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Deficiencies in infrastructure for the diagnosis and treatment of stroke in Colombia

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Dear Editor,

At present, the Colombian Ministry of Health and Social Protection is advancing the development of a national stroke policy. A technical working group, composed of neurologists and public health physicians from Bogotá and several regions, has been established. A nationwide assessment of the existing infrastructure for stroke care was conducted. The first step involved mapping hospital assets capable of diagnosing and treating stroke. A total of 314 centers with potential capacity to manage stroke patients were identified. This characterization relied on data collected by the Angels® initiative (1) and public information from regional health authorities and the Colombian Ministry of Health (2).

Marked territorial disparities were identified, revealing significant inequities in access to comprehensive care. Key findings include: i) two departments (Vaupés and Vichada) without access to cranial imaging (CT or MRI); ii) four departments (Amazonas, Arauca, Chocó, and Guaviare) lacking thrombolytic agents such as alteplase or tenecteplase; iii) eleven departments without the capacity to perform mechanical thrombectomy for large vessel occlusion; and iv) two departments with a CT scanner within the public network but unable to provide thrombolysis due to absent or unimplemented protocols.

The biannual certification of stroke centers by the WSO-SIECV (World Stroke Organization – Sociedad Iberoamericana de Enfermedades Cerebrovasculares) serves as a key instrument for assessing and implementing quality standards in stroke care centers throughout Latin America (3). To date, ten centers in Colombia hold WSO-SIECV certification: six in the advanced category (capable of performing thrombolysis, thrombectomy, and providing comprehensive care) and four in the essential category (capable of thrombolysis). These certified centers are located in Bogotá, Medellín, Bucaramanga, Pasto, Armenia, and Cali. Consequently, the certification rate among centers with stroke care potential is alarmingly low (3%, 10/314) and confined to major urban areas.

An estimated 1,270,762 Colombians (2.4% of the national population) reside in departments without access to thrombolytic therapy, while approximately 4,443,755 individuals (8.5% of the population) live in areas without access to mechanical thrombectomy. Notably, two of these departments rank among the highest nationally for poverty and extreme poverty rates, while data on these indicators are unavailable for seven additional departments.

The lack of access to reperfusion therapies for nearly 10% of Colombia's population has a significant impact on disability rates, quality-adjusted life years lost, productive years lost, and stroke-related mortality.

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This diagnosis poses critical challenges:

1. Adherence to health system principles: Efficiency, universality, comprehensiveness, unity, solidarity, and participation. Each principle is compromised to varying degrees by the absence of infrastructure in affected regions (4).
2. Brain health as a development priority: The relationship between brain health, productivity, and quality of life is well established (5). The lack of access to standard treatment for one of the most disabling neurological diseases perpetuates a vicious cycle of illness, poverty, and limited development.
3. Public policy formulation: Colombia faces the complex challenge of legislating and creating public policies that address the needs of both urban populations and those in remote, rural, and insular areas, guaranteeing equal rights to health services for all Colombians (6).

In conclusion, Colombia faces significant deficiencies in basic stroke treatment infrastructure —especially in underserved regions— a low rate of certified stroke centers, a substantial proportion of patients who would remain untreated in the event of a stroke, and a grave threat to brain health and human development. The most affected geographic regions are the Orinoco, Amazon, and Pacific areas. We call upon the Ministry of Health, municipal and departmental authorities, scientific societies, insurers, and health care providers to take appropriate measures, within their respective mandates, to guarantee access to stroke treatment for populations in these regions.

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