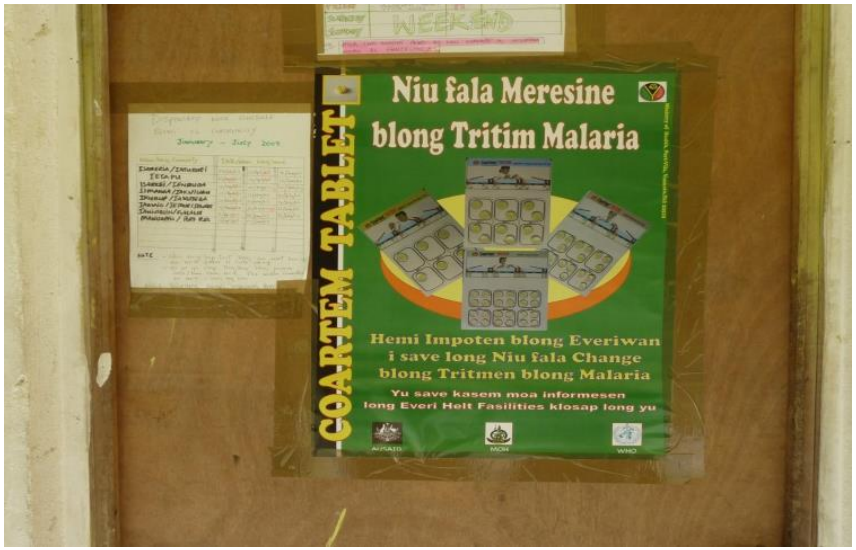
16.6 MILLION
NUMBER OF PEOPLE TESTED AND TREATED
Tuberculosis ›

713 MILLION
NUMBER OF INSECTICIDE-TREATED NETS DISTRIBUTED
Malaria ›

The malaria control tool box



Health promotion and education



Vanuatu

Philippines

Vanuatu

Philippines

Introduction of malaria rapid diagnostic tests and artemisinin-based combination treatment Vanuatu 2009

Bed nets do not deliver themselves…

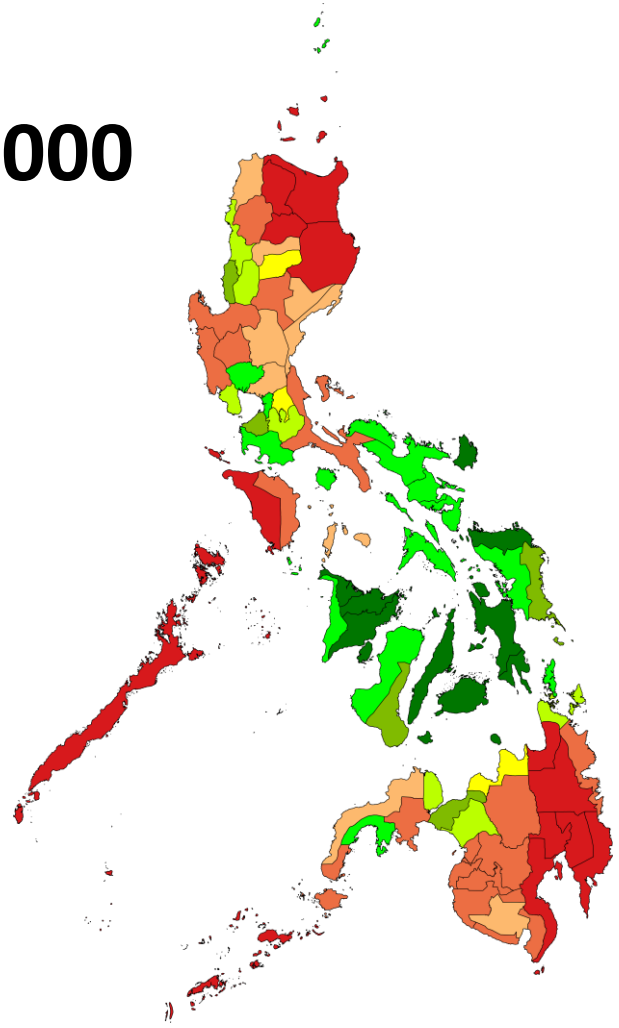
Indonesia

Philippines

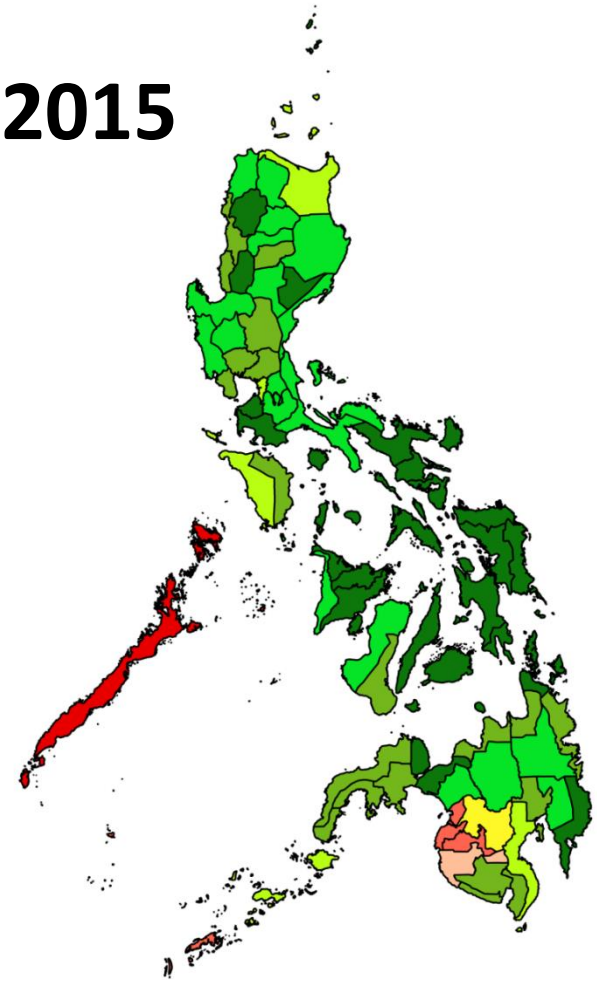
Republic of the Philippines
Department of Health
Kagawaran ng Kalusugan

Geographic Case Distribution per Province

2000



2015

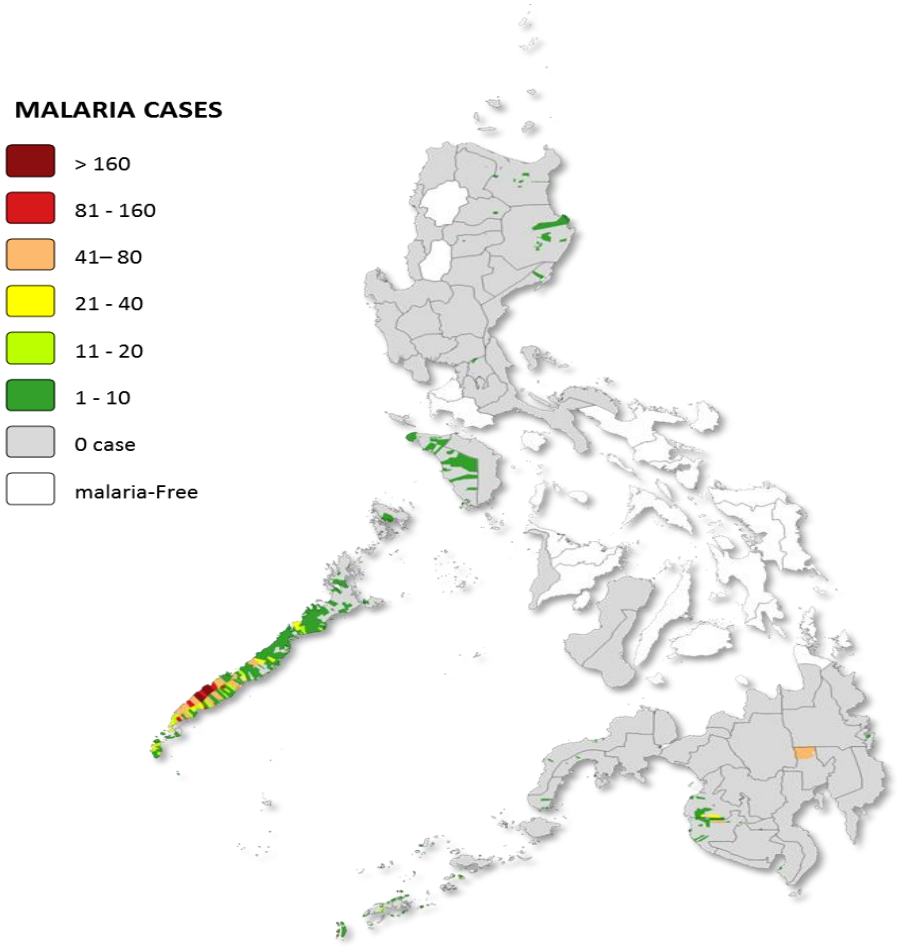


MALARIA CASES

- > 500
- 101 - 500
- 51– 100
- 21 - 50
- 6 - 20
- 1 - 5
- 0 case
- malaria-Free

Data Source: NMCEP/PIDSR/PHILMIS

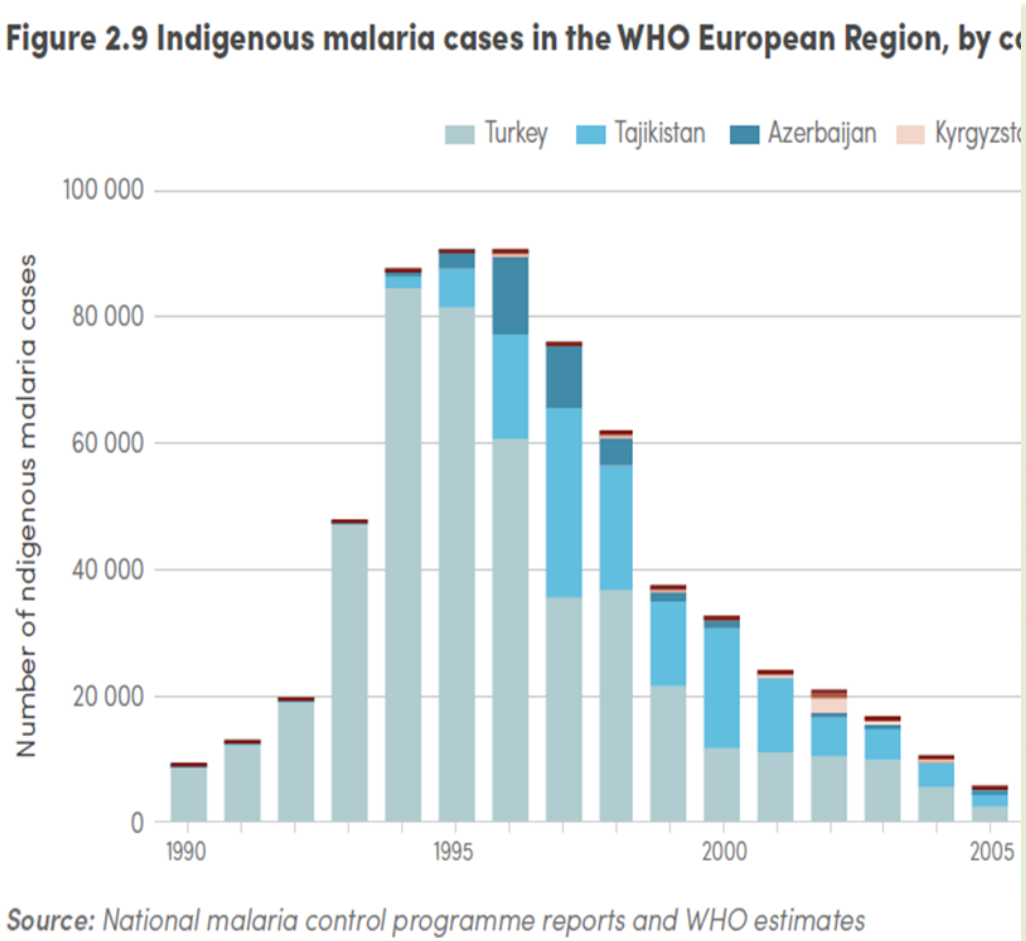
Malaria Case Distribution Map, 2014 (community level)

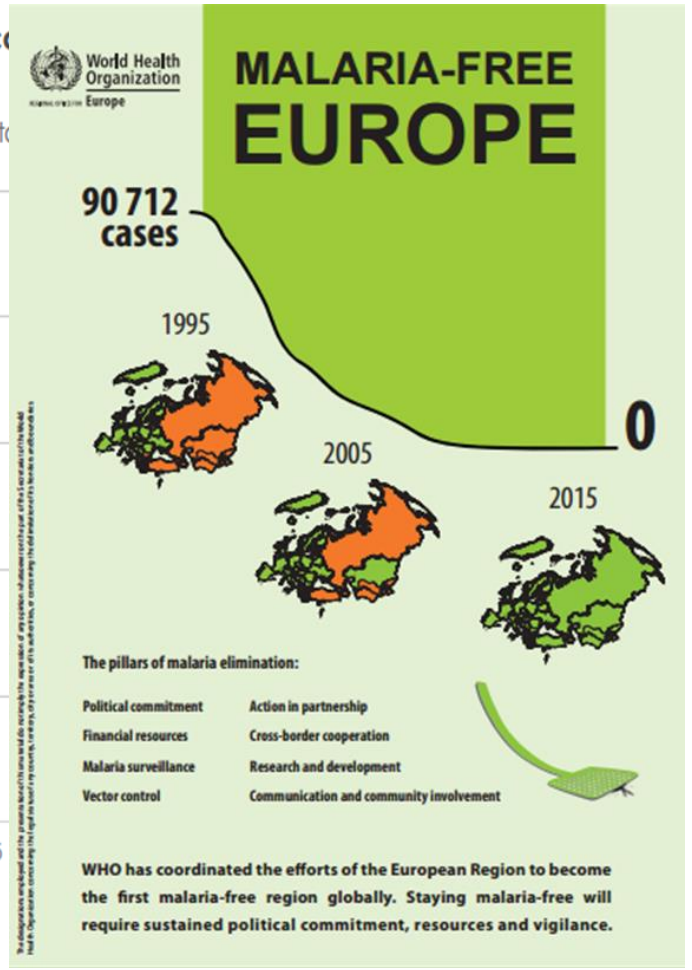


Malaria risk map
Fit for Travel
www.fitfortravel.nhs.uk

This map is only intended as a guide and is not exact. The map must always be used in conjunction with the malaria advice text. Bite avoidance measures should be taken in all areas.

Tackling malaria in the WHO European Region





WHO EURO, 2016

Vector-borne and parasitic diseases

- News
- Events
- Malaria
- Dengue and chikungunya
- Leishmaniasis
- Soil-transmitted helminths
- Integrated vector management (IVM)
- Activities
- International travel
- Data and statistics
- **Publications**
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Regional framework for prevention of malaria reintroduction and certification of malaria elimination 2014–2020 (2014)

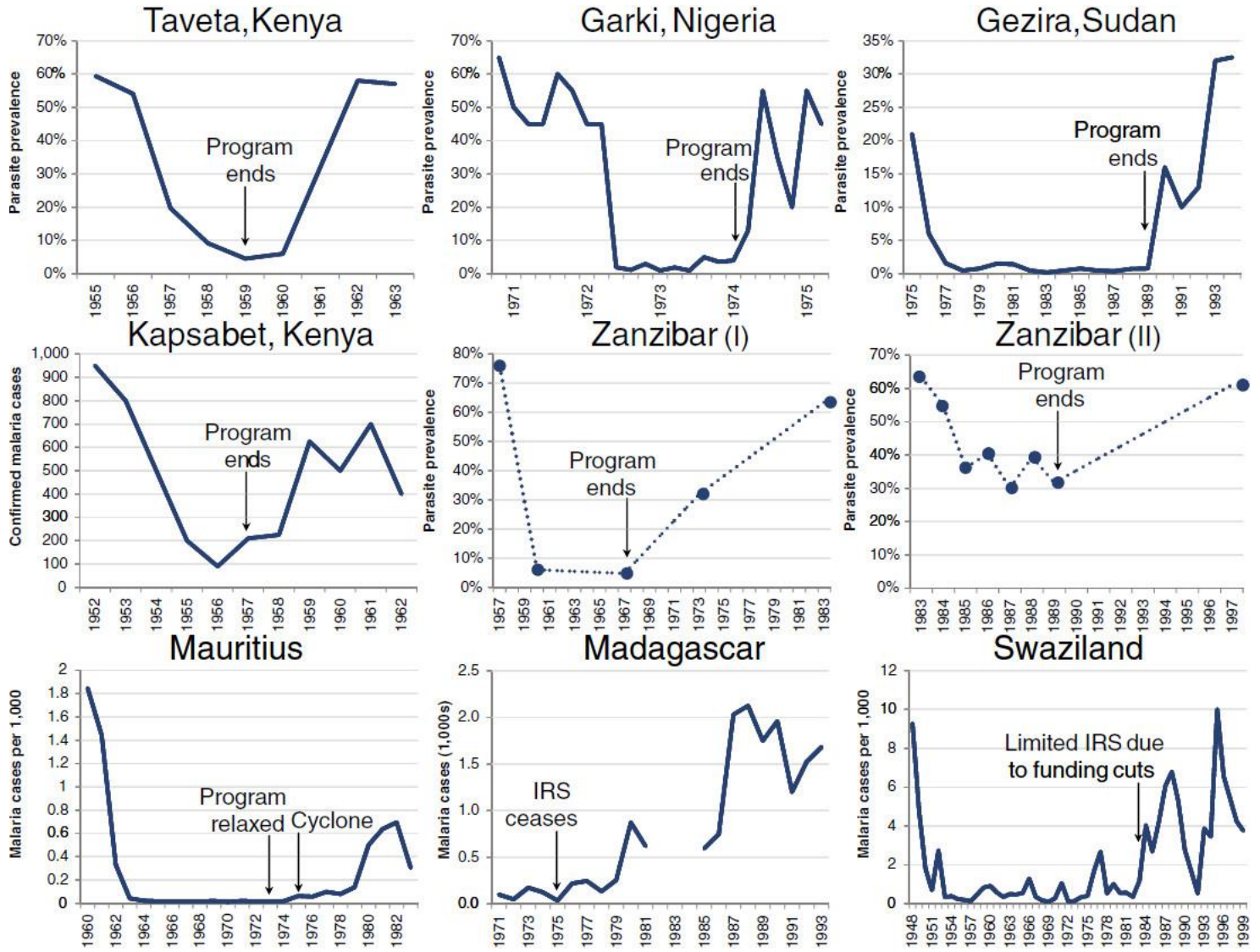
Download

English (PDF, 394.0 KB)

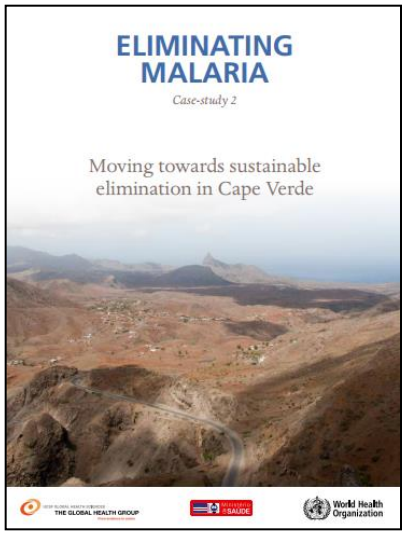
By Mikhail Ejov, Vladimir Davidyants and Andrei Zvantsov
2014, iv + 21 pages
978 92 890 5015 9
This publication is only available online.

This framework outlines the key ways to avoid the resurgence of malaria in countries where it has been eliminated, the goals and objectives of programmes to eliminate malaria and prevent its reintroduction, as well as the scientific, operational, organizational and methodological aspects of the process of certifying countries free from malaria. It is intended to guide health policy-makers, managers of national malaria control programmes and others in central Asia, the south Caucasus, Turkey and some other European countries where malaria is or could be a threat.

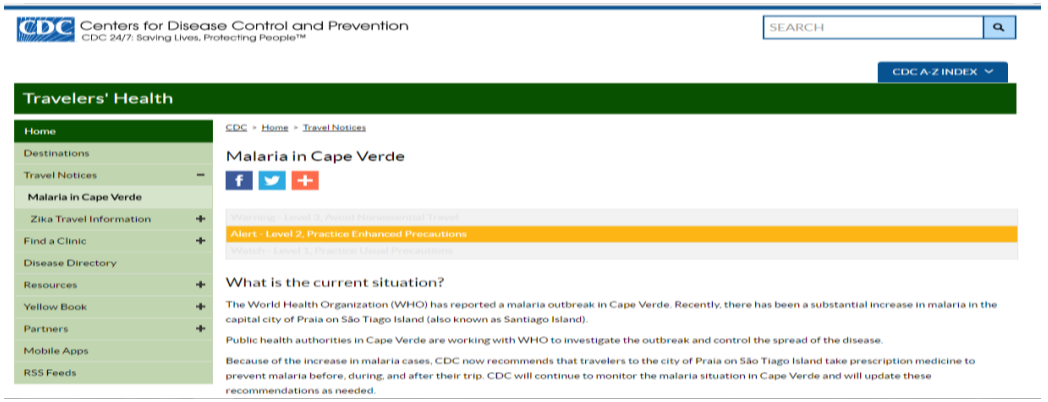
The risk of interrupted investment: malaria resurgences

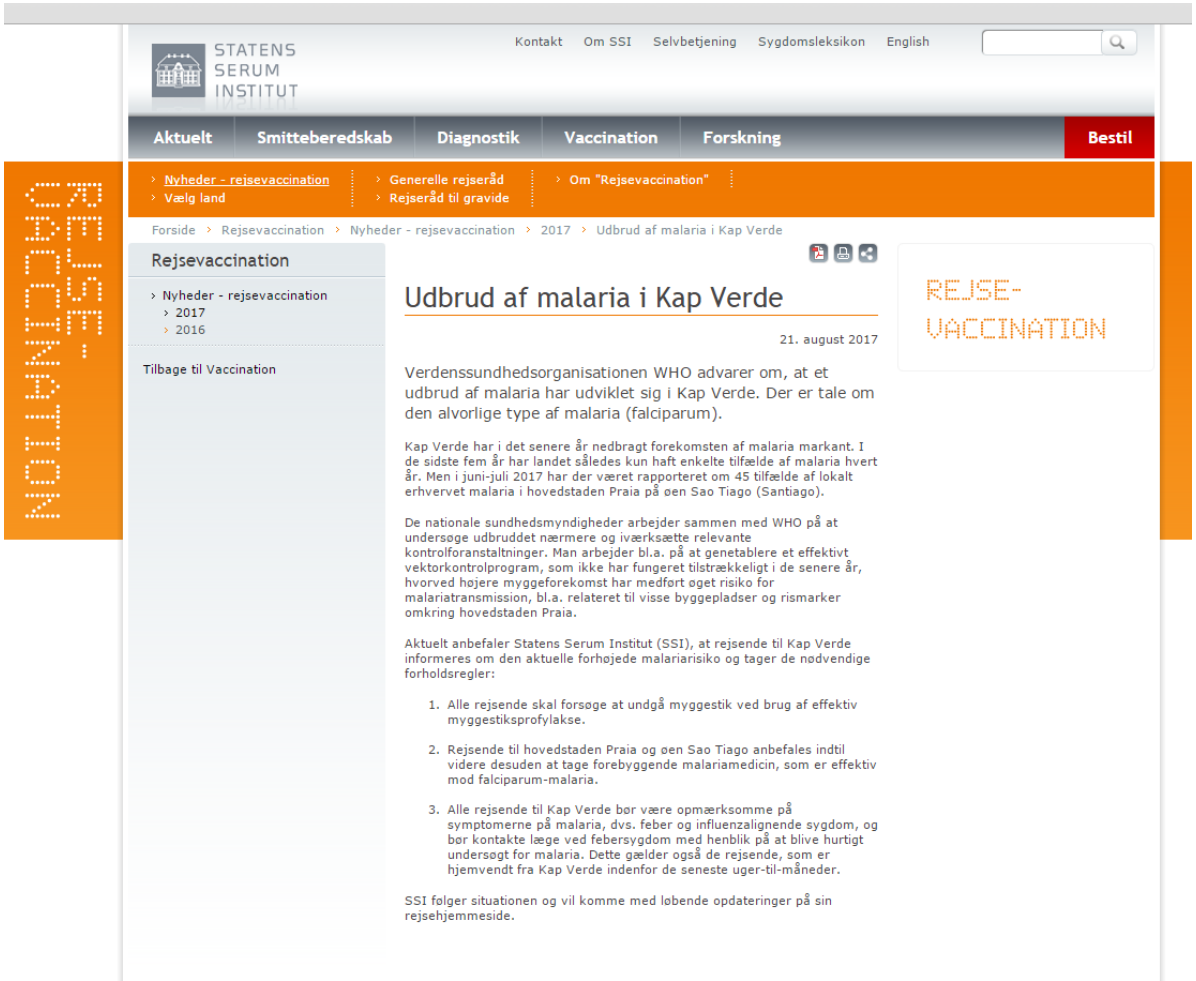


Malaria outbreak in Cape Verde, August 2017



2012



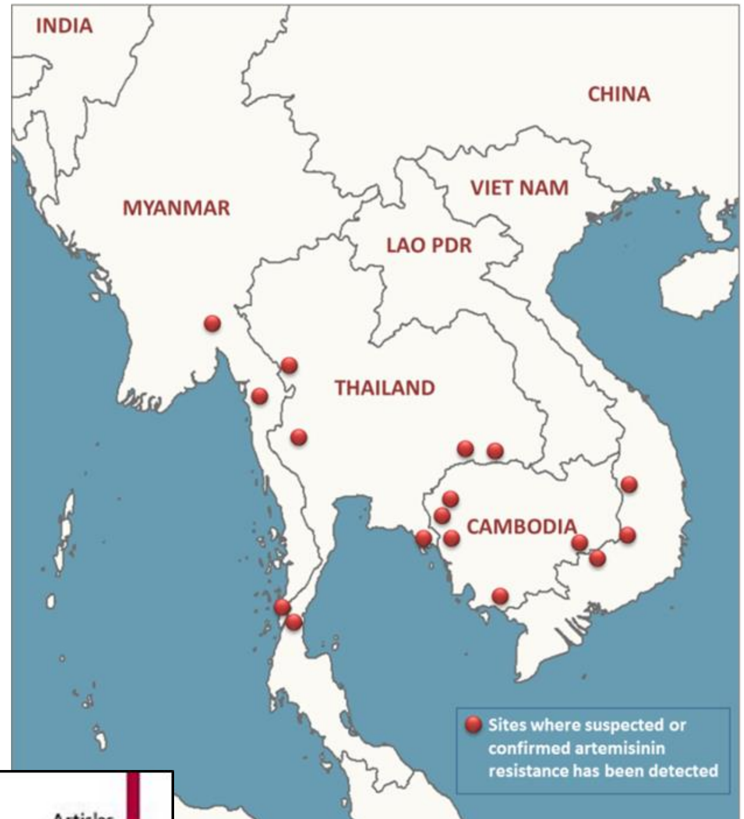


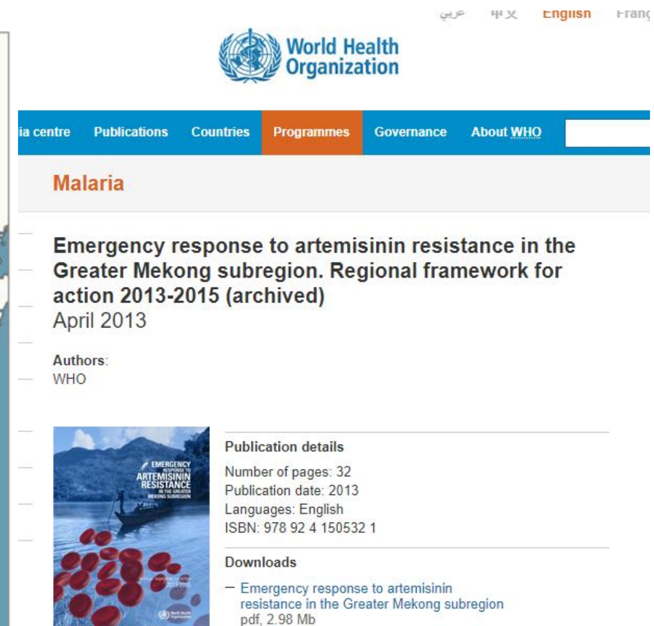
Artemisin resistance – a serious threat to global malaria control

ORIGINAL ARTICLE

Artemisinin Resistance in *Plasmodium falciparum* Malaria

ABSTRACT



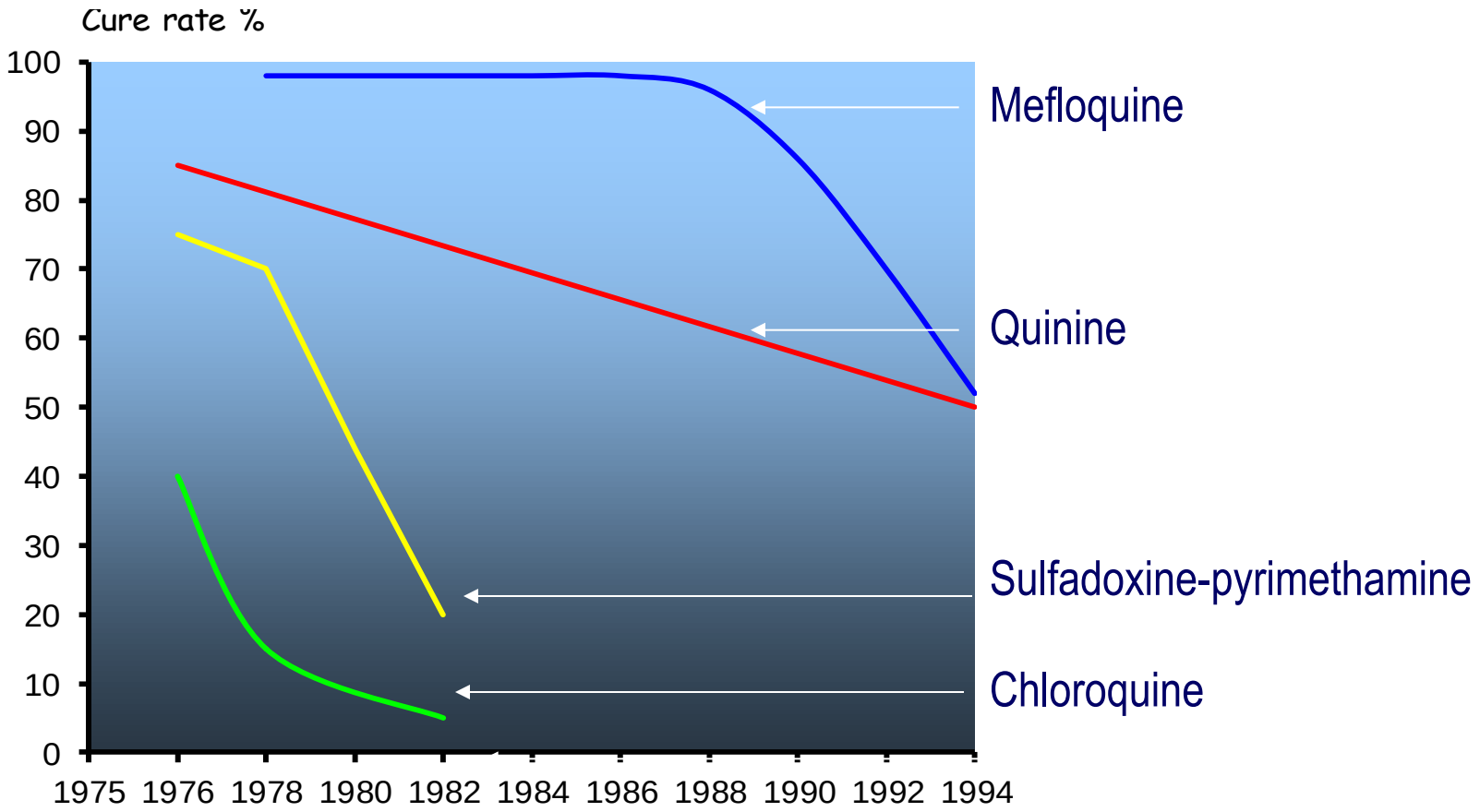


Articles

Emergence of artemisinin-resistant malaria on the western border of Thailand: a longitudinal study

Summary

All antimalarials will lose their effect globally - sooner or later



Counterfeit and poor quality antimalarial drugs is another serious threat

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THE LANCET
Infectious Diseases

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< Previous Article Volume 12, No. 6, p488–496, June 2012

Review

Poor-quality antimalarial drugs in southeast Asia and sub-Saharan Africa

Gaurvika ML Nayyar, BS, Joel G Breman, MD, Paul N Newton, MRCP, James Herrington, PhD

Published: June 2012

Karunamoorthi *Malaria Journal* 2014, **13**:209
http://www.malariajournal.com/content/13/1/209

MALARIA JOURNAL

RESEARCH Open Access

The counterfeit anti-malarial is a crime against humanity: a systematic review of the scientific evidence

Kaliyaperumal Karunamoorthi

Abstract

Background: The counterfeiting of anti-malarials represents a form of attack on global public health in which fake and substandard anti-malarials serve as *de facto* weapons of mass destruction, particularly in resource-constrained endemic settings, where malaria causes nearly 660,000 preventable deaths and threatens millions of lives annually. It has been estimated that fake anti-malarials contribute to nearly 450,000 preventable deaths every year. This crime against humanity is often underestimated or ignored. This study attempts to describe and characterize the direct and indirect effects of counterfeit anti-malarials on public health, clinical care and socio-economic conditions.

Methods: A search was performed using key databases, WHO documents, and English language search engines. Of 262 potential articles that were identified using a fixed set of criteria, a convenience sample of 105 appropriate articles was selected for this review.

Results: Artemisinin-based combination therapy (ACT) is an important tool in the fight against malaria, but a sizable number of patients are unable to afford to this first-line treatment. Consequently, patients tend to procure cheaper anti-malarials, which may be fake or substandard. Forensic palynology reveals that counterfeits originate in Asia. Fragile drug regulations, ineffective law-enforcement agencies and corruption further burden ailing healthcare

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Health

Third of malaria drugs 'are fake'

By Michelle Roberts
Health editor, BBC News online

22 May 2012 Health Share

A third of malaria drugs used around the world to stem the spread of the disease are counterfeit, data suggests.

Importeret malaria

MÅNEDENS BILLEDE

En 57-årig kvinde rejste uden malariaprofylakse på en uges charterferie til Gambia. Seks dage efter hjemkomsten fik hun sygdomsfølelse med febrilia. To døgn senere blev hun fundet bevidstløs i hjemmet. Hun blev indlagt på et lokalsygehus højfebril, lavtrykket og med perifer hypoperfusion med kolde ekstremiteter. Blodprøver viste svær trombocytopeni, tegn på dissemineret intravaskulær koagulation samt kraftigt forhøjet laktatdehydrogenase og C-reaktivt protein. Ved mikroskopi blev der senere påvist *Plasmodium falciparum* med 6% inficerede erytrocytter. Patienten blev umiddelbart overflyttet til en infektuanset varighed af opholdet. Opdaterede nationale anbefalinger for malariakemoprofylakse kan findes i Epi-Nyt og på Statens Serum Instituts hjemmeside (www.ssi.dk/rejser). Det er essentielt, at selv den mindste mistanke om malaria efter hjemkomst fra malariaområder tages alvorligt af både patienten og den behandlende læge, og at mistanken be- eller afkræftes ved akut mikroskopi af blodudstryg for malariaparasitter.

Lasse S. Vestergaard, Sören Thybo og Niels Obel
E-mail: l.vestergaard@cmp.dk

EPI-NEWS

2017
2016
2015
2014
2013
2012
2011

EPI-NEWS

About diseases and vaccines

No 26 - 2017

Malaria 2016
Severe falciparum malaria imported from the Limpopo province in South Africa

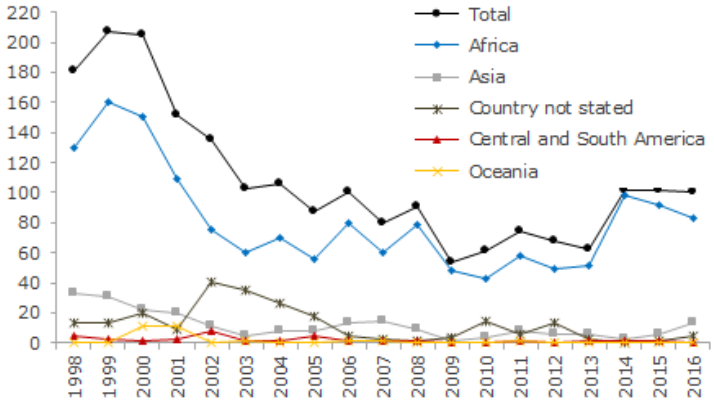
Malaria 2016

In 2016, a total of 101 cases of imported malaria were notified by Danish laboratories to Statens Serum Institut, Table 1.

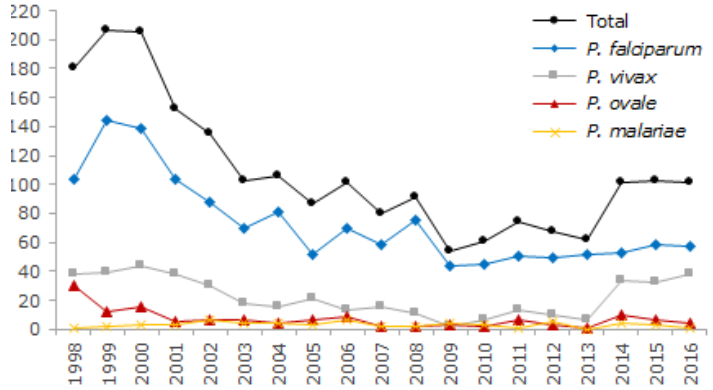
Table 1. Number of malaria cases imported to Denmark, by place of infection and type of malaria, 2016

Malaria species	Africa	Asia	Central & South America	Oceania	Not stated	Total 2016	Total 2015
P. falciparum	55	0	0	0	2	57	58
P. vivax	23	12	0	0	3	38	33
P. ovale	4	0	0	0	0	4	7
P. malariae	1	0	0	0	0	1	3
Mixed	0	0	0	0	0	0	1
Not stated	0	1	0	0	0	1	0
Total	83	13	0	0	5	101	102

Figure 1. Development in the number of malaria cases imported to Denmark, by place of infection, 1998-2016

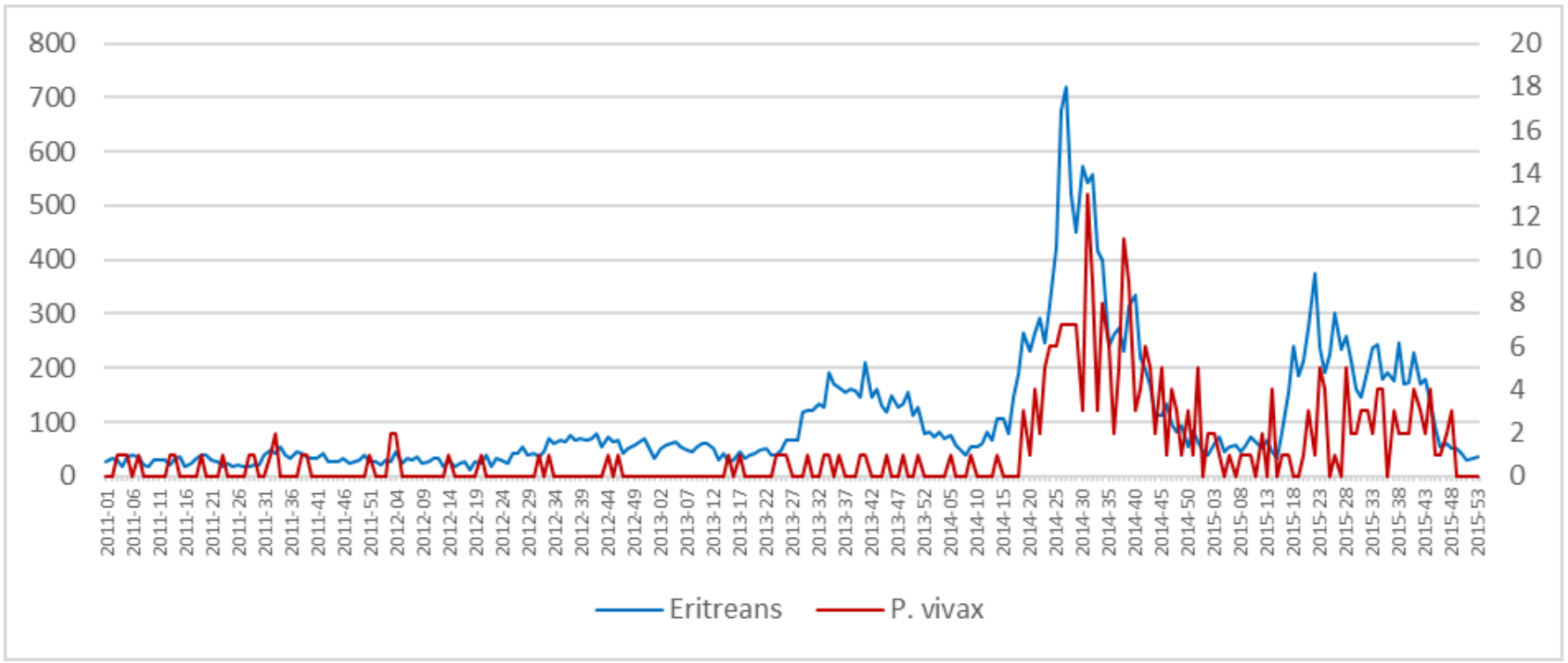


igure 2. Development in the number of malaria cases imported to enmark, by type of malaria, 1998-2016



Exceptional increase of malaria in Europe due to imported *Plasmodium vivax in* migrants from Eritrea 2014-15

Sweden
Germany
Norway
Netherlands
Switzerland
United Kingdom



EPI-NYT

STATENS SERUM INSTITUT · OVERVÅGNING OG FOREBYGGELSE AF SMITSOMME SYGDOMME
Sundhedsstyrelsens Meldesystem for Smitsomme Sygdomme

Redaktør: Peter Henrik Andersen
Afdeling for Infektionsepidemiologi
Statens Serum Institut • Artillerivej 5 • 2300 København S

Tel.: 32 68 30 38 • Fax: 32 68 38 74
Telefontid: Ma. ti. to. fr. 8.30-11:00, on. 12:30-15:00
www.ssi.dk • epinyt@ssi.dk • ISSN: 1396-8599

VACCINATIONSFORSLAG VED UDLANDSREJSE — Uge 27b, 2016

EUROPA	Gr 1	Gr 2	Gr 3	Gr 4
Albanien	A	A	A	ABs
Bosnien-Hercegovina	A	A	ABf	ABfs
Bulgarien	A	A	ABf	ABfrs
Estland		A	Af	ABfrs
Hviderusland	A	A	ABf	ABfrs
Kroatien		A	Af	ABfs
Letland		A	Af	ABfrs
Litauen		A	Af	ABfrs
Makedonien		A	Af	ABfs
Moldova	A	A	ABf	ABfrs
Montenegro		A	ABf	ABfs
Polen		A	Af	ABfrs
Rumænien	A	A	ABf	ABfrs
Rusland	A	A	Aj$^{7}_{9}$Bf	Aj$^{7}_{9}$Bfrs
Serbien		A	ABf	ABfs
Slovakiet		A	Af	ABfs
Slovenien		A	Af	ABf
Tyrkiet	A	Av$^{5}_{9}$	Av$^{5}_{9}$	ATBrsv$^{5}_{9}$
alm. turistområder	A	A	A	ATBs
Tjekkiet		A	Af	ABf
Ukraine	A	A	ABf	ABfrs
Ungarn		A	Af	ABfs
CARIBIEN				
Anguilla (GB)	A	A	A	ATB
Antigua og Barbuda	A	A	A	ATB
Aruba	A	A	A	ATB
Bahamas	A	A	A	ATB
Barbados	A	A	A	ATB
Bermuda (GB)	A	A	A	ATB
Caymanøerne (GB)	A	A	A	ATB
Cuba	A	A	A	ATBr
Dominica	A	A	A	ATB
Dominikanske Republik	Av	Aq	ABq	ATBrsq
Grenada	A	A	A	ATB
Guadeloupe (FR)	A	A	A	ATB
Haiti	AX	AX	ABX	ATBrsX
Jamaica	A	A	A	ATB
Jomfruøerne (GB og USA)	A	A	A	ATB
Martinique (FR)	A	A	A	ATB
Montserrat	A	A	A	ATB
Nederlandske Antiller	A	A	A	ATB
Puerto Rico (USA)	A	A	A	ATB
Saint Kitts and Nevis	A	A	A	ATB
Saint Lucia	A	A	A	ATB
St. Vincent og Grenadinerne	A	A	A	ATB
Trinidad og Tobago	Av*	Av*	Av*	AvTB
Paraguay	AG	AGq	AGq	AGTBrsq
Peru	A	Aq*q	Aq*Bq	Aq*TBtrsq
Amazonas (Loreto)	AGX	AGX	AGBX	AGTBrsX
Surinam	AG	AGx	AGBx	AGTBrsx
Uruguay	A	A	A	ATBs
Venezuela	Aq*	Aq*q	Aq*Bq	Aq*TBrsq
Amazonas, Bolivar	AGX	AGX	AGBX	AGTBrsX
Margarita	A	A	A	ATB
OCEANIEN				
Carolinerne	A	A	AB	ATBs
Christmas Island (AU)	A	A	AB	ATBs
Cocos Islands(AU)	A	A	AB	ATBs
Cookøerne	A	A	AB	ATBs
Fiji	A	A	AB	ATBs
Fransk Polynesien	A	A	AB	ATBs
Guam (USA)	A	A	AB	ATBs
Kiribati	A	A	AB	ATBs
Mikronesien	A	A	AB	ATBs
Nauru	A	A	AB	ATBs
Niue	A	A	AB	ATBs
Nordmarianere	A	A	AB	ATBs
Ny Kaledonien (FR)	A	A	AB	ATBs
Papua Ny Guinea	AX	AX	ABX	ATBsX
Pitcairn	A	A	AB	ATBs
Salomonøerne	AX	AX	ABX	ATBsX
Samoa	A	A	AB	ATBs
Tokelau (NZ)	A	A	AB	ATBs
Tonga	A	A	AB	ATBs
Tuvalu	A	A	AB	ATBs
Vanuatu	AX	AX	ABX	ATBsX
Wake Island (USA)	A	A	AB	ATBs
Wallis og Futunaøerne (FR)	A	A	AB	ATBs
AFRIKA				
Algeriet	A	A	AB	ATBrs
Angola	AGX	AGX	AGBX	AGTBrsX
Benin	AGX	AGMX	AGMBX	AGMTBrsX
Botswana	A	Ax$^{11}_{6}$	ABx$^{11}_{6}$	ATBrsx$^{11}_{6}$
Burkina Faso	AGX	AGMX	AGMBX	AGMTBrsX
Burundi	AGX	AGX	AGBX	AGTBrsX
Cameroun	AGX	AGMX	AGMBX	AGMTBrsX
Centralafrikanske Rep.	AGX	AGMX	AGMBX	AGMTBrsX
Chagosøerne (GB)	A	A	AB	ATBrs

A: Hepatitis A
B: Hepatitis B
f: FSME/TBE
g/G: Gul feber
g/G*: Gul feber evt. kun v/ særlig risiko
j: Japansk encephalitis
M: Meningokok A+C+W135+Y
r: Rabies
s: Tuberkulose
T: Tyfus
(T): Tyfus >2 uger
V: Myggestikprofylakse

Q: Klorokin
X: Meflokin/Malarone/doxycyklin
Z: Doxycyklin/Malarone

Vaccinationsforslagene er let opdateret, se EPI-NYT 26/16 og 27a/16. Alle rejsende bør være vaccineret mod difteri og tetanus, symboler herfor er derfor ikke medtaget i tabellen.

Rejsen
Efter rejsens karakter er forslagene opdelt i fire kategorier:

1. Forretnings- eller kongresrejse af nogle dages varighed til hovedstad eller anden storby.
2. Arrangeret turistrejse af op til fire ugers varighed med dagsudflugter. Er rejsen af særlig art med mulighed for intens smitteudsættelse, kan **Gr 2** suppleres fra **Gr 3/4**, fx med B ved seksuel kontakt med lokale, T ved udtalt dårlig hygiejne, M ved tæt lokal personkontakt, j ved insekteksposition (trekkingtur).
3. Individuel rejse af nogle måneders varighed, fx rygsækrejse.
4. Langvarig individuel rejse i halve år, indvandrere på familiebesøg (uanset rejsens varighed), udstationering eller tilsvarende hyppigt gentagne besøg.

NB: Individualisering vil ofte forekomme.

Symbolernes typografi
STORE BOGSTAVER er brugt, når forslaget gælder alle rejsende; små bogstaver, når der er tale om begrænset anvendelse.
Malariaprofylakse er fremhævet med **fed skrift** og er placeret sidst i de enkelte kolonner. Således henviser f, g, j, r, s til vaccination af udvalgte rejsende, og **v, q, x, z** henviser til risiko for malaria i en mindre del af landet, se www.ssi.dk/rejser.
Sæsonvariation er angivet med tal, enkelte lande på www.ssi.dk/rejser.

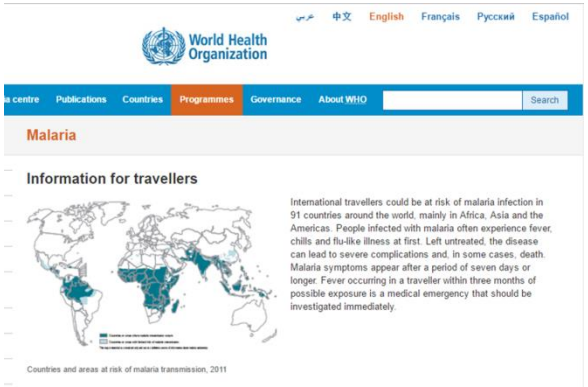
j: Japansk encephalitis (fra 2 mdr.), EPI-NYT 37/09, 6/12 og 10/13.
M: Meningokoksygdom A+C+W135+Y (fra 1 år, evt. fra 2 mdr., EPI-NYT 10/13). Obligatorisk ved pilgrimsrejse til Mekka, EPI-NYT 27a/16.
r: Rabies, se EPI-NYT 37/10 og 6/16.
s: Tuberkulose. BCG til børn (fra fødslen) og unge til højendemiske områder, hvis der er længerevarende tæt kontakt til lokal befolkning, der lever under dårlige kår. Evt. ved længerevarende erhvervsmæssig eksposition.
T: Tyfus. Injektion fra ca. 2 år, ved særlig risiko fra 18 mdr. Kapsler fra ca. 5 år. Indvandrere på besøg hos slægt og venner foreslås vaccineret uanset varighed.

Malariaprofylakse:
V: Meget lille risiko, myggestikprofylakse tilstrækkeligt.
Q: Klorokin, alternativt **V** eller **X**, alt efter smitterisiko.
X: Meflokin, Malarone eller doxycyklin.
Z: Doxycyklin eller Malarone.

Grundvaccination af børn og personer, der ikke har modtaget de almindelige børnevaccinationer, EPI-NYT 5a/15.

Vaccination af børn før ophold i udviklingslande, EPI-NYT 6/11.

Udvalgte insektoverførte virussygdomme, EPI-NYT 6/12.



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- Nyheder - rejsevaccination
- Vælg land
- Generelle rejseråd
- Rejseråd til gravide
- Om "Rejsevaccination"

Forside › Rejsevaccinationer

Rejsevaccinationer

Her kan du se, hvilke vaccinationer og evt. forebyggelse mod malaria, Statens Serum Institut anbefaler ved rejser til udlandet.

Du finder anbefalingerne ved at bruge den alfabetiske liste over lande.

REJSE-VACCINATION

Kontakt

Kontakt din læge eller en vacccinationsklinik for personlig rådgivning om rejsevaccination.

Alfabetisk liste over lande

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Æ Ø Å

Udbrud af zikavirus

Der er udbrud af zikavirus i Syd- og Mellemamerika i områder, hvor Aedes-myg er udbredt.
Læs mere i temaet om zikavirus...

Vaccination - hvor?

Du skal kontakte din egen læge eller en vaccinationsklinik.
Se listen over vaccinationssteder...

Undgå rejsediarré

Op mod halvdelen af dem, der rejser til subtropiske eller tropiske egne vil få rejsediarré. God fødevarehygiejne er det vigtigste værn mod mave-tarm infektioner.
Læs mere...

Rejsevaccination nyheder

Polio i verden
13-10-2016
Polio er tæt på at være udryddet i hele verden, og WHO ha...

Nyt subsite om rejsevaccination på SSI's hjemmeside
04-10-2016
SSI har udviklet et nyt subsite med anbefalinger om vacci...

Gul feber i Angola og Den Demokratiske Republik Congo
04-10-2016
Sundhedsministeriet i Angola informerede den 21. januar 2...

Se alle nyheder - rejsevaccination

Statens Serum Institut Artillerivej 5 2300 Kbh S T 3268 3268 F 3268 3868 EAN 5798000362192 E serum@ssi.dk

Filippinerne

Her kan du se, hvilke vaccinationer og evt. forebyggelse mod malaria, der anbefales ved rejser til Filippinerne.

Anbefalingerne tager udgangspunkt i rejselængde og rejsetype - vær altid opmærksom på "Særlige risici".

Vælg rejsens varighed/type:

Op til 1 uge (forretnings-, kongres- eller turistrejse samt rejse til alm. turistområder)

FOLD ALLE UD

- Stivkrampe
- Difteri
- Hepatitis A
- Dokumentation for gul feber-vaccination
- Malaria

REJSE-VACCINATION

Find land

-- vælg land --

Personlig rådgivning

Kontakt din læge eller en vacccinationsklinik for personlig rådgivning om rejsevaccination.

Eksterne links

Udenrigsministeriets rejsevejledninger

Klar til rejse - Fødevarestyrelsens rejseråd

Malaria

Der er risiko for malaria (falciparum og vivax) hele året på den sydlige del af Palawan, i den vestlige del af Mindanao (Zamboanga) og på ø-grupperne Sulu og Tawi-Tawi.

Der er meget lav eller ingen risiko i resten af landet, inklusive Luzon, Visayas og den østlige del af Mindanao. Der er normalt ingen risiko i byområder.

Til risikoområder beskrevet ovenfor anbefales:

- at den rejsende enten tager medicinsk forebyggelse (med atovaquone/proguanil eller doxycyclin)

  eller

- at den rejsende konsekvent anvender en effektiv myggestiksprofylakse og medbringer malariamedicin til nødbehandling

Som medicinsk forebyggelse foreslås enten atovaquone/proguanil eller doxycyclin. Atovaquone/proguanil skal tages dagligt fra 1 dag før og indtil 7 dage efter opholdet. Doxycyklin skal tages dagligt fra 1 dag før og indtil 4 uger efter opholdet.
Som nødbehandling foreslås atovaquone/proguanil (voksne: 4 tabletter dagligt i tre dage).

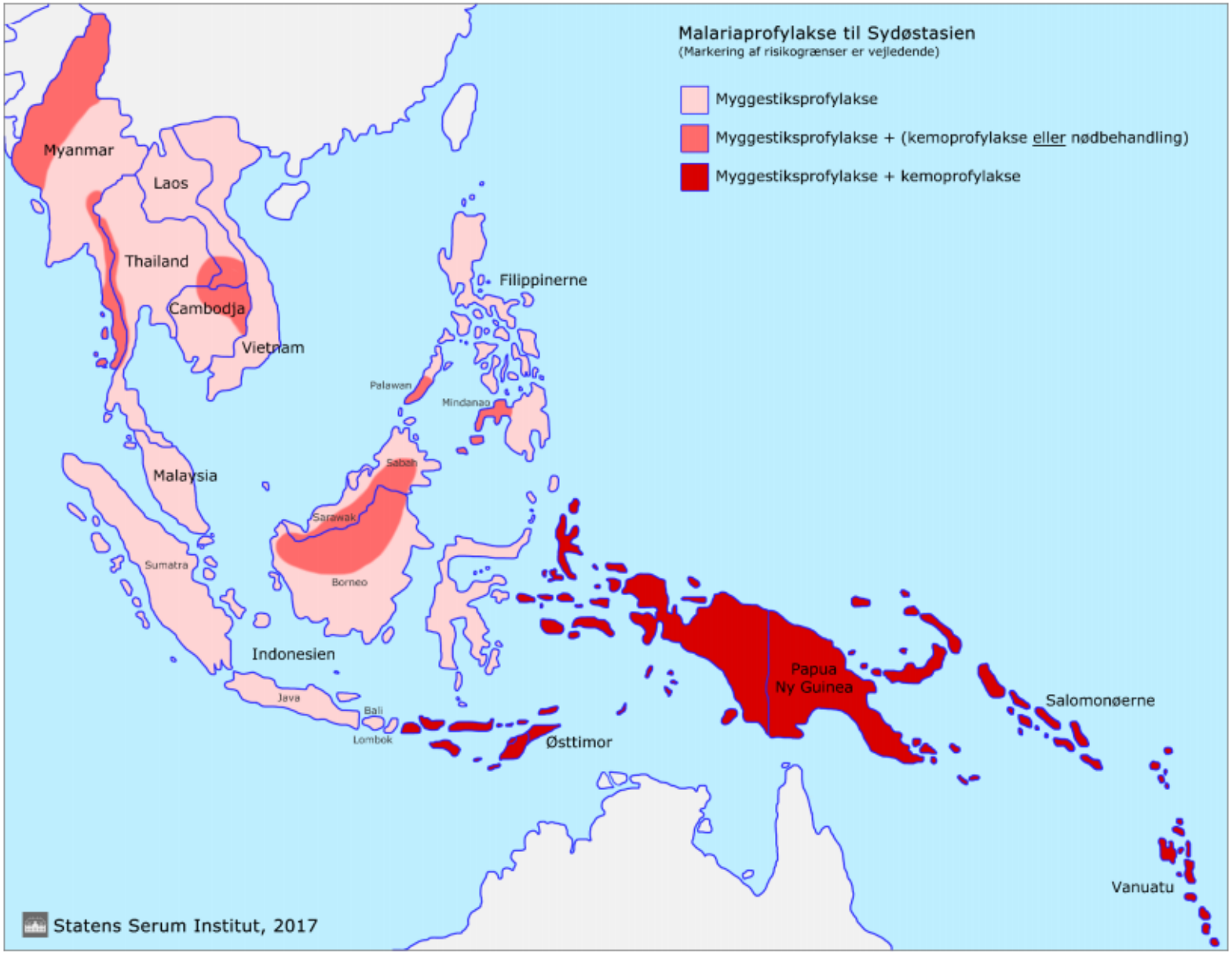
Primær forebyggelse af myggestik er altid vigtig i områder med malaria. Myggebalsam anvendes efter mørkets frembrud, hvilket yder beskyttelse i nogle timer, afhængig af typen. Omhyggelig indsmøring af alle bare hudområder er vigtig. Midlerne kan virke lokalirriterende, især ved længere tids brug. Anvendelse til børn under 3 år skal ske med forsigtighed, og midlerne må ikke benyttes til spædbørn. Sprøjtning med insekticider indendørs og anvendelse af permethrin-imprægnerede myggenet over sengen nedsætter ligeledes risikoen for malaria.

Risikokort over malaria i Sydøstasien og Oceanien

Risikokort over malaria i Syd- og Mellemamerika

Om sygdommen
Malaria

Særlige risici


Malariaprofylakse til Sydøstasien
(Markering af risikogrænser er vejledende)
Myggestiksprofylakse
Myggestiksprofylakse + (kemoprofylakse eller nødbehandling)
Myggestiksprofylakse + kemoprofylakse
Myanmar
Laos
Thailand
Cambodja
Vietnam
Filippinerne
Palawan
Mindanao
Malaysia
Sabah
Sarawak
Sumatra
Borneo
Indonesien
Java
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Lombok
Østtimor
Papua
Ny Guinea
Salomonøerne
Vanuatu
Statens Serum Institut, 2017


Malariaprofylakse til Syd- og Mellemamerika
(Markering af risikogrænser er vejledende)
Myggestiksprofylakse
Myggestiksprofylakse + (kemoprofylakse eller nødbehandling)
Mexico
Den Dominikanske Republik
Haiti
Belize
Honduras
Guatemala
El Salvador
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Statens Serum Institut's vaccination recommendations for foreign travel have been updated

12 July 2017

Statens Serum Institut no longer recommends routine use of malaria tablets for travellers to the majority of countries/areas in Southeast Asia and Central & South America. And tuberculosis vaccination is primarily recommended for children aged up to 11-12 years of age.

Statens Serum Institut's (the SSI) reference group for travel vaccination and malaria prophylaxis regularly revises the SSI's travel vaccination recommendations. This year, the reference group has primarily focused on the risk of malaria when travelling to Southeast Asia and to Central & South America and on the indication for vaccination against tuberculosis.

Low malaria risk in Southeast Asia and Central & South America

The risk that Danish travellers to Southeast Asia and to Central & South America become infected with malaria is very modest. In the past 10 years, only seven cases were acquired in Southeast Asia and eight cases in Central & South America. This is equivalent to approximately 2% of all imported malaria cases.

On this basis, Statens Serum Institut no longer recommends routine use of chemoprophylaxis for travellers to the majority of the countries/areas in Southeast Asia and Central & South America where such prophylaxis was previously recommended.

For travellers to specific areas with a certain level of known risk of malaria, Stand-by emergency treatment may be used as an alternative to conventional malaria prophylaxis.

If the traveller is not given malaria tablets for continuous use during the travel, it is very important that the traveller is informed that some risk of malaria may remain, and the traveller must therefore be recommended systematic use of effective mosquito bite prophylaxis and must be instructed to be attentive to fever and other malaria symptoms both during and after the travel (particularly in the initial three months after returning from the travel).

It is important to point out that Stand-by emergency treatment is not the same as self-therapy. If the traveller runs a fever during a stay in Southeast Asia or Central & South America (or other places with a malaria risk), the traveller should always contact the emergency desk of his or her insurance company for advice on local malaria work-up and treatment.

Furthermore, it is important to be aware that some groups of travellers, e.g. immigrants who visit their families in their country of origin, travellers who go trekking and stay overnight in some jungle and swamp areas and back-packers on long-term travels with no predetermined travel route, may be at a heightened risk of becoming infected with malaria and these groups therefore require extra careful guidance.

Low malaria risk in South-east Asia and Central & South America.

In connection with the annual revision of the Danish recommendations for travel vaccination and malaria prevention, the SSI's reference group for this field has, among others, focused on the most recent many years with low numbers of malaria cases from Asia, particularly the South-east Asian countries (e.g. Myanmar, Thailand, Cambodia, Laos, Vietnam, Malaysia, Singapore, Indonesia and the Philippines) among which several receive a considerable and growing number of Danish tourists. Similarly, from the countries in Central & South America that have some risk of malaria, very few cases of malaria are imported.

Asia

Central and South America

Table 2. Number of imported malaria cases from Asia, by country of infection and type of malaria, 2007-2016

Country of infection	All types of malaria	Vivax malaria	Falciparum malaria	Type not stated
India	28	25	3	0
Afghanistan	18	18	0	0
Pakistan	16	16	0	0
Thailand	4	3	0	1
Indonesia	2	0	2	0
Myanmar	1	0	1	0
Total	69	62	6	1

Table 3. Number of imported malaria cases from Central & South America, by country of infection and type of malaria, 2007-2016

Country of infection	All types of malaria	Vivax malaria	Falciparum malaria	Type not stated
Brazil	2	1	1	0
Peru	2	2	0	0
Bolivia	1	1	0	0
Guatemala	1	1	0	0
Honduras	1	0	1	0
Unknown (South America)	1	0	1	0
Total	8	5	3	0

The ABCD of malaria prophylaxis for travellers

- Awareness. Knowledge of the disease and the level of local risk in the destination.

- Bites of mosquitoes. Malaria is transmitted by mosquitoes, which bites during night from dusk to dawn – protect yourself from bites.

- Chemoprophylaxis. Make sure to use chemoprophylaxis as prescribed to you.

- Diagnosis and treatment. No malaria prophylaxis gives full protection, therefore go to see a doctor if any symptoms arise to get tested and treated.

Special risk travellers

- Travellers with longer stay in rural areas.
- Peole visiting friends and relatives.
- People with medical conditions, immunoesuppression or those without a spleen.

Mosquito Bite Prevention for Travelers

Mosquitoes spread many types of viruses and parasites that can cause diseases like chikungunya, dengue, Zika, and malaria. If you are traveling to an area where malaria is found, talk to your healthcare provider about malaria prevention medication that may be available.

Protect yourself and your family from mosquito bites. Here's how:

Keep mosquitoes out of your hotel room or lodging

- Choose a hotel or lodging with air conditioning or screens on windows and doors.
- Sleep under a mosquito bed net if you are outside or in a room that is not well screened. Mosquitoes can live indoors and will bite at any time, day or night.
  - » Buy a bed net at your local outdoor store or online before traveling overseas.
  - » Choose a WHOPES-approved bed net (like Pramax*): compact, white, rectangular, with 156 holes per square inch, and long enough to tuck under the mattress.
  - » Permethrin-treated bed nets provide more protection than untreated nets.
    - Permethrin is an insecticide that kills mosquitoes and other insects.
    - Do not wash bed nets or expose them to sunlight. This will break down the insecticide more quickly.
  - » For more information on bed nets: www.cdc.gov/malaria/malaria_worldwide/reduction/itn.html

Cover up!

- Wear long-sleeved shirts and long pants.
- Mosquitoes may bite through thin clothing. Treat clothes with permethrin or another Environmental Protection Agency (EPA)-registered insecticide for extra protection.

Use only an EPA-registered insect repellent

- Consider bringing insect repellent with you.
- Always follow the product label instructions.
- Reapply insect repellent every few hours.
  - » Do not spray repellent on the skin under clothing.
  - » If you are also using sunscreen, apply sunscreen first and insect repellent second.
- For more information: www2.epa.gov/insect-repellents

Natural insect repellents not registered with EPA

- In the United States, the EPA has not evaluated for effectiveness most of the commonly known natural insect repellents.
  - » Examples of ingredients used in unregistered insect repellents include: citronella oil, cedar oil, geranium oil, peppermint and peppermint oil, pure oil of lemon eucalyptus, soybean oil.
  - » **CDC recommends that you use an insect repellent containing an active ingredient shown to be both safe and effective.**

CS259867 October 29, 2015

Use an insect repellent with one of the following active ingredients:

Active ingredient Higher percentages of active ingredient provide longer protection	Some brand name examples* (Insect repellents may be sold under different brand names overseas.)
DEET	Off!, Cutter, Sawyer, Ultrathon
Picaridin, also known as **KBR 3023**, **Bayrepel**, and **icaridin**	Skin So Soft Bug Guard Plus, Autan (outside the United States)
Oil of lemon eucalyptus (OLE) or **para-menthane-diol** (PMD)	Repel
IR3535	Skin So Soft Bug Guard Plus Expedition, Skin Smart

If you are travelling with a baby or child:

- Always follow instructions when applying insect repellent to children.
- Do not use insect repellent on babies younger than 2 months of age.
- Instead, dress infants or small children in clothing that covers arms and legs, or cover the crib, stroller, and baby carrier with mosquito netting.
  - » Adults: Spray insect repellent onto your hands and then apply to a child's face. Do not apply insect repellent to a child's hands, mouth, cut or irritated skin.

Treat clothing and gear

- Use permethrin to treat clothing and gear (such as boots, pants, socks, tents) or purchase permethrin-treated clothing and gear. Read product information to find out how long the protection will last.
- If treating items yourself, always follow the product instructions.
- Do **not** use permethrin products directly on skin.

* The use of commercial names is to provide information about products; it does not represent an endorsement of these products by the Centers for Disease Control and Prevention or the U.S. Department of Health and Human Services.

www.cdc.gov/features/StopMosquitoes

- Mosquito repellents containing DEET are most effective
- Minimum DEET concentration of 30-50% for adults, 20% for children
- May not be used for children <3 years
- Children needs help from parents to apply it (to mimimize exposure), should not to be applied in face
- Can be used by pregnant women
- But avoid long-term use

Sikker | https://www.webapoteket.dk/maerker/autan

webapoteket.dk

Søg efter produkter og artikler...

Recepter | Helbred | Personlig pleje | Mor & Barn | Sex & Samliv | Sår & Sygepleje | Dyr & Hjem | Rejseapoteket | Mærker

Fri fragt over 400 kr. til GLS Pakkeshop (*)

Levering 1-3 hverdage

Har du spørgsmål? Kontakt os på tlf. +45 8785 1133 eller send en e-mail

Filtrer på | Nulstil

› Type (2)

› Mærke (1)

Autan

Her finder du Autan mod myg. Autan myggespray findes i pumpe. Du kan også vælge Autan Family Care Gel mod myg.

Produkter i kategorien

Autan
Autan Cooling Insect
kølende & lindrende efter stk spray

25 ml
På lager
Klubpris: 93,45
Vejl. pris DKK 109,95

Autan
Autan Family Care Ge
Gel Mod myg

100 ml
På lager
Klubpris: 93,45
Vejl. pris DKK 109,95

Autan
Autan Protection Plu
bekyttelse mod myg, fluer og flåt

SPAR 15%

100 ml
På lager
Vejl. pris DKK ~~109,95~~ 93,45

Tilmeld dig KLUBWebapoteket og spar 15%

Chemoprophylaxis options

- Atovaquone-proguanil
- Doxycycline (> 12 years of age)
- Mefloquine (NB: attention to contraindications)

- Pregant women:
  - Mefloquine - 1st, 2nd and 3rd trimester
  - Doxycycline – 1st trimester only

Tabel 1. Dosering ved malariaprofylakse

	Styrke	Dose-rings-hyppighed	Dosering til				
			5-9 kg (2849, 2897)	10-19 kg	20-29 kg	30-39 kg	> 40 kg
Hydroxy-chloroquin	tabl. 250 mg	ugentlig	¼ tabl.*	½ tabl.	1 tabl.	1½ tabl.	2 tabl.
	tabl. 200 mg*	ugentlig	¼ tabl.*	½ tabl.	1 tabl.	1½ tabl.	2 tabl.
Mefloquin	tabl. 250 mg	ugentlig		¼ tabl.	½ tabl.	¾ tabl.**	1 tabl.
Doxycyclin	tabl. 100 mg	daglig					1 tabl.
Atovaquon/ proguanil	tabl. 250 mg atovaquon/ 100 mg proguanil	daglig					1 tabl.
	tabl. 62,5 mg atovaquon/ 25 mg proguanil (børnetabl.)	daglig	5-9,9 kg ½ børne-tabl.*** (2849)	1 børne-tabl.	2 børne-tabl.	3 børne-tabl.	

Pregnant women 1:

- Mosquito bite prevention is essential!
  - Use a mosquito bed net
  - Use insect repellants
  - DEET can be used safely (based on a small number of studies)
- WHO recommends pregnant women to **avoid travel** in areas with a high risk of chloroquine-resistant falciparum.
- **Chloroquine** is the preferred choice for chemoprophylaxis if this is sufficient (i.e. no parasite resistance).
- For travel to areas with *P falciparum* malaria, **mefloquine** is the preferred choice - unless there are contraindications (e.g. a history of mental illness).

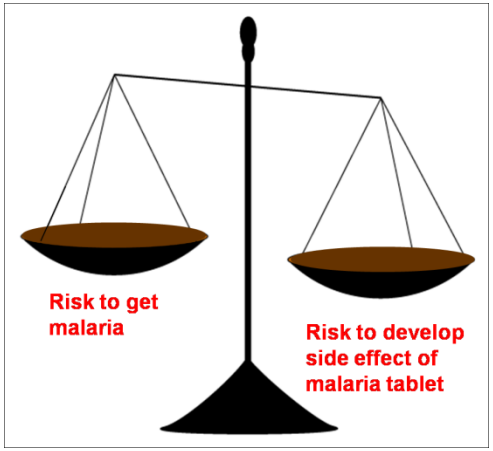
Pregnant women 2:

- Alternatively to mefloquine, **doxycycline** may be used during 1st trimester, but is contraindicated during 2nd and 3rd trimester.
- For areas with mefloquine resistance (parts of South-East Asia) there is NO effective prophylaxis available for 2nd and 3rd trimester. Similar if there is contraindications to the use of mefloquine.
- Atovaquon/proguanil should not be used, as safety data are limited.
- Use of antimalarials by women with yet unknown pregnancy is not a reason terminate the pregnancy.

During breastfeeding:

- Chloroquine and mefloquine are considered safe during breastfeeding.
- Atovaquone-proguanil can be used if the breastfed infant weighs more than 5 kg.
- Infants who are breastfed do not receive adequate concentrations of any antimalarial drugs and require their own chemoprophylaxis.

Stand-by malaria treatment?



- Consider risk for malaria versus risk of medicine side effects
- It is generaly not adviced to buy malaria medicine locally, due to risk of poor quality or fake drugs.
- During longer travel to malaria risk areas, where acces to health services or good quality medicine is limited, travellers may bring a dose of quality-assured malaria treatment from home, eg. Atovaquone-Proguanil (Malarone).
- Give the traveller a detailed oral and written instruction.
- Travellers must always seek medical care promtly regardless.

VIDENSKAB OG PRAKSIS | STATUSARTIKEL

Malariaprofylakse til langtidsrejsende og udstationerede

Afdelingslæge Jørgen A.L. Kurtzhals &
læge Lasse S. Vestergaard

H:S Rigshospitalet, Klinisk Mikrobiologisk Afdeling, Center for Medicinsk Parasitologi, og
Statens Serum Institut, Afdeling for Bakteriologi, Mykologi og Parasitologi, Parasitologisk Laboratorium

De fleste rejsemedicinske konsultationer vedrører ture af ugers til få måneders varighed. Når rejserne bliver på halve til hele år, øges risikoen for alvorlig sygdom, så man må give et stigende antal vaccinationer [1] og anbefale, at der medbringes basale lægemidler o.l. Stik imod denne tendens vælger mange langtidsrejsende at skække på malariaprofylaksen. De generelle regler for malariaprofylakse er sammenfattet i Tabel 1. Hvor man ved rejser af kortere varighed fokuserer på kemoprofylakse, er rådgivning af langtidsrejsende ofte kompleks. I denne artikel vil vi beskrive de overvejelser, der bør indgå i en sådan rådgivning.

De rejsende

Vi vil her fokusere på gruppe 4 (rejser i halve år, udstationering eller tilsvarende) i EPI-Nyts årlige anbefalinger for rejseprofylakse [1], fordi der som regel ubetænket kan anvendes malariakemoprofylakse på kortere rejser. Gruppe 4 omfatter udstationerede med eller uden familie, ryggesækrejsende og rejsende på hyppigt gentagne kortere besøg. Disse grupper har forskellige karakteristika og behov. Mange udstationerede bor i veludrustede boliger, har adgang til lægehjælp, god økonomi og en ordnet hverdag. Ryggesækrejsende bor under vekslende, ofte dårlige forhold, har utilstrækkelig adgang til lægehjælp, ofte et lavt rejsebudget og ringere mulighed for at tage vare på sig selv i tilfælde af sygdom. Rejsende på hyppige, kortere rejser bør som regel på hoteller med lav risiko for smitte og i de fleste tilfælde – hvis de får malaria – vil sygdommen debutere efter hjemkomsten. En særlig undergruppe, personer, der stammer fra et malariaområde, men bor i Danmark, kan have tendens til at negligere malaria, fordi de tidligere har været delvis immune over for sygdommen. Skønt de muligvis beholder en vis beskyttelse mod alvorlige malariatilfælde [2], anses denne immunitet for tabt efter blot seks måneder uden eksposition for malaria. Da der ofte er tale om familiebesøg i egne med høj forekomst af malaria og sundhedsfaciliteter med få ressourcer, bliver effektiv kemoprofylakse særlig vigtig i denne gruppe. En anden undergruppe, militært personel, vil ikke blive omtalt, men kan til dels rådgives ud fra de beskrevne principper.

Forebyggelse af myggestik

Flere arter af *Anopheles*-myg kan overføre malaria. De stikker især om aftenen og om natten og er almindeligvis følsomme for de nedenstående insekticider og repellenter. Malariatransmissionen er mest intens omkring nattetiden, fordi myggene lægger sig i forskrævl. Da intet forebyggende malariamiddel giver 100%'s beskyttelse, er myggestikprofylakse vigtig, både ved kortere og længere rejser. Alene ved at sove under myggenet imprægneret med permethrin eller deltamethrin halveres risikoen for malaria [3], så ryggesækrejsende bør medbringe et imprægneret myggenet. Ved udstationering kan man yderligere reducere udsættelsen ved at følge enkle regler. Boligen bør sikres mod myg ernten med hårdede døre og vinduer kombineret med aircondition, eller med indtakte myggenet foran vinduer og blindører. Vægge og lofter skal regelmæssigt sprøjtes med insekticider, f.eks. permethrin. Udendørs efter mørkets frembrud bør man man beskytte sig med insektrepellenter, myggebalsam [4, 5].

I Danmark kan man købe icaridin (Autan) og p-menthane-3,8-diol (Citriodiol, Mosiguard), som begge er effektive mod en række myg i 2-3 timer efter påsmøring. I udlandet kan man købe repellenter med det aktive stof diethyl-m-toluamid (DEET), som afhængigt af koncentrationen skal påføres hver 3.-6. time. Naturpræparater som f.eks. citronella- og kokosolier har kort virkningstid og variabel effekt. Repellenter skal fordeles omhyggeligt på eksponerede hudområder, også i ansigtet (dog ikke på tår og tæt ved øjnene), da de kun virker på få centimeters afstand. Ved længere tids brug er der risiko for bivirkninger, især overfølsomhed og hudirritation [4, 5]. Repellenter bør anvendes med forsigtighed og i lave koncentrationer til børn under tre år og slet ikke til spædbørn. Højdosis B-vitamin er uden effekt trods forlydender om det modsatte, dette gælder også lysfakler, sanseapparater og myggelys.

Tabel 1. Malariaprofylaksens ABCD.

A. Awareness Viden om sygdommen og grundigt kendskab til risikoen for malaria på rejsestedet

B. Bites of mosquitoes Malaria overføres med myg, som hovedsageligt stikker i de mørke timer – undgå myggestik i denne periode

C. Chemoprophylaxis Ved utilstrækkelig med at tage den foreskrevne kemoprofylakse

D. Diagnosis and treatment Ingen midler giver absolut med malaria, og ethvert symptom på malaria skal føre til undersøgelse og behandling uden forsinkelse

Conclusions on new malaria prophylaxis recommendations for travellers

- Malaria has been reduced substantially globally over the past 15 years.
- Africa is still the main risk areas – chemoprophylaxis is required for most travellers.
- In Southeast Asia and in Central and South America, the malaria burden and risk for travellers is far less – chemoprophylaxis will usually not be required for most ”ordinary tourist” travellers, but special attention for some travellers are required (based on route and mode of travel).
- It may be relevant to bring a dose of standard malaria treatment (”stand-by treament”) for ”standard tourist travel” in Southeast Asia and Central and South America.
- ONE SIZE DOES NOT FIT ALL IN MALARIA PROPHYLAXIS…

Thank you

Questions?