



**Scaling Up Stroke Prevention and Treatment in the Americas:
The Declaration of Santiago de Chile
October 31, 2015**

Countries in the Americas face a growing burden of stroke-related mortality and disability. This region has significant health system challenges that must be overcome to meet the World Health Organization's goal to decrease the premature mortality of non-communicable diseases by 25 percent by 2025. Focusing on cardiovascular diseases and stroke will accelerate accomplishing this goal sooner.

We, the signers of this declaration and the organizations we represent, commit to unifying our voices in calling for action for the prevention and treatment of stroke in the Americas. We urge the respective regional authorities to allocate financial and human resources commensurate to the local and regional burden of stroke.

As part of the Addis Ababa Action Agenda and the 2030 Sustainable Development Goals, countries have committed to a new social mutual understanding to provide both social protection and essential public services. Leveraging these global commitments, we call for prioritizing strategies within respective national and regional institutions and organizations for organized stroke systems of care.

Burden of Stroke in the Region [GBD 2010, PAHO data, economic impact]

- a) According to the World Health Organization, 15 million people suffer stroke worldwide each year. Of these, 5 million die and another 5 million are permanently disabled.¹
- b) We acknowledge that stroke is the No. 2 killer in most Latin American countries.^{2,3} Similarly, the disability associated with stroke in the region of the Americas is significant given epidemiological changes.⁴
- c) We acknowledge that almost 80 percent of the leading chronic diseases (29 million) occur in low and middle income countries. Cardiovascular diseases will remain the No. 1 cause of death globally, accounting for 17.3 million deaths per year, and expected to increase to more than 23.6 million by 2030.⁵ In Latin America, 40 percent of cardiovascular deaths occur during an individual's most productive years.⁶
- d) We acknowledge the Political Declaration of the United Nations High-Level Meeting on the Prevention and Control of Non-communicable Diseases.⁷
- e) We reaffirm the World Health Assembly Decision (WHA 65.8) on follow-up to the United Nations High-Level Meeting on the Prevention and Control of Non-communicable Diseases and the adoption of the global target of a 25 percent reduction in premature mortality from non-communicable diseases by 2025.⁸
- f) We recognize that health is a precondition for and an expected outcome of sustainable human development in the 2030 Sustainable Development Goals.⁹
- g) We realize the lack of health insurance coverage is associated with increased cardiovascular risk, including stroke risk.¹⁰

Stroke is preventable through a set of key population-based interventions and key interventions among people at high risk.

- a) We recognize that primary and secondary prevention is the cornerstone towards decreasing morbidity and mortality of stroke.
- b) We acknowledge that public education on recognizing and treating risk factors, as well as early recognition of stroke, is important.¹⁷
- c) We recognize that effective treatment of stroke includes a focus on the collection of information and the participation of a multidisciplinary team with the capacity to provide quality care within a stroke unit.^{23,24}
- d) We further recognize that:
 - i) Many of the risk factors are modifiable and/or treatable and that the treatment of such factors results in a decreased incidence of cardiovascular disease and stroke.¹¹

- ii) Treatable and/or modifiable risk factors leading to stroke should be managed. In order of the highest impact and priority, those include hypertension, atrial fibrillation, tobacco use, diabetes mellitus, obesity, sedentary life, salt intake, and hyperlipidemia. Managing these factors will prevent a first and recurrent stroke.^{12, 13, 14}
 - iii) Primary and secondary prevention of stroke requires pharmacological treatment of treatable risk factors (anti-hypertensives, lipid control therapies, traditional and novel anticoagulants in atrial fibrillation and antiplatelet therapy) and other essential medicines as recognized by the new UN Sustainable Development Goals.¹⁵
 - iv) Treating the aforementioned risk factors requires access to affordable medical care, public coverage of medications that solve patient-specific needs and improve treatment adherence, and environments facilitating behavioral modification.¹⁶
 - v) We recognize the need to implement an educational program from elementary school to adolescence to sensitize the public on the stroke and its related risk factors including its early recognition.¹⁷
 - vi) Primordial prevention of cardiovascular disease and stroke at the population level requires the establishment of public policies supporting limiting the exposure to tobacco use, limiting consumer salt consumption and facilitating physical activity and exercise.¹⁸
- e) We further acknowledge that acting now in establishing goals and policies to achieve those stroke factors will permit countries to reach the World Health Organization's target of decreasing the mortality of cardiovascular disease and stroke by 25 percent by 2025.¹⁹

Stroke is treatable. [Interventions that are evidence-based, Stroke Systems of Care]

- a) We reaffirm that stroke is a treatable disease and with the right interventions can reduce long-term disability and mortality.²⁰
- b) We acknowledge that the effective treatment of stroke includes early recognition of the signs of a stroke, prompt transportation to the hospital and coordination of care by EMS and hospital.²¹
- c) We further acknowledge that stroke awareness, prevention, treatment and rehabilitation are required for a robust regional stroke systems.²²
- d) We acknowledge that the effective treatment of a stroke should include a standardized systematic approach by a multidisciplinary stroke team in a stroke unit.^{23, 24}
- e) There is an opportunity to improve the delivery of guidelines-based care for the patient hospitalized with stroke.²⁵
- f) We affirm that essential and specialized stroke care requires, at minimum, access to acute thrombolysis with intravenous tissue plasminogen activator (tPA) and access to basic diagnostic services (laboratory, electrocardiogram, computed tomography scan).^{26, 27, 28}
- g) We acknowledge that with the expertise available, treatment with intravenous thrombolysis and/or endovascular embolectomies can limit disability and mortality from ischemic stroke.²⁹
- h) We reinforce the need to access rehabilitation services that can help accelerate and improve function of patients and their reintegration into society.³⁰

Outcomes from the Latin American Summit on October 29-31, 2015

- a) The AHA/ASA, Latin American and Caribbean Stroke Network, the Chilean Neurology Society, the Ibero-American Stroke Association and World Stroke Organizations affirm the scaling up of prevention and control efforts.
- b) We acknowledge the following stroke gaps of care are evident in the Americas:
 - i) Stroke policies are not established in all countries. Hospitals in many countries are not adequately aligned with national stroke policy goals.
 - ii) Access to stroke care is variable, limited and regional-dependent. Hospitals are inadequately certified and accredited for stroke care.
 - iii) Funding for stroke programs, research and education is limited. Professional and public education vary across countries.
 - iv) Populations in the Latin American region do not have a unified nomenclature to refer to stroke.
 - v) There is an opportunity to increase public health awareness on stroke prevention and warnings signs.
- c) Therefore, we call for the following policies that support:
 - i) National plans by each country that acknowledge stroke specifically to ensure care and appropriate access.
 - ii) Low-cost and if possible, public coverage for prevention, control and acute treatment that has been prioritized above.
 - iii) Universal healthcare that includes access to pre-hospital care, stroke care and essential services and medications.
- d) We acknowledge and resolve the scaling up of stroke-focused initiatives within the region; and collaboration should be a whole society approach among multi-sectorial partners (i.e. academia, the private sector, health not-for-profits/charities, civil society, professional societies, Ministries of Health).

2) Call-to-action [concrete interventions in collaborative manner] in the context of NCD Global agenda, WHO 25 by 25 and PAHO Regional Strategy on NCD

- a) Target population level exposures lead to increased stroke risk. Regions/countries should pursue policies aimed at decreasing exposure of tobacco smoking, salt consumption and weight control, and promoting physical activity to reduce the burden of stroke in the Americas.
- b) Establish goals for the treatment and control of treatable risk factors, acknowledging the priorities and at-risk audiences established above.
 - i) Establish sensible strategies to allow screening and diagnosis of treatable risk factors such as hypertension, atrial fibrillation, diabetes mellitus and hyperlipidemia.³¹
 - ii) Increase access to medical care and public coverage to medications for the control of treatable risk factors including, but not limited to, hypertension, diabetes mellitus, hyperlipidemia and atrial fibrillation.
 - iii) Public coverage to medical care for secondary prevention and medications.
- c) Support of quality patient care:
 - i) Appropriate stroke professional training and a system of monitoring and quality improvement will strengthen the delivery of health care.³²
 - ii) With the goal of improving treatment times and increasing the number of patients treated, thrombolysis with tPA should be registered by governments and covered under national plans in all of the countries in Latin America. A focus on improvement of treatment times and emergency transport efficiency will result in better stroke treatment delivery.³³
 - iii) Define priority metrics for focused efforts to improve care across the continuum. Those metrics should address pre-hospital recognition of stroke and appropriate treatment by EMS, timely delivery of optimal therapy (tPA or invasive intervention as appropriate to center capability), and secondary prevention therapies at time of discharge to reduce recurrent stroke.
- d) Provide public education (warning signs and risk-factor reduction) is an important aspect of a robust stroke systems of care.
- e) As appropriate, local countries and regions need to establish sensible and financially feasible standardized stroke treatment guidelines.³⁴
- f) Establish translational, epidemiological and clinical research on stroke, specific to in-country issues.

Signatories of Declaration of Santiago de Chile

We, the undersigned, stand committed by these recommendations:

Co-signers:

Ignacio Gutierrez, Ministerio de Salud- Chile

Rodrigo Restrepo Gonzalez, Ministerio de Salud y
Protección Social- Colombia

Scientific & Professional Societies:

Salvador Cruz-Flores, American Heart Association/American Stroke Association

Sheila Martins, Rede Latino Americana e Caribenha de AVC y Sociedad Brasileira de Enfermedades Cerebrovascul

Jose Luis Castillo, Sociedad de Neurología, Psiquiatría y Neurocirugía de Chile (Chile)

Bo Norrving, World Stroke Organization

Sebastian Ameriso, Fundación para la lucha Contra Las Enfermedades Neurológicas de la Infancia (FLENI), Argentina

Octávio Marques Pontes Neto, Rede Brasil AVC

Rubens Jose Gagliardi, Academia Brasileira de Neurologia

Carlos Cantú Brito, Academia Mexicana de Neurología, (AMN), México

Félix Reynoso, Sociedad Neurología Argentina

Margarita Vejar, Sociedad Chilena de Cardiología

Alexis del Carmen Llamas, Fundación Colombiana de Corazón

Javier Torres-Zafra, Asociación Colombiana de Neurología

Palmira Pramparo, Fundación Interamericana del Corazón

Mario Munoz-Collazos, Red Colombiana Contra el ACV (RECAVAR), Colombia

Juan-Camilo Vargas, Asociación Colombiana de Neurología- RECAVAR

Fernando Góngora Rivera, Sociedad Iberoamericana de Enfermedad Cerebrovascular (SIECV) y Asociación Mexicana de EVC

Antonio Arauz, Asociación Mexicana de Enfermedad Vasculat Cerebral

Mary Lewis, Heart & Stroke Foundation of Canada

Academic Institutions:

Pablo Lavados, Universidad del Desarrollo y Universidad de Chile

Claudio Sacks, Universidad del Valparaíso

Rubens Jose Gagliardi, Academia Brasileira de Neurología

Lorena Hoffmeister, Universidad Mayor- Escuela de Salud Publica, Chile

Government Institutions:

Danny Moises Barrientos Iman, Instituto Nacional de Ciencias Neurológicas, Perú

Pilar Calle la Rosa, Instituto Nacional de Ciencias Neurológicas, Perú

Other Civil Society Organizations:

Eduardo Bianco, Framework Convention Alliance

Mauricio Alvarez, Asociación Colombiana de Empresas de Medicina Integral

Arnold Hoppe, La Clinica Alemana

References:

- ¹World Health Organization, World Heart Federation, World Stroke Organization. Global atlas on cardiovascular disease prevention and control: policies, strategies, and interventions. Published 2011.
http://www.who.int/cardiovascular_diseases/en/cvd_atlas_15_burden_stroke.pdf.
- ²Institute for Health Metrics and Evaluation. Global Burden of Disease Study, 2013. Available at
<http://vizhub.healthdata.org/gbd-cause-patterns/>.
- ³Souza M de FM de, Gawryszewski VP, Orduñez P, Sanhueza A, & Espinal MA. Cardiovascular disease mortality in the Americas: current trends and disparities. *Heart* 2012; 98(16):1207–12.
- ⁴Saposnik G, & Del-Brutto OH. Stroke in South América: A systematic review of incidence, prevalence, and stroke subtypes. Iberoamerican Society of Cerebrovascular Disease.
- ⁵Pan American Health Organization. Deaths due to non-communicable diseases in countries of the Americas [Internet]. 2015 [cited 2015 July 29]. Available from: http://www.paho.org/hq/index.php?option=com_content&view=article&id=10169.
- ⁶Ibid
- ⁷United Nations: General Assembly. Political Declaration of the high level meeting of the General assembly on the prevention and control of non-communicable diseases. Available at:
http://www.who.int/nmh/events/un_ncd_summit2011/political_declaration_en.pdf
- ⁸World Health Organization. 65th World Health Assembly document A65/54: Second report of Committee A. Published May 25, 2012. Available at: http://apps.who.int/gb/ebwha/pdf_files/WHA65/A65_54-en.pdf
- ⁹World Health Organization. Health in the post-2015 development agenda: need for a social determinant of health approach. *Joint statement of the UN platform on social determinants of health*. Available at:
http://www.who.int/social_determinants/advocacy/UN_Platform_FINAL.pdf
- ¹⁰Amaranco et al. Impact of living and socioeconomic characteristics on cardiovascular risk in ischemic stroke patients. *Int J Stroke*. 2014 Dec;9(8):1065-72. doi: 10.1111/ijss.12290. Epub 2014 Jun 12.
- ¹¹Ibid
- ¹²Rundek T, & Sacco R. Risk factor management to prevent first stroke. Available at:
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2666965/pdf/nihms-99238.pdf>
- ¹³Kernan et al. Guidelines for the Prevention of Stroke in Patients with Stroke and Transient Ischemic Attack.
<https://stroke.ahajournals.org/content/early/2014/04/30/STR.000000000000024.abstract>
- ¹⁴Adams et al. Guidelines for the Early Management of Adults with Ischemic Stroke a Guideline from the American Heart Association. *Stroke*. 2007; 38: 1655-1711.
- ¹⁵United Nations. Sustainable development goals. Available at: <http://www.un.org/sustainabledevelopment/sustainable-development-goals/>
- ¹⁶World Health Organization. Prevention of Cardiovascular Disease. Guidelines for assessment and management of cardiovascular risk. Geneva, 2007.
- ¹⁷Ibid
- ¹⁸Weitraub et al. Value for primordial and primary prevention for cardiovascular disease: A policy statement from the American Heart Association: <http://circ.ahajournals.org/content/124/8/967.full>
- ¹⁹World Health Organization. Global action plan for the prevention and control of non-communicable diseases. Geneva: WHO; 2013.
- ²⁰Ibid
- ²¹Higashida et al. Interactions within stroke systems of care. *Stroke*, 2013; volume 44(10): 2961 - 2984
- ²²Ibid
- ²³Martin et al. Guidelines for acute ischemic stroke treatment – Part II: Stroke treatment. *Arq Neuropsiquiatr* 2012; 70(11):885-893.
- ²⁴Lindsay et al. World Stroke Organization Global Stroke Services Guidelines and Action Plan *International Journal of Stroke*, 2014.
- ²⁵Ibid
- ²⁶Jauch et al. Guidelines for the early management of patients with Acute Ischemic Stroke. Available at:
<http://stroke.ahajournals.org/content/44/3/870>
- ²⁷Powers et al. 2015 AHA/ASA Focused Update of the 2013 Guidelines for the Early Management of Patients With Acute Ischemic Stroke Regarding Endovascular Treatment. Available at:
<http://stroke.ahajournals.org/content/early/2015/06/26/STR.0000000000000074.abstract>
- ²⁸Lindsay et al. World Stroke Organization Global Stroke Services Guidelines and Action Plan *International Journal of Stroke*, 2014.
- ²⁹Powers et al. 2015 AHA/ASA Focused Update of the 2013 Guidelines for the Early Management of Patients With Acute Ischemic Stroke Regarding Endovascular Treatment. Available at:
<http://stroke.ahajournals.org/content/early/2015/06/26/STR.0000000000000074.abstract>
- ³⁰Jauch et al. Guidelines for the early management of patients with Acute Ischemic Stroke. Available at:
<http://stroke.ahajournals.org/content/44/3/870>

- ³¹. Avezum A, Pieri A, Martins SO, & Marin-Neto JA. Stroke in Latin America. Burden of Disease and Opportunities for Prevention. *Global Heart* 2015. DOI: <http://www.sciencedirect.com/science/article/pii/S2211816014000180>
- ³². Ordunez P, Martinez R, Niebylski ML, & Campbell NR. Hypertension Prevention and Control in Latin America and the Caribbean. *J Clin Hypertens (Greenwich)*. 2015 Feb 28. doi: 10.1111/jch.12518.
- ³³. Ibid
- ³⁴. Pan American Health Organization. PanAmerican STEPS, the PAHO/WHO stepwise approach to chronic non-communicable disease risk-factor surveillance. 2010. [Pan American STEPS](#)