

tiempo completo y sin constantes interrupciones. El regreso a clases presenciales deberá considerar el rezago educativo de todos los niños y en especial aquéllos con mayores desventajas sociales. Hacemos un llamado a nuestros colegas salubristas y epidemiólogos a ser más vocales sobre este tema; esto implica comunicar mejor los riesgos del Covid-19 en niños, visibilizar su impacto en la educación y bienestar de los niños y apoyar a las autoridades para diseñar medidas de mitigación en escuelas que sean viables y efectivas.

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Regional variability of glycemic control among adults with diabetes mellitus in Colombia

Dear editor: The information related to all diabetic patients reported in the framework of the Colombian General System of Social Security in Health offers the opportunity to understand the characteristics of this population at risk and thus identify the challenges faced by the health system and determine actions to improve health outcomes and contributing to the financial sustainability of the system.¹ The geographic proximity between regions, and differences in social and economic development, can influence access and quality of health services, which means that there may be variations in the glycemic control of patients with diabetes mellitus (DM) that must be explored and described to direct strategies according to regional needs.^{2,3}

We conducted a cross-sectional study to evaluate the association between the region of residence and HbA1c levels among adults with DM who received care within the Colombian health system from July 1, 2018, to June 30, 2019. Data were reported by insurers to the High-Cost Diseases Colombian Fund, in compliance with the resolution 2463 of 2014 stated by the Colombian Ministry of Health and Social Protection.⁴

During the study period, 1 284 048 adults had been diagnosed with DM, of these 68.62% had a report of HbA1c level, which constitute the population analyzed in this study. The mean age was 64.90 years (SD±12.89) and 59.03% of patients were women. The median HbA1c for both men and women was 6.90%

(IQR=6.20-8.00%). The HbA1c target (<7%) was achieved in 52.39 of women and 51.60% of men ($p<0.001$).

The region "other departments" had the highest median HbA1c (7.20%; IQR=6.20-9.10%), where 50.41% were covered by state insurance. The lowest median was observed in the central region (median: 6.80%; IQR=6.20-7.90%) and in Bogotá, D.C. (median: 6.80%; IQR=6.30-7.80%), where 77.35 and 87.21% of patients had private insurance, respectively.

HbA1c levels was significantly higher in men than women and

in the "other departments" region compared to the other regions. In the population covered by public insurance, the HbA1c average was higher than in the population covered by private insurance (table I).

In conclusion, in Colombia three out of five people with diabetes mellitus had at least one HbA1c result in the last year. Only 52.07% of diabetics with HbA1c testing met the target of staying below 7%. Patients with diabetes mellitus living in the "other departments" region, and people affiliated with the state insurance showed less glycosylated hemoglo-

bin control. Health promotion and disease prevention programs need to be strengthened by considering DM as a metabolic risk factor for conditions such as obesity and chronic kidney disease. Future studies should identify the social determinants of these differences between regions.

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Table I
RESULTS OF MULTIPLE LINEAR REGRESSION MODEL TO ESTABLISH ASSOCIATION BETWEEN HbA1c AND REGION OF RESIDENCE IN ADULT POPULATION WITH DM, ADJUSTING FOR COVARIATES INCLUDED. COLOMBIA, 2019

Variable	Coefficient	95%CI		p value
		Lower limit	Upper limit	
Region				
Other departments*				
Bogotá, D.C	-4.71	-5.28	-4.13	<0.001
Caribbean	-4.14	-4.71	-3.56	<0.001
Central	-5.04	-5.61	-4.47	<0.001
Eastern	-2.95	-3.54	-2.36	<0.001
Pacific	-4.66	-5.23	-4.08	<0.001
Sex				
Female*				
Male	0.11	0.01	0.20	0.029
Age (years)	-0.26	-0.26	-0.26	<0.001
BMI (kg/m ²)	-0.12	-0.13	-0.11	<0.001
Health system insurance coverage				
Private*				
Public	2.62	2.49	2.74	<0.001
Other	-1.57	-2.06	-1.09	<0.001

* Reference category

95%CI: 95% confidence interval; BMI: body mass index; number of observations: 879 657; kg: kilograms; m: meters; DM: diabetes mellitus.

Departments that conform each region of Colombia grouped according to the definition of the National Administrative Department of Statistics for the year 2019: Caribbean: Atlántico, Bolívar, Cesar, Córdoba, La Guajira, Magdalena and Sucre. Bogotá, D.C.: Bogotá, D.C. Central: Antioquia, Caldas, Caquetá, Huila, Quindío, Risaralda y Tolima. Eastern: Boyacá, Cundinamarca, Meta, Norte de Santander, Santander. Other departments: Amazonas, Arauca, Casanare, Guainía, Guaviare, Putumayo, San Andrés y Providencia, Vaupés y Vichada. Pacific: Cauca, Chocó, Nariño y Valle del Cauca.

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