Conquering stroke epidemiological statistics in Brazil an innovative initiative from the Brazilian Society of Cardiology

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Background: Stroke has been the second major cause of death in Brazil in the last decades. A better understanding on epidemiological statistics as well as on the diseases burden is crucial for enabling stakeholders to better tackle the disease.

Purpose: This project aims to continuously monitor and evaluate the data sources on heart disease and stroke in Brazil to provide the most up-to-date information on the epidemiology of these diseases to Brazilian society annually.

Methods: This initiative is based on the Heart Disease & Stroke Statistics Update methodology of the American Heart Association, with the support of the Brazilian Society of Cardiology, the Global Burden of Diseases Brazil network and an international committee. The project incorporates official statistics provided by the Brazilian Ministry of Health and other government agencies, as well as data generated by other sources and scientific studies on heart disease, stroke, and other CVD, including GBD/IHME data.

Results: The age-standardized prevalence rates per 100.000 for ischemic stroke in 1990 was 1327,6 (1151.2 to 1516) and 870.1 (761.1 to 992.8) in 2019 representing a percent change of −34.5 (−36.7 to −0.3). The age-standardized prevalence rates for intracerebral hemorrhage in 1990 was 507.5 (438.9 to584.1) and 315.9 (275 to 361.4) in 2019 representing a percent change of −37.7 (−40.5 to −0.3). The age-standardized incidence rates for stroke in 1990 was 224.6 (201.6 to 251.8) and 127 (113.8 to 142.1) in 2019 representing a percent change of −43.5 (−44.7 to −0.4). the age-standardized mortality rates for stroke in 1990 was 137.8 (127.8 to 144) and 58.1 (52.6 to 61.8) in 2019 representing a percent change of −57.8 (−60.4 to −0.6). The age-standardized DALY rates for stroke in 1990 was 2959 (2829.6 to 3063) and 1219.6 (1142 to 1285.5) in 2019 representing a percent change of −58.8 (−61 to −0.6).

Conclusion: This project represents a fundamental step on a better understanding on the stroke epidemiology in Brazil. While we observed a significant decrease in mortality rates from 1990 to 2019, we also raise a concern on a possible shift for a plateau curve or even increased rates in the next years.