

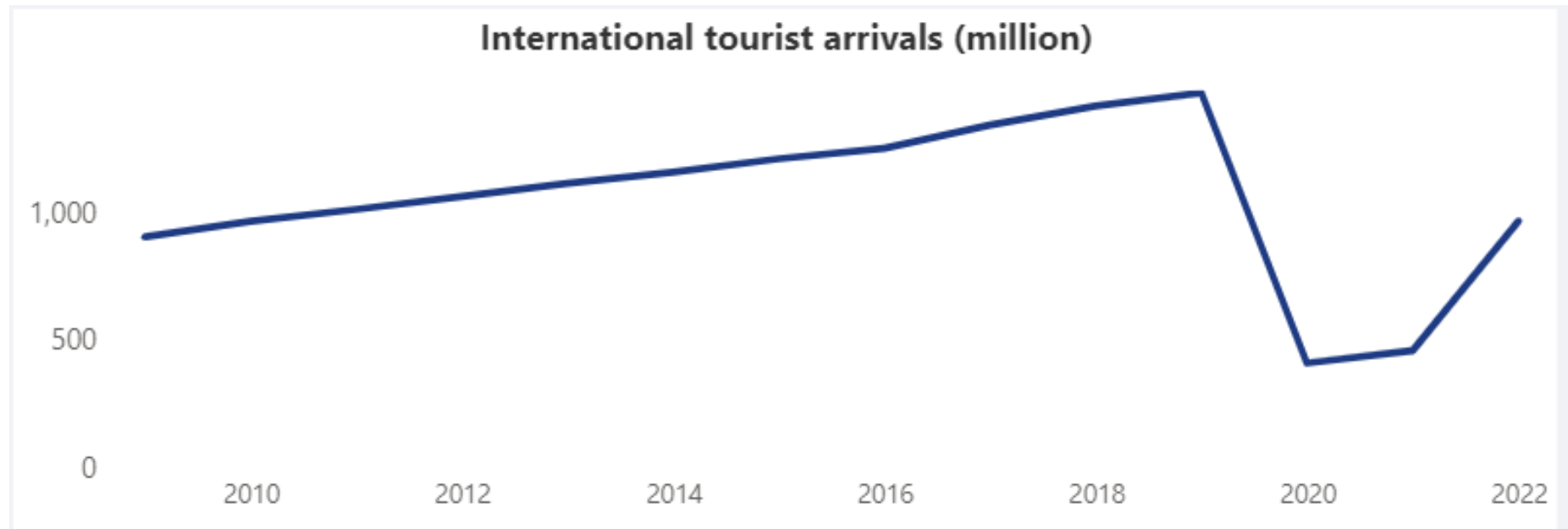
Febra la intoarcerea din calatorie

Dr Ioana Olaru

22 SEPTEMBRIE 2023



2 miliarde de oameni pe an vor calatori in afara tarii de resedinta pana in 2030 (majoritatea in tari cu economii emergente)



Epidemiologie

- 10-20% dintre cei care au calatorit si 15-70% dintre cei care au vizitat destinatii tropicale au o probleme de sanatate in timpul calatoriei sau dupa intoarcere
- Cei care viziteaza familia si prietenii au un risc crescut de infectii
 - 70% dintre cazurile de malarie din UK
 - 90% dintre cazurile de febra tifoida
- Cel mai frecvent febra + simptome respiratoria sau gastrointestinale
 - Majoritatea auto-limitante
 - 12-54% simptome mai severe → prezentare la medic
 - 1-6% internati in spital

Epidemiologie

- Infectiile la calatori sunt sub-raportate
 - Auto-limitante fara a consulta medicul
 - Consultatii la medicul de familie, spitale generale
- Malaria este cel mai frecvent diagnostic la pacientii cu sindrom febril la intoarcerea din calatorie
 - 5-29% dintre prezentarile in clinici de specialitate
 - 26-75% dintre pacientii internati cu sindrom febril
 - Majoritatea infectii cu *P. falciparum* – reprezinta **25-55% dintre decese** la calatori cu sindrom febril
- Alte infectii frecvente: dengue, febra tifoida, rikettsioze
- ~3% dintre infectii ar putut fi prevenite prin vaccinuri (gripa, febra tifoida, hepatita A)

Epidemiologie

- >25% dintre calatori cauza febrei nu este identificata
- Majoritatea patologiilor de calatorie (diaree, pneumonie, infectii de tract urinar) sunt cauzate de organisme commune
- **Important!!** identificarea patologiilor cu pot pune in pericol viata sau cu potential transmisibil
- Regiunea in care a fost calatoria determina probabilitatea celor mai frecvente cauze e febra
- Boli infectioase emergente
 - MERS, SARS-CoV
 - Ebola

Identificati pacientii cu infectii care pot pune in pericol viata

- Excludeti malaria (test)
- Evaluarea riscului (qSOFA validat pentru a fi folosit in UPU dar nu pentru calatori)
- !! Co-morbiditati & pacienti cu imunosupresie
- Pacientii cu imunosupresie pot avea raspuns inadecvat la vaccinuri & unele vaccinuri sunt contraindicate

Box 2qSOFA score
<http://www.qsofa.org>

One point for each of

Low blood pressure (sBP \leq 100 mm Hg)

High respiratory rate (RR \geq 22 breaths/min)

Altered mentation (Glasgow Coma Scale score $<$ 15)

\geq 2 qSOFA points near the onset of infection is associated with a greater risk of death or prolonged stay in intensive care unit

Fink et al BMJ 2019

1 Triage

All febrile travellers should be assessed for evidence of sepsis



qSOFA score
2+ of the following indicates severe infection:

Glasgow Coma Scale $<$ 15

Respiratory rate $>$ 22

Systolic blood pressure $<$ 100

Follow local sepsis pathway

Consider:

Empirical therapy

Referral to intensive treatment unit (ITU)

Immune status

Use a lower threshold for admission in those with compromised immune status, as infection can present atypically in this group

May be compromised by:

Malignancy Transplant

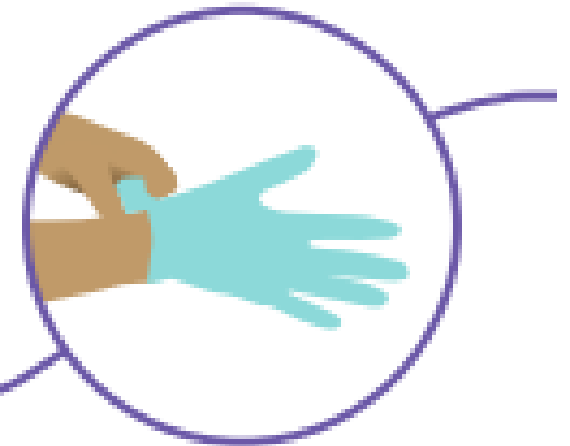
Age HIV status Diabetes

Immunosuppressive drugs (including steroids)

2

Isolation

Contact precautions are often required until a diagnosis is confirmed and treatment commenced



Clinical presentation

Are any of the following present?

Rash

Diarrhoea

Respiratory symptoms

Haemorrhage

Gastrointestinal or respiratory secretions

Yes

No

Isolation
not required



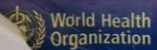
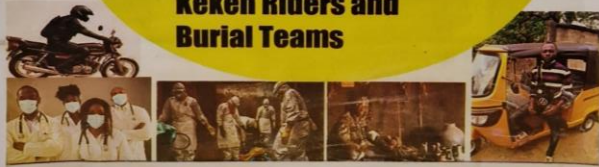
GOVERNMENT OF SIERRA LEONE
Ministry of Health and Sanitation

Target group for EVD Vaccine

There are certain groups of people who are at higher risk of coming in contact with and getting sick with Ebola because of the work that they do and the area that they work.

These high risk groups include:

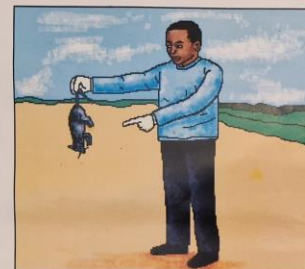
**Health Care Workers,
Front Line Workers,
Traditional Healers,
Traditional Birth Attendants
Okada Riders,
Kekeh Riders and
Burial Teams**



PROTECT YOURSELF FROM LASSA FEVER



Keep cats at home to drive away rats



Wear gloves or plastic to handle dead rats



Bury dead rats in a plastic bag to prevent spread of Lassa Fever



Cover your food always to prevent rats from eating it



Rush suspected Lassa Fever patients to the nearest health facility, Lassa Fever treatment is FREE at the Kenema Government Hospital.



To save you and the lives of your family, do not touch the dead body of Lassa patients



3

Travel risk assessment

Focused
travel history

Where did
you go?

What did you
do there?

When did you
become unwell?

A close-up photograph of a person wearing a yellow shirt, holding a blue pen and writing on a white clipboard. The background is blurred, showing a person in a white lab coat.

Anamneza

- Informatii generale
 - Varsta
 - Gravida
 - Boli pre-existente, medicamente, interventii chirurgicale
 - Imunosupresie: HIV, cortizon, chimioterapie, diabet

Anamneza

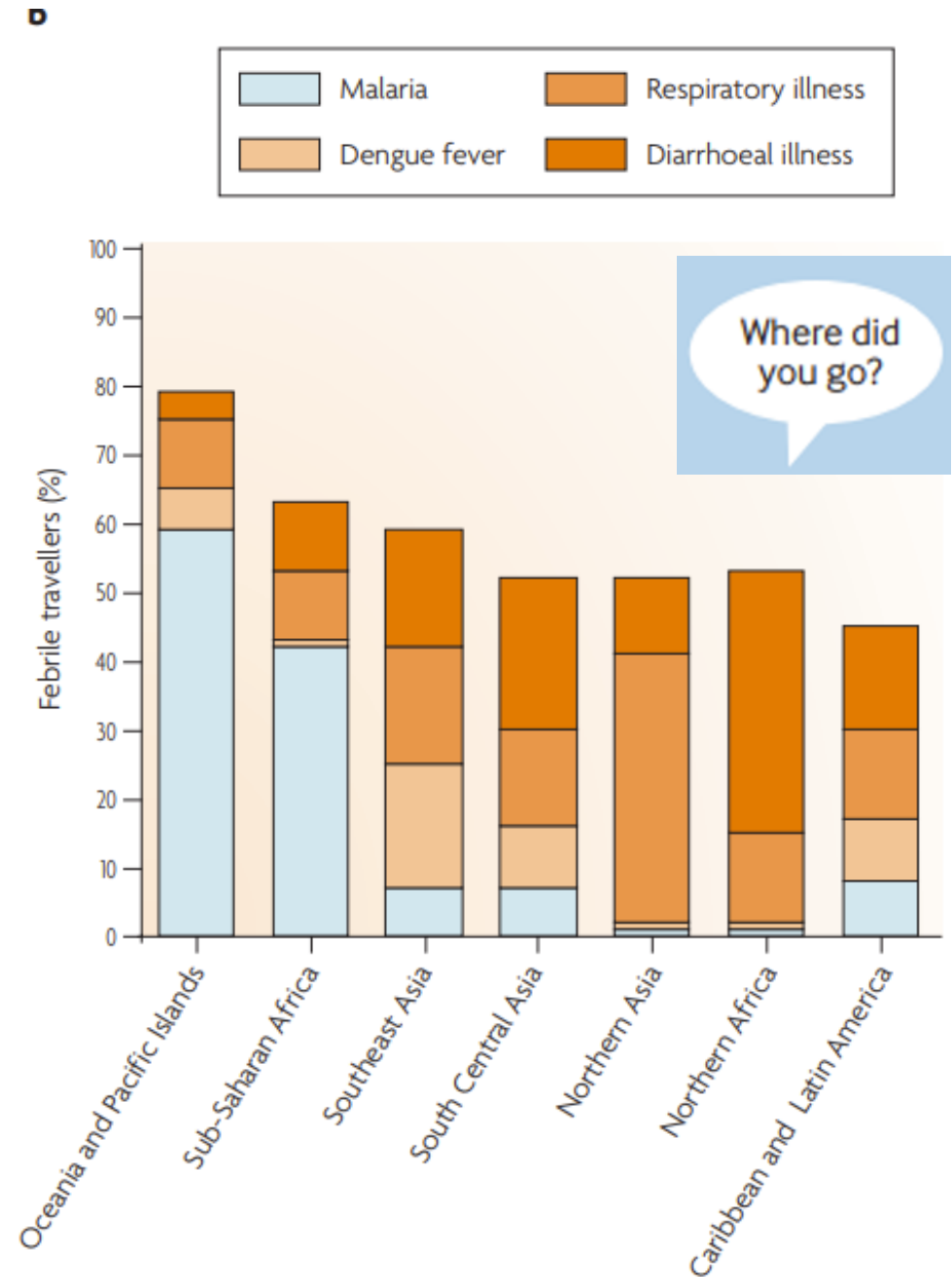
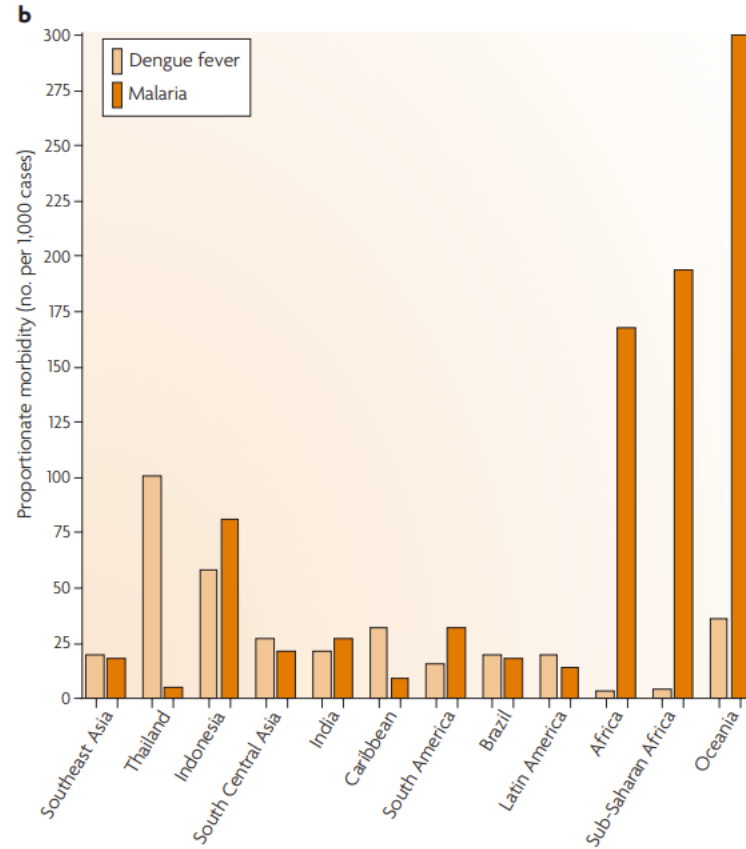
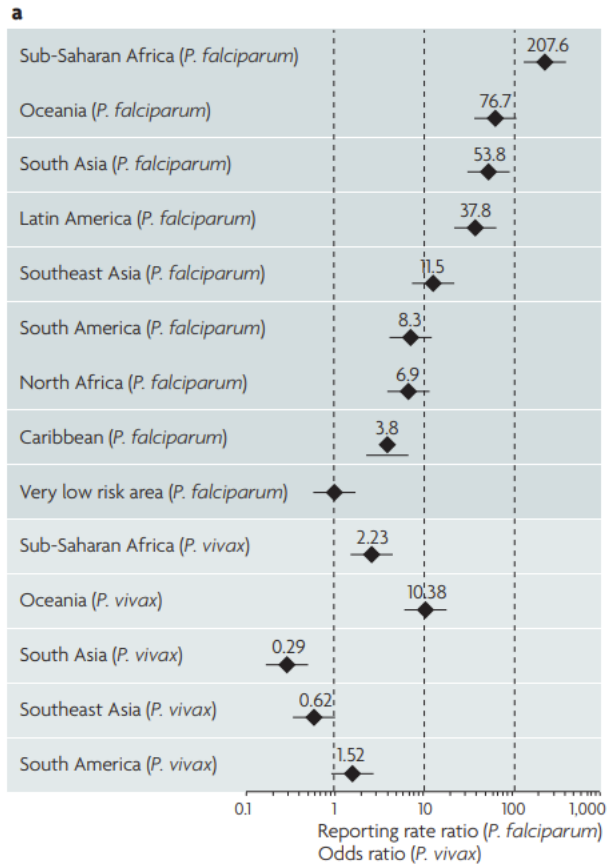
- Informatii despre calatorie
 - Destinatia & traseul
 - Conditii de calatorie (hotel, hostel, camping)
 - Activitati (sport, turism medical, tatuaje, contacte sexuale neprotejate)
 - Expunere la factori de risc
 - Profilaxie (medicamente, vaccinuri, repelent)
- Detalii despre boala
 - Data debutului (intervalul de timp de la intoarcere)
 - Simptome
 - Tratament inaintea prezentarii
 - Afectarea altor persoane din grupul de calatorie

Cauze de febra la intoarcerea din calatorie in functie de destinatie

Regiunea geografica	
Caraibe	Chikungunya Dengue Malarie (Hispaniola) Zika
America Centrala	Chikungunya Dengue Febra tifoida/ paratifoida Malarie (<i>P. vivax</i>) Zika
America de Sud	Chikungunya Dengue Malarie (<i>P. vivax</i>) Zika

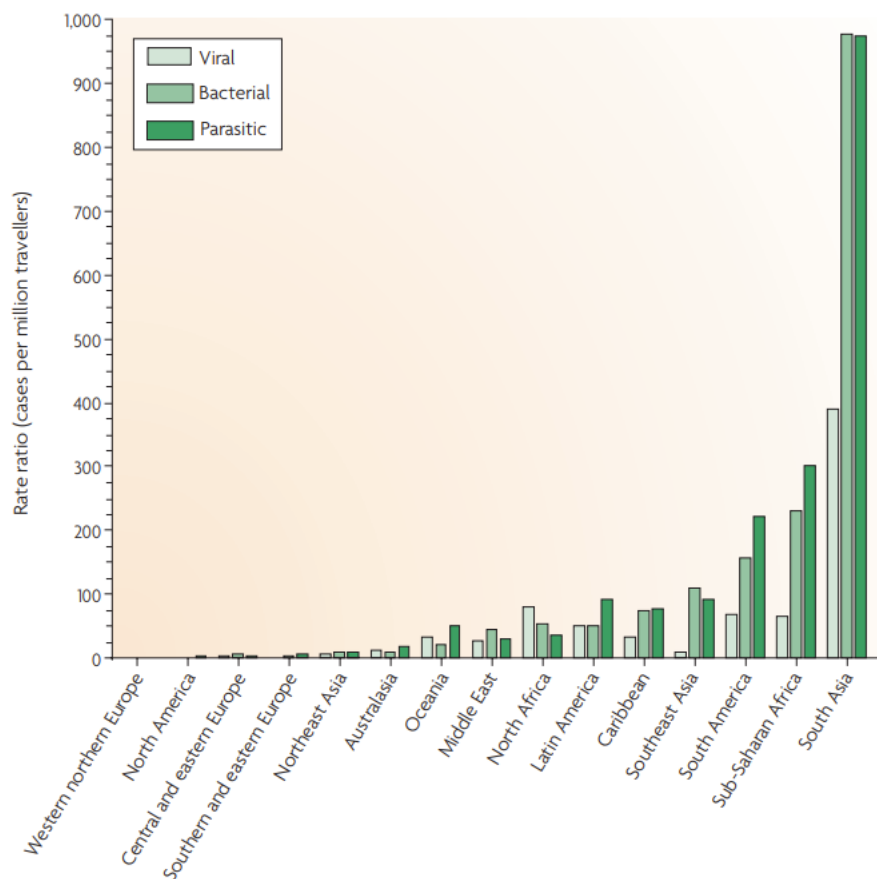
Regiunea geografica	
Asia centrala si de sud	Dengue Febra tifoida/ paratifoida Malarie (non- <i>P. falciparum</i>)
Asia de sud-est	Dengue Malarie (non- <i>P. falciparum</i>)
Africa sub-sahariana	Dengue Febra tifoida/ paratifoida Malarie (<i>P. falciparum</i>) Rickettsioze Schistosomiaza (febra Katayama)

Cauze de febra la intoarcerea din calatorie in functie de destinatie



Where did
you go?

Etiologia infectiilor in functie de destinatie



- Cele mai multe infectii dupa calatorii in Asia de Sud > Africa
- In special infectii parazitare si bacteriene

 Travel destinations

+ = high risk



Northern and eastern Europe



North America



Latin America and Caribbean



South East Asia



Central and South Asia



Sub-Saharan Africa

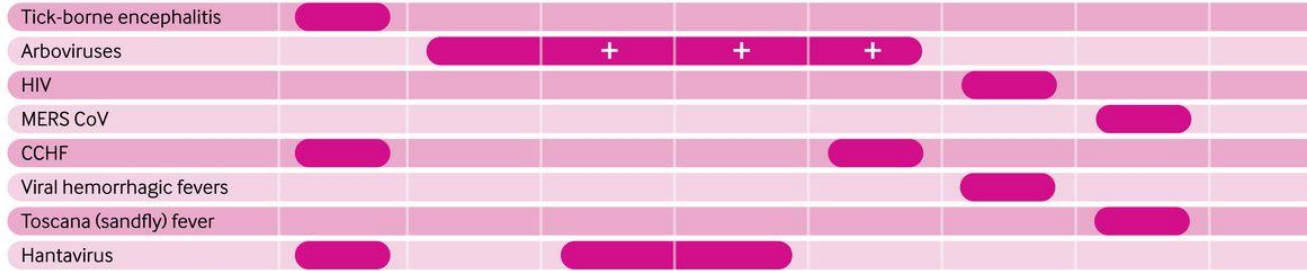


North Africa, Mediterranean, and Middle East

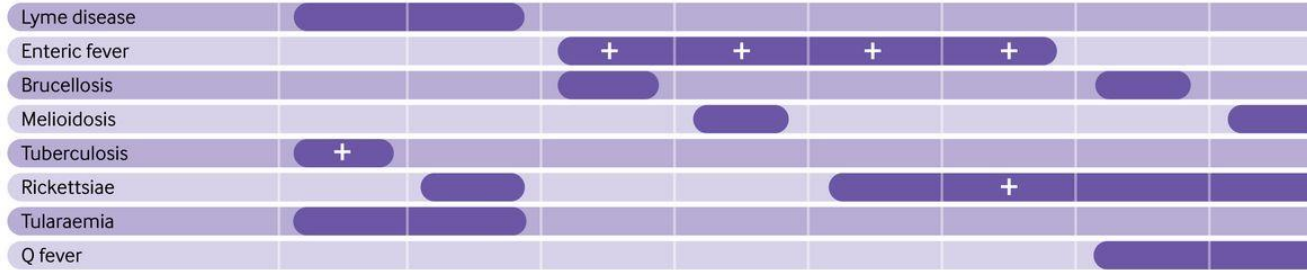


Australasia

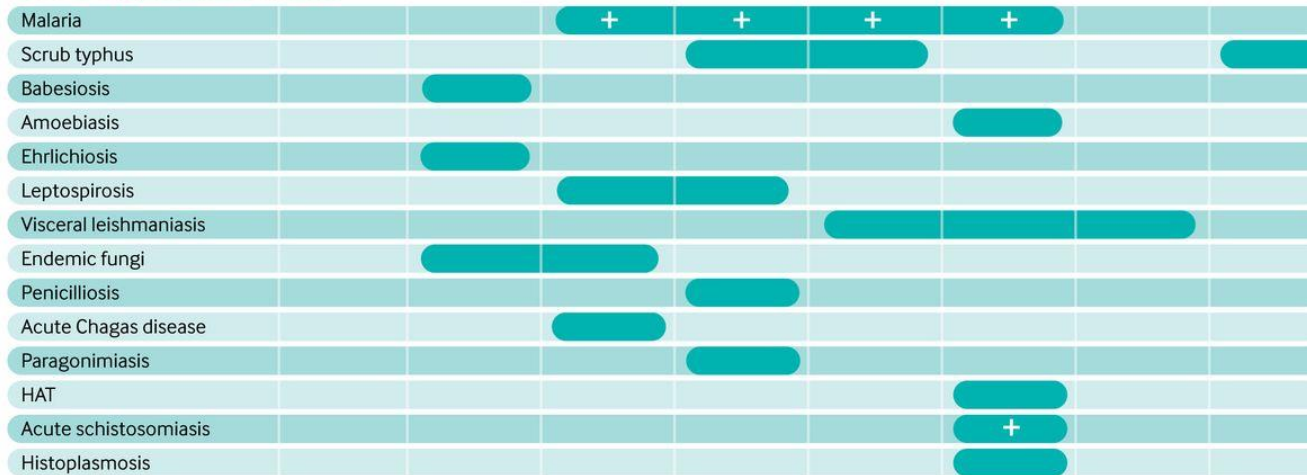
Viral infections



Bacterial infections



Other organism infections



What did you do there?

Activitati si expuneri la factori de risc

Factori de risc	Frecvent	Ocazional	Rar
Tantari	Dengue Malarie	Chikungunya Encefalita japoneza Febra galbena West Nile Zika	Filarioze
Capuse	Boala Lyme Tick typhus	Febra Q	Alte borelioze, febra recurenta, febra hemoragica Crimeea Congo, ehrlichioza, encefalita de capusa, tularemie, pesta
Pureci	-	Tifos murin	Pesta
Musca tsetse	-	-	Trypanozomiaza
Animale	Celulita	-	Tularemie, antrax, rabie, febra muscaturii de sobolan

What did you do there?

Activitati si expuneri la factori de risc

Factori de risc	Frecvent	Ocazional	Rar
Vas de croaziera	Legionella Norovirus Hepatita A/E	-	-
Speologi	Histoplasmoza	-	Rabie
Ferme	Bruceloza Febra Q	-	
Apa dulce	Febra Katayama (schistosomiaza acuta)	-	Acantamoeba, melioidoza
Safari	Tifos de capusa	-	Antrax, tripanozomiaza

What did you do there?

Activitati si expuneri la factori de risc

Factori de risc	Frecvent	Ocazional	Rar
Apa contaminata	Amoebiaza, febra tifoida, boli diareice, hepatita A/E		
Lapte nepasteurizat	Listeria Salmonella Shigella	Brucella	
Mancare insuficient gatita	Gastroenterita Amoebiaza		Trichineloza
Contacte sexuale neprotejate		<i>Neisseria gonorrhoeae</i> <i>Chlamydia trachomatis</i>	HIV, hepatita A, B, C, sifilis
Injectii, piercing, tatuaje		Hepatita B, C, HIV micobacterii	

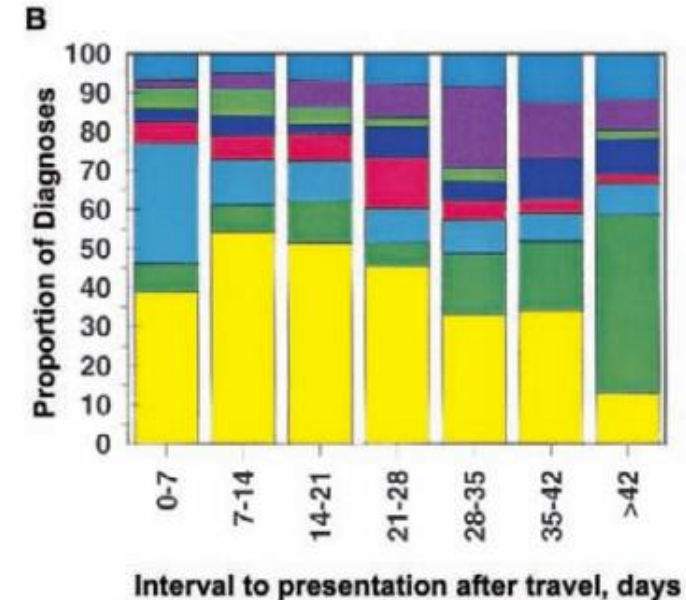
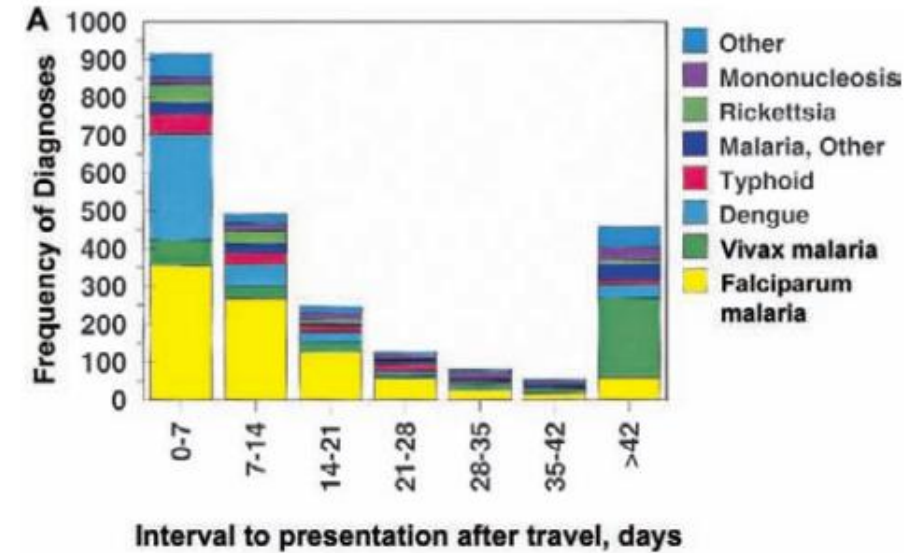


Factori de risc alimentari



Etiologia infectiilor in functie de timpul dinte calatorie si simptome

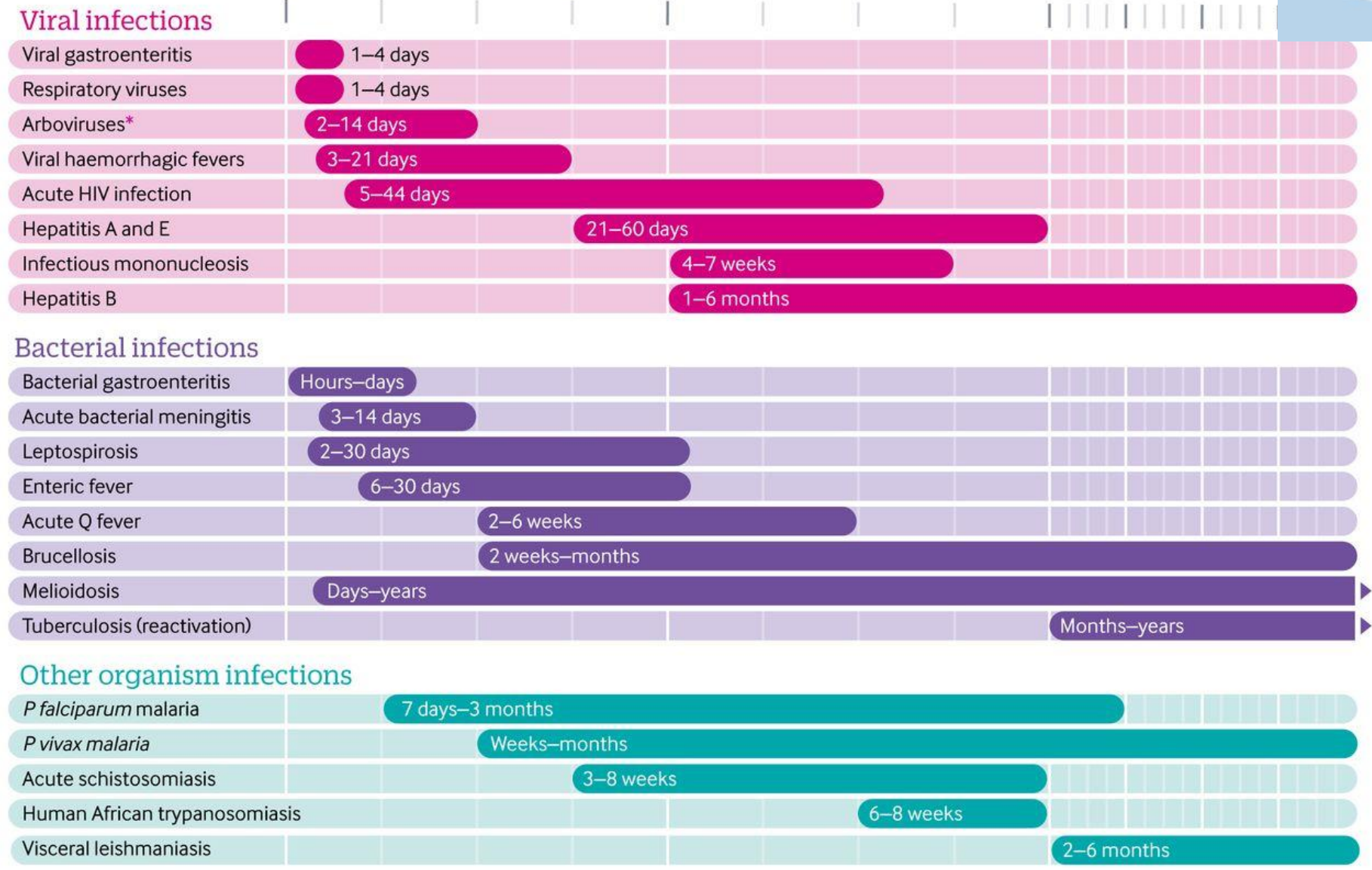
- Majoritate infectiilor au debut la 1-2 saptamani de la intoarcerea din calatorie
- Malaria *P. falciparum* mai frecventa in primele 3 saptamani
- Malaria cu *P. vivax* >42 zile (~40-50% dintre prezentari >42 zile)
- Dengue ~ prima saptamana
- Rickettsioze ~1-2 saptamani



When did you become unwell?

Disease incubation times

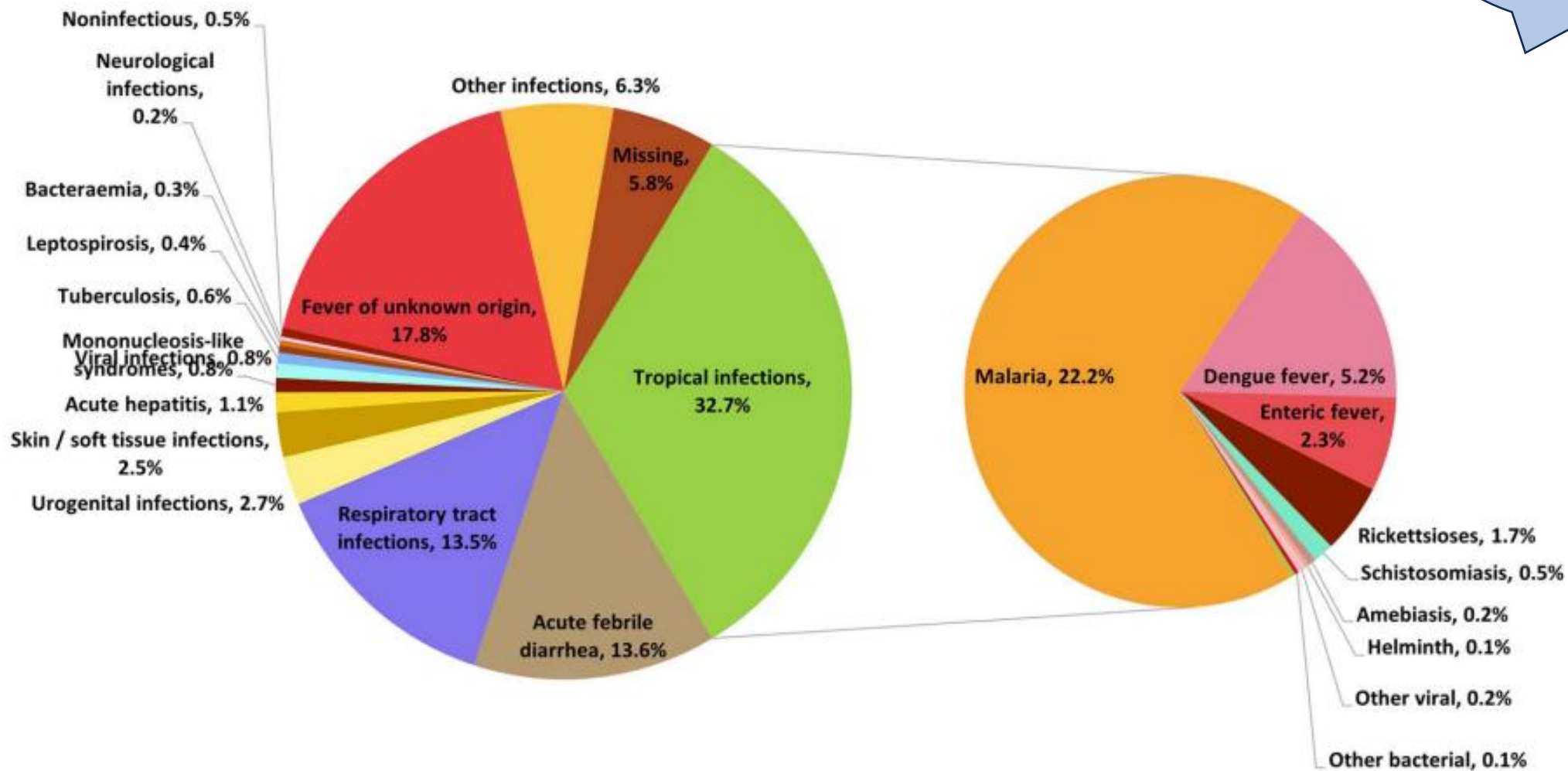
When did you become unwell?



* e.g. chikungunya, dengue, Zika, Japanese encephalitis, yellow fever

What can it be?

What can it be?



Examen clinic

- **Examen clinic complet!!**
 - Limfadenopatii
 - Hepatomegalie/ splenomegalie
 - Icter
 - Anemie
 - Eruptii sau leziuni cutanate
 - Afectare articulara, musculoscheletala
 - Meningism, fotofobie, alterarea starii de constienta
 - Semne neurologice
 - Conjunctivita
 - Hemoragie

Examen de laborator

- Hemograma completa
- Transaminaze, bilirubina, GPT
- Hemoculturi
- Dipstick urinar
- Radiografie pulmonara

- **Malarie!! Test rapid & microscopie**
- Investigatii suplimentare in functie de semne si simptome

Infectii in functie de prezentare clinica si rezultate de laborator

	Bacterii	Virusuri	Paraziti	Fungi
Dureri abdominale	Febra tifoida/ paratifoida	-	Abces hepatic (Entamoeba)	-
Stare de constienta alterata/ afectare SNC	Meningita meningococica Scrub typhus	Encefalite arbovirusuri (Encefalita japoneza, West Nile, Rabie, Encefalita de capusa)	Angiostrongylus Malarie cerebrala Trypanozomiaza africana	-
Atralgii/ mialgii	-	Chikungunya Dengue Febra Ross River Zika	Sarcocystoza Trichineloză	-

Infectii in functie de prezentare clinica si rezultate de laborator

	Bacterii	Virusuri	Paraziti	Fungi & alte
Eozinofilie	-	-	Angiostrongylus Fasciola Sarcocystis Schistosomiaza acuta Trichineloza Alti paraziti	Reactii de hipersensibilitate la medicamente
Debut >6 saptamani	Melioidoza Tuberculoza	Hepatita acuta B, C, E	Abces hepatic Malarie (<i>P ovale</i> , <i>P vivax</i>) Trypanozomiaza africana	-
Febra persistenta >2 saptamani	Bruceloza Febra Q Tuberculoza Febra tifoida/ paratifoida	CMV EBV HIV (primoinfectie)	Leishmanioza viscerală Malarie Schistosomiaza acuta Toxoplasmoza	-

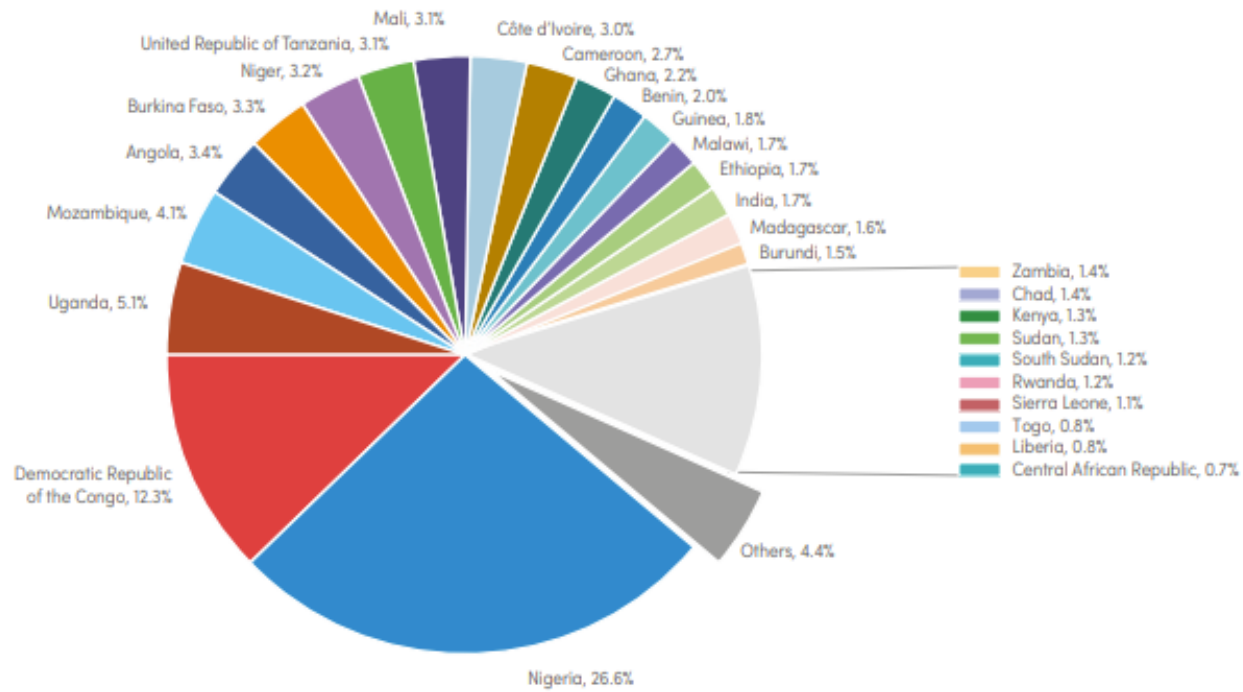
Infectii in functie de prezentare clinica si rezultate de laborator

	Bacterii	Virusuri	Paraziti	Fungi & alte
Hemoragie	Leptospiroza Meningococemie Rickettsioze	Febre hemoragice virale (dengue, Ebola, Lassa, febra galbena)	-	-
Icter	Leptospiroza	Hepatita acuta A, B, C, E Febre hemoragice (febra galbena)	Malarie severa	-
Sindrom mononucleozic	-	CMV EBV HIV acut	Toxoplasmoza	-
Leucocite normale/ leucopenie	Rickettsioze Febra tifoida/ paratifoida	Chikungunya Dengue HIV acut Zika	Malarie	-

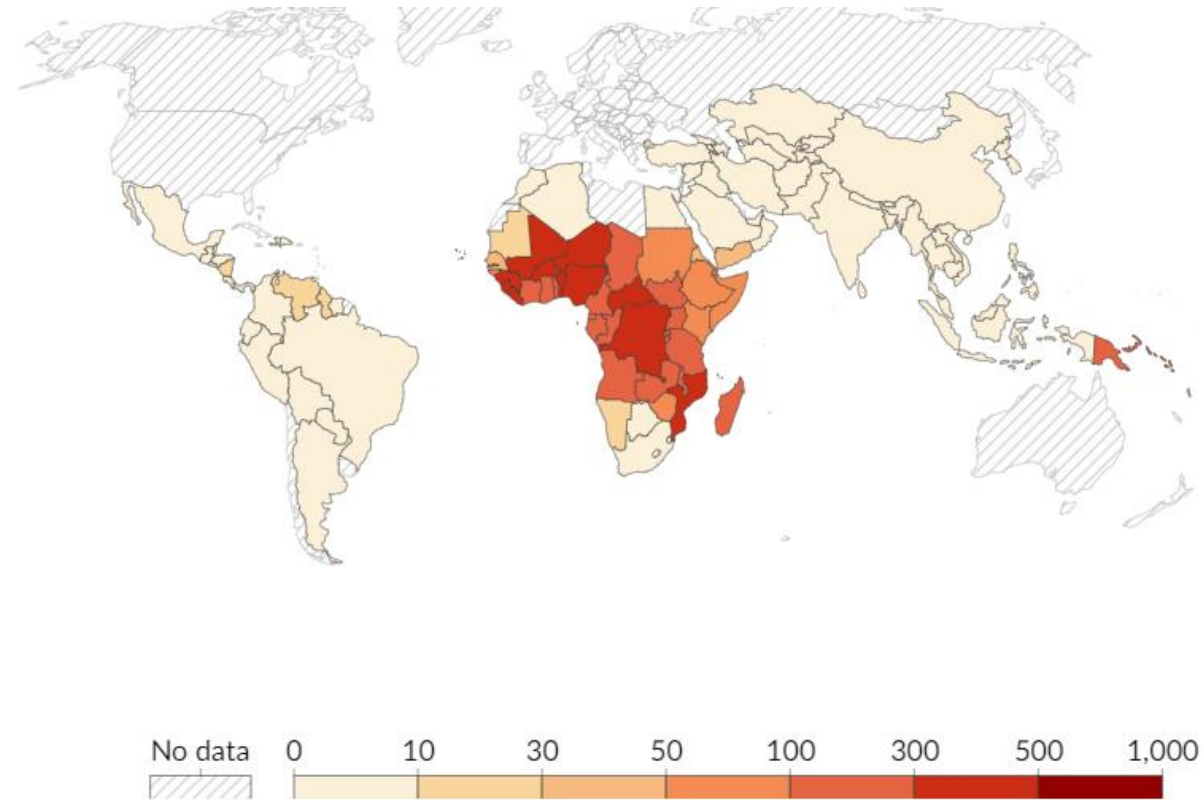
Infectii in functie de prezentare clinica si rezultate de laborator

	Bacterii	Virusuri	Paraziti	Fungi & alte
Eruptii	Meningococemie Rickettsioze Febra tifoida/ paratifoida	Chikungunya Dengue HIV acut Pojar Varicela Zika	-	-
Simptome respiratorii/ infiltrate pulmonare	Legioneloza Leptospiroza Melioidoza Ciuma Psitacoza Febra Q Tuberculoza	MERS Influenza	Schistosomiaza acuta	Coccidiomicoza Histoplasmoza

Malaria

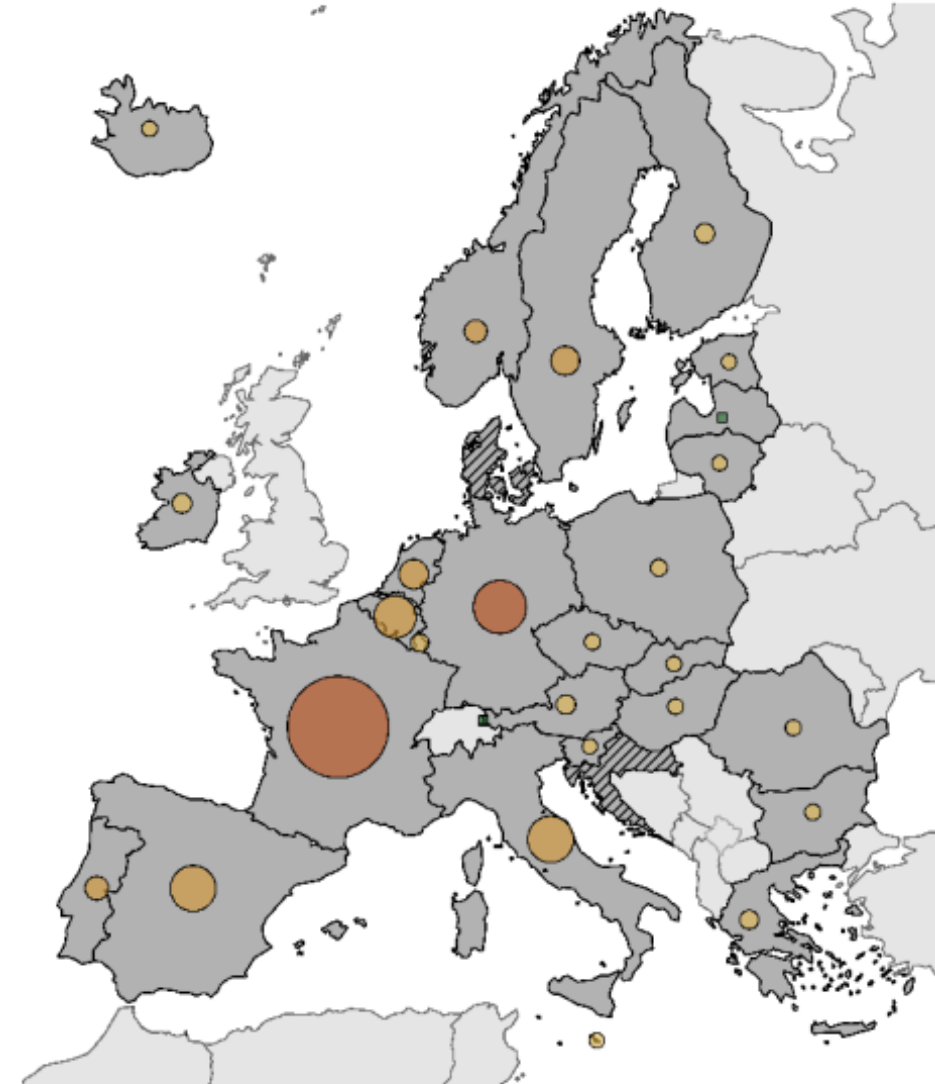
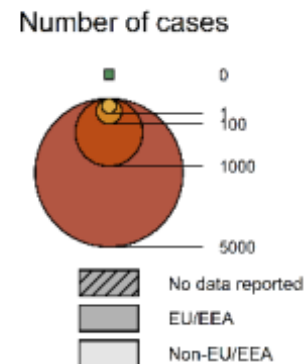


Incidenza la 1000 de locuitori



Malaria in Europa

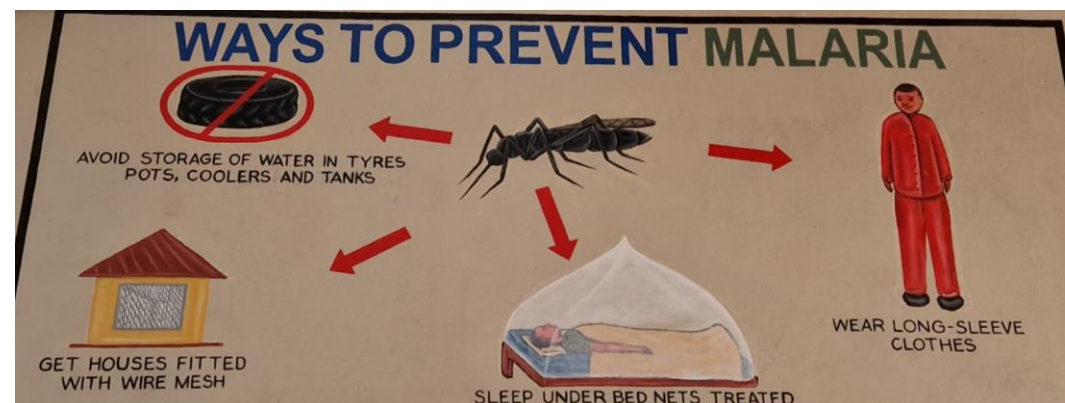
- 4856 de cazuri de malarie in 2021 EU/EAE
- 99.7% asociate calatoriilor & 13 dobandite in Europa (Grecia, Franta)
- Numar crescut de cazuri in lunile de vara
- Mai frecvent la barbati (1.3:1)
- 7 cazuri in Romania



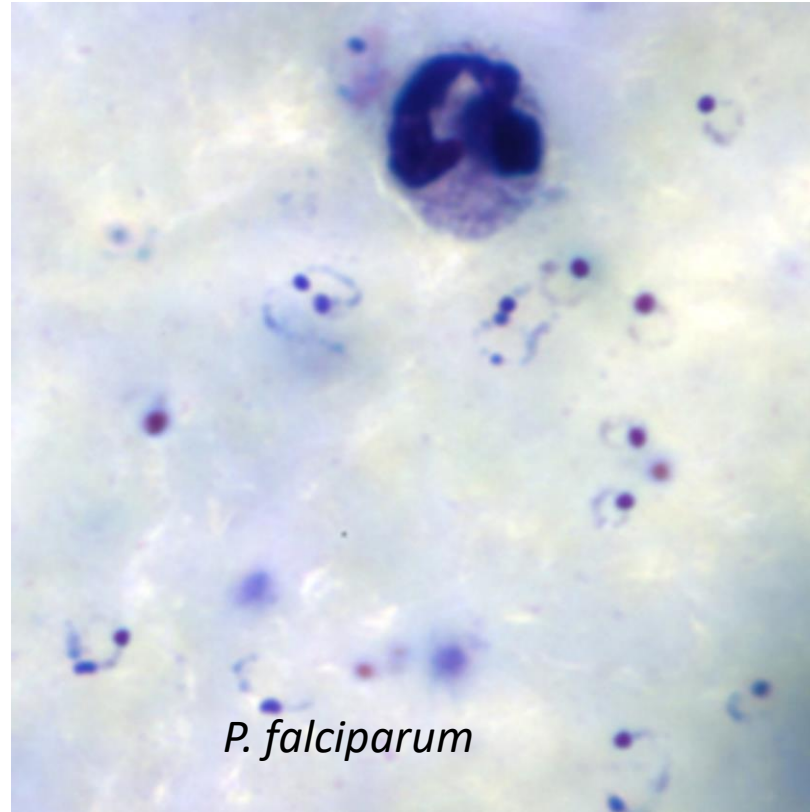
Administration boundaries: © Eurographics
The boundaries and names shown on this map do not imply official endorsement or acceptance by the European Union. ECDC. Map produced on 29 January 2023.

Malaria

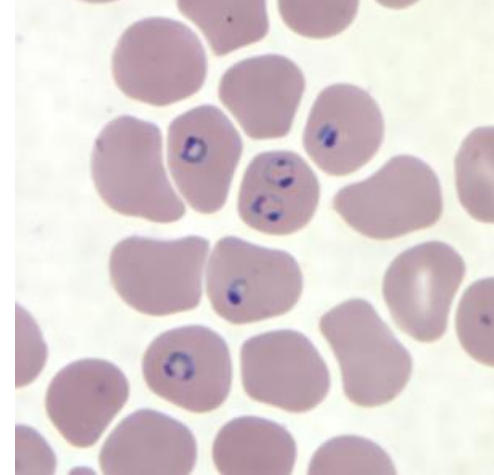
- Febra (periodicitate)
- Cefalee
- Mialgii
- Stare de rau general
- Severa: icter, anemie severa, insuficienta renala acuta, ARDS, stare confuzionala, convulsii, coma
- Incubatie (zile – luni in functie de specie)
- **Tratament:** artemisinin combination therapy
- **Preventie:** profilaxie medicamentoasa, spray repelent



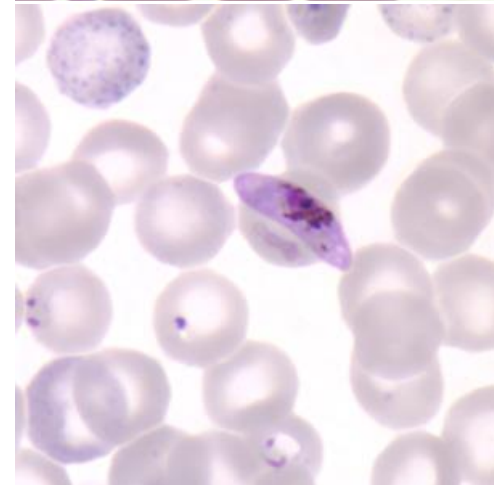
Malaria - diagnostic



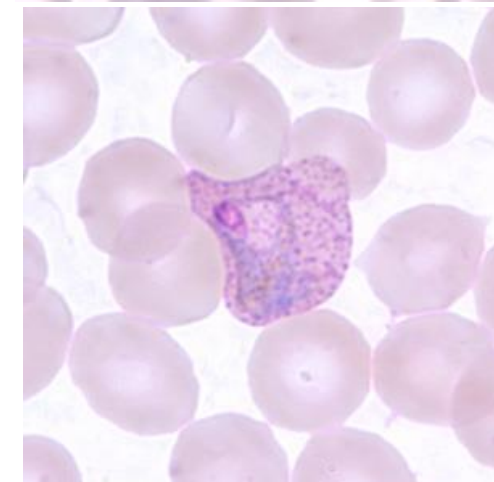
P. falciparum



P. falciparum

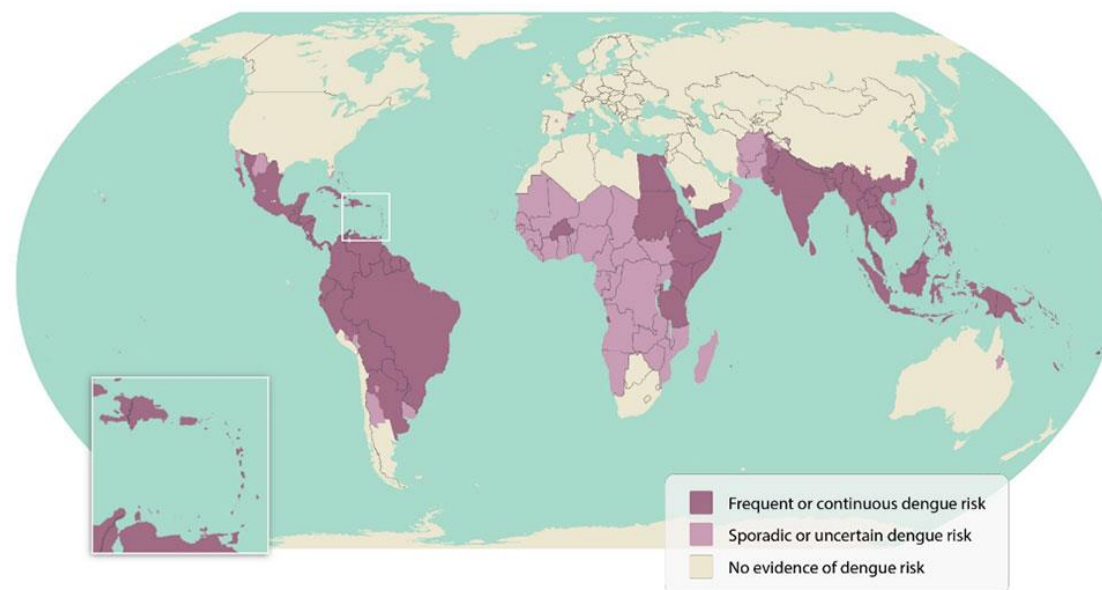


P. vivax



Dengue

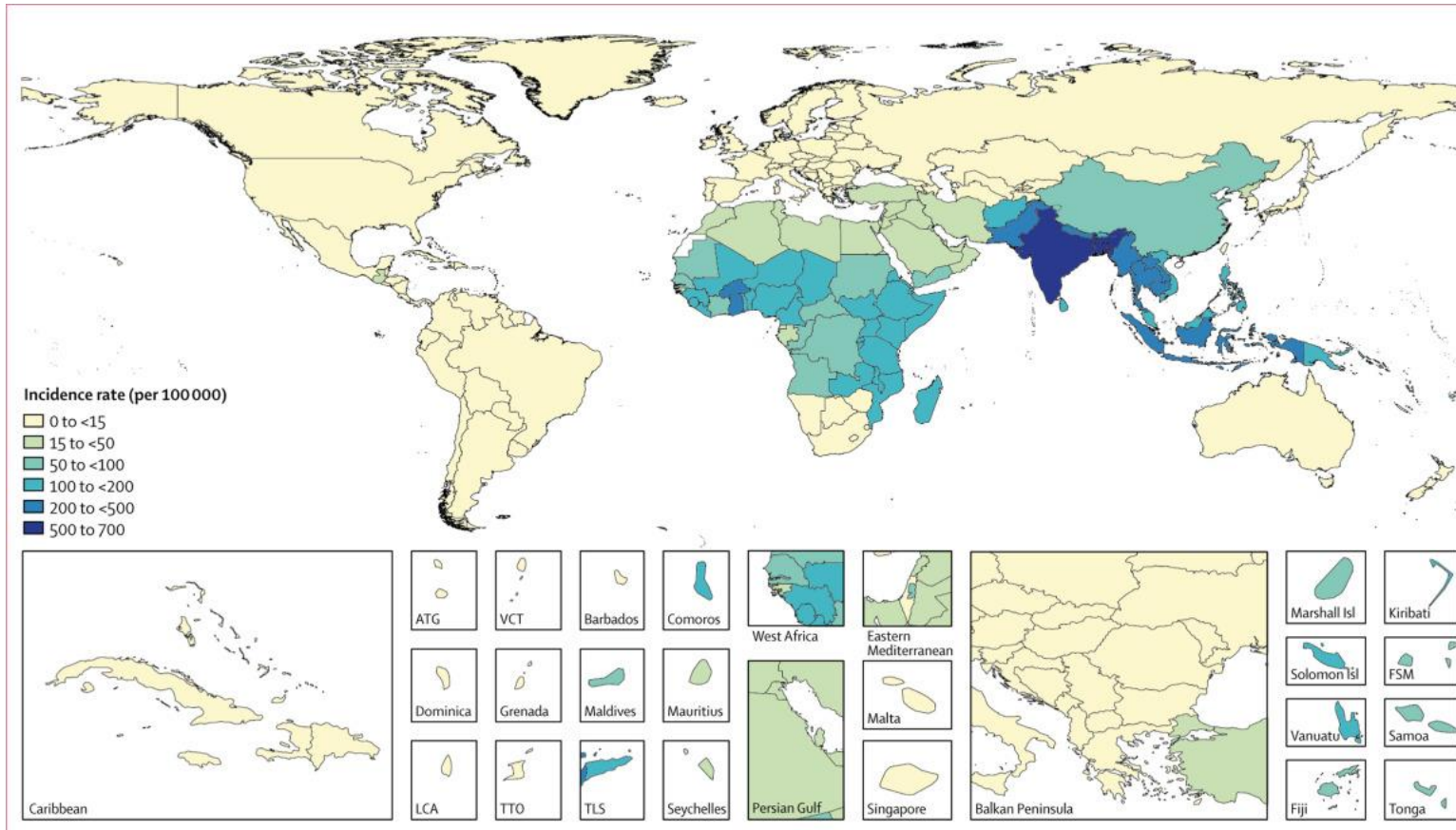
Dengue	Dengue with Warning Signs	Severe Dengue
<p>Probable Dengue Live in/travel to endemic area. Fever and 2 of the following criteria</p> <ul style="list-style-type: none">• Nausea/vomiting• Rash• Aches and pains• Tourniquet test positive• Leukopenia• Any warning sign <p>Laboratory-confirmed dengue</p> <ul style="list-style-type: none">• Molecular techniques/ IgM or IgG seroconversion	<p>Presence of warning signs</p> <ul style="list-style-type: none">• Abdominal pain or tenderness• Persistent vomiting• Clinical fluid accumulation (ascites, pleural effusion)• Mucosal bleeding• Lethargy, restlessness• Postural hypotension• Liver enlargement >2 cm• Progressive increase in hematocrit	<p>One of the following manifestations</p> <ul style="list-style-type: none">• Shock or respiratory distress due to severe plasma leakage• Severe bleeding (based on evaluation by attending physician)• Severe organ involvement (such as liver or heart)



Tratament: suportiv

Preventie: spray repelent, vaccin

Febra tifoida si paratifoida



- Febra nediferentiata
- Dureri abdominale
- Cefalee
- Diaree/ constipatie

- Complicatii ~ 2 saptamani

- **Dx:** hemoculturi
- **Tratament:** ceftriaxona, azitromicina (ciprofloxacina)
- **Preventie:** vaccin

Latest Posts On ProMED-Mail

10 Sep 2023 [Equine infectious anemia - North America \(04\): USA \(MS\) horse](#)

10 Sep 2023 [African swine fever - Europe \(23\): Sweden \(VM\) spread, reader comment](#)

10 Sep 2023 [Avian influenza \(137\): North America \(USA\) harbor seal](#)

10 Sep 2023 [Conjunctivitis - Viet Nam, Ghana, RFI](#)

10 Sep 2023 [Lassa fever - West Africa \(11\): Benin \(BO\) fatal](#)

10 Sep 2023 [Anthrax - Romania \(07\): \(MS\) human cases confirmed](#)

10 Sep 2023 [Eastern equine encephalitis - North America \(11\): USA \(RI\) donkey, presumptive +ve](#)



Boli transmisibile cu raportare obligatorie

Encefalite acute

Meningite virale, TB

Bruceloza

Dengue

Difterie

Febra tifoida si paratifoida

Febre hemoragice virale

Febra galbena

Holera

Malarie

Meningococemie

Pesta

Rabie

Tifos exantematic

...

Bolile transmisibile raportate, conform prevederilor H.G. nr. 589/2007

Bolile transmisibile care se raporteaza telefonic imediat si se completeaza „Fisa unica de raportare caz de boala transmisibila”, in maxim 5 zile

Bolile transmisibile pentru care se completeaza „Fisa unica de raportare caz de boala transmisibila”, in maxim 5 zile

Bolile transmisibile care se raporteaza lunar, numeric, pe grupe de varsta si mediu de resedinta

Bolile transmisibile care se raporteaza telefonic imediat si se completeaza „Fisa unica de raportare caz de boala transmisibila”, in maxim 5 zile

conform prevederilor H.G. nr. 589/2007

- Poliomielita cu virus salbatic
- Tetanos
- Tetanos neonatal
- Difterie
- Rujeola
- Infectie rubeolica congenitala
- Gripa umana cauzata de un nou subtip
- Infectie cu E. Coli entero-hemoragic (EHEC)
- Botulism
- Febra tifoida si paratifoida
- Listerioza
- Leptospiroza
- Boala meningococica
- Meningita virala
- Meningita bacilara TBC

De considerat

- Malaria cel mai frecvent diagnostic la calatorii cu febra
- Majoritatea infectiilor sunt cauzate de patogeni obisnuiti
 - rezistenta mai frecventa la antibiotice (Africa, Asia sau Orientul Mijlociu, în special la cei care au avut contact cu sistemul medical)
- Pentru a preveni infectiile transmisibile întrebați-vă întotdeauna: "Este necesar ca acest pacient să fie izolat?"
 - febre hemoragice virale (Ebola, Marburg, Lassa) dar leptospiroza, infectiile meningococice, rikettsiozele pot determina hemoragii

Va multumesc pentru atentie!

