The ITIT (illness Tracking in Travellers) App
– for information and surveillance

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WHO Collaborating Centre for Travellers' Health

- **Travellers are a key element in the spread of infection**
- Travel and migration continue to increase
- Travellers are sentinels visiting all countries
  - Can be sampled upon return at relatively few points
  - Tracking travel related infection can allow for the detection of pathogen point of entry
  - To date no enough on illness in travel

Background to the development of the ITIT app as a tool for travel medicine

- Provide travel health advice that is NON COMMERCIAL
- **Allied with WHO** – Free to access -12 languages
- **E-CONSENT** paperless
- How can data be used for the good of public health yet respect individual rights and liberties?
- How can we provide a robust methodology to avoid false identification of outbreaks
- **AVOID MISINFORMTION** - no hype but yet share information for public health benefit
- ITIT aims to fulfil the **5 conditions of innovation in digital health**: Trust, Evidence, Accountability, Data Protection, Data access
- Future use of AI for personalized travel medicine

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Contents lists available at ScienceDirect

Travel Medicine and Infectious Disease

journal homepage: www.elsevier.com/locate/tmaid

Mobile apps for travel medicine and ethical considerations: A systematic review

Agata Ferretti [a,*,1], Nadja Hedrich [b,1], Thibault Lovey [b,1], Effy Vayena [a,2], Patricia Schlagenhauf [b,2]

[a] Health Ethics and Policy Lab, Department of Health Sciences and Technology, ETH, Zürich, Switzerland
[b] WHO Collaborating Centre for Travellers' Health, Department of Public and Global Health, Epidemiology, Biostatistics and Prevention Institute, University of Zürich, Switzerland

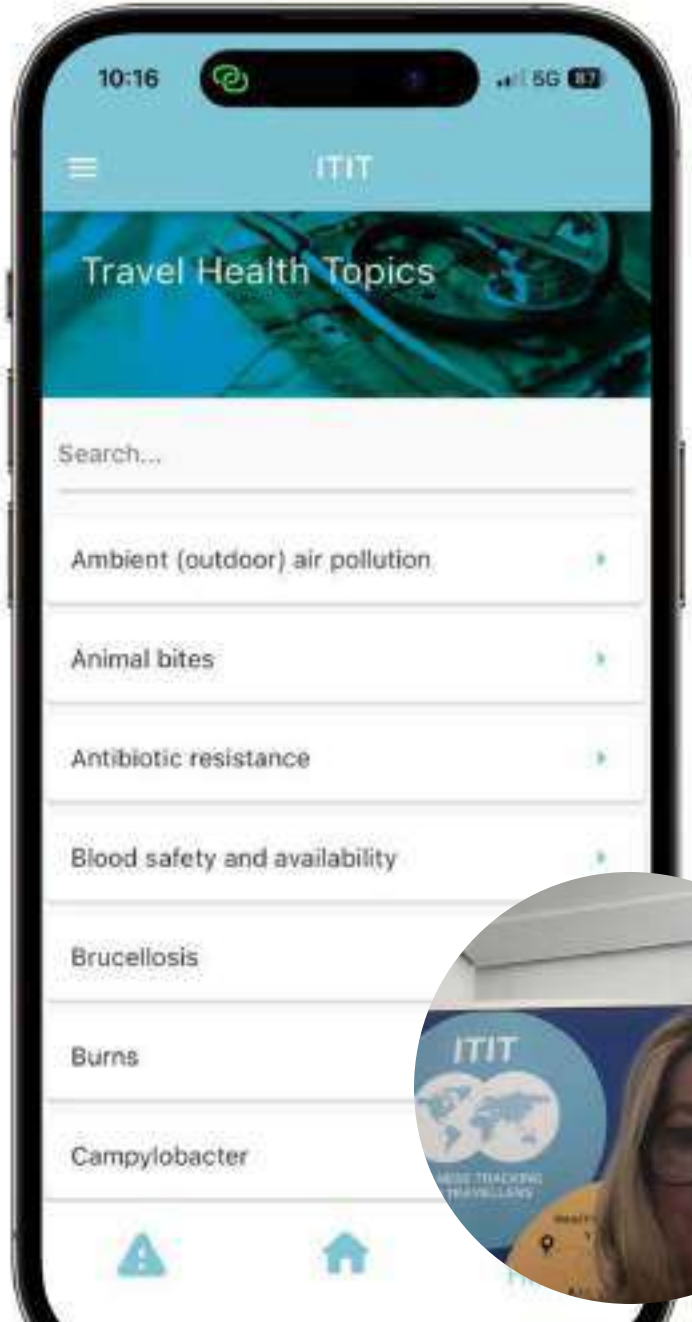
The ITIT App - uses travellers for infection surveillance

Travellers are sentinels visiting all countries	Access to **“bottom up” real-time information**
Link geolocation, infection and environmental data	Complement and augment existing surveillance
Collaboration between WHO and UZH	Data S

* ITIT is funded by the Swiss National Science Foundation

17:40
5G
ITIT
Disease Outbreak News
Diphtheria - African Region (AFRO)
22.11.2025
Marburg virus disease- Ethiopia
21.11.2025
Chikungunya virus disease- Global situation
18.11.2025
Rift Valley fever- Mauritania and Senegal
05.11.2025
Nipah virus infection - Bangladesh
18.09.2025
Ebola virus disease – Democratic Republic of the Congo
16.09.2025

10:16
5G
Country Information
Search...
Afghanistan
Albania
Algeria


10:16
5G
ITIT
Travel Health Topics
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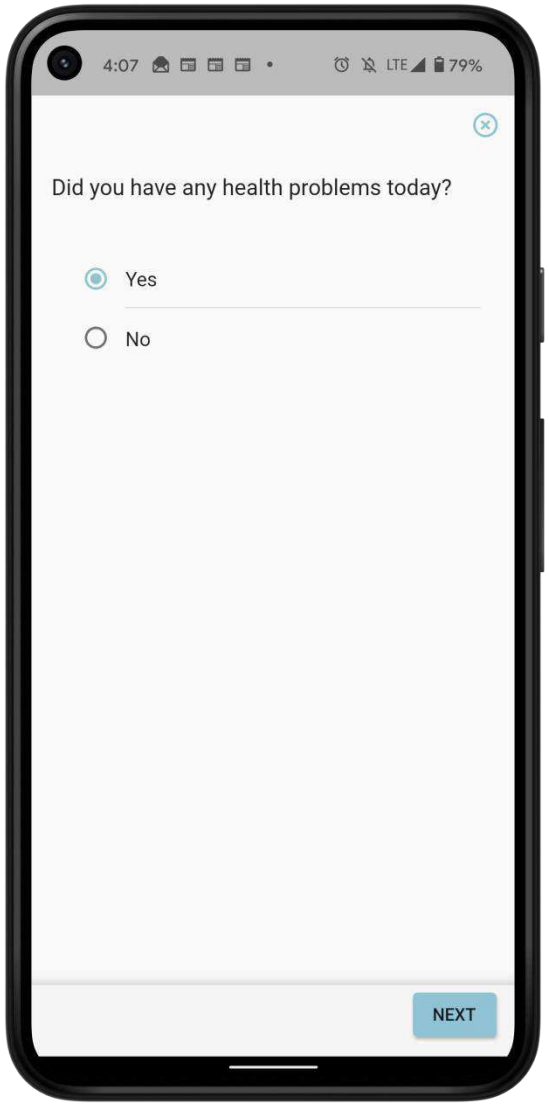
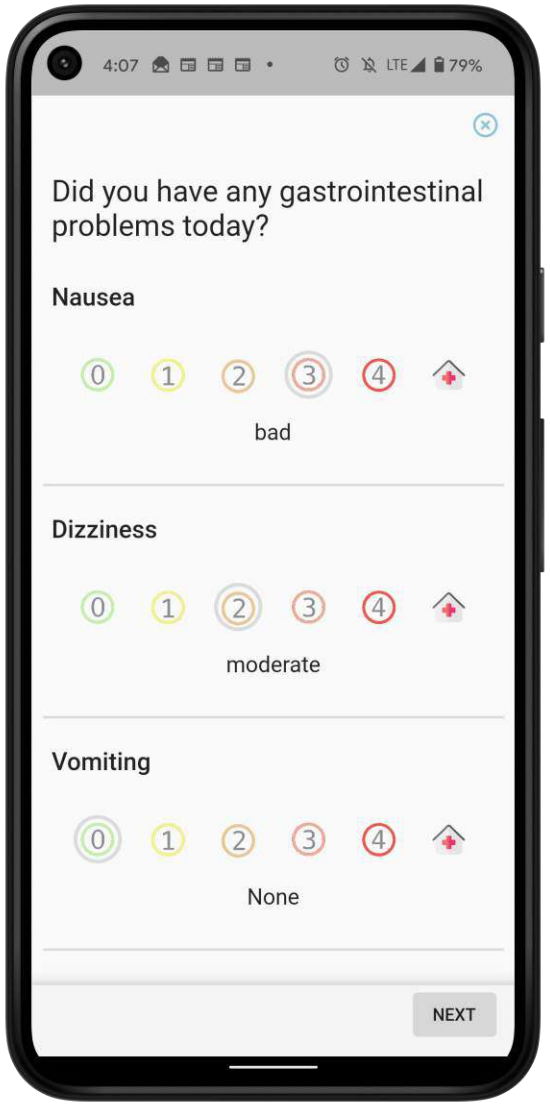
Ambient (outdoor) air pollution
Animal bites
Antibiotic resistance
Blood safety and availability
Brucellosis
Burns
Campylobacter

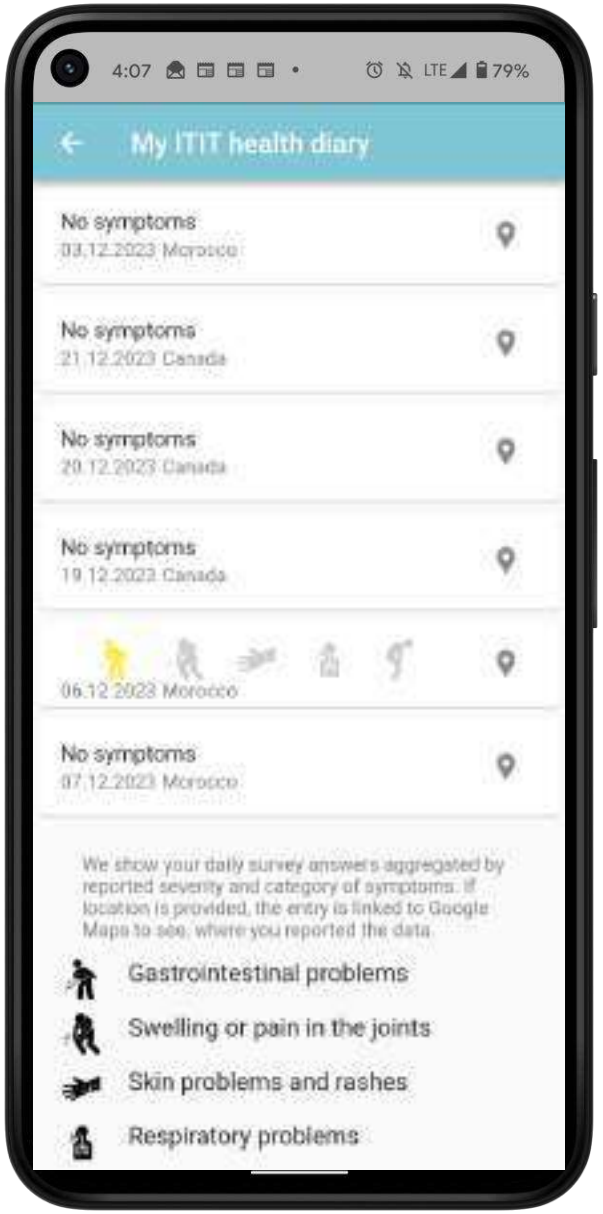
ITIT





Surveys

- Demographic Survey
- Daily Health Surveys
- Post-Trav… Questionn…



NEW FEATURE since 2024

My ITIT Health Diary

- Provides the traveller with an electronic record of illness during the trip
- – what – when - where

Participant 1

- 42
- Male
- Hypertension
- Non-Smoking
- Vietman for Business
- 3 days
- Can use app for all trips

Trip 1

Day 1 Day 2 Day 3

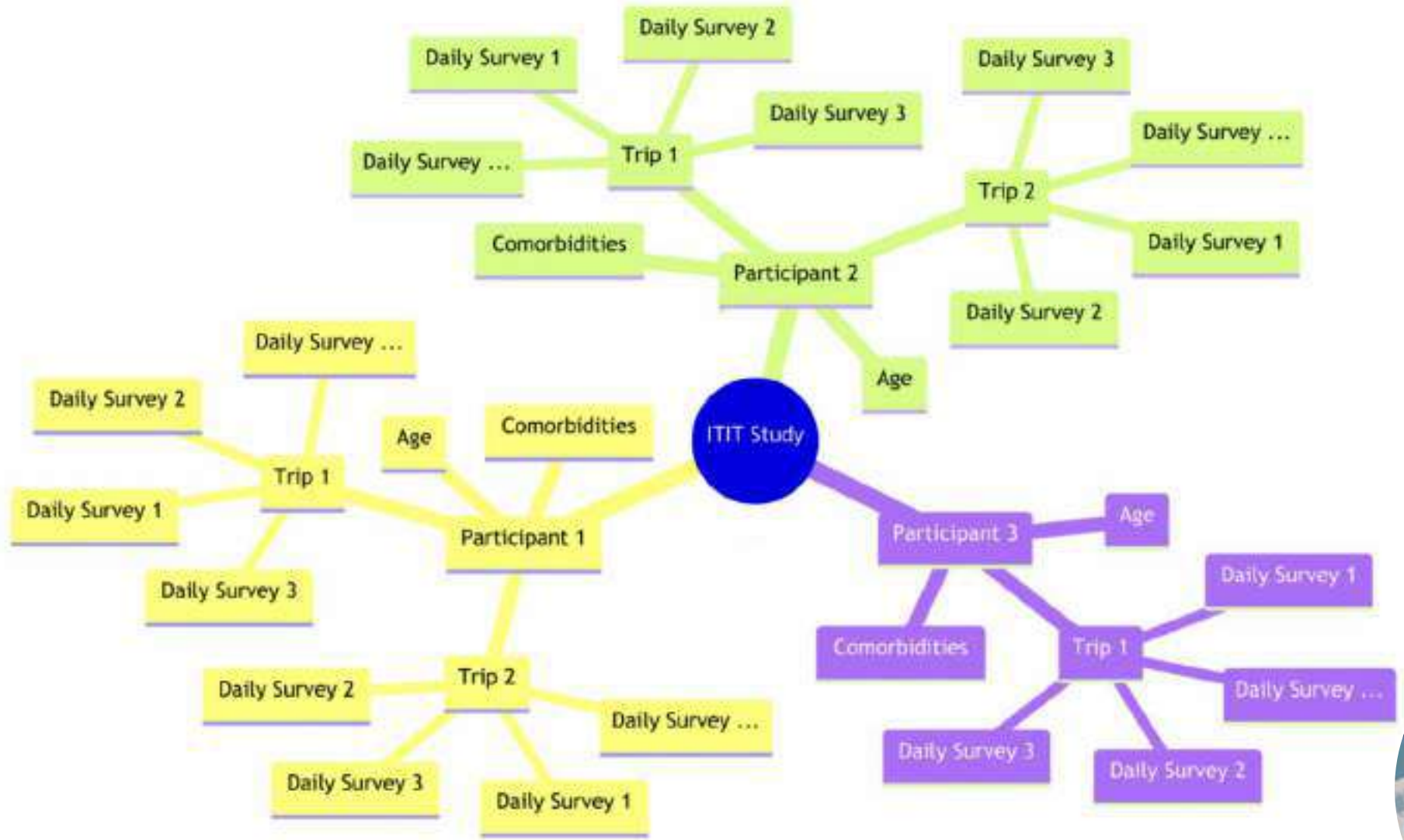
Post-Travel Survey 1

Trip 2

Day 1 Day 2 Day 3

No Symptoms

Post-Travel Sur


ITIT Study
Participant 1
Age
Comorbidities
Trip 1
Daily Survey 1
Daily Survey 2
Daily Survey 3
Daily Survey ...
Trip 2
Daily Survey 2
Daily Survey ...
Daily Survey 3
Daily Survey 1
Participant 2
Comorbidities
Age
Trip 1
Daily Survey 1
Daily Survey 2
Daily Survey 3
Daily Survey ...
Trip 2
Daily Survey 3
Daily Survey ...
Daily Survey 1
Daily Survey 2
Participant 3
Age
Comorbidities
Trip 1
Daily Survey 1
Daily Survey ...
Daily Survey 3
Daily Survey 2

ITIT

Open access Original research

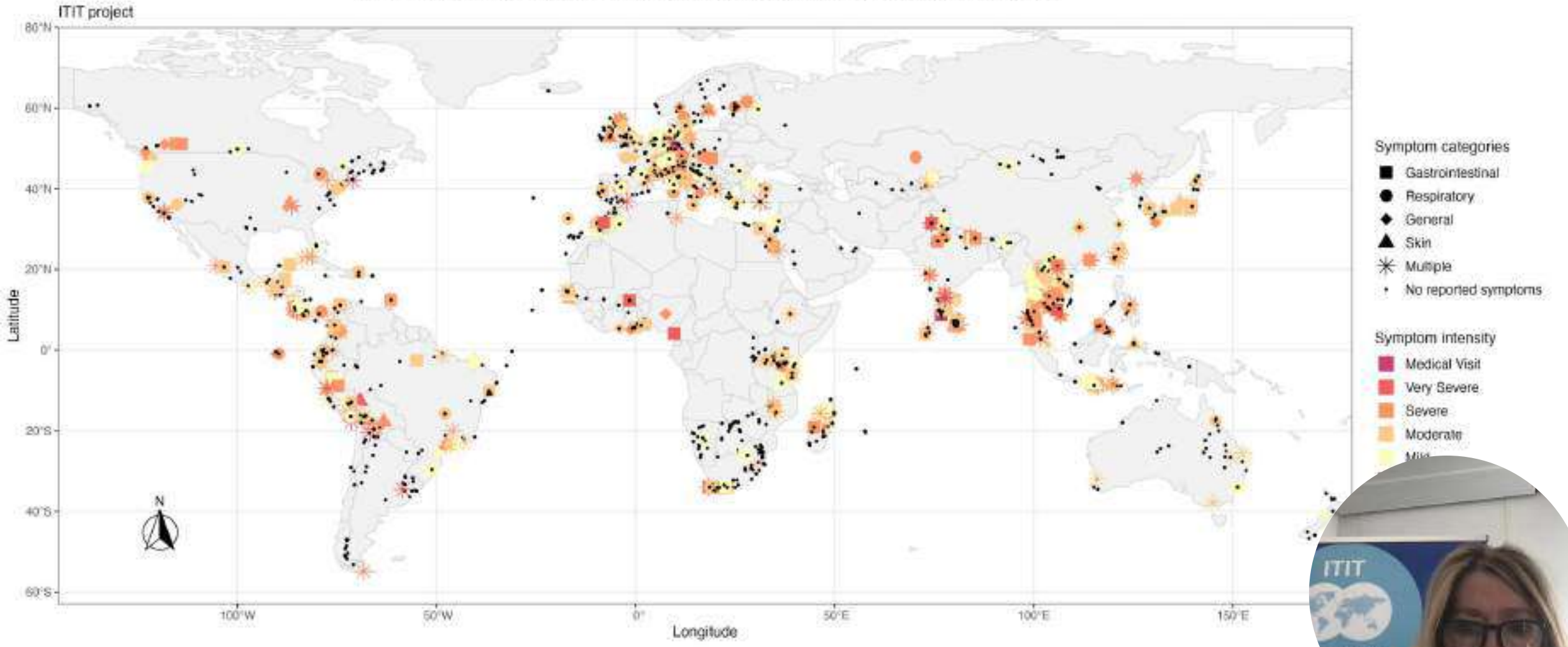
BMJ Open

Surveillance of global, travel-related illness using a novel app: a multivariable, cross-sectional study

Thibault Lovey,[1] Nadja Hedrich ,[1] Martin Peter Grobusch ,[2] Julian Bernhard,[3] Patricia Schlagenhauf ,[1,4] The ITIT Global Network

BMJ Open

Map showing the location of ITIT users and the type and intensity of symptoms reported



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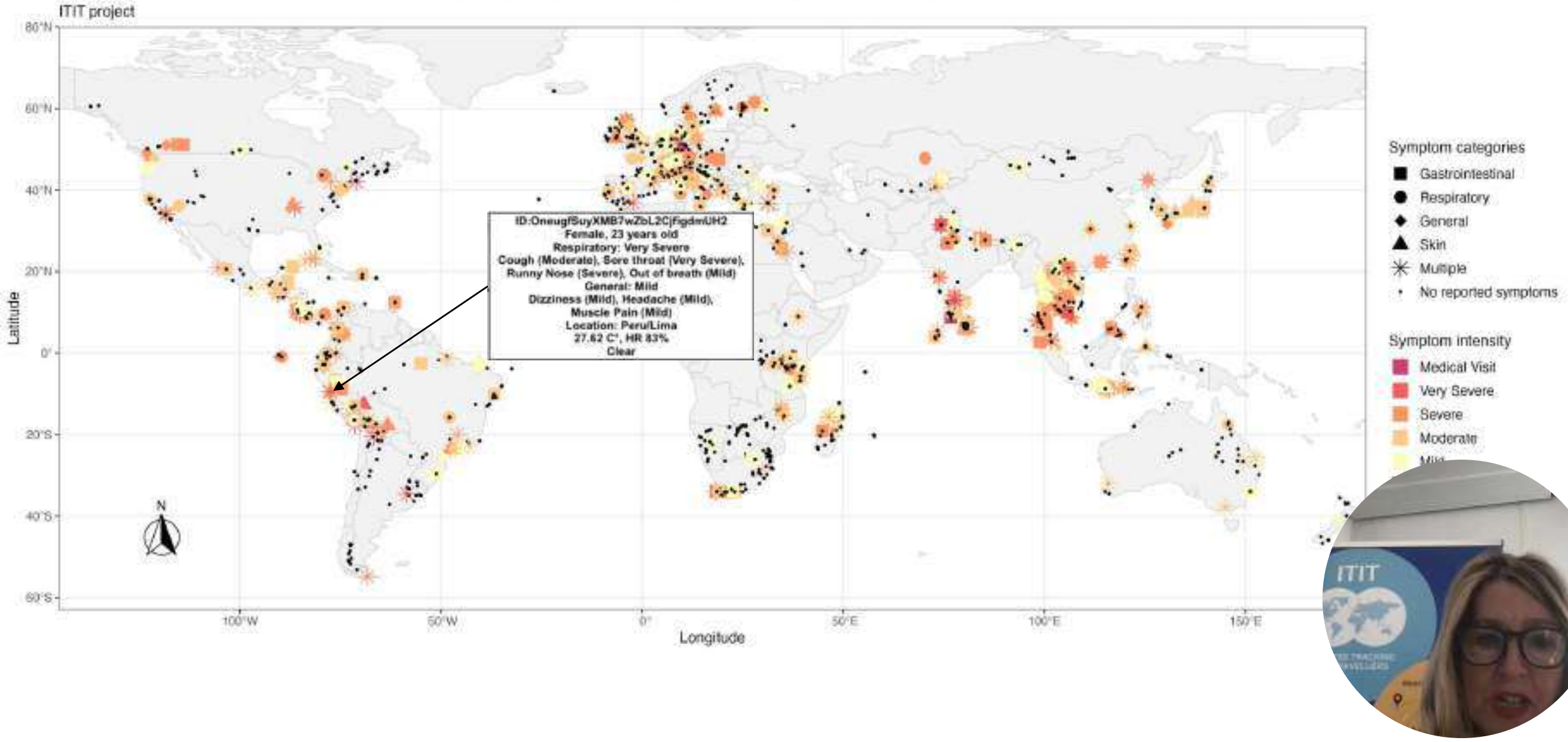
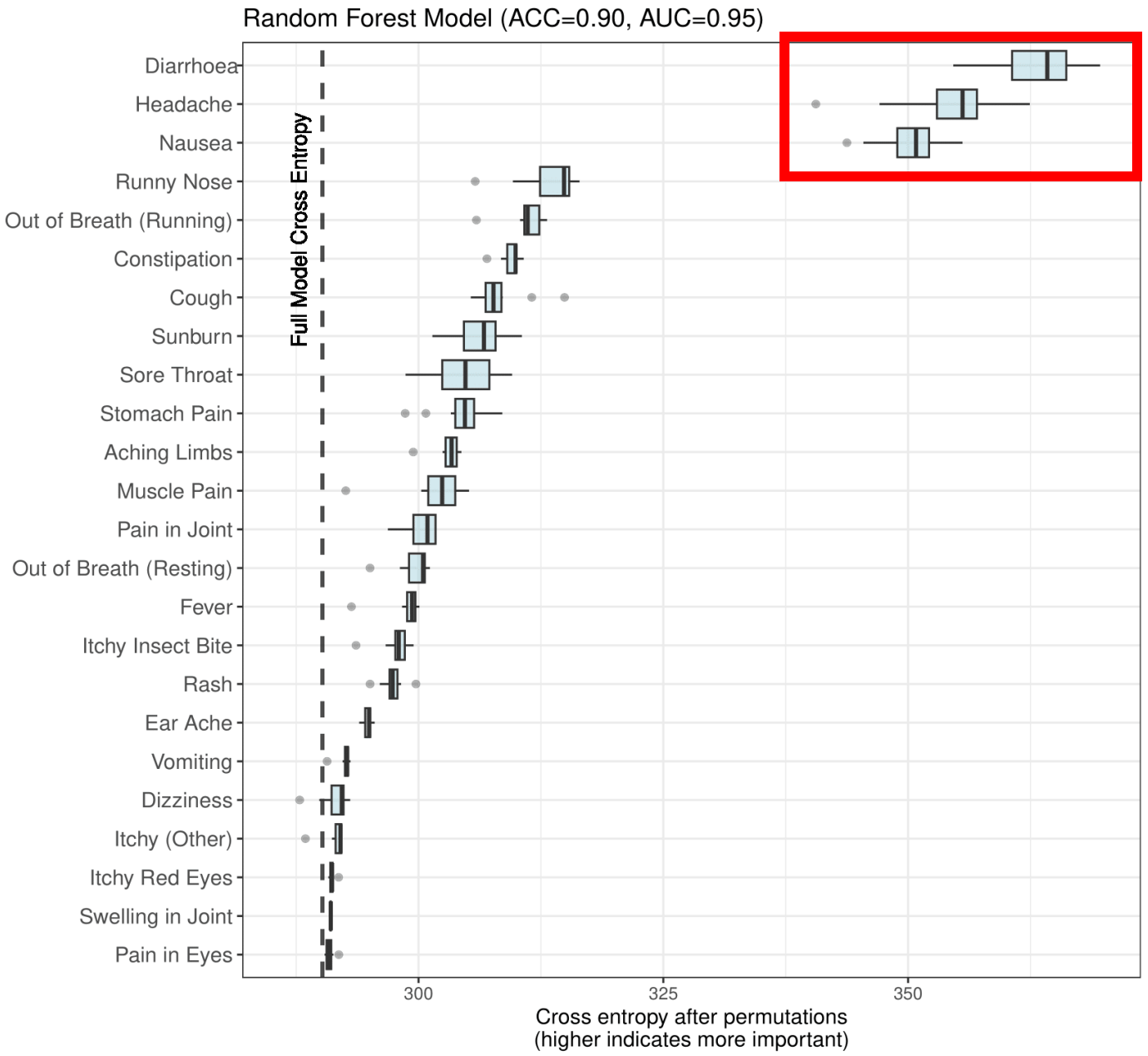


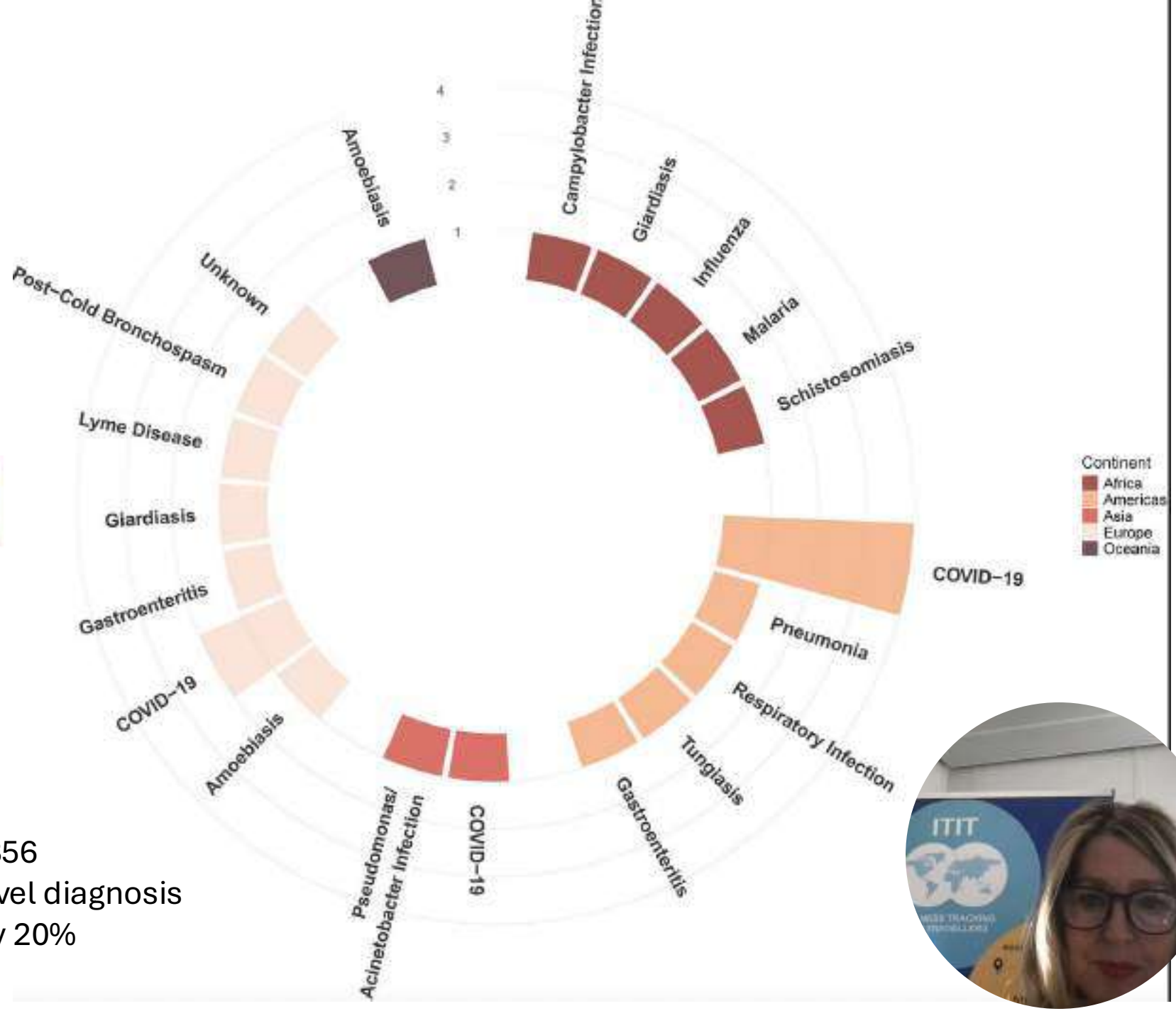


Impact of symptoms

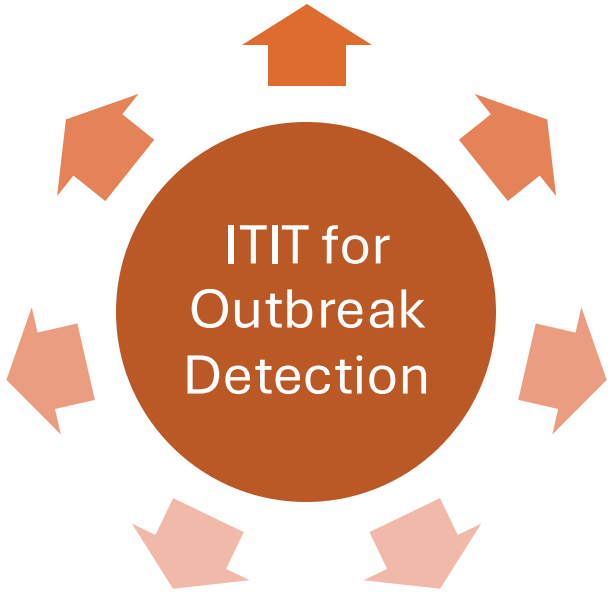
Travel Medicine and Infectious Disease
Volume 63, November–December 2025, 102843

Real-time illness monitoring in travellers: an international, prospective, digital surveillance study

Nadja Heidrich [a], Thibault Lovey [b], Julian Bernhard [b], Martin P. Grobusch [c], Philippe Gautret [d], Patricia Schlagenhauf [b,*], ITIT Global Network



- Post-travel questionnaires n=356
- 6% of travellers had a post travel diagnosis
- Self treatment was reported by 20%



Limitation:

Sample size

What's ahead for ITIT^2

- Supplement lab reports and traditional top-down surveillance
- Leverages widespread use of phones and travellers – real time, bottom –up infection surveillance
- Create complex data sets **linking illness data, geolocation and environmental data** for analyses. Modelling!
- Can be used for early detection of outbreaks - apply AI technology
- Create a sustainable database n > 2300– public health asset
- Resource for personalised travel medicine –advice throughout trip
- ITIT ^{2} (released September 2025) **can contact travellers**
- ITIT^2 will have the WHO International Travel and Health in e-format

UZH

PATRICIA SCHLAGENHAUF (PROJECT PI)

NADJA HEDRICH (POSTDOC)

THIBAULT LOVEY (POSTDOC)

WHO COLLABORATION

MIKA KAWANA

APP

ULF BLANKE (ANTAVI)

Download on the App Store

GET IT ON Google Play

How can you take part?

1. Download the **"ITIT Travelhealth"** App/scan the QR codes
2. Complete the consent form and baseline questionnaire
3. Complete the daily survey on travel illness

WHO Collaborating Centre for Travellers' Health

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Thank you - Please participate in ITIT!! **patricia.schlagenhauf@uzh.ch**

Questions from the HAVENSYMPOSIUM

Q1: How does the reliance on voluntary, self-reported symptom data from travelers via the ITIT app impact the overall accuracy and representativeness of the surveillance data, particularly concerning the underreporting of mild or non-specific symptoms and potential bias toward users who are already more health-conscious or tec[illegible]ally proficient?

Q2: are the real-time outbreak signals generated by the ITIT app effec[illegible] into and shared with established international surveillance networks[illegible] Health Organization and regional centers) to trigger timely public hea[illegible] and what is the required threshold or evidence level from the app data[illegible] official investigation into a reported cluster?

UZH

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