**Oficio Número**: CI-HCG/25/2025

**Asunto:** Transparencia Febrero Investigación

**LIC. MARISELA MARIA DEL ROSARIO VALLE VEGA**

Coordinadora General de Mejora Regulatoria y Transparencia

O. P. D. Hospital Civil de Guadalajara

Presente:

En respuesta al oficio No. CGMRT/1101/2025 y relación a la información solicitada por transparencia le hago llegar la siguiente información:

Protocolos Comités Unidad Hospitalaria “Fray Antonio Alcalde”

|  |  |  |  |
| --- | --- | --- | --- |
|  | Ética en Investigación | Investigación | Bioseguridad |
| Periodo de registro | No. De protocolos registrados | | |
| Enero | 94 | 1 | 1 |
| Febrero | 18 | 2 | 0 |

Protocolos Comités Unidad Hospitalaria “Juan I. Menchaca”

|  |  |  |  |
| --- | --- | --- | --- |
|  | Ética en Investigación | Investigación | Bioseguridad |
| Periodo de registro | No. De protocolos registrados | | |
| Enero | 24 | 24 | 0 |
| Febrero | 14 | 14 | 0 |

Se anexa información al correo [ielopez@hcg.gob.mx](mailto:ielopez@hcg.gob.mx).

Sin otro particular envío a usted un afectuoso saludo.

Atentamente

**"La Salud del Pueblo es la Suprema Ley"**

Guadalajara, Jalisco; a 05 de Marzo del 2025

**Dr. Gerardo León Garnica**

**Coordinador de Investigación**

**OPD Hospital Civil de Guadalajara**

Ccp Archivo

GLG/EMGH

Salud Publica Mex . 2025 Feb 20;67(2 (mar-abr)):115-123. doi: 10.21149/16283.

# Survey of antibiotic use at a tertiary care hospital in Mexico

[Federico A Zumaya-Estrada](https://pubmed.ncbi.nlm.nih.gov/?term=Zumaya-Estrada+FA&cauthor_id=39977203) [1](https://pubmed.ncbi.nlm.nih.gov/39977203/#full-view-affiliation-1), [Hilda Ivonne Huerta-Icelo](https://pubmed.ncbi.nlm.nih.gov/?term=Huerta-Icelo+HI&cauthor_id=39977203) [2](https://pubmed.ncbi.nlm.nih.gov/39977203/#full-view-affiliation-2), [Estaban González-Díaz](https://pubmed.ncbi.nlm.nih.gov/?term=Gonz%C3%A1lez-D%C3%ADaz+E&cauthor_id=39977203) [3](https://pubmed.ncbi.nlm.nih.gov/39977203/#full-view-affiliation-3), [María Del Rayo Morfín-Otero](https://pubmed.ncbi.nlm.nih.gov/?term=Morf%C3%ADn-Otero+MDR&cauthor_id=39977203) [4](https://pubmed.ncbi.nlm.nih.gov/39977203/#full-view-affiliation-4), [Jesús Ulises Garza-Ramos](https://pubmed.ncbi.nlm.nih.gov/?term=Garza-Ramos+JU&cauthor_id=39977203) [5](https://pubmed.ncbi.nlm.nih.gov/39977203/#full-view-affiliation-5), [Celia Mercedes Alpuche-Aranda](https://pubmed.ncbi.nlm.nih.gov/?term=Alpuche-Aranda+CM&cauthor_id=39977203) [6](https://pubmed.ncbi.nlm.nih.gov/39977203/#full-view-affiliation-6)

PMID: 39977203 DOI: [10.21149/16283](https://doi.org/10.21149/16283)

## Abstract

**Objective:** To analyze antibiotic use in a tertiary care hospital in Mexico.

**Materials and methods:** We conducted two point prevalence surveys based on the World Health Organization methodology in a tertiary care hospital in Guadalajara, Mexico. We surveyed the clinical records of patients with active antibiotic prescriptions (APs) in medical (MED), surgical (SUR), medical-surgical (MIX) wards, and intensive care units (ICUs). Descriptive statistics were estimated using Stata software.

**Results:** We analyzed 929 APs from 403 patients. The prevalence of antibiotic use in the hospital was 47.5%. Antibiotics were more used in ICUs (59.5%) and MIX wards (54.8%). The main reasons for antibiotic use were community-acquired infections (45.2%), and preoperative prophylaxis (23.1%), mostly multidose and prolonged (89.3%). APs were mainly empirical (92.4%), administered parenterally (95.9%) and lacked subsequent review (30.3%). Bacterial culture testing was limited (30.5%). The most used antibiotics were ceftriaxone (18.9%), clindamycin (8.5%), and meropenem (8.2%). Most APs corresponded to Access (56.4%) and Watch antibiotics (35.6%) (AWaRe, WHO).

**Conclusions:** We revealed frequent prescribing patterns of broad-spectrum antibiotics and differences in their use possibly related to patients' clinical profiles.

Neurology. 2025 Mar 11;104(5):e213343. doi: 10.1212/WNL.0000000000213343. Epub 2025 Feb 5.

# The Burden of Multiple Sclerosis in Mexico

[Enrique Gómez-Figueroa](https://pubmed.ncbi.nlm.nih.gov/?term=G%C3%B3mez-Figueroa+E&cauthor_id=39908467) [1](https://pubmed.ncbi.nlm.nih.gov/39908467/#full-view-affiliation-1) [2](https://pubmed.ncbi.nlm.nih.gov/39908467/#full-view-affiliation-2), [Carlos Javier Moreno-Bernardino](https://pubmed.ncbi.nlm.nih.gov/?term=Moreno-Bernardino+CJ&cauthor_id=39908467) [3](https://pubmed.ncbi.nlm.nih.gov/39908467/#full-view-affiliation-3), [Andrea Margarita De Alba-Sánchez](https://pubmed.ncbi.nlm.nih.gov/?term=De+Alba-S%C3%A1nchez+AM&cauthor_id=39908467) [1](https://pubmed.ncbi.nlm.nih.gov/39908467/#full-view-affiliation-1), [Natali Guerrero-Udave](https://pubmed.ncbi.nlm.nih.gov/?term=Guerrero-Udave+N&cauthor_id=39908467) [1](https://pubmed.ncbi.nlm.nih.gov/39908467/#full-view-affiliation-1), [Patricia Orozco-Puga](https://pubmed.ncbi.nlm.nih.gov/?term=Orozco-Puga+P&cauthor_id=39908467) [1](https://pubmed.ncbi.nlm.nih.gov/39908467/#full-view-affiliation-1), [Cynthia Patricia Corona-Vázquez](https://pubmed.ncbi.nlm.nih.gov/?term=Corona-V%C3%A1zquez+CP&cauthor_id=39908467) [1](https://pubmed.ncbi.nlm.nih.gov/39908467/#full-view-affiliation-1), [María Eugeni Briseño-Godínez](https://pubmed.ncbi.nlm.nih.gov/?term=Brise%C3%B1o-God%C3%ADnez+ME&cauthor_id=39908467) [1](https://pubmed.ncbi.nlm.nih.gov/39908467/#full-view-affiliation-1), [Omar Cárdenas-Sáenz](https://pubmed.ncbi.nlm.nih.gov/?term=C%C3%A1rdenas-S%C3%A1enz+O&cauthor_id=39908467) [1](https://pubmed.ncbi.nlm.nih.gov/39908467/#full-view-affiliation-1), [Amado Jímenez-Ruiz](https://pubmed.ncbi.nlm.nih.gov/?term=J%C3%ADmenez-Ruiz+A&cauthor_id=39908467) [1](https://pubmed.ncbi.nlm.nih.gov/39908467/#full-view-affiliation-1), [Brenda Allison Verboonen-Salgado](https://pubmed.ncbi.nlm.nih.gov/?term=Verboonen-Salgado+BA&cauthor_id=39908467) [4](https://pubmed.ncbi.nlm.nih.gov/39908467/#full-view-affiliation-4), [Nayeli Sánchez-Rosales](https://pubmed.ncbi.nlm.nih.gov/?term=S%C3%A1nchez-Rosales+N&cauthor_id=39908467) [4](https://pubmed.ncbi.nlm.nih.gov/39908467/#full-view-affiliation-4), [Christian García Estrada](https://pubmed.ncbi.nlm.nih.gov/?term=Garc%C3%ADa+Estrada+C&cauthor_id=39908467) [5](https://pubmed.ncbi.nlm.nih.gov/39908467/#full-view-affiliation-5), [José Luis Ruíz-Sandoval](https://pubmed.ncbi.nlm.nih.gov/?term=Ru%C3%ADz-Sandoval+JL&cauthor_id=39908467) [1](https://pubmed.ncbi.nlm.nih.gov/39908467/#full-view-affiliation-1)

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## Abstract

**Background and objectives:** Multiple sclerosis (MS) is a CNS disease causing significant disability, mainly in young and middle-aged individuals. Despite extensive global research, Mexico lacks comprehensive epidemiologic data on MS, complicating effective health care planning and intervention. This study analyzes the epidemiology of MS in Mexico using data from the Global Burden of Disease (GBD) study. It focuses on prevalence, incidence, disability-adjusted life years (DALYs), years lived with disability (YLDs), and years of life lost (YLLs) from 1990 to 2021. In addition, it examines the relationship between the sociodemographic index (SDI) and MS burden across Mexican states.

**Methods:** Data were sourced from the GBD 2021 and analyzed using standard GBD methodologies. Key metrics included prevalence, DALYs, YLDs, and YLLs, standardized by age. Pearson correlation and linear regression were used to evaluate the association between SDI and MS prevalence. A locally weighted regression (LOESS) model was applied to compare observed and expected DALY rates based on SDI, identifying regional disparities in MS burden.

**Results:** In 2021, an estimated 18,016 individuals (95% uncertainty interval [UI] 14,993-21,337) lived with MS in Mexico, with an age-standardized prevalence of 13.10 per 100,000 inhabitants (95% UI 10.91-15.50). The incidence rate was 0.65 per 100,000 inhabitants (95% UI 0.55-0.75). Total DALYs for MS in 2021 were 17,947 (95% UI 14,458-20,542), comprising 13.05 age-standardized DALYs per 100,000 inhabitants. YLLs accounted for 9.47 per 100,000 inhabitants (95% UI 8.24-10.85) and YLDs for 3.56 (95% UI 2.45-4.77). The LOESS model revealed significant regional discrepancies, with Northern Mexico exhibiting better-than-expected health outcomes while Central and Southern Mexico displaying higher observed DALYs than expected.

**Discussion:** The findings highlight substantial regional disparities in the MS burden across Mexico. Northern Mexico showed better-than-expected health outcomes while Central and Southern Mexico exhibited higher disease burdens than anticipated. These discrepancies suggest that socioeconomic factors and health care accessibility significantly affect MS outcomes. The study's limitations include reliance on hospital records and potential underdiagnosis in less developed regions. Enhanced data collection and comprehensive health care strategies are essential to effectively address the growing MS burden in Mexico.

Arch Med Res. 2025 Feb 20;56(4):103183. doi: 10.1016/j.arcmed.2025.103183. Online ahead of print.

# Mexican Interdisciplinary Consensus on the Diagnosis and Preventive Measures for Respiratory Syncytial Virus Infections

[Rosa Maria Wong-Chew](https://pubmed.ncbi.nlm.nih.gov/?term=Wong-Chew+RM&cauthor_id=39983633) [1](https://pubmed.ncbi.nlm.nih.gov/39983633/#full-view-affiliation-1), [Daniel E Noyola](https://pubmed.ncbi.nlm.nih.gov/?term=Noyola+DE&cauthor_id=39983633) [2](https://pubmed.ncbi.nlm.nih.gov/39983633/#full-view-affiliation-2), [Fortino Solórzano-Santos](https://pubmed.ncbi.nlm.nih.gov/?term=Sol%C3%B3rzano-Santos+F&cauthor_id=39983633) [3](https://pubmed.ncbi.nlm.nih.gov/39983633/#full-view-affiliation-3), [Sarbelio Moreno-Espinosa](https://pubmed.ncbi.nlm.nih.gov/?term=Moreno-Espinosa+S&cauthor_id=39983633) [4](https://pubmed.ncbi.nlm.nih.gov/39983633/#full-view-affiliation-4), [Maria Guadalupe Miranda-Novales](https://pubmed.ncbi.nlm.nih.gov/?term=Miranda-Novales+MG&cauthor_id=39983633) [5](https://pubmed.ncbi.nlm.nih.gov/39983633/#full-view-affiliation-5), [Eric Ochoa Hein](https://pubmed.ncbi.nlm.nih.gov/?term=Hein+EO&cauthor_id=39983633) [6](https://pubmed.ncbi.nlm.nih.gov/39983633/#full-view-affiliation-6), [Arturo Galindo-Fraga](https://pubmed.ncbi.nlm.nih.gov/?term=Galindo-Fraga+A&cauthor_id=39983633) [6](https://pubmed.ncbi.nlm.nih.gov/39983633/#full-view-affiliation-6), [Diana Vilar-Compte](https://pubmed.ncbi.nlm.nih.gov/?term=Vilar-Compte+D&cauthor_id=39983633) [7](https://pubmed.ncbi.nlm.nih.gov/39983633/#full-view-affiliation-7), [Gerardo Martinez-Aguilar](https://pubmed.ncbi.nlm.nih.gov/?term=Martinez-Aguilar+G&cauthor_id=39983633) [8](https://pubmed.ncbi.nlm.nih.gov/39983633/#full-view-affiliation-8), [Rodolfo Norberto Jiménez-Juárez](https://pubmed.ncbi.nlm.nih.gov/?term=Jim%C3%A9nez-Ju%C3%A1rez+RN&cauthor_id=39983633) [3](https://pubmed.ncbi.nlm.nih.gov/39983633/#full-view-affiliation-3), [Gilberto Tena- Alavez](https://pubmed.ncbi.nlm.nih.gov/?term=Alavez+GT&cauthor_id=39983633) [9](https://pubmed.ncbi.nlm.nih.gov/39983633/#full-view-affiliation-9), [Dina Villanueva-García](https://pubmed.ncbi.nlm.nih.gov/?term=Villanueva-Garc%C3%ADa+D&cauthor_id=39983633) [10](https://pubmed.ncbi.nlm.nih.gov/39983633/#full-view-affiliation-10), [Martha Eugenia Valdivia-Proa](https://pubmed.ncbi.nlm.nih.gov/?term=Valdivia-Proa+ME&cauthor_id=39983633) [11](https://pubmed.ncbi.nlm.nih.gov/39983633/#full-view-affiliation-11), [Pedro Antonio Martinez-Arce](https://pubmed.ncbi.nlm.nih.gov/?term=Martinez-Arce+PA&cauthor_id=39983633) [12](https://pubmed.ncbi.nlm.nih.gov/39983633/#full-view-affiliation-12), [Alejandro Ernesto Macías-Hernández](https://pubmed.ncbi.nlm.nih.gov/?term=Mac%C3%ADas-Hern%C3%A1ndez+AE&cauthor_id=39983633) [13](https://pubmed.ncbi.nlm.nih.gov/39983633/#full-view-affiliation-13), [Francisco Javier Espinosa-Rosales](https://pubmed.ncbi.nlm.nih.gov/?term=Espinosa-Rosales+FJ&cauthor_id=39983633) [14](https://pubmed.ncbi.nlm.nih.gov/39983633/#full-view-affiliation-14), [Daniel Ibarra-Rios](https://pubmed.ncbi.nlm.nih.gov/?term=Ibarra-Rios+D&cauthor_id=39983633) [15](https://pubmed.ncbi.nlm.nih.gov/39983633/#full-view-affiliation-15), [Guillermo Ruiz Palacios Y Santos](https://pubmed.ncbi.nlm.nih.gov/?term=Palacios+Y+Santos+GR&cauthor_id=39983633) [6](https://pubmed.ncbi.nlm.nih.gov/39983633/#full-view-affiliation-6), [Martha Josefina Avilés-Robles](https://pubmed.ncbi.nlm.nih.gov/?term=Avil%C3%A9s-Robles+MJ&cauthor_id=39983633) [3](https://pubmed.ncbi.nlm.nih.gov/39983633/#full-view-affiliation-3), [Emilia Josefina Patiño-Bahena](https://pubmed.ncbi.nlm.nih.gov/?term=Pati%C3%B1o-Bahena+EJ&cauthor_id=39983633) [16](https://pubmed.ncbi.nlm.nih.gov/39983633/#full-view-affiliation-16), [Ricardo Stanley Vega-Barrientos](https://pubmed.ncbi.nlm.nih.gov/?term=Vega-Barrientos+RS&cauthor_id=39983633) [17](https://pubmed.ncbi.nlm.nih.gov/39983633/#full-view-affiliation-17), [Claudia Del Carmen López-Enriquez](https://pubmed.ncbi.nlm.nih.gov/?term=L%C3%B3pez-Enriquez+CDC&cauthor_id=39983633) [18](https://pubmed.ncbi.nlm.nih.gov/39983633/#full-view-affiliation-18), [Esteban González-Díaz](https://pubmed.ncbi.nlm.nih.gov/?term=Gonz%C3%A1lez-D%C3%ADaz+E&cauthor_id=39983633) [12](https://pubmed.ncbi.nlm.nih.gov/39983633/#full-view-affiliation-12), [Martha Cecilia Guerrero-Almeida](https://pubmed.ncbi.nlm.nih.gov/?term=Guerrero-Almeida+MC&cauthor_id=39983633) [19](https://pubmed.ncbi.nlm.nih.gov/39983633/#full-view-affiliation-19), [Daniel Octavio Pacheco-Rosas](https://pubmed.ncbi.nlm.nih.gov/?term=Pacheco-Rosas+DO&cauthor_id=39983633) [5](https://pubmed.ncbi.nlm.nih.gov/39983633/#full-view-affiliation-5), [Martha Lucía Granados-Cepeda](https://pubmed.ncbi.nlm.nih.gov/?term=Granados-Cepeda+ML&cauthor_id=39983633) [20](https://pubmed.ncbi.nlm.nih.gov/39983633/#full-view-affiliation-20), [Cesar Adrian Martinez-Longoria](https://pubmed.ncbi.nlm.nih.gov/?term=Martinez-Longoria+CA&cauthor_id=39983633) [21](https://pubmed.ncbi.nlm.nih.gov/39983633/#full-view-affiliation-21), [Alicia Elizabeth Robledo-Galván](https://pubmed.ncbi.nlm.nih.gov/?term=Robledo-Galv%C3%A1n+AE&cauthor_id=39983633) [22](https://pubmed.ncbi.nlm.nih.gov/39983633/#full-view-affiliation-22), [Patricia Cornejo-Juarez](https://pubmed.ncbi.nlm.nih.gov/?term=Cornejo-Juarez+P&cauthor_id=39983633)

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## Abstract

**Background:** Respiratory syncytial virus (RSV) is a common cause of respiratory illness in children and adults in Latin America and Mexico. RSV circulates with seasonal peaks in fall and winter. Individuals at highest risk for severe infection are premature infants and those with comorbidities, as well as older adults with cardiopulmonary pathologies and/or varying degrees of immunocompromise.

**Objective:** To provide an updated landscape of the epidemiology, risk groups, diagnostic methods, and prevention of RSV infection in Mexico.

**Methods:** Convened by the Asociación Mexicana de Infectología y Microbiología Clínica, 28 interdisciplinary experts participated in a consensus meeting held in November 2023. Four groups, each with seven experts and a medical writer, were formed to discuss epidemiology and diagnosis, risk groups, vaccines, and monoclonal antibodies (mABs). Predefined questions, formulated by a team of four experts, were discussed within each group, and consensus was reached on the answers. These responses were then analyzed and organized into recommendations based on national and international evidence.

**Results:** Evidence-based recommendations for epidemiological surveillance, diagnosis, and prevention of RSV infection were proposed. Future perspectives regarding the usefulness of new vaccines and passive immunoprophylaxis were analyzed.

**Conclusions:** Timely identification of at-risk populations, diagnosis and treatment of RSV infection, and particularly the rational use of mABs and vaccines are key strategies to reduce the clinical and epidemiological burden of RSV infection.

**Keywords:** Monoclonal antibodies; Pneumonia; Respiratory syncytial virus; Vaccines.

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# Tongluo Jiedu as an adjuvant therapy for oral cancer

[Sarah Monserrat Lomelí Martínez](https://pubmed.ncbi.nlm.nih.gov/?term=Lomel%C3%AD+Mart%C3%ADnez+SM&cauthor_id=39959769) [1](https://pubmed.ncbi.nlm.nih.gov/39959769/#full-view-affiliation-1) [2](https://pubmed.ncbi.nlm.nih.gov/39959769/#full-view-affiliation-2), [Melissa Martínez Nieto](https://pubmed.ncbi.nlm.nih.gov/?term=Mart%C3%ADnez+Nieto+M&cauthor_id=39959769) [3](https://pubmed.ncbi.nlm.nih.gov/39959769/#full-view-affiliation-3), [Ana Esther Mercado González](https://pubmed.ncbi.nlm.nih.gov/?term=Mercado+Gonz%C3%A1lez+AE&cauthor_id=39959769)

Affiliations Expand

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## Abstract

Oral cancer is one of the malignant neoplasms that present major global health challenge. It is the sixth most prevalent type of cancer in the world, with a high incidence and mortality rate. This letter is a review of the study by Yin *et al* which was published in the *World Journal of Clinical Cases* (2024). The study evaluated the effect of Tongluo Jiedu as an adjuvant treatment for oral cancer. Over the years, there has been a continuous search for effective and less invasive treatments for oral cancer. This article emphasizes and discusses various therapeutic options currently available, and it highlights that early intervention and multidisciplinary management are crucial for improving outcomes. Traditional Chinese medicine, particularly Tongluo Jiedu, presents potential complementary approach to conventional oral cancer therapies. Future research on Tongluo Jiedu should be focused on validation of its efficacy and safety through large, well-designed clinical trials, as well as better understanding of the molecular mechanisms involved, and optimization of therapeutic combinations. Additionally, continuous education of health professionals is key to the effective and safe integration of this traditional medicine into clinical practice. Continuous research is essential for optimization of therapeutic strategies and for addressing the challenges presented by this neoplasm.

**Keywords:** Chinese herbal medicine; Dentistry; Herbal drugs; Oral cancer; Tongluo Jiedu; Traditional Chinese medicine.

Genes (Basel). 2025 Feb 2;16(2):182. doi: 10.3390/genes16020182.

# *MLH1* Methylation Status and Microsatellite Instability in Patients with Colorectal Cancer

[Manuel Alejandro Rico-Méndez](https://pubmed.ncbi.nlm.nih.gov/?term=Rico-M%C3%A9ndez+MA&cauthor_id=40004511) [1](https://pubmed.ncbi.nlm.nih.gov/40004511/#full-view-affiliation-1), [Miguel Angel Trujillo-Rojas](https://pubmed.ncbi.nlm.nih.gov/?term=Trujillo-Rojas+MA&cauthor_id=40004511) [1](https://pubmed.ncbi.nlm.nih.gov/40004511/#full-view-affiliation-1), [María de la Luz Ayala-Madrigal](https://pubmed.ncbi.nlm.nih.gov/?term=Ayala-Madrigal+ML&cauthor_id=40004511) [1](https://pubmed.ncbi.nlm.nih.gov/40004511/#full-view-affiliation-1), [Jesús Arturo Hernández-Sandoval](https://pubmed.ncbi.nlm.nih.gov/?term=Hern%C3%A1ndez-Sandoval+JA&cauthor_id=40004511) [1](https://pubmed.ncbi.nlm.nih.gov/40004511/#full-view-affiliation-1), [Anahí González-Mercado](https://pubmed.ncbi.nlm.nih.gov/?term=Gonz%C3%A1lez-Mercado+A&cauthor_id=40004511) [1](https://pubmed.ncbi.nlm.nih.gov/40004511/#full-view-affiliation-1), [Melva Gutiérrez-Angulo](https://pubmed.ncbi.nlm.nih.gov/?term=Guti%C3%A9rrez-Angulo+M&cauthor_id=40004511) [2](https://pubmed.ncbi.nlm.nih.gov/40004511/#full-view-affiliation-2), [José Geovanni Romero-Quintana](https://pubmed.ncbi.nlm.nih.gov/?term=Romero-Quintana+JG&cauthor_id=40004511) [3](https://pubmed.ncbi.nlm.nih.gov/40004511/#full-view-affiliation-3), [Jesús Alonso Valenzuela-Pérez](https://pubmed.ncbi.nlm.nih.gov/?term=Valenzuela-P%C3%A9rez+JA&cauthor_id=40004511) [4](https://pubmed.ncbi.nlm.nih.gov/40004511/#full-view-affiliation-4), [Ruth Ramírez-Ramírez](https://pubmed.ncbi.nlm.nih.gov/?term=Ram%C3%ADrez-Ram%C3%ADrez+R&cauthor_id=40004511) [5](https://pubmed.ncbi.nlm.nih.gov/40004511/#full-view-affiliation-5), [Beatriz Armida Flores-López](https://pubmed.ncbi.nlm.nih.gov/?term=Flores-L%C3%B3pez+BA&cauthor_id=40004511) [6](https://pubmed.ncbi.nlm.nih.gov/40004511/#full-view-affiliation-6), [José Miguel Moreno-Ortiz](https://pubmed.ncbi.nlm.nih.gov/?term=Moreno-Ortiz+JM&cauthor_id=40004511) [1](https://pubmed.ncbi.nlm.nih.gov/40004511/#full-view-affiliation-1)

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## Abstract

**Background/Objectives:** The purpose of the current study was to compare the methylation of five regions of the CpG island of *MLH1* with the presence of microsatellite instability (MSI) in colorectal cancer (CRC) patients. **Methods:** The study analyzed 138 CRC tumor samples. DNA extraction was performed, followed by bisulfite conversion. *MLH1* gene methylation was assessed by methylation-specific PCR (MS-PCR), and the resulting fragments were analyzed using polyacrylamide gels. MSI was evaluated using multiplex PCR, and the fragments were run through capillary electrophoresis. R studio (v4.4.1) and SPSS (v29.0) software were used for the statistical analysis, and values of *p* < 0.05 were considered statistically significant. **Results:** The study showed 75.4% unmethylated, 21% partially methylated, and 3.6% fully methylated samples, with region A frequently methylated. MSI was observed in 7.2% of cases (MSI-H: 5.8%, MSI-L: 1.4%). BAT-26 was the most unstable marker. A significant difference between *MLH1* methylation and MSI-H (*p* < 0.01) was identified, but there was no relationship with specific *MLH1* regions. **Conclusions:** No differences were identified when analyzing specific methylation regions in relation to MSI. This study is the first to describe MSI frequency in Mexican patients regardless of age.

**Keywords:** MLH1; colorectal cancer; methylation; microsatellite instability.

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# Outcomes and Current State of Deep Inferior Epigastric Perforator Flap Surgery in Peru and Mexico

[Otto Rolando Ziegler Rodriguez](https://pubmed.ncbi.nlm.nih.gov/?term=Ziegler+Rodriguez+OR&cauthor_id=39995477) [1](https://pubmed.ncbi.nlm.nih.gov/39995477/#full-view-affiliation-1) [2](https://pubmed.ncbi.nlm.nih.gov/39995477/#full-view-affiliation-2) [3](https://pubmed.ncbi.nlm.nih.gov/39995477/#full-view-affiliation-3), [Gabriel De La Cruz-Ku](https://pubmed.ncbi.nlm.nih.gov/?term=De+La+Cruz-Ku+G&cauthor_id=39995477) [4](https://pubmed.ncbi.nlm.nih.gov/39995477/#full-view-affiliation-4) [5](https://pubmed.ncbi.nlm.nih.gov/39995477/#full-view-affiliation-5), [Juan Rafael Ludeña Muñoz](https://pubmed.ncbi.nlm.nih.gov/?term=Lude%C3%B1a+Mu%C3%B1oz+JR&cauthor_id=39995477) [2](https://pubmed.ncbi.nlm.nih.gov/39995477/#full-view-affiliation-2) [6](https://pubmed.ncbi.nlm.nih.gov/39995477/#full-view-affiliation-6) [7](https://pubmed.ncbi.nlm.nih.gov/39995477/#full-view-affiliation-7), [Juan Enrique Rodriguez Valdivia](https://pubmed.ncbi.nlm.nih.gov/?term=Rodriguez+Valdivia+JE&cauthor_id=39995477) [8](https://pubmed.ncbi.nlm.nih.gov/39995477/#full-view-affiliation-8), [Christian Gerardo Ramos-Acevedo](https://pubmed.ncbi.nlm.nih.gov/?term=Ramos-Acevedo+CG&cauthor_id=39995477) [9](https://pubmed.ncbi.nlm.nih.gov/39995477/#full-view-affiliation-9), [Eduardo Medina Flores](https://pubmed.ncbi.nlm.nih.gov/?term=Medina+Flores+E&cauthor_id=39995477) [10](https://pubmed.ncbi.nlm.nih.gov/39995477/#full-view-affiliation-10), [Hector Vicuña Urbina](https://pubmed.ncbi.nlm.nih.gov/?term=Vicu%C3%B1a+Urbina+H&cauthor_id=39995477) [8](https://pubmed.ncbi.nlm.nih.gov/39995477/#full-view-affiliation-8), [Miguel De La Parra-Marquez](https://pubmed.ncbi.nlm.nih.gov/?term=De+La+Parra-Marquez+M&cauthor_id=39995477) [11](https://pubmed.ncbi.nlm.nih.gov/39995477/#full-view-affiliation-11) [12](https://pubmed.ncbi.nlm.nih.gov/39995477/#full-view-affiliation-12), [Mauricio Manuel García-Pérez](https://pubmed.ncbi.nlm.nih.gov/?term=Garc%C3%ADa-P%C3%A9rez+MM&cauthor_id=39995477) [13](https://pubmed.ncbi.nlm.nih.gov/39995477/#full-view-affiliation-13), [Ignacio González-García](https://pubmed.ncbi.nlm.nih.gov/?term=Gonz%C3%A1lez-Garc%C3%ADa+I&cauthor_id=39995477) [14](https://pubmed.ncbi.nlm.nih.gov/39995477/#full-view-affiliation-14) [15](https://pubmed.ncbi.nlm.nih.gov/39995477/#full-view-affiliation-15)

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## Abstract

**Background:** In developing countries, breast reconstruction has multiple barriers, especially related to microsurgical procedures. Our aim was to describe the characteristics and outcomes of patients who underwent deep inferior epigastric artery perforator (DIEP) flap in 2 Latin American countries (Peru and Mexico) performed by recent postgraduate microsurgery fellows.

**Methods:** A retrospective study of a case series of breast cancer patients who underwent DIEP flap surgery in 5 surgery centers in 2 different countries, Peru and Mexico, was conducted.

**Results:** A total of 45 female patients were included, the mean age was 47.62 years with a median body mass index of 24.91 kg/m2. The majority of patients had a presurgical diagnosis of mastectomy (91.1%), whereas 8.9% had chronic radiodermatitis. Moreover, the most common reason for surgical intervention was breast reconstruction after breast cancer surgery (88.9%). The median operative time and length of hospital stay were 8 hours (range 3-14 h) and 6 days (range 3-21 d), respectively. Twenty percent of patients required blood transfusions, 24.4% had venous congestion, and 15.6% presented wound dehiscence. Moreover, 9 (33.3%) patients required reoperation and 6 required salvage procedures (15.6%).

**Conclusions:** Due to the multiple healthcare barriers in these countries, a very low number of DIEP flaps are performed in Peru and Mexico. Outcomes were worse in Peru compared with Mexico, with complication rates similar to those of other Latin American countries but higher than those of interventions performed in more experienced hands in the United States and Europe.

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# [Healthcare-related infections in a pediatric intensive care unit in Mexico: Epidemiology and associated factors]

[Juan Carlos Lona-Reyes](https://pubmed.ncbi.nlm.nih.gov/?term=Lona-Reyes+JC&cauthor_id=40011127) [1](https://pubmed.ncbi.nlm.nih.gov/40011127/#full-view-affiliation-1), [Tania Alejandra Cruz-Chávez](https://pubmed.ncbi.nlm.nih.gov/?term=Cruz-Ch%C3%A1vez+TA&cauthor_id=40011127) [2](https://pubmed.ncbi.nlm.nih.gov/40011127/#full-view-affiliation-2), [Juan Antonio Gallegos-Marín](https://pubmed.ncbi.nlm.nih.gov/?term=Gallegos-Mar%C3%ADn+JA&cauthor_id=40011127) [2](https://pubmed.ncbi.nlm.nih.gov/40011127/#full-view-affiliation-2), [Ana María Chávez-Vázquez](https://pubmed.ncbi.nlm.nih.gov/?term=Ch%C3%A1vez-V%C3%A1zquez+AM&cauthor_id=40011127) [2](https://pubmed.ncbi.nlm.nih.gov/40011127/#full-view-affiliation-2), [Fernando Alatorre-Rendón](https://pubmed.ncbi.nlm.nih.gov/?term=Alatorre-Rend%C3%B3n+F&cauthor_id=40011127) [3](https://pubmed.ncbi.nlm.nih.gov/40011127/#full-view-affiliation-3), [Jesús González-Carmona](https://pubmed.ncbi.nlm.nih.gov/?term=Gonz%C3%A1lez-Carmona+J&cauthor_id=40011127) [4](https://pubmed.ncbi.nlm.nih.gov/40011127/#full-view-affiliation-4), [Bruno Moreno-Medina](https://pubmed.ncbi.nlm.nih.gov/?term=Moreno-Medina+B&cauthor_id=40011127) [2](https://pubmed.ncbi.nlm.nih.gov/40011127/#full-view-affiliation-2)

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## Abstract

We conducted a prolective cohort study with the aim of estimating the incidence of healthcare-associated infections and identifying associated factors in an intensive care unit in Mexico. Diagnosis of central venous catheter-associated bacteremia, ventilator-associated pneumonia and urinary catheter-associated urinary tract infection was established according to the Centers for Disease Control and Prevention definitions; risk factors were analyzed by logistic regression. Four hundred twenty-six patients who had 486 admissions were studied, 55.9% were male and the median age was 4 years. The healthcare-associated infections incidence rate was 14.8 events/1000 patient-days. The prevalent microorganisms were gram negative bacilli. The factors associated with healthcare-associated infections were chronic conditions (p=0,01), the number of central venous catheters inserted and the days duration of central venous catheter, mechanical ventilation and the urinary catheter (the 4 variables with p≤0.001).

**Keywords:** Catheter-related infections; Healthcare-associated infections; Infecciones asociadas con el sistema de salud; Infecciones del tracto urinario; Infecciones relacionadas con catéteres; Infección nosocomial; Intensive care units; Neumonía asociada al ventilador; Nosocomial infection; Unidades de cuidados intensivos; Urinary tract infections; Ventilator-associated pneumonia.

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# Association between microsatellite polymorphism in the Heme Oxygenase-1 (HMOX1) gene promoter and type 2 diabetes: an updated meta-analysis

[Juan José Rivera-Valdés](https://pubmed.ncbi.nlm.nih.gov/?term=Rivera-Vald%C3%A9s+JJ&cauthor_id=39917725) [#](https://pubmed.ncbi.nlm.nih.gov/39917725/#full-view-equal-contrib-explanation) [1](https://pubmed.ncbi.nlm.nih.gov/39917725/#full-view-affiliation-1), [Sonia Sifuentes-Franco](https://pubmed.ncbi.nlm.nih.gov/?term=Sifuentes-Franco+S&cauthor_id=39917725) [#](https://pubmed.ncbi.nlm.nih.gov/39917725/#full-view-equal-contrib-explanation) [2](https://pubmed.ncbi.nlm.nih.gov/39917725/#full-view-affiliation-2), [Sandra Margarita Ramírez-Meza](https://pubmed.ncbi.nlm.nih.gov/?term=Ram%C3%ADrez-Meza+SM&cauthor_id=39917725) [3](https://pubmed.ncbi.nlm.nih.gov/39917725/#full-view-affiliation-3), [Omar Íñiguez-Mosqueda](https://pubmed.ncbi.nlm.nih.gov/?term=%C3%8D%C3%B1iguez-Mosqueda+O&cauthor_id=39917725) [4](https://pubmed.ncbi.nlm.nih.gov/39917725/#full-view-affiliation-4), [José Javier Morales-Núñez](https://pubmed.ncbi.nlm.nih.gov/?term=Morales-N%C3%BA%C3%B1ez+JJ&cauthor_id=39917725) [2](https://pubmed.ncbi.nlm.nih.gov/39917725/#full-view-affiliation-2), [Mayra Leticia Ramírez-Evangelista](https://pubmed.ncbi.nlm.nih.gov/?term=Ram%C3%ADrez-Evangelista+ML&cauthor_id=39917725) [2](https://pubmed.ncbi.nlm.nih.gov/39917725/#full-view-affiliation-2), [Itzel Viridiana Reyes-Pérez](https://pubmed.ncbi.nlm.nih.gov/?term=Reyes-P%C3%A9rez+IV&cauthor_id=39917725) [5](https://pubmed.ncbi.nlm.nih.gov/39917725/#full-view-affiliation-5), [Omar Graciano-Machuca](https://pubmed.ncbi.nlm.nih.gov/?term=Graciano-Machuca+O&cauthor_id=39917725) [6](https://pubmed.ncbi.nlm.nih.gov/39917725/#full-view-affiliation-6)

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## Abstract

Over a decade has passed since the first meta-analysis examining (GT)n repeats in the *HMOX1* promoter region and their association with Type 2 Diabetes (T2D) was conducted. Since then, new studies on this topic have been published, prompting this updated meta-analysis to further clarify these associations. A systematic review conducted through December 2024 using the search term: (HMOX1 OR HMOX1 OR HMOX1D OR "HO-1" OR HSP32 OR bk286B10) AND (polymorphisms OR polymorphism OR "genetic variant" OR "genetic variants") AND (Diabetes) in the PubMed, Web of Science, and Scopus databases identified nine studies comprising 2,027 cases and 2,840 controls. Pooled odds ratios (OR) and 95% confidence intervals (CI) were calculated using either a fixed-effect model (FEM) for homogeneous data or a random-effect model (REM) for other cases, as appropriate. Sensitivity analysis and publication bias were also assessed. The SS genotype was identified as being inversely associated with T2D in both SS:SL + LL and SS:LL genetic models (OR = 0.769, *p* = 0.003; OR = 0.726, *p* = 0.003; respectively). These findings suggest that SS genotype (< 25 GT repeats) may have a protective role against T2D; however, further studies are needed to elucidate the mechanisms by which HMOX1 influences T2D pathogenesis.

**Supplementary information:** The online version contains supplementary material available at 10.1007/s40200-025-01575-y.

**Keywords:** HMOX1; Heme oxygenase 1; Microsatellite; Oxidative stress; Type 2 diabetes.

Case Reports Am J Case Rep. 2025 Feb 14:26:e948495. doi: 10.12659/AJCR.948495.

# Retracted: Cowden Syndrome and Oral Lesions: A Case Report Using MLPA

[Mariana Cristina Barrón-Márquez](https://pubmed.ncbi.nlm.nih.gov/?term=Barr%C3%B3n-M%C3%A1rquez+MC&cauthor_id=39950210) [1](https://pubmed.ncbi.nlm.nih.gov/39950210/#full-view-affiliation-1), [Rogelio González-González](https://pubmed.ncbi.nlm.nih.gov/?term=Gonz%C3%A1lez-Gonz%C3%A1lez+R&cauthor_id=39950210) [2](https://pubmed.ncbi.nlm.nih.gov/39950210/#full-view-affiliation-2), [Lucina Bobadilla-Morales](https://pubmed.ncbi.nlm.nih.gov/?term=Bobadilla-Morales+L&cauthor_id=39950210) [3](https://pubmed.ncbi.nlm.nih.gov/39950210/#full-view-affiliation-3), [Victor Ulises Rodriguez-Machuca](https://pubmed.ncbi.nlm.nih.gov/?term=Rodriguez-Machuca+VU&cauthor_id=39950210) [4](https://pubmed.ncbi.nlm.nih.gov/39950210/#full-view-affiliation-4), [Ronell Bologna-Molina](https://pubmed.ncbi.nlm.nih.gov/?term=Bologna-Molina+R&cauthor_id=39950210) [2](https://pubmed.ncbi.nlm.nih.gov/39950210/#full-view-affiliation-2) [5](https://pubmed.ncbi.nlm.nih.gov/39950210/#full-view-affiliation-5), [Nelly Molina-Frechero](https://pubmed.ncbi.nlm.nih.gov/?term=Molina-Frechero+N&cauthor_id=39950210) [6](https://pubmed.ncbi.nlm.nih.gov/39950210/#full-view-affiliation-6), [Omar Alejandro Tremillo-Maldonado](https://pubmed.ncbi.nlm.nih.gov/?term=Tremillo-Maldonado+OA&cauthor_id=39950210) [2](https://pubmed.ncbi.nlm.nih.gov/39950210/#full-view-affiliation-2), [Sandra López-Verdín](https://pubmed.ncbi.nlm.nih.gov/?term=L%C3%B3pez-Verd%C3%ADn+S&cauthor_id=39950210) [7](https://pubmed.ncbi.nlm.nih.gov/39950210/#full-view-affiliation-7)

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## Abstract

This publication is being retracted due to challenges to the patient's consent for publication and omission of a key author. Reference: Mariana Cristina Barrón-Márquez, Rogelio González-González, Lucina Bobadilla-Morales, Victor Ulises Rodriguez-Machuca, Ronell Bologna-Molina, Nelly Molina-Frechero, Omar Alejandro Tremillo-Maldonado, Sandra López-Verdín: Cowden Syndrome and Oral Lesions: A Case Report Using MLPA. Am J Case Rep 2025; 26: e943740. DOI: 10.12659/AJCR.945876.

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# Seroprevalence of Celiac Disease in Mexican Mestizo Patients With Autoimmune Thyroid Disease

[Diana Karen Tapia-Calderón](https://pubmed.ncbi.nlm.nih.gov/?term=Tapia-Calder%C3%B3n+DK&cauthor_id=40000025) [1](https://pubmed.ncbi.nlm.nih.gov/40000025/#full-view-affiliation-1), [Karina Guadalupe Hernández-Flores](https://pubmed.ncbi.nlm.nih.gov/?term=Hern%C3%A1ndez-Flores+KG&cauthor_id=40000025) [2](https://pubmed.ncbi.nlm.nih.gov/40000025/#full-view-affiliation-2), [José Antonio Velarde Ruiz-Velasco](https://pubmed.ncbi.nlm.nih.gov/?term=Velarde+Ruiz-Velasco+JA&cauthor_id=40000025) [1](https://pubmed.ncbi.nlm.nih.gov/40000025/#full-view-affiliation-1), [Edgar Santino García-Jiménez](https://pubmed.ncbi.nlm.nih.gov/?term=Garc%C3%ADa-Jim%C3%A9nez+ES&cauthor_id=40000025) [1](https://pubmed.ncbi.nlm.nih.gov/40000025/#full-view-affiliation-1), [José Roberto Barrientos-Ávalos](https://pubmed.ncbi.nlm.nih.gov/?term=Barrientos-%C3%81valos+JR&cauthor_id=40000025) [3](https://pubmed.ncbi.nlm.nih.gov/40000025/#full-view-affiliation-3), [Juan Manuel Aldana-Ledesma](https://pubmed.ncbi.nlm.nih.gov/?term=Aldana-Ledesma+JM&cauthor_id=40000025) [1](https://pubmed.ncbi.nlm.nih.gov/40000025/#full-view-affiliation-1), [Ana Isabel Tornel-Avelar](https://pubmed.ncbi.nlm.nih.gov/?term=Tornel-Avelar+AI&cauthor_id=40000025) [1](https://pubmed.ncbi.nlm.nih.gov/40000025/#full-view-affiliation-1), [Lydia Aurora Mercado-Jáuregui](https://pubmed.ncbi.nlm.nih.gov/?term=Mercado-J%C3%A1uregui+LA&cauthor_id=40000025) [1](https://pubmed.ncbi.nlm.nih.gov/40000025/#full-view-affiliation-1), [Adolfo Gómez-Quiroz](https://pubmed.ncbi.nlm.nih.gov/?term=G%C3%B3mez-Quiroz+A&cauthor_id=40000025) [4](https://pubmed.ncbi.nlm.nih.gov/40000025/#full-view-affiliation-4), [Felipe Cerda-Camacho](https://pubmed.ncbi.nlm.nih.gov/?term=Cerda-Camacho+F&cauthor_id=40000025) [5](https://pubmed.ncbi.nlm.nih.gov/40000025/#full-view-affiliation-5), [Francisco Alejandro Felix-Tellez](https://pubmed.ncbi.nlm.nih.gov/?term=Felix-Tellez+FA&cauthor_id=40000025) [2](https://pubmed.ncbi.nlm.nih.gov/40000025/#full-view-affiliation-2), [Héctor Vivanco-Cid](https://pubmed.ncbi.nlm.nih.gov/?term=Vivanco-Cid+H&cauthor_id=40000025) [2](https://pubmed.ncbi.nlm.nih.gov/40000025/#full-view-affiliation-2), [Carlos Alonso Domínguez-Alemán](https://pubmed.ncbi.nlm.nih.gov/?term=Dom%C3%ADnguez-Alem%C3%A1n+CA&cauthor_id=40000025) [2](https://pubmed.ncbi.nlm.nih.gov/40000025/#full-view-affiliation-2), [Omar Ugarte Álvarez](https://pubmed.ncbi.nlm.nih.gov/?term=Ugarte+%C3%81lvarez+O&cauthor_id=40000025) [6](https://pubmed.ncbi.nlm.nih.gov/40000025/#full-view-affiliation-6), [José María Remes-Troche](https://pubmed.ncbi.nlm.nih.gov/?term=Remes-Troche+JM&cauthor_id=40000025) [2](https://pubmed.ncbi.nlm.nih.gov/40000025/#full-view-affiliation-2)

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## Abstract

**Goals:** This study aimed to assess the seroprevalence of celiac disease in Mexican patients with autoimmune thyroid diseases, hypothesizing that prevalence would align with rates observed in other populations.

**Background:** The association between celiac disease and autoimmune thyroid diseases has been documented globally, with varying seroprevalence rates. Historically, Mexican Mestizos were considered at low risk for celiac disease, yet recent findings suggest similar prevalence to other regions. However, data regarding Hispanic patients with autoimmune thyroid diseases are limited.

**Study:** This observational, descriptive, cross-sectional study involved 170 Mexican Mestizo patients diagnosed with autoimmune thyroid diseases, specifically Hashimoto thyroiditis or Graves' disease. Data on demographics, disease history, and symptoms were collected. Celiac disease seroprevalence was assessed using immunoglobulin A anti-tissue transglutaminase, immunoglobulin A deamidated gliadin peptide, and immunoglobulin G deamidated gliadin peptide antibodies, with values above a specified threshold considered positive.

**Results:** Among the participants, 92.4% were female, with a mean age of 45.4 years. Hashimoto thyroiditis was present in 80.6% of cases, whereas Graves disease accounted for 19.4%. The overall celiac disease seroprevalence was 8.8% (95% CI; 5.4-14.1). All individuals with positive serology had Hashimoto thyroiditis, and although no gastrointestinal symptoms were linked to seropositivity, anemia was more common in celiac-positive subjects.

**Conclusions:** Celiac disease seroprevalence among Mexican Mestizo patients with autoimmune thyroid diseases aligns with other populations. Serological screening for celiac disease is recommended, even in the absence of gastrointestinal symptoms. Further biopsy-confirmed studies are necessary.

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Observational Study BMC Cancer. 2025 Feb 21;25(1):325. doi: 10.1186/s12885-025-13729-5.

# Nutritional status at diagnosis and its relationship with survival and relapse in Mexican children with acute lymphoblastic leukemia: a retrospective study

[Alan E Guzmán-León](https://pubmed.ncbi.nlm.nih.gov/?term=Guzm%C3%A1n-Le%C3%B3n+AE&cauthor_id=39984931) [1](https://pubmed.ncbi.nlm.nih.gov/39984931/#full-view-affiliation-1), [Sergio Gallegos-Castorena](https://pubmed.ncbi.nlm.nih.gov/?term=Gallegos-Castorena+S&cauthor_id=39984931) [2](https://pubmed.ncbi.nlm.nih.gov/39984931/#full-view-affiliation-2), [Hugo Romo-Rubio](https://pubmed.ncbi.nlm.nih.gov/?term=Romo-Rubio+H&cauthor_id=39984931) [2](https://pubmed.ncbi.nlm.nih.gov/39984931/#full-view-affiliation-2), [Erika Casillas-Toral](https://pubmed.ncbi.nlm.nih.gov/?term=Casillas-Toral+E&cauthor_id=39984931) [3](https://pubmed.ncbi.nlm.nih.gov/39984931/#full-view-affiliation-3), [Veronica Lopez-Teros](https://pubmed.ncbi.nlm.nih.gov/?term=Lopez-Teros+V&cauthor_id=39984931) [1](https://pubmed.ncbi.nlm.nih.gov/39984931/#full-view-affiliation-1), [Katja Stein](https://pubmed.ncbi.nlm.nih.gov/?term=Stein+K&cauthor_id=39984931) [4](https://pubmed.ncbi.nlm.nih.gov/39984931/#full-view-affiliation-4) [5](https://pubmed.ncbi.nlm.nih.gov/39984931/#full-view-affiliation-5)

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## Abstract

**Background & aims:** Childhood acute lymphoblastic leukemia (ALL) is a malignancy with varying survival rates across countries with low, middle, and high income. The assessment of nutritional status (NS) using anthropometric indicators has been explored for its potential relationship on treatment outcomes. This study analyzed a 3-year retrospective cohort of Mexican pediatric patients with ALL, exploring the association between NS at diagnosis and relapse/mortality.

**Methods:** Retrospective observational study. Medical records from 252 pediatric patients with ALL were included; anthropometric indicators (Z-scores) of body weight, height, mid-upper arm circumference (MUAC), and triceps and subscapular skinfolds (TSF and SSF, respectively) measurements were used to assess NS. The relapse/mortality data were collected from medical records. Kaplan-Meier (KM) functions and Cox regression models were performed to evaluate the effect of indicators on survival, relapse, and event (death or disease relapse).

**Results:** Patients with malnutrition showed a significantly lower survival rate according to their BMI (76% vs 63%, p = 0.049), while relapses were higher in the group with TSF < -2 SD (41% vs 12%, p = 0.007). Patients with stunting and TSF < -2 SD showed a higher risk of mortality (HR:6.214, 95%CI: 1.372 to 28.154; HR:2.91, 95%CI: 1.27 to 6.68, respectively), while in patients with higher MUAC Z-score showed a decrease in the mortality risk (HR:0.85, 95%CI:0.73 to 1.00).

**Conclusions:** The nutritional status assessed by anthropometric measurements was a strong predictor of survival and relapse outcomes 3y post/diagnosis in this cohort of pediatric patients with ALL.

**Keywords:** ALL, Acute lymphoblastic leukemia; BMI, body mass index; Childhood ALL; Nutritional status; Survival rate.

Antibiotics (Basel). 2025 Feb 12;14(2):187. doi: 10.3390/antibiotics14020187.

# The Clinical Implications of Inappropriate Therapy in Community-Onset Urinary Tract Infections and the Development of a Bayesian Hierarchical Weighted-Incidence Syndromic Combination Antibiogram

[Adolfo Gómez-Quiroz](https://pubmed.ncbi.nlm.nih.gov/?term=G%C3%B3mez-Quiroz+A&cauthor_id=40001430) [1](https://pubmed.ncbi.nlm.nih.gov/40001430/#full-view-affiliation-1), [Brenda Berenice Avila-Cardenas](https://pubmed.ncbi.nlm.nih.gov/?term=Avila-Cardenas+BB&cauthor_id=40001430) [1](https://pubmed.ncbi.nlm.nih.gov/40001430/#full-view-affiliation-1), [Judith Carolina De Arcos-Jiménez](https://pubmed.ncbi.nlm.nih.gov/?term=De+Arcos-Jim%C3%A9nez+JC&cauthor_id=40001430) [2](https://pubmed.ncbi.nlm.nih.gov/40001430/#full-view-affiliation-2), [Leonardo Perales-Guerrero](https://pubmed.ncbi.nlm.nih.gov/?term=Perales-Guerrero+L&cauthor_id=40001430) [3](https://pubmed.ncbi.nlm.nih.gov/40001430/#full-view-affiliation-3), [Pedro Martínez-Ayala](https://pubmed.ncbi.nlm.nih.gov/?term=Mart%C3%ADnez-Ayala+P&cauthor_id=40001430) [4](https://pubmed.ncbi.nlm.nih.gov/40001430/#full-view-affiliation-4), [Jaime Briseno-Ramirez](https://pubmed.ncbi.nlm.nih.gov/?term=Briseno-Ramirez+J&cauthor_id=40001430) [3](https://pubmed.ncbi.nlm.nih.gov/40001430/#full-view-affiliation-3) [5](https://pubmed.ncbi.nlm.nih.gov/40001430/#full-view-affiliation-5)

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## Abstract

**Background/objectives:** The rise in multidrug-resistant pathogens complicates UTI management, particularly in empirical therapy. This study aimed to develop and describe a Bayesian hierarchical weighted-incidence syndromic combination antibiogram (WISCA) model to optimize antibiotic selection for adult patients with community-onset UTIs.

**Methods:** A retrospective study was conducted using a Bayesian hierarchical model. Data from microbiology laboratory records and medical databases were analyzed, focusing on age, prior antibiotic exposure, and clinical characteristics. Clinical outcomes, including extended hospital stays and in-hospital mortality, were evaluated before WISCA model development. Unlike traditional antibiograms, a WISCA integrates patient-specific factors to improve antimicrobial coverage estimations. A total of 11 monotherapies and 18 combination therapies were tested against 15 pathogens, with posterior coverage probabilities and 95% highest density intervals (HDIs) used to assess coverage.

**Results:** Inappropriate final antibiotic treatment was associated with worse outcomes. The Bayesian framework improved estimations, particularly for rare pathogen-antibiotic interactions, increasing model applicability in high-resistance settings. Combination regimens showed superior coverage, especially in MDR cases and older adults.

**Conclusions:** This study employed a comprehensive methodological approach for WISCA development, enhancing empirical antibiotic selection by incorporating local resistance data and patient-specific factors in a middle-income Latin American country with a high antimicrobial resistance profile. These findings provide a foundation for future clinical applications and antimicrobial stewardship strategies in high-resistance environments.

**Keywords:** Bayesian analysis; WISCA; antibiotic resistance; antibiotic stewardship; antimicrobial coverage; urinary tract infections; weighted-incidence syndromic combination antibiograms.