

Fig. 1. Compliance rate of the recommendations of the Valencian Health Programme in Latin American immigrant women from January 2008 to September 2012.

the Valencian Health Programme was 40%, but in this case they also preformed the test at the time of delivery [4]. In the city of Alicante we need to implement some of the strategies of Barona-Vilar *et al.*, specifically the midwives' workshop and serology performed at the time of delivery. In Catalonia in the Screening Programme of Chagas Disease in Newborns of Latin American origin, the rate of coverage in 2010 was 77·7% [5]. Our study was similar to others performed in Spain where the higher prevalence of *T. cruzi* infection (over 80%) was found in pregnant Bolivian women [1, 4, 5, 6].

In conclusion, we recommend implementation of screening in other areas of Spain. Moreover, it is important to perform screening on pregnant woman in other European countries where there is Latin American immigration especially from Bolivia. Possibly, the Valencian and Catalonian programmes should be mirrored in any country with Latin American immigrants.

Declaration of Interest

None.

References

- 1. **Barona-Vilar C, et al.** Prevalence of *Trypanosoma cruzi* infection in pregnant Latin American women and congenital transmission rate in a non-endemic area: the experience of the Valencian Health Programme (Spain). *Epidemiolology and Infection* 2012; **140**: 1896–1903.
- Generalitat Valenciana. Imported Chagas disease. Protocol of actions in the Valencian Community [in Spanish]. Valencia: Generalitat Valenciana, Conselleria de Sanitat, 2009, pp. 65 (http://publicaciones.san.gva.es/

- publicaciones/documentos/V-5243-2008.pdf). Accessed 10 July 2013.
- Generalitat Valenciana. Control regulation of congenital and perinatal infections in Valencia Community [in Spanish]. Valencia: Generalitat Valenciana, Conselleria de Sanitat, 2007, pp. 57 (http://www.sp.san.gva. es/DgspPortal/docs/CIRCULAR_3_2007.pdf). Accessed 23 September 2012.
- 4. Ramos-Rincón JM, *et al.* Evaluation of the grade of application of the recommendations of screening for Chagas disease in pregnant women. *Revista Clinica Española* 2012; **212**: 366–368.
- 5. Basile L, Ciruela P, and the work group of Chagas disease in Catalonia. Update of the screening program of Chagas diseases in newborns of Latin American origin in Catalonia. *Revista Española de Salud Publica* 2013; 87: 51–52.
- Flores-Chavez MD, et al. Surveillance of Chagas disease in pregnant women in Madrid, Spain, from 2008 to 2010. Eurosurveillance 2011; 16: pii=19974.
- J. M. RAMOS^{1,2,*}, H. PINARGOTE¹, M. ANDREU³, J. SASTRE⁴, D. TORRUS⁵, J. C. MARTINEZ-ESCORIZA^{2,6}, J. PORTILLA^{1,2,5}
- ¹ Department of Internal Medicine, Hospital General Universitario de Alicante, Alicante, Spain
- ² Universidad Miguel Hernández, Campus de San Juan, Alicante, Spain
- ³ Section of Microbiology, Hospital General Universitario de Alicante, Alicante, Spain
- ⁴ Unit of Admission and Documentation, Hospital General Universitario de Alicante, Alicante, Spain
- ⁵ Unit of Infectious Diseases, Hospital General Universitario de Alicante, Alicante, Spain
- ⁶ Department of Gynecology and Obstetrics, Hospital General Universitario de Alicante, Alicante, Spain
- *Author for correspondence:
- J. M. Ramos, Department of Internal Medicine, Hospital General Universitario de Alicante, C/ Pintor Baeza, 12, 03010 Alicante, Spain.

(Email: jramosrincon@yahoo.es)

Epidemiol. Infect. (2014). doi:10.1017/S0950268813001933 First published online 6 August 2013

Prevalence of *Trypanosoma cruzi* infection in Latin American pregnant women and level of compliance of the Valencian Health Programme in the city of Alicante: a reply

The study of Ramos *et al.* [1] above, describes the coverage of Chagas disease screening in pregnant women from endemic countries living in Alicante. Their results were compared to our study showing results

from the city of Valencia, which belongs to the same Spanish region [2].

Data from deliveries of Latin American women at the 'Hospital General de Alicante' were linked with serological data to ascertain if the serological tests had been performed in the targeted population. In comparison with the Valencia data (95·4% of coverage) the authors showed that a lower percentage of theoretical targeted women in the city of Alicante had a serological test registered in the laboratory database (41%). It must be highlighted that there are some differences between both studies that may explain at least the different coverage.

The period of study was longer in Alicante and included 2 years (2008 and 2012), with evident lower rates that affect the mean overall rate of the studied period. Moreover, the sources used to analyse the data from Alicante may have lead to an underestimation of the coverage rate, due to the fact that the Hospital General is the reference hospital for high-risk pregnancies and receives women from other health departments. It might be that a number of the women delivering there could have been followed in a primary health centre of other health departments, and their serological test analysed in a different microbiology laboratory. Another less probable reason to consider could be that some women knew their status against T. cruzi or had been screened already during a previous pregnancy in Spain. The best source to ascertain the exact status of the women's serological situation in the Valencian Region may well be the obstetrical records and the maternal cards completed by midwives following up pregnant women at the primary healthcare centres.

We agree with Ramos *et al.* with regard to the importance of sensitizing all the health specialities involved to the relevancy of the screening programme during pregnancy. Scholarly communication supposes an important challenge to warrant higher coverage

rates. Midwives, especially those falling within the providence of recruitment, should be offered participation in workshops to be trained, because they represent a key point in the chain.

In conclusion, different Spanish studies have identified that women from the Southern Cone, and especially those from Bolivia, are the most vulnerable to Chagas disease in immigrant mothers [2–4]. The demonstrated benefits for their newborns make it especially recommendable to implement similar programmes in those Spanish and European regions with immigrant populations arriving from endemic areas.

References

- Ramos JM, et al. Prevalence of Trypanosoma cruzi infection in Latin American pregnant women and level of compliance of the Valencian Health Programme in the city of Alicante. Epidemiology and Infection. doi:S0950268813001921.
- Barona-Vilar C, et al. Prevalence of Trypanosoma cruzi infection in pregnant Latin American women and congenital transmission rate in a non-endemic area: the experience of the Valencian Health programme (Spain). Epidemiology and Infection 2012; 140: 1896– 1903.
- 3. Basile L, Ciruela P, and the work group of Chagas disease in Catalonia. Update of the screening program of Chagas disease in newborns of Latin American origin in Catalonia. *Revista Española de Salud Pública* 2013; 87: 51–52.
- 4. Flores-Chavez MD, *et al.* Surveillance of Chagas disease in pregnant women in Madrid, Spain, from 2008 to 2010. *Eurosurveillance* 2011; **16**: pii = 19974.

C. BARONA-VILAR

Department of Health, General Directorate of Public Health, Generalitat Valenciana, Spain Centre for Public Health Research (CSISP), Valencia, Spain. Spanish Consortium for Research on Epidemiology and Public Health, CIBERESP, Spain

(Email: barona_car@gva.es)