

670 Evaluation of an Indigenous Community Possibly Protected Against Sensitivity to Mites in the Andean Region



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RATIONALE: Mites species are present throughout the world, the sensitization to these oscillate according to the region. However, little has been clarified in some ethnic. Intraepidermal tests and specific immunoglobulins for mites are lower in indigenous people compared to other predominant ethnic groups in the region.

METHODS: An analytical study was carried out to compare ethnic groups in an Andean region of South America. The indigenous group selected with the Respondent-Driven Sampling technique (RDS) and the mestizos group was from a capital city, paired by sex and age group. Prick tests with extracts, with concentrations of 300 μ g/mL for *B. tropicalis*, 300 μ g/mL for *D. pteronyssinus*, and 400 μ g/mL for *D. farinae*; as well as an allergen-specific immunoglobulin E (IgE) measurement, were tested on individuals with allergic disease history. We used correlational effect sizes for comparing two groups using the Point-Biserial correlation.

RESULTS: Diameters of the wheals showed large size effect, with lower diametral values in the indigenous group compared with the values of the mestizo group *B tropicalis* (rbis = -0.50, 95% CI: -0.68 to -0.21), *D pteronyssinus* (rbis = -0.54, 95% CI: -0.71 to -0.26) and *D farinae* (rbis = -0.47, 95% CI: -0.66 to -0.17). The IgE reported medium effect sizes, with lower values in the indigenous ethnic group *B tropicalis* (rbis = -0.29), *D pteronyssinus* (rbis = -0.35) and *D farinae* (rbis = -0.33, 95%).

CONCLUSIONS: The environmental aspects and social determinants could be modifiable factors for the reaction of the indigenous population against *Blomia tropicalis*, *Dermatophagoides pteronyssinus* and *Dermatophagoides farinae* mites.

671 Can Social Media Reliably Predict Trends in Pediatric Asthma-related Emergency Department Visits?



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RATIONALE: Prior research examining fluctuations in asthma-related ED visits has focused on factors such as food trends and environmental activity; however, less is known about the predictive potential of using social media data. Our objective was to examine the correlation of asthma-related search terms using Google Trends (GT) with pediatric asthma-related ED visits. We can provide asthma surveillance information quicker than traditional Center of Disease Control methods. EPA particulate data may also play a correlative role in the influx of ED visits.

METHODS: Using Pediatric Health Information System data from pediatric free-standing hospitals, weekly counts of asthma-related ED visits from 2010-2015 were compared to weekly GT SVI (search volume index). In addition, EPA data was generated from the most complete data and focused on 5 particulates, including Ozone, CO, NO₂, SO₂, and PM10 Speciation. Correlations with GT SVI, EPA, and ED visits were calculated using yearly aggregated data.

RESULTS: Data from 11 metropolitan areas were included. Comparisons between ED visit data and GT SVI showed mostly positive correlations ranging from an average of 0.299 to 0.632. However, not all correlations were significant. Historic hospital data in combination with GT SVI better predicts pediatric asthma-related ED visits versus GT SVI data alone.

Comparisons between ED visit data and EPA data frequently showed positive correlation in 6 cities across years investigated.

CONCLUSIONS: There is evidence that the fluctuation of pediatric asthma-related ED visits may be related to social media data. GT SVI data may be a valuable new source for predicting influxes of asthma-related ED visits.

672 Knowledge Gaps On Asthma Diagnosis Among General Physicians And Specialists In Contrast With Evidence-Based Clinical Guideline Recommendations: Results From A National Survey



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RATIONALE: This study sought to identify how knowledge concerning some aspects of asthma diagnosis may vary according to the treating physician's medical specialty.

METHODS: We conducted an online national survey among 860 Mexican board-certified practitioners who routinely evaluate patients with asthma to assess their knowledge about several aspects of asthma diagnosis. Their replies were contrasted *per specialty* against the 2017 evidence-based recommendations of the Mexican Asthma Guidelines (GUIMA).

RESULTS: 34 *otolaryngologists*, 62 general practitioners (GPs), 161 pulmonologists, 239 pediatricians and 364 allergists completed the survey. Although the overall application of diagnostic clinical criteria agreed with most GUIMA recommendations in all groups (up to 85%), several specialties-related knowledge gaps were also documented. Up to 30% of non-pulmonologists didn't recognize chest discomfort as a clue symptom of asthma, and all except pulmonologists incorrectly listed FEV1 as the best parameter to confirm expiratory flow obstruction. Almost 75% of all physicians were not aware of the morning-evening PEF measurement as an alternative tool to demonstrate variable airflow obstruction, and almost half erroneously believed wheezing-associated viral illnesses in non-atopic children predispose to asthma. The GUIMA recommendation to restrict allergy testing and only perform when allergy is suspected was not shared by >50% of GPs, pediatricians and allergists, as they would perform these tests in all asthma cases.

CONCLUSIONS: There are considerable specialties-related variations in physicians' knowledge about predisposing factors, phenotyping, diagnostic criteria and classification of asthma in contrast to GUIMA recommendations. Recognition of such discrepancies could encourage specialty-specific learning tools and stimulate further activities of guidelines' dissemination.