



## TRAVEL MEDICINE: What you should know?

- What is travel medicine?
- Available resources?
- When is counseling necessary?





## Hong Kong Investigating Initial Chikungunya Case of 2025

August 4, 2025 • 4:50 am CDT

### CDC Reports Fourth Human Case of H5 Bird Flu Tied to Dairy Cow Outbreak

Español (Spanish) Print

#### **Press Release**

For Immediate Release: July 3rd, 2024

Contact: Media Relations

(404) 639-3286

Healthcare & Pharmaceuticals

## Japan's health ministry reports country's first death from mpox

By Reuters

December 13, 2023 4:21 PM GMT+7 · Updated 4 months ago





TOKYO, Dec 13 (Reuters) - Japan's health ministry on Wednesday reported the country's first fatality from mpox.

The patient was a man in his 30s with a prior infection with HIV and no travel history, the ministry said in a statement.

Mpox is a viral infection that spreads through close contact, causing flu-like symptoms and pus-filled lesions. Most cases are mild but it can kill.



Home > Society > General News

General News >>

## Concerns Growing over Measles Outbreak in Japan







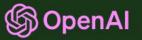




LETTER ► Emerg Infect Dis. 2016 Jul;22(7):1317–1318. doi: 10.3201/eid2207.160469 🖸

#### Yellow Fever in a Worker Returning to China from Angola, March 2016

Yun Ling <sup>1</sup>, Jun Chen <sup>1</sup>, Qin Huang <sup>1</sup>, Yunwen Hu <sup>1</sup>, Aihong Zhu <sup>1</sup>, Shanke Ye <sup>1</sup>, Lie Xu <sup>1</sup>, Hongzhou Lu <sup>1,⊠</sup>



Research >

Product ~

Developers >

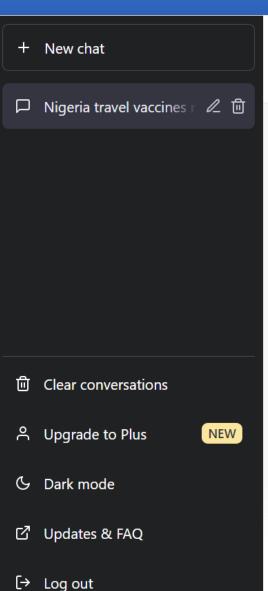
Safety

Company ~

# Introducing ChatGPT

We've trained a model called ChatGPT which interacts in a conversational way. The dialogue format makes it possible for ChatGPT to answer followup questions, admit







I'm traveling to Nigeria. Which vaccines do you recommend?

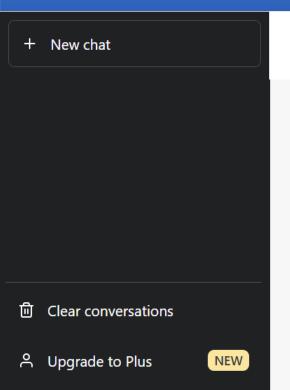


If you are traveling to Nigeria, it is recommended that you get vaccinated against a number  $\Box$   $\Box$  of diseases, including:

- 1. Yellow fever: Yellow fever vaccination is required for all travelers to Nigeria, as the disease is endemic in many areas of the country.
- 2. Hepatitis A and B: These vaccines are recommended for all travelers to Nigeria, especially if you will be staying for an extended period or have close contact with locals.
- 3. Typhoid: Typhoid fever is a common food and waterborne disease in Nigeria. It is recommended that you get vaccinated against it before traveling.
- 4. Meningitis: Nigeria is part of the "meningitis belt" in sub-Saharan Africa, where outbreaks of meningococcal meningitis occur regularly. Vaccination is recommended for travelers, especially during the dry season (December to June).
- 5. Polio: Nigeria has recently been Segenerate response io virus transmission, but

Send a message...





WA

I'm traveling to Nigeria. Which vaccines do you recommend?

- 5. Polio: Nigeria has recently been declared free of wild polio virus transmission, but vaccination is still recommended, especially for travelers staying for an extended period.
- 6. Measles: Measles outbreaks occur regularly in Nigeria. Make sure you are up to date on your measles vaccination before traveling.
- 7. Cholera: Cholera outbreaks occur regularly in Nigeria, especially during the rainy season (June to September). The vaccine is not 100% effective, but it may offer some protection.

It is important to consult with a healthcare provider or a travel medicine specialist at least 4-6 weeks before your trip to discuss which vaccines are recommended for you based on your individual health status, planned activities, and other factors.

## Risk of Travel

- Risk of infectious diseases
- Spreading of infectious diseases from one country to another
- Risk of exacerbation of existing diseases e.g. DM, asthma, epilepsy, etc.
- Risk of travel-related problems e.g. AMS, Decompression sickness, economy class syndrome etc.
- Risk of accident/injury/homicide
- Psychological problem in travelers e.g. culture shock

## **Practices in Travel Medicine**

#### Pre Travel visit

- Risk assessment and management
- Recommendation of vaccination/chemoprophylaxis
- Malaria prevention and prophylaxis
- High altitude counselling
- Other risk: travelers with underlying diseases, specific destination

### Post travel and During Travel Visit

- Screening of returned travelers
- Diagnosis and treatment of common problem in returned-travelers eg fever, diarrhea, rash, eosinophilia
- Surveillance, Prevention and Control, Research

80%

## **Practices in Travel Medicine**

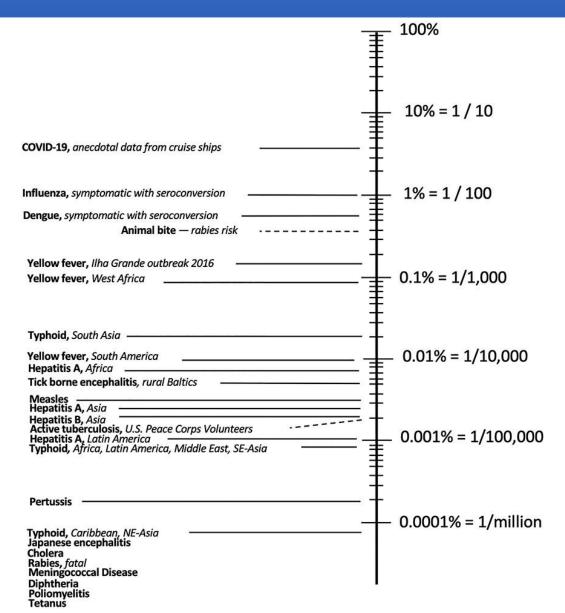
- Pre Travel visit
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### Post travel and During Travel Visit

- Screening of returned travelers
- Diagnosis and treatment of common problem in returned-travelers eg fever, diarrhea, rash, eosinophilia

20%

• Surveillance, Prevention and Control, Research

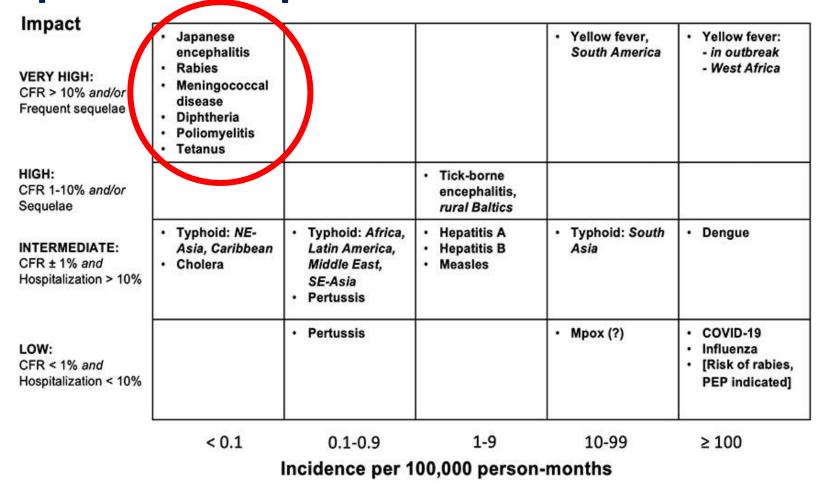


#### **NEW STEFFENOGRAM!**

Vaccine preventable disease travel health risks: Estimated incidence per month in lower income countries among non-immunes

Steffen R, et al. J Travel Med. 2023;taad085. [published online ahead of print, 2023 Jun 21].

## Impact of symptomatic VPDs in travellers





## No vaccine package in Travel Medicine



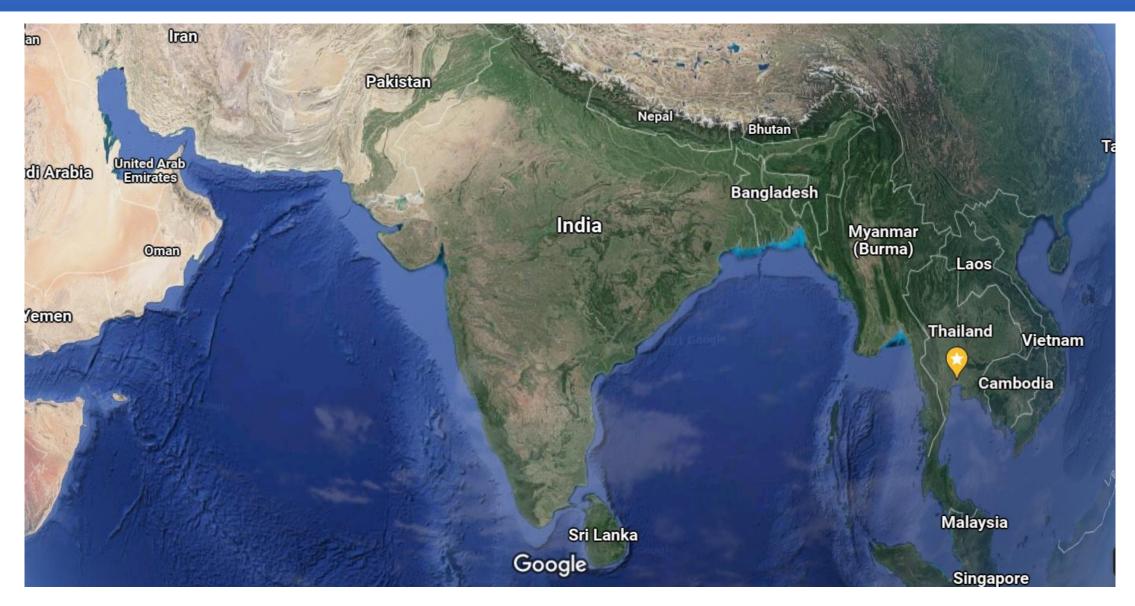
## Peru







## INDIA





#### Structured Approach to Medical Consultation before international travel

#### Risk Assessment

Medical history, including medications, disabilities, immune status, immunizations, surgeries, allergies, and pregnancy or breast-feeding

Prior travel experience

Specific itinerary, including regions, season, and dates

Activities (e.g., adventure travel and events involving mass gatherings)

Type of accommodations

Travelers' risk tolerance

Financial challenges

#### Standard In-Office Interventions

#### Administration of immunizations

Updating of routine vaccines —

MMR, Tdap, pneumococcal, varicella, influenza
Routine travel vaccines —
hepatitis A, typhoid, hepatitis B
Special travel vaccines —
yellow fever, rabies, polio, meningococcal, Japanese encephalitis, cholera, tickborne encephalitis

#### Malaria chemoprophylaxis (if risk)

Individualize to itinerary and patient

#### Travelers' diarrhea

Food and water precautions
Oral rehydration and use of loperamide
and bismuth
Antibiotic self-treatment options for
severe diarrhea
Prophylaxis with bismuth or antibiotic
(only if high risk)

#### Focused Education before the Trip

#### Vectorborne diseases (if risk)

Altitude illness

Personal protection measures for malaria, dengue, chikungunya, Zika virus infection, leishmaniasis, rickettsial disease, sleeping sickness

#### Other travel-related illnesses (as applicable)

Travelers' thrombosis
Motor vehicle injury
Bloodborne and sexually transmitted
infections
Swimming, water exposure,
and marine hazards
Transportation-associated illnesses
Respiratory infection and tuberculosis
Rabies and animal-associated illness
Skin conditions and wounds

#### Medical kit and medical care abroad

Personal health kit Available medical facilities Evacuation insurance; supplemental health insurance

## **Pre-travel Consultation**

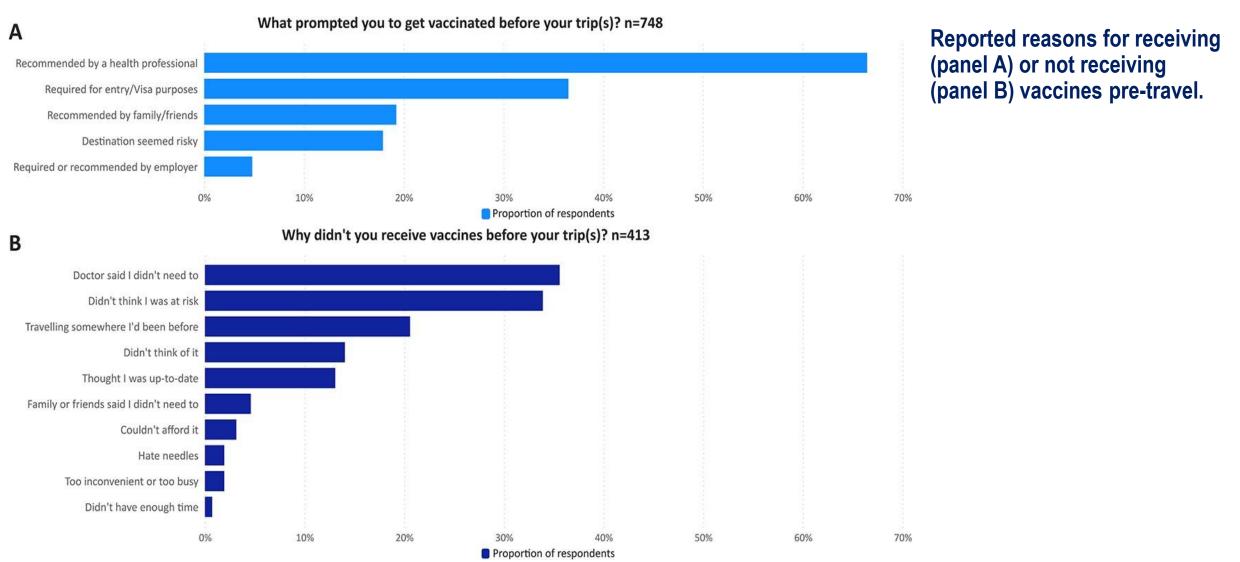
- Geographical and health risk at the destination
- Medical history and travel itinerary
- Individual risk assessment
- Standard intervention and preventive measures

### **General Consideration for Travel Vaccination**

□ Routine vaccine ☐ EPI, different country – different EPI ☐ MMR, Hep B, Tetanus etc. □ Required vaccine ☐ Required for specific country or event ☐ Yellow fever vaccine — Endemic country, Meningococcal vaccine — Hajj, Umrah □ Recommended vaccine ☐ Hepatitis A, typhoid, rabies, JE etc.

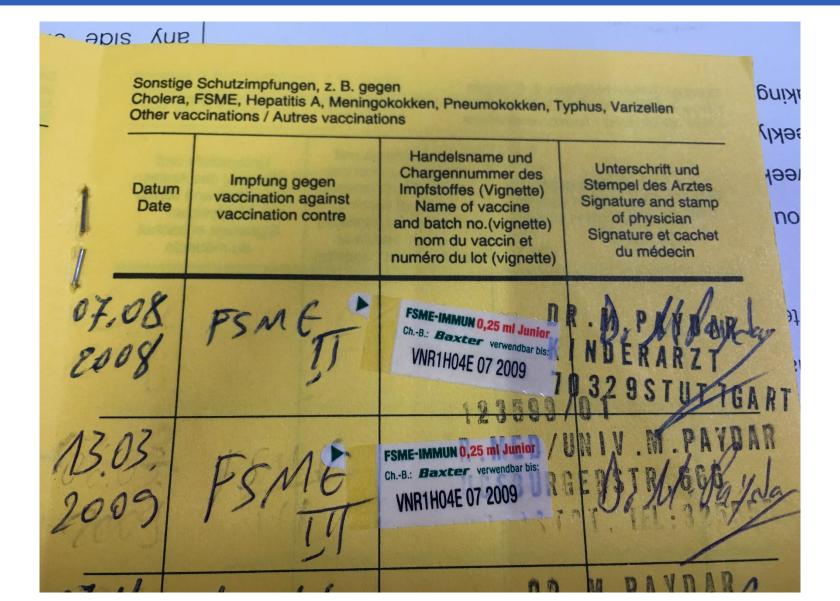
## **Pre-travel Consultation**

- Geographical and health risk at the destinating travel
   Medical history and to health risk during travel
   Inimize the travel health risk during travel
- - Standard intervention and preventive measures



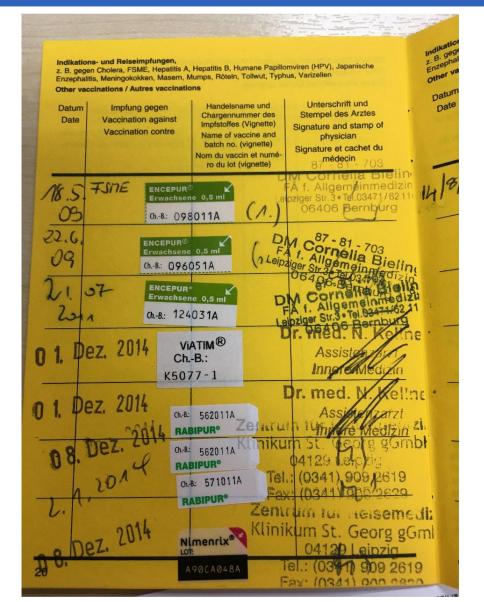
### **Routine vaccine and Travel Vaccine**

Travel Vaccine	Routine Vaccine	
Hepatitis A		
Japanese Encephalitis		
Polio (IPV)		
Typhoid vaccine	MMR	
Rabies	Tetanus, Diphtheria, Pertussis	
Yellow fever	Hepatitis B	
Meningococcal vaccine	Influenza	
<u>Cholera</u>	Varicella	
Tick-borne encephalitis	Pneumococcal	
	Hib	
	Rotavirus	





## Thai Travel Clinic Hospital for Tropical Diseases Faculty of Tropical Medicine, Mahidol University



Indika z. B. g. Enzepl Other Datur Date	Vaccination against Vaccination contre  Handelsname und Chargennummer des Impfstoffes (Vignette)  Unterschrift und Stempel des Arztes
0 1. D	ez. 2014 Lot: Exp.:  JEV13A31B AUG/2015  Lot: Assistance  Assistance
de —	ez. 2014 Ch.8: 562011A RABIPUR®  Ch.8: 562011A RABIPUR®  Ch.8: 562011A RABIPUR®
	Jan. 2015  Ch.B: 571011A  RABIPUR  Ch.B: 571011A  RABIPUR
02	Nimenrix Klinikum St. Georg agn 04129 Leipzig A90CA048A Tel.: (0341) 909 2619 Fax: (0341) 900 2629
	20/1/16 MERIEUT BATCH LISZS

## Case 3

 A 30-year-old Thai male is visiting the travel clinic for counseling before traveling to Gabon.

## What would you do?

## Case 3

• A 30-year-old Thai male is visiting the travel clinic for counseling before traveling to Gabon.

Travel Risk Assessment (Trip Details)	
Itinerary	<ul> <li>Countries and specific regions, including order of countries if &gt;1 country</li> <li>Outbreaks at destination</li> <li>Rural or urban destinations</li> </ul>
Timing	<ul><li>Season of travel</li><li>Time to departure</li><li>Trip duration</li></ul>



#### Travel Risk Assessment (Trip Details)

#### Reason for travel Adoption Adventure Business Education or research • Medical tourism (seeking health care) Pilgrimage Tourism Visiting friends and relatives • Volunteer, missionary, or aid work Travel style • Accommodations (e.g., camping/ tent, dormitory, guest house, hostel/ budget hotel, local home or host family, tourist/ luxury hotel) • "Adventurous" eating • Independent travel or package tour Level of hygiene at destination • Modes of transportation • Traveler risk tolerance

Travel with children

#### Special activities

- Animal interactions (including visiting farms, touring live animal markets)
- Cruise ship
- Cycling/motorbiking
- · Disaster relief
- Diving
- Extreme sports
- High elevations
- Medical care (providing or receiving)
- Rafting or other water exposure
- Sexual encounters (planned)
- Spelunking

## Case 3

- Individual risk assessment
- Risk communication
  - Address Special Health Risks
  - Educate to Change Behavior
- Risk management
  - Vaccine
  - Prophylactic medication (malaria)
  - Adjust/Change Plans
  - Postpone/Cancel Trips



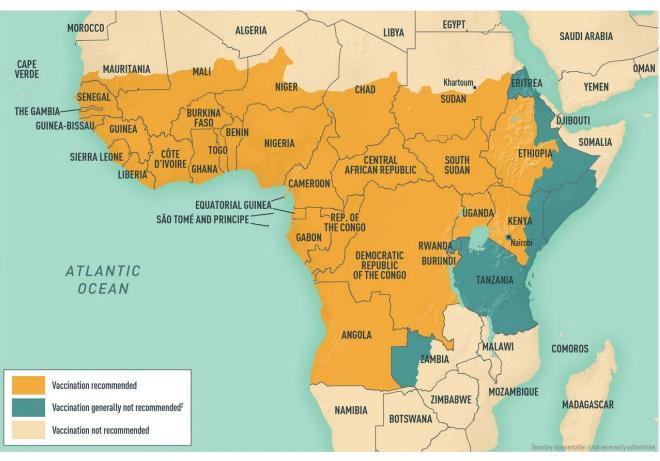
## Case 3

- A 30-year-old Thai male is visiting the travel clinic for counseling before traveling to Gabon.
- No U/D, Cannot recognize vaccination history
- Working with 3 colleagues in the capital city of Gabon for 1 weeks (business trips)
- Stay mostly in the hotel
- Leaving Thailand next month with Qatar airway transiting Dubai
- Request for yellow fever vaccine

## **Yellow Fever**

- Acute viral hemorrhagic disease transmitted by infected mosquitoes
- Nonhuman and human primates are the main reservoirs of the virus
- Endemic in Africa and Latin America
- Incubation period usually 3-6 days
- Most infections likely to be asymptomatic
- Case fatality rate in severe case is 20-50%





### Yellow Fever endemic area

### **Yellow Fever Vaccine**

- Live attenuated vaccine
- More than 900 million doses used
- Excellent safety and effective against the disease
- Need to receive 10 days before travel
- Routinely used in endemic country
- Immunity from vaccine long lasting\*\*

### YF Vaccine Immunogenicity in Adults

#### **Immunogenicity Among Adults**

• The immunogenicity of YF vaccine has been assessed in clinical studies of **adults** from **non-endemic** countries, 1–8 including international travelers, 1,2,4 and in adult residents from **YF endemic** countries 9–11



YF vaccine is immunogenic with high seroconversion rates in adults from YF endemic and non-endemic regions

Trials identified from PubMed searches, with >10 vaccinated subjects and reported seroconversion data, are included.

<sup>\*</sup>Vaccine given as one-third dose; †Administered sequentially with a Japanese encephalitis vaccine; ‡Age range not specified.

Several serological testing methods were used over time and as many thresholds for seroconversion. Neutralizing antibody testing were mostly used with a threshold of neutralizing titers ≥ 1/5, ≥1/10 or ≥ 1/20 or a post-vaccination neutralizing antibody titer ≥4-fold prevaccination titer. YF: Yellow Fever; yrs: years.

<sup>1.</sup> Wolga J, et al. J Biol Stand. 1986;14(4):289–95; 2. Roche JC, et al. Vaccine. 1986;4(3):163–5; 3. Nasveld PE, et al. Hum Vaccines. 2010;6(11):906–14; 4. Lang J, et al. Am J Trop Med Hyg. 1999;60(6):1045–50; 5. Receveur MC, et al. Bull Soc Pathol Exot. 1993;86(5 Pt 2):406–9; 6. Ambrosch F, et al. Vaccine. 1994;12(7):625–8; 7. Pfister M, et al. Am J Trop Med Hyg. 2005;72(3):339–46; 8. Roukens AH, et al. PLoS One. 2008 23;3(4):e1993; 9. Fabiyi A, et al. Proceedings of 1st International Conference on Viral and Bacterial Vaccines, Paris. 1983:141–3; 10. Juan-Giner A, et al. Lancet. 2021;397(10269):119–27; 11. Nasidi A, et al. Trans R Soc Trop Med Hyg. 1993;87(3):337–9.

CONTRAINDICATIONS	PRECAUTIONS
<ul> <li>Allergy to vaccine component<sup>1</sup></li> <li>Age &lt;6 months</li> <li>Symptomatic HIV infection or CD4 T-lymphocytes &lt;200/mm<sup>3</sup> (or &lt;15% of total in children aged &lt;6 years)<sup>2</sup></li> <li>Thymus disorder associated with abnormal immunecell function</li> <li>Primary immunodeficiencies</li> <li>Malignant neoplasms</li> <li>Transplantation</li> <li>Immunosuppressive and immunomodulatory therapies</li> </ul>	<ul> <li>Age 6–8 months</li> <li>Age ≥60 years</li> <li>Asymptomatic HIV infection and CD4 T-lymphocytes 200–499/mm³ (or 15%–24% of total in children aged &lt;6 years)²</li> <li>Pregnancy</li> <li>Breastfeeding</li> </ul>





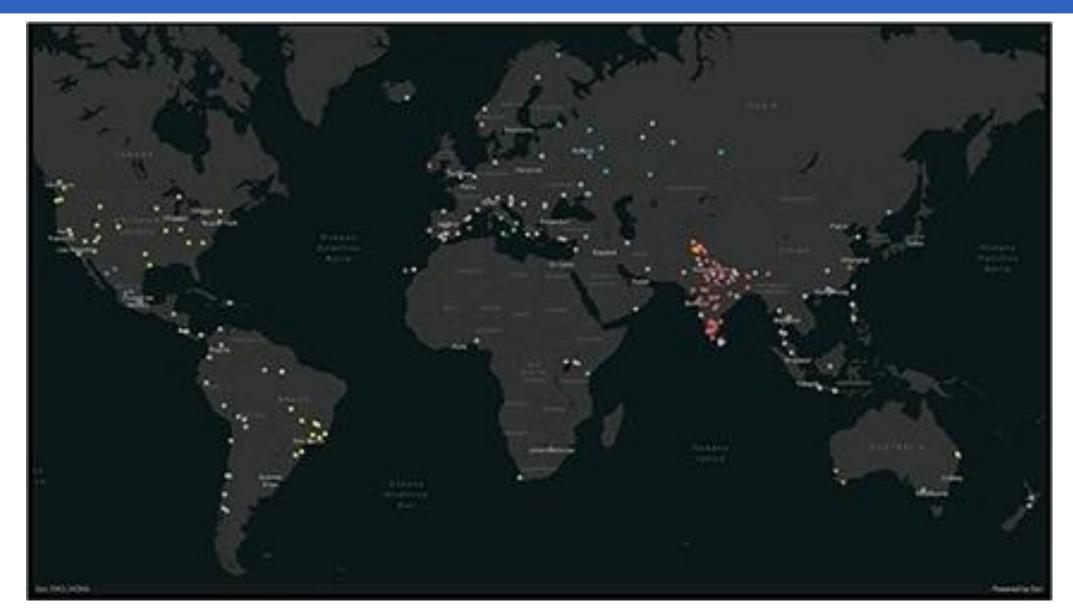


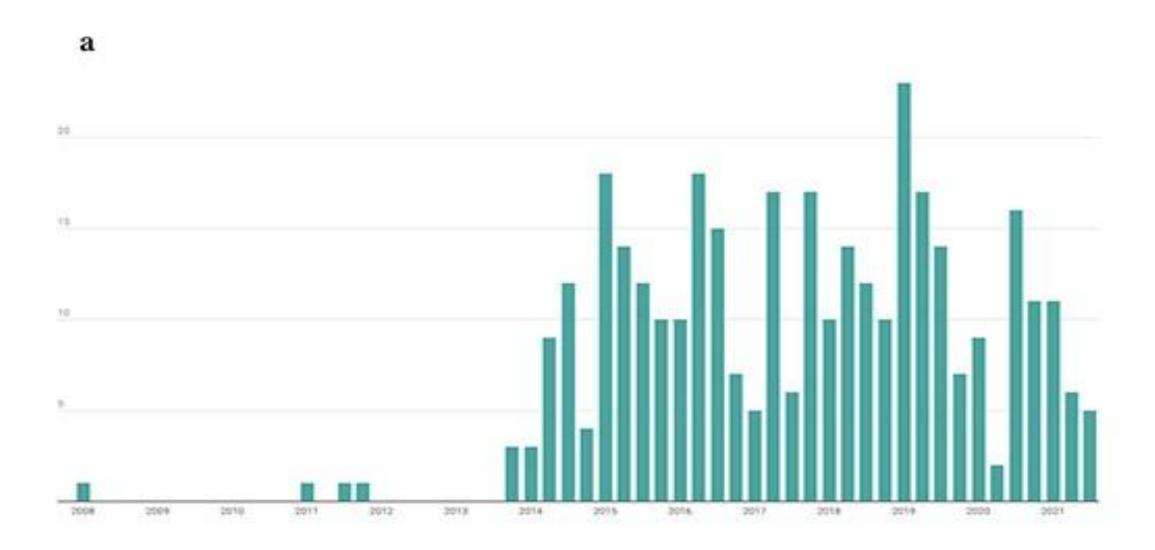


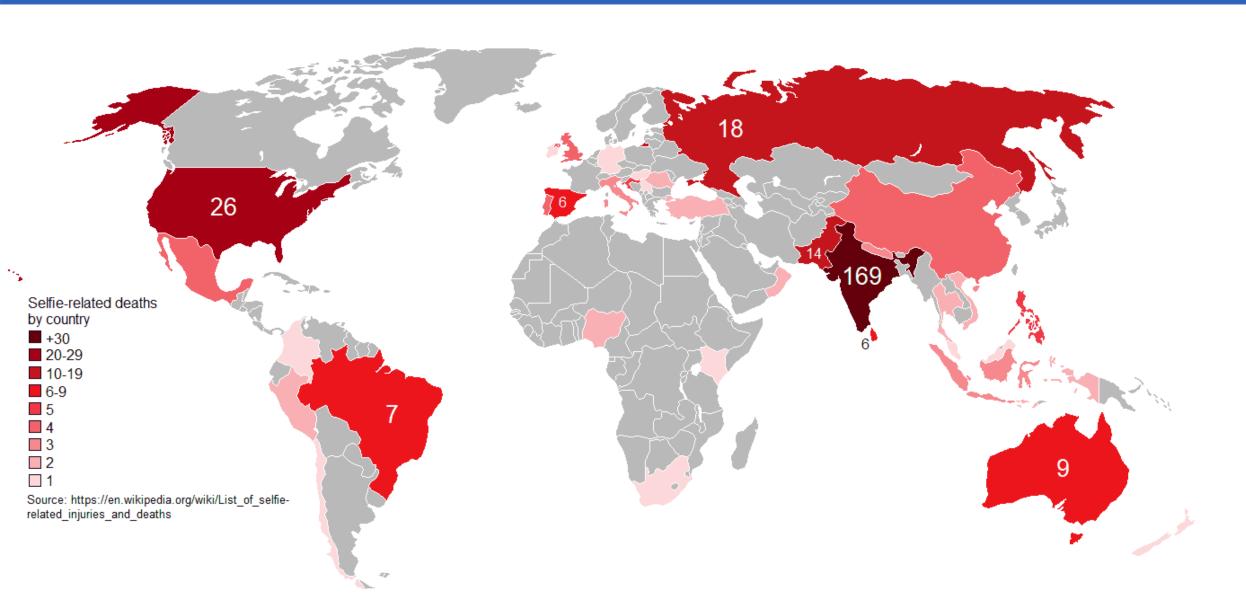
Serengeti, Tanzania

Masai-Mara, Kenya











DAILY SABAH

Nearly 260 people have died taking selfies since 2011, study says

BY DAILY SABAH | ISTANBUL | OCT 04, 2018 - 12:00 AM GMT+3 |

## Selfie deaths: 259 people reported dead seeking the perfect picture





# Irish tourist falls to his death from train 'while trying to take a selfie' on 'death railroad' in Thailand

- Patrick Ward, a 45-year-old Irish national, fell from the moving train in Thailand
- Mr Ward fell from the train after leaning out of the carriage to take photos
- · Rescuers tried to resuscitate him for half an hour but their efforts were in vain





Journal of Travel Medicine, 2022, 1–4 https://doi.org/10.1093/jtm/taab170 Research Letter

- 13.5 years analysis
- Increased report after 2012
- Death: 379 (141 identified as travelers)

#### Research Letter

### Selfie-related deaths using web epidemiological intelligence tool (2008–2021): a cross-sectional study

Manuel Linares<sup>®</sup>, MD<sup>1,2,\*</sup>, Laura Santos, MD<sup>1,3</sup>, Joaquín Santos, BSc<sup>1</sup>, Cristina Juesas, BSc<sup>1</sup>, Miguel Górgolas, MD, PhD<sup>4</sup> and José-Manuel Ramos-Rincón, MD, PhD<sup>5</sup>

Angelo et al. Malar J (2017) 16:293 DOI 10.1186/s12936-017-1936-3

Malaria Journal

13 years analysis

RESEARCH Open Access



## Malaria after international travel: a GeoSentinel analysis, 2003–2016

Kristina M. Angelo<sup>1\*</sup>, Michael Libman<sup>2</sup>, Eric Caumes<sup>3</sup>, Davidson H. Hamer<sup>4</sup>, Kevin C. Kain<sup>5</sup>, Karin Leder<sup>6,7</sup>, Martin P. Grobusch<sup>8</sup>, Stefan H. Hagmann<sup>9</sup>, Phyllis Kozarsky<sup>1,10</sup>, David G. Lalloo<sup>11</sup>, Poh-Lian Lim<sup>12,13</sup>, Calvin Patimeteeporn<sup>1</sup>, Philippe Gautret<sup>14</sup>, Silvia Odolini<sup>15</sup>, François Chappuis<sup>16</sup>, Douglas H. Esposito<sup>1</sup> and for the GeoSentinel Network

• Severe malaria: 444

• Death: 12

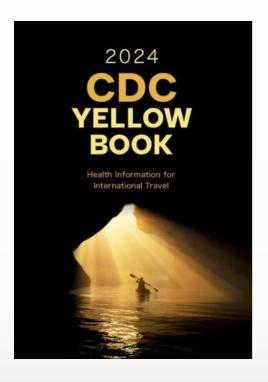


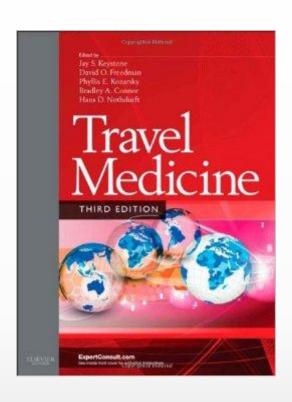
# ISTM Body of Knowledge

- Revised 2017
- To guide the professional development of individuals practicing travel medicine
- To shape curricula and training programs (and also research) in travel medicine

# ISTM Body of Knowledge

- 1. Epidemiology
- 2. Immunology/Vaccinology
- 3. Pre-travel assessment/consultation
- 4. Diseases contracted during travel
- 5. Other clinical conditions associated with travel
- 6. Post-travel assessment
- 7. Administrative and general travel medicine issues







VOLUME 26 | ISSUE 4 | JUNE 2019









### **International Society of Travel Medicine**

Promoting healthy travel worldwide

Established 1991

International Society of Travel Medicine



JOURNAL ARTICLE ACCEPTED MANUSCRIPT

#### Climate change and glacier melting: risks for unusual outbreaks?

Ryan Varghese, BPharm, Pal Patel, BTech, Dileep Kumar, PhD M. Rohit Sharma, MD, PhD 🔀 **Author Notes** 

Journal of Travel Medicine, taad015, https://doi.org/10.1093/jtm/taad015

**Published:** 31 January 2023 Article history ▼

JOURNAL ARTICLE

CORRECTED PROOF

### Air pollution crisis in Southeast Asia and its impact on international travellers | Get access >

Amornphat Kitro, MD, Jinjuta Panumasvivat, MD, Phimphan Pisutsan, MD, Wasin Matsee, MD 🔀

Journal of Travel Medicine, taad077, https://doi.org/10.1093/jtm/taad077

**Published:** 06 June 2023 Article history ▼ JOURNAL ARTICLE

#### Heat-related illnesses are an increasing threat for travellers to hot climate destinations 8

Wasin Matsee, MD ™, Sakarn Charoensakulchai, MD, Aisha N Khatib, MD

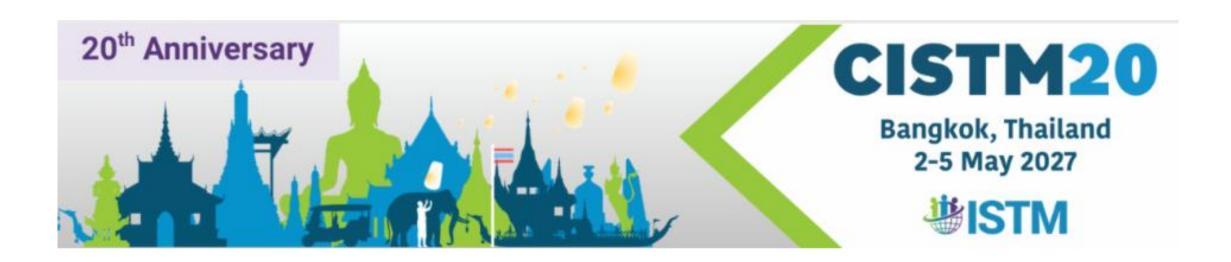
Journal of Travel Medicine, Volume 30, Issue 4, May 2023, taad072, https://doi.org/10.1093/jtm/taad072

Published: 24 May 2023 Article history ▼



### **Challenges in Travel Medicine**

- Climate changes
- Emerging Infectious diseases
- Changing patterns of drug resistance
- Elderly travelers or travelers with chronic medical conditions
- Artificial Intellegence, Technology for travel (mobile app) etc



# CISTM20 2-5 May 2027 | Bangkok, Thailand

Save the Date for CISTM20!

