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International Journal of Infectious Diseases

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DISEASES

Letter to the Editor

Decrease in the coverage of measles-containing vaccines and the risk of reestablishing endemic transmission of measles in Brazil


In September 2016, the Pan-American Health Organization (PAHO) declared the Region of the Americas free of measles ([Pan American Health Organization/World Health Organization, 2016](#)). In August 2018, PAHO announced that endemic transmission of measles was re-established in Venezuela, likely due to ongoing civil strife in the country. In 2018, 12/35 countries of the Americas confirmed measles cases ([Pan American Health Organization/World Health Organization, 2018](#)). In February 2018, a measles outbreak was reported in the Roraima state, northern Brazil, bordering Venezuela. On 10 December 2018, the measles outbreak had reached 11/27 states in Brazil and 10,262 cases were confirmed by laboratory and epidemiological criteria ([Elidio et al., 2019](#)). Most cases were registered in the North region (99.2%), with higher incidence among children under 5 years of age ([Ministry of Health, 2019](#)). The D8 genotype was identified in the confirmed cases, which was the same found in Venezuela ([Pan American Health Organization/World Health Organization, 2018](#)).

Vaccination is the main public health strategy to prevent the spread of the measles virus and, consequently, prevent deaths and complications ([Moss, 2017](#)). Measles-containing vaccines (MCV)

have been available free of charge in Brazil since 1977 ([Ministry of Health, Brazil, 2013](#)). The national routine vaccination schedule recommends at least two doses of MCV, the first at 12 months and the second at 15 months of age. The coverage target adopted by the Brazilian Ministry of Health for the first and second routine doses of measles vaccine is 95% at state and national levels, as recommended by the [World Health Organization \(2012\)](#). More information on the Brazilian vaccination schedule can be found elsewhere ([Brazilian Ministry of Health, 2018](#)).

We analyzed official national data on the MCV coverage obtained through an administrative method, based on the number of doses and the target population ([Domingues and Teixeira, 2013](#)). At national level, the coverage of the first dose of MCV decreased since 2014, not reaching the target in 2017 (90.4%) ([Figure 1](#)). Similarly, the target for the second dose of MCV had not been reached since 2013 and decreased since 2015. At regional level, decreases were also found, and the worst scenario was observed in the North region for both first and second doses.

Although the reintroduction of measles in Brazil seems to be related to the outbreak in Venezuela, the spread of the virus was favored by the seemingly low MCV coverages. It is urgent to investigate the determinants of the decrease in MCV coverage in Brazil and to implement effective strategies to reach the 95% target of both first and second doses of MCV, aiming to stop further spread of the virus and to avoid the reestablishment of the endemic transmission of measles in the country.

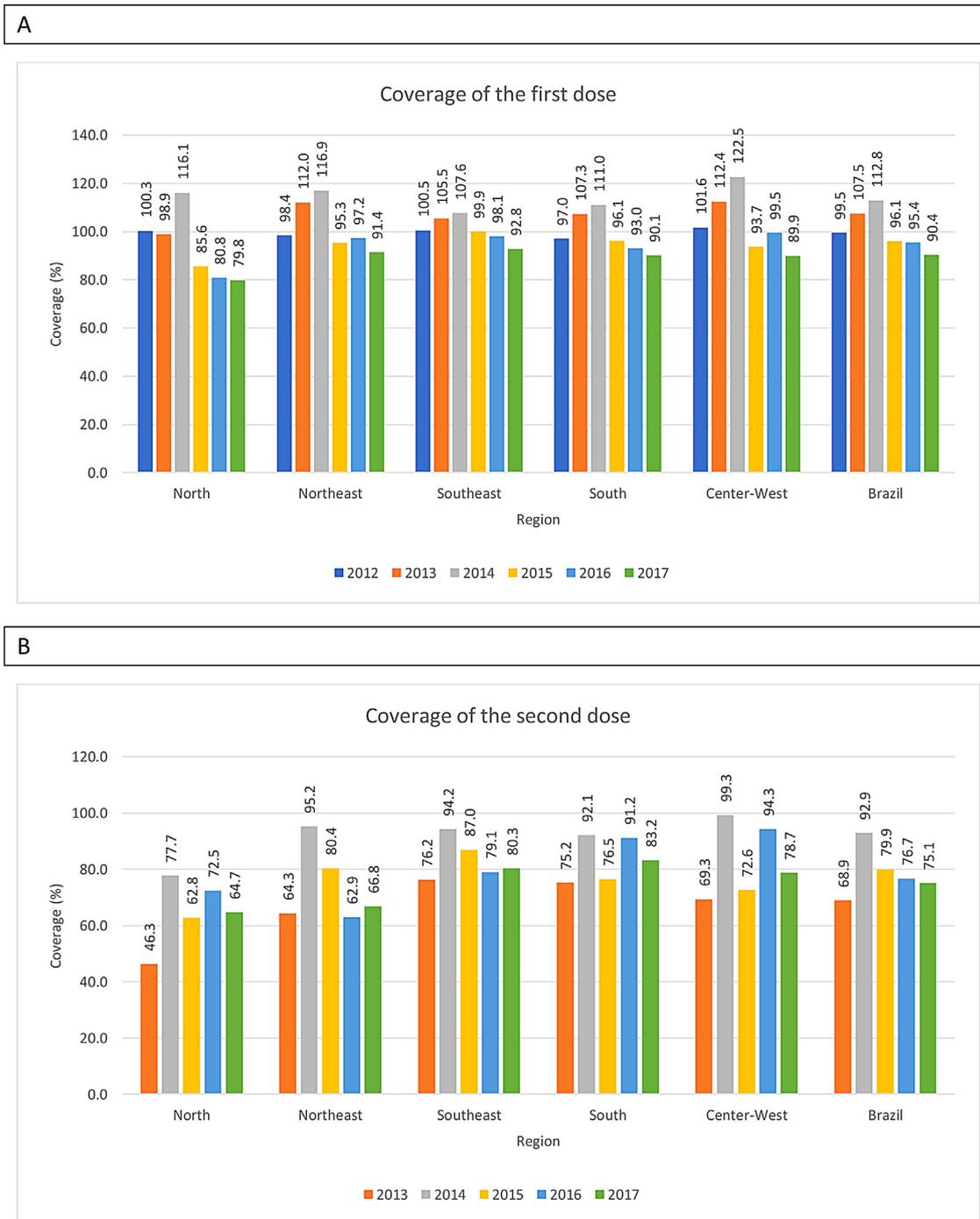


Figure 1. National and regional coverages of the first (a) and second (b) doses of measles-containing vaccines, Brazil, 2012–2017.

Authors' contributions

FCP and GVAF analysed the data, wrote the manuscript and coordinated the preparation of the manuscript. GAE supported data collection and reviewed the final manuscript. CMO and DBG contributed to the outline of the manuscript and reviewed the final manuscript. All authors approved the manuscript.

Conflict of interest

The authors declare no conflict of interest.

Funding source

DBG receives funding from the National Council for Scientific and Technological Development – CNPq and Research Productivity Grant 1-D (2016–2020). The other authors do not receive funding from any source.

Ethical approval

Because it involved only the use of secondary data, without the identification of individuals and institutions, this study did not

pose a risk to people, dispensing with the requirements of Resolution 466/2012 of the National Health Council of Brazil.

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Flávia C. Pacheco^{a,b,*}

Giovanny V.A. França^{a,b}

^aPost-Graduation Program in Health Sciences, University of Brasília, Brasília-DF, Brazil

^bSecretariat of Health Surveillance, Ministry of Health, Brasília-DF, Brazil

Guilherme A. Elidio
Secretariat of Health Surveillance, Ministry of Health, Brasília-DF, Brazil

Cesar M. Oliveira
Department of Epidemiology & Public Health, University College London, London, UK

Dirce B. Guilhem
Post-Graduation Program in Health Sciences, University of Brasília, Brasília-DF, Brazil

* Corresponding author at: QRSW Quadra 6 Bloco B07 Apto 204, Sudoeste, Brasília, Distrito Federal, CEP: 70.675-627, Brazil.
E-mail address: flavia.pacheco@saude.gov.br (F. Pacheco).

Received 30 January 2019