



Shortage of yellow fever vaccination: A travel medicine emergency for Chilean travellers



ARTICLE INFO

Keywords:

Yellow fever
Outbreak
Brazil
Travel medicine
Vaccination

In recent years, yellow fever (YF) outbreaks have struck various African and South American countries, a scenario, which led to the creation of the “Eliminate Yellow fever Epidemics” initiative by the WHO [1]. The current Brazilian outbreak is the largest, both in human and epizootic cases in decades in South America, expanding from the historical endemic areas towards the crowded coastal region [2]. This outbreak poses a unique challenge for national authorities and global response [3], but also Travel Medicine. The threat of an urban epidemic triggered an unprecedented vaccine campaign from Brazilian authorities, in a global context of limited availability of vaccines. The transmission area now comprises main tourist destinations [4], creating the necessity to protect travellers originating in non-endemic countries such as Chile.

Recently classified as a high-income country, Chile has more than doubled its number of citizens traveling abroad within the last 10 years and the coastal regions of Brazil are among the most popular holiday destinations [5]. The vaccine, formerly prescribed before trips to sylvatic areas in South America, is now recommended to most of the > 200,000 annual Chilean travellers to Brazil.

The YF outbreak caused significant media attention in January 2018, leading to controversies about the necessity to vaccinate Chilean tourists visiting Brazil, since the vaccine stock was rapidly sold out, under chaotic conditions. Following the death of several tourists including two Chileans in February 2018 [6], the recommendation to postpone travel if not vaccinated was also strictly adopted by Chilean authorities [7]. In the upcoming summer (January–February 2019), the situation could worsen for the following reasons: 1) ~200,000 unvaccinated tourists are planning their holidays in Brazil; 2) the lack of physicians trained in Travel Medicine and/or Infectious Diseases to provide adequate pre-travel advice including yellow fever vaccine prescriptions; 3) the limited number of 60 authorized YF vaccination centres, which is in sharp contrast to the situation in Europe [8] (e.g. 968 in The Netherlands, with similar population); and 4) a projected maximum of 40,000 available doses of YF vaccine in Chile during the 2019 summer months (Sanofi Pasteur Chile, personal communication).

The first concern led to recent updates by the Chilean Ministry of Health [7,9]. A recent guideline for non-expert physicians addressed

the second point [10]. Any which way, the existing gap between the vaccine demand and availability will remain. The authorities and medical societies in Chile have discussed the use of fractional doses, but this WHO approved emergency measure [11] will not widely be adopted, mainly for technical problems and legal insecurities. The fact, that Brazil is a common destination for young middle class families, school trips, and senior citizen tours contributes to the anticipated panic and chaos that Chile's few Travel Medicine clinics and YF vaccination centres will face in the coming weeks and months. Unfortunately, except for a campaign reinforcing the use of fractional doses, there is no solution in sight.

Conflicts of interest

None.

Funding

None.

References

- [1] A global strategy to Eliminate Yellow fever Epidemics 2017–2026. Geneva: World Health Organization; 2018.
- [2] Chaves TDSS, Orduna T, Lepetic A, Macchi A, Verbanaz S, Risquez A, Perret C, Echazarreta S, Rodríguez-Morales AJ, Lloveras SC. Yellow fever in Brazil: epidemiological aspects and implications for travelers. *Trav Med Infect Dis* 2018;23:1–3.
- [3] Pan American Health Organization/World Health Organization. Epidemiological update: yellow fever. 7 december 2018. Washington, D.C: PAHO/WHO; 2018.
- [4] WHO. Updates on yellow fever vaccination recommendations for international travelers related to the current situation in Brazil. <https://www.who.int/ith/updates/20180116/en/> (accessed January 10, 2019).
- [5] Subsecretaría de Turismo. Gasto, Permanencia Promedio y Egreso de Divisas de turismo emisor, llegada a destinos. Serie 2000-2016. <http://www.subturismo.gob.cl/wp-content/uploads/2015/10/20170605-Serie-hist%C3%B3rica-Turismo-Emisor-2000-2016.xls> (accessed January 10, 2019).
- [6] Hamer DH, Angelo K, Caumes E, van Genderen PJJ, Florescu SA, Popescu CP, Perret C, McBride A, Checkley A, Ryan J, Cetron M, Schlagenhaut P. Fatal yellow fever in travelers to Brazil, 2018. *MMWR Morb Mortal Wkly Rep* 2018;67:340–1.
- [7] Ministerio de Salud. Vacunas para viajeros. Recomendaciones contra la Fiebre Amarilla. <https://www.minsal.cl/recomendaciones-de-vacunacion-a-viajeros/fiebre-amarilla> (accessed January 10, 2019).

<https://doi.org/10.1016/j.tmaid.2019.01.016>

Received 16 January 2019; Accepted 28 January 2019

Available online 29 January 2019

1477-8939/ © 2019 Elsevier Ltd. All rights reserved.

- [8] Petersen J, Simons H, Patel D. Access to yellow fever travel vaccination centres in England, Wales, and Northern Ireland: a geographical study. *Trav Med Infect Dis* 2017;18:24–9.
- [9] Ministerio de Salud. División de Prevención y Control de Enfermedades. Informa acerca de la vacunación contra la fiebre amarilla en viajeros. Ordinario B27/N° 5277. Santiago. 26.11.2018.
- [10] Weitzel T, Perret C, Valdivieso F, Abarca K, Vial P. Yellow fever vaccination for Chilean tourists visiting Brazil. Practical considerations. *Rev Chilena Infectol* 2018;35:587–94.
- [11] Yellow fever vaccine: WHO position on the use of fractional doses – June 2017. *Wkly Epidemiol Rec* 2017;92:345–50.

Thomas Weitzel*, Pablo Vial
*Programa de Medicina del Viajero y Vacunatorio Internacional, Clínica
Alemana de Santiago; Instituto de Ciencias e Innovación en Medicina,*

*Facultad de Medicina Clínica Alemana, Universidad del Desarrollo,
Santiago, Chile*

*E-mail addresses: tweitzel@alemana.cl,
thomas.weitzel@gmail.com (T. Weitzel).*

Cecilia Perret
*Centro de Medicina del Viajero, Escuela de Medicina, Pontificia Universidad
Católica de Chile, Santiago, Chile*

Ximena Aguilera
*Centro de Epidemiología y Políticas de Salud, Facultad de Medicina Clínica
Alemana, Universidad del Desarrollo, Santiago, Chile*

* Corresponding author. Travel Medicine Program, Clínica Alemana, Av. Vitacura 5951, Santiago, Chile.