



GEOGRAPHIC REGIONAL DISTRIBUTION OF PREVALENCE OF LOW BIRTH WEIGHT IN PERU

DISTRIBUCIÓN GEOGRÁFICA DE PREVALENCIAS REGIONALES DE BAJO PESO AL NACER EN PERÚ

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Mr. Editor

Low birth weight (LBW) continues to be a global public health problem and it is an important health indicator that identifies the social, economic, and environmental background of the newborn and his family, determined when the birth weight is less than 2500 grams⁽¹⁻²⁾. In Peru, this indicator is evaluated annually through the Encuesta Demográfica y de Salud Familiar.

(ENDES). The Ministry of Health of Peru (MINSa) and the Registro Nacional de Identidad y Estado Civil (RENIEC) developed and began the implementation in 2012 of the Certificado de Nacido Vivo en Línea (CNV). This system allows the registration of newborns and generates a real-time birth certificate, also records information such as gender, weight, height, characteristics of gestation and childbirth, among other nominal health variables, this system is free of charge and use by the public and private Health Care Institutions (IPRESS)⁽³⁾.

The objective of this communication is to show the spatial distribution of the regional prevalence in Peru of LBW reported by ENDES and CNV for the year 2018. An analysis was made of the information reported by the CNV, which originates from the nominal register of health care in the IPRESS where births were attended by health personnel. The ENDES whose information is collected from health cards or information reported by the mother in the interviews conducted, although their results are referential because of its high coefficient of variation has continuity in their reports for more than a decade. The existing statistical differences were compared with the prevalence reported by the ENDES and the CNV and categorization were made into three groups according to the differences between the two sources of information.

We evaluated 494,024 records of newborns reported to the CNV for 2018 with full information to establish the prevalence of LBW and carry out the spatial distribution⁽⁴⁾. We observed a difference in the national prevalence of LBW of 1.3% in comparison with the ENDES of the same year, at the regional level we have that the group with the greatest difference (between 2.4% to 3.4%) were found Ica, Pasco, Amazonas, Junín, Madre de Dios, Lima Provinces, Moquegua and Loreto. The group with a different intermediate (between 1.3% to 1.8%) are Huánuco, Lima, Ucayali, Tumbes, Arequipa, and La Libertad. Finally, the group with a different minimum (between 0% to 1.1%) are located in Cusco, Callao, San Martín, Tacna, Ancash, Ayacucho, Puno, Piura, Cajamarca, Apurímac, Huancavelica, and Lambayeque. The differences found to show that all cases were less than $\pm 3.5\%$ between CNV and ENDES (Figure 1), all reported values agree with global estimates (14.6%) and for Latin America and the Caribbean (8.7%)⁽¹⁾. It evidences the importance of having nominated health information systems that allow accurate population health interventions⁽⁵⁾.

The CNV has been closing coverage gaps, according to the projection of births of the Instituto Nacional de Estadística e Informática (INEI), the CNV had 12.4% coverage among registered births for the year 2012,

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with an increasing trend over time and achieving 88.1% coverage for the year 2018⁽⁴⁾, reinforcing the need to give adequate time to the implementation of health information systems⁽⁶⁾. The difference highlights the ENDES that only gives us reference information at the regional level for the indicator of LBW⁽⁷⁾, the system CNV allows us to count with nominal data to track each child and allows that the Integrated Health Network Addresses (DIRIS) at the national level to coordinate health interventions with their regional and local authorities, the MINSA

should continue to strengthen the systems of nominated information being implemented at the national level^(6,8).

In conclusion, 6.0%⁽⁴⁾ of newborns reported by the CNV have LBW compared to 7.3%⁽⁶⁾ reported by ENDES for 2018, 12 of the 26 spatial distribution have a difference of less than 1.1% between both sources of information. The CNV provides nominated information for follow-up interventions at the population level and to help improve the health of mothers and newborns.

LETTERS TO THE EDITOR

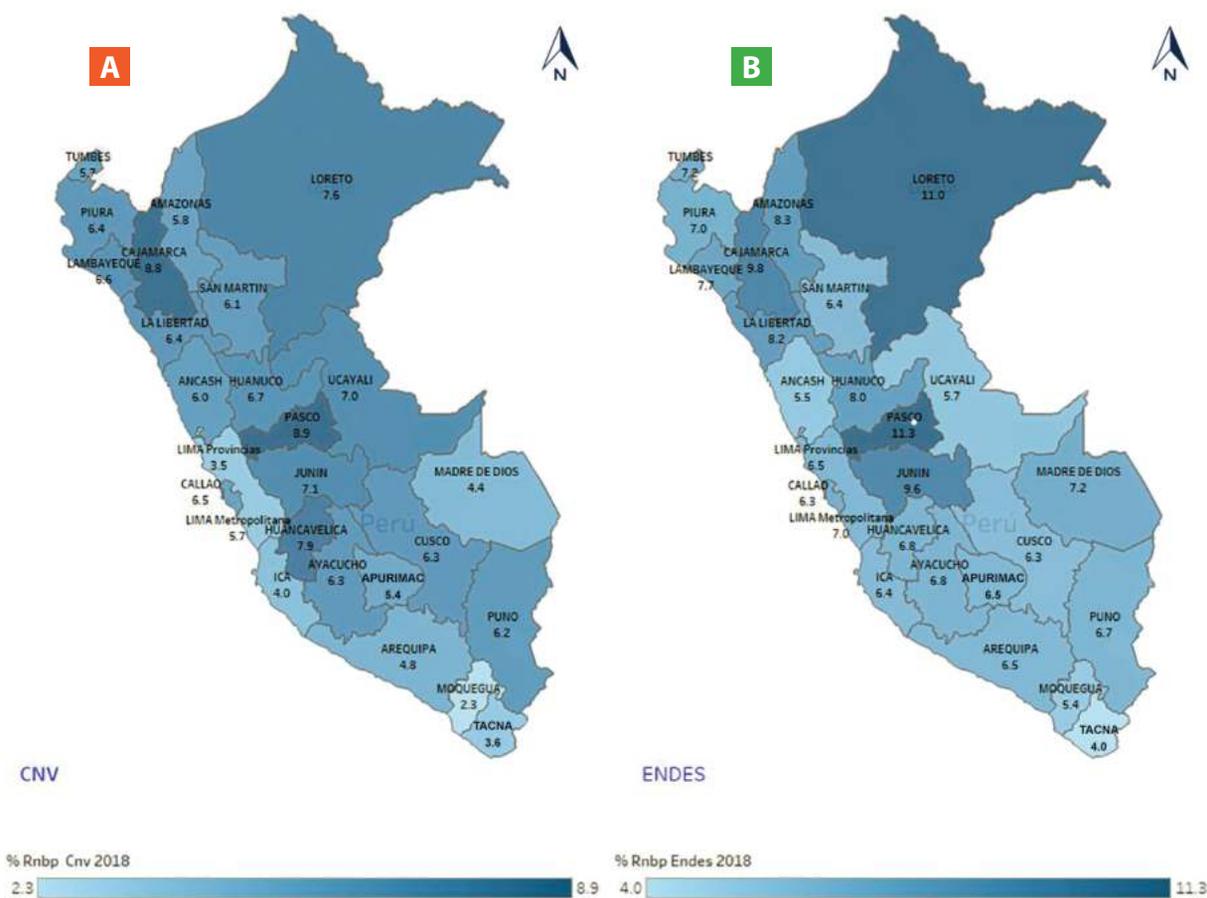


Figure 1. A. Geographical analysis of regional prevalence of low birth weight, Peru CNV 2018. **B.** Geographical analysis of regional prevalence of low birth weight, Peru ENDES 2018.

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BIBLIOGRAPHIC REFERENCES

1. Blencowe H, Krusevec J, de Onis M, Black R, An X, Stevens G, et al. National, regional, and worldwide estimates of low birthweight in 2015, with trends from 2000: a systematic analysis. *Lancet Glob Health* 2019; 7: e849-60. [http://dx.doi.org/10.1016/S2214-109X\(18\)30565-5](http://dx.doi.org/10.1016/S2214-109X(18)30565-5)
2. Revollo GB, Martínez JI, Grandi C, et al. Prevalencias de bajo peso y pequeño para la edad gestacional en Argentina: comparación entre el estándar INTERGROWTH-21st y una referencia argentina. *Arch Argent Pediatr* 2017;115(6):547-555. <http://dx.doi.org/10.5546/aap.2017.547>
3. Curioso WH, Pardo K, Loayza M. Transformando el sistema de información de nacimientos en el Perú. *Rev Peru Med Exp Salud Publica*. 2013;30(2):303-7. <http://dx.doi.org/10.17843/rpmesp.2013.302.209>
4. Ministerio de Salud. Registro del Certificado de Nacido Vivo en Línea [internet]. Disponible en: <https://www.minsa.gob.pe/cnv/>
5. Miguel-Yanes J, Ezpeleta D. Medicina de precisión: precisamente ahora. *Med Clin (Barc)*. 2018;150(6):240-243. <https://doi.org/10.1016/j.medcli.2017.06.029>
6. Curioso WH, Espinoza-Portilla E. Marco conceptual para el fortalecimiento de los sistemas de información en salud en el Perú. *Rev Peru Med Exp Salud Publica*. 2015;32(2):335-42. https://www.scielosp.org/scielo.php?script=sci_pdf&pid=S1726-46342015000200019&lng=es&tln g=es
7. Instituto Nacional de Estadística e Informática. Encuesta Demográfica y de Salud Familiar [Internet]. Disponible en: <https://proyectos.inei.gob.pe/endes/>
8. Vargas-Herrera J, Pardo Ruiz K, Garro Nuñez G, Miki Ohno J, Pérez-Lu JE, Valdez Huarcaya W, et al. Resultados preliminares del fortalecimiento del sistema informático nacional de defunciones. *Rev Peru Med Exp Salud Publica*. 2018;35(3):505-14. <https://doi.org/10.17843/rpmesp.2018.353.3913>

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