



World Stroke
Organization



one voice

World Stroke
Organization

Annual Report 2021

www.world-stroke.org



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one voice

Letter from the President



Marc Fisher, President

2021 was a difficult year for all of us because of the continued impact of the pandemic on our personal and professional lives. Hopefully all of you have remained healthy and the pressures on your clinical practice and healthcare facilities have not been too severe. The WSO has continued to push forward on our plans despite the challenges that are facing healthcare systems and the stroke community around the world. We were able to deliver a successful virtual World Stroke Congress and World Stroke Day in October with the help of the event co-chairs and many volunteers. The World Stroke Campaign led by Sheila Martins, who will be your next President continues to have a large impact worldwide. The World Stroke Academy under the leadership of Dr. Gustavo Saposnik has continued to add content to be enjoyed by all. The Future Leaders program under the direction of Werner Hacke, Valeria Caso and Chris Chen has been meeting virtually and the first cohort of already impressive participants will finish later this year. A second cohort will be recruited soon and begin their program later this year. The International Journal of Stroke has had a very successful year under the leadership of Hugh Markus and his team. The WSO has participated in many other activities as outlined in this report. Mia Grupper and her staff make all this happen, so thank-you to them.

The WSO has continued to push forward on our plans despite the challenges that are facing healthcare systems and the stroke community around the world.

We are planning to hold an in-person World Stroke Congress in Singapore at the end of October around World Stroke Day. It will be the first opportunity we have had to meet in some time so I invite as many of you as possible to attend in person and look forward to seeing you there.

Finally, I would like to thank our colleagues, partners, members and sponsors for their contribution to this work and for your continuous support to WSO, which takes us closer to our mission of lives free from stroke.

A handwritten signature in black ink that reads "Marc Fisher". The signature is fluid and cursive, with a long horizontal stroke at the end.

Sincerely,
Marc Fisher

Our Vision, Mission and Strategic Priorities

The World Stroke Organization (WSO) is recognized as the lead global organization for stroke by the World Health Organization (WHO). It was established in October 2006 through a merger of the International Stroke Society and the World Stroke Federation with the purpose of coordinating efforts and constituting One World Voice for Stroke. The aims of WSO are to:

- **Foster the best standards of practice in stroke care**
- **Increase public awareness**
- **Influence policies for prevention of stroke and vascular dementia, improve health services**
- **Provide education through collaboration with private and public organizations**
- **Facilitate stroke research**
- **Advocate and foster systems for long-term support of stroke survivors and their families**

In May 2019, WSO leadership reviewed and updated the organization's strategic priorities through to 2022. WSO's mission to reduce the global burden of stroke through prevention, treatment and long-term care was reaffirmed.

The plan was very ambitious with three strategic priorities and an action plan with 15 clearly defined actions to reach each strategic priority. We are pleased to report that the work is progressing well and that we are on track to achieve our goals by 2022.



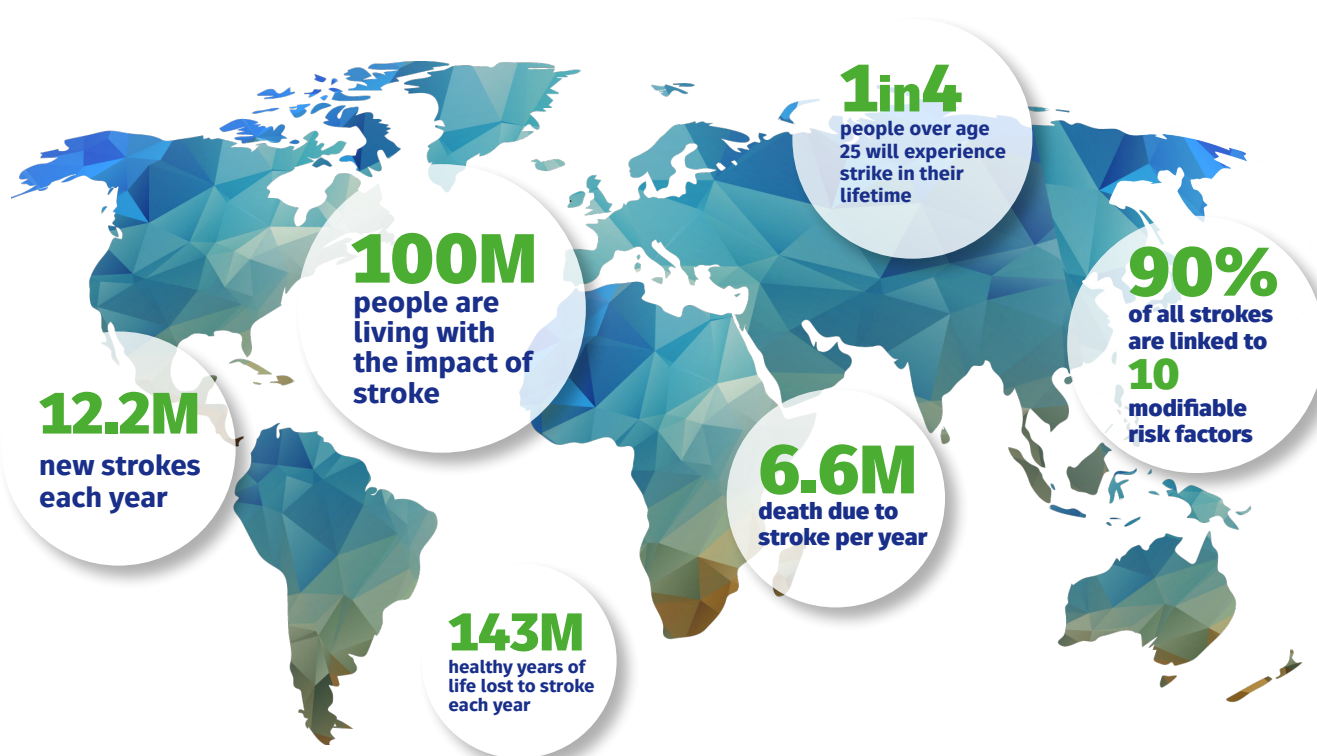
A new strategic workshop will be held in 2022 to evaluate how well the goals were achieved and to define a new strategic plan for the coming years.

A Global Voice for Stroke – Influencing Global Policy through Advocacy and Awareness

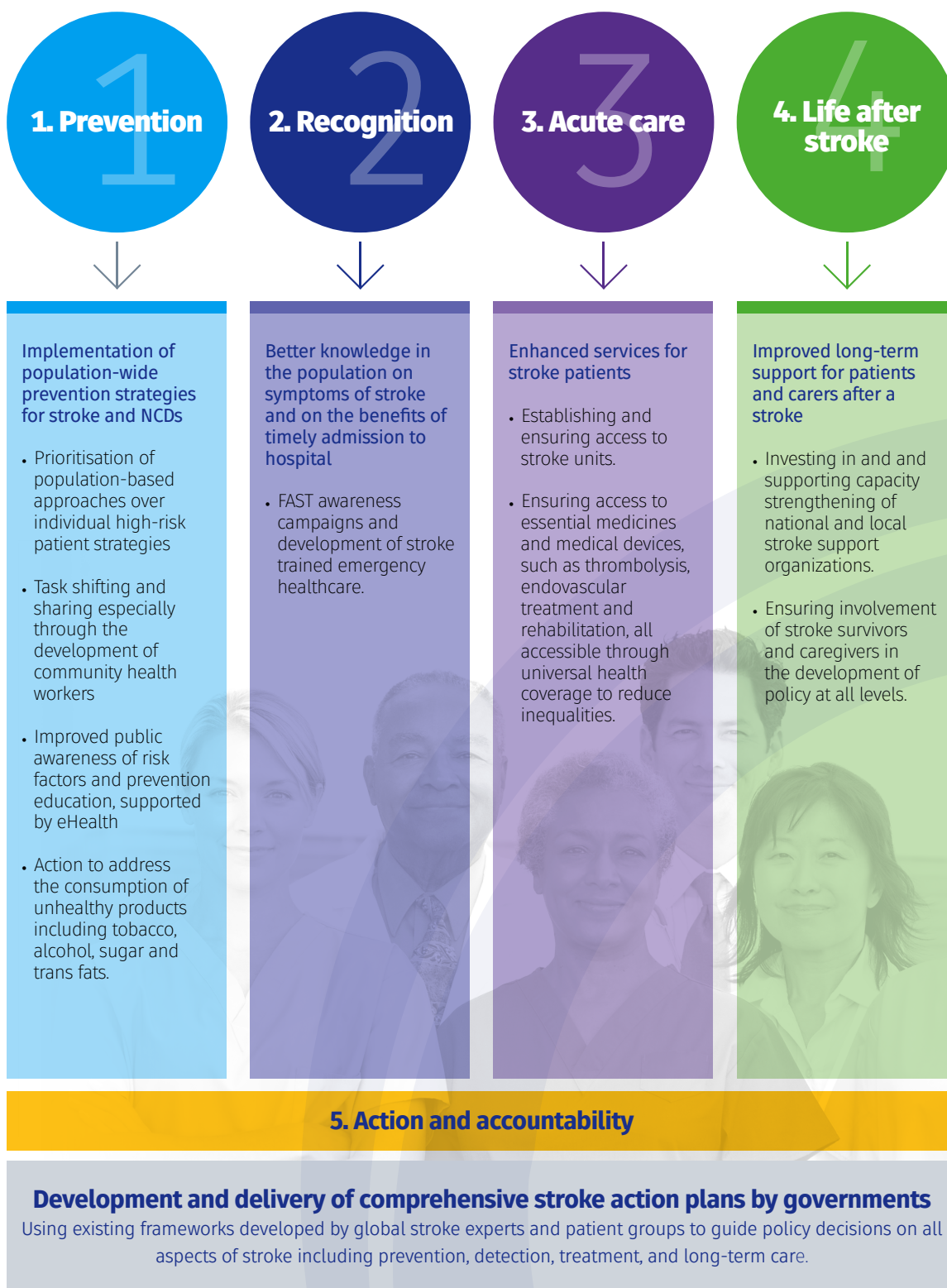
Developing Global Policy

In 2019, 12.2 million people worldwide had a stroke and of these 6.6 million died. This makes stroke the second-leading cause of death in the world. Over 100 million individuals around the world have experienced and live with the effects of stroke. Projections suggest that this figure will continue to rise dramatically in the coming decades. 143 million years of healthy life were lost due to stroke related death and disability. Stroke is gaining ground globally – over the past 10 years the lifetime risk of stroke in adults over 25 has increased from 1 in 6 to 1 in 4, implying that globally, 1 in 4 people over 25 will have a stroke in their lifetime. Worryingly, incidence, mortality and prevalence rates have risen among people younger than 70 years over the past decades. The burden of stroke disproportionately affects individuals in low- and middle-income countries (LMICs). Between 1990 and 2019, stroke-related DALYs attributable to risk factors increased by 48% in LMICs whilst they declined by 25% in high-income countries.

Stroke the second-leading cause of death in the world



To advance the specific needs of stroke within this broader context, WSO has defined five key advocacy priorities that span across prevention, detection, acute care, and rehabilitation. These advocacy priorities support the realization of WSO's strategic objectives.



A WSO advocacy brochure is under preparation and will be launched in 2022.

The Global Policy Committee, chaired by Michael Brainin and Valery Feigin, convened three very well attended webinars on the following topics.



Webinar 1

Prevention of stroke and dementia

Co-Chairs:
M. Brainin and S. Martins
Speakers:
S. Martins, C. Anderson, J. Wardlaw and M. Brainin

404 attendees



Webinar 2

Stroke in needs and numbers

Co-Chairs:
V. Feigin and A. Hills
Speakers:
V. Feigin, G. Ford, B. Norrving and M. Owolabi

260 attendees



Webinar 3

Environment and stroke

Co-Chairs:
A. Ranta and S. Ozturk
Speakers:
M. Wasay, J. Reis, V. Feigin and A. Ranta

140 attendees

Members of the Global Policy committee also contributed to the strengthening the evidence-base for WSO advocacy priorities with a series of key publications:

- [*Preventing the Next Pandemic: The Case for Investing in Circulatory Health - A Global Coalition for Circulatory Health Position Paper*](#)
- [*Quality of stroke guidelines in low- and middle-income countries: a systematic review.*](#)
- [*The state of stroke services across the globe: Report of World Stroke Organization-World Health Organization surveys.*](#)
- [*The African Stroke Organization - a new dawn for stroke in Africa.*](#)
- [*Primary stroke prevention worldwide: translation evidence into action.*](#)

During the year, WSO has participated in several global and regional meetings as well as in health initiatives to advance the aim of our organization.



World Health Organization

WSO was represented at the 148th annual WHO Executive Board (WHO EB), held on 18 - 26 January 2021. The EB148 agenda was based upon four pillars focusing on universal health coverage, health emergencies, health, and well-being, and effective and efficient WHO support. Even though the COVID-19 pandemic dominated the agenda, there were also several non-communicable disease (NCD) related items. During the meeting, Member States also agreed upon the agenda for the World Health Assembly 74 (WHA74) and the resolutions to be considered by the Assembly.

WSO participated in the virtual WHA74 held between 24- 31 May 2021 and at the WHA74 Special Session on Pandemic Preparedness between 29 November – 1 December 2021. On behalf of the Global Coalition for Circulatory Health, WSO called for better circulatory disease care and prevention in the context of COVID-19 and future emergency preparedness via statements on “Strengthening WHO’s global emergency preparedness and response” at both meetings.

WSO was also well represented at two of the regional WHO meetings. Jeyaraj Pandian participated at the 74th World Health Organization (WHO), South East Asian region virtual meeting held from 6-10 September 2021 in Kathmandu. He delivered a statement in the NCD session and spoke about WSO's key recommendations on Preserving the Stroke Systems of Care during the pandemic. His contribution reinforced the importance of preserving the stroke systems of care globally and in this region. Epifania Collantes represented WSO at the 72nd session of the WHO Regional Committee for the Western Pacific which was held between 25-29 October 2021 in Himeji, Japan. She delivered a statement on how WSO is working closely with WHO to promote stroke prevention to contribute to the achievement of WHO's Global Action Plan for the Prevention and Control of NCDs.

We are also pleased to report that WSO was a co-author of the WHO priority list of medical devices for the management of cardiovascular diseases, stroke, and diabetes published in 2021 and that WSO office bearers were nominated for WHO Strategic and Technical Advisory Groups on the Prevention and Control of Noncommunicable Diseases and NCD-Related Research and Innovation.

NCD Alliance

We have continued our close collaboration with the NCD Alliance throughout the year and were very happy that our Past-President, Bo Norrving was elected member of the Board of Directors. In this role, he will continue to ensure that stroke has a prominent place in the global NCD agenda.

Global Coalition for Circulatory Health

The Global Coalition for Circulatory Health (GCCH), formed in 2017, is the only network of international, regional, and national organizations advocating for increased prevention, control, and treatment of all circulatory diseases. Together with the members of the Global Coalition we produced a position paper providing a clear rationale and actionable proposals for Member States to include measures to address circulatory health in emergency preparedness plans. The paper *Preventing the Next Pandemic: The Case for Investing in Circulatory Health - A Global Coalition for Circulatory Health Position Paper* was launched in October 2021 at a high-level webinar.



The OneNeurology Initiative

In 2021, WSO joined the OneNeurology initiative. This is a patient driven, multi-stakeholder partnership that was founded by the European Federation of Neurological Associations [EFNA] and the European Academy of Neurology [EAN]. The partnership aims to unite and strengthen neurology-related groups to stimulate collaborative advocacy, action and accountability for the prevention, treatment, and management of neurological disorders worldwide.



The launch of the initiative was timely, since the World Health Organisation has opened a consultation in 2021 on a 10-year intersectoral Global Action Plan on Epilepsy and Other Neurological Disorders (GAP), to be adopted by the World Health Assembly in May 2022 and consequently implemented at country level. The partnership has and will focus on contributing to the drafting, adoption, and implementation of the GAP by countries worldwide.

Building Public Awareness

The World Stroke Campaign is a communications program designed to create individual behavior change that reduces the global burden of stroke.

The campaign is informed by and seeks to articulate a unified message that can be adapted to the needs of communities around the world. The experiences of stroke survivors and caregivers are woven through our campaigns and the work of stroke support organizations is vital to our capacity to connect with communities and individuals around the world. We work hard with our members to send our message beyond the stroke community, delivering social media promotions, influencer engagement and media outreach, that creates a global context for the national and regional work of members and partners.

”

The campaign is informed by and seeks to articulate a unified message that can be adapted to the needs of communities around the world.

The World Stroke Campaign strategy focuses effort on:

1

Stroke prevention

Raising awareness of the root causes, impacts and lifestyle changes that people can make to reduce their likelihood of suffering a stroke.

2

Stroke symptom awareness

Building public awareness of the signs of stroke and the importance of seeking emergency medical attention.

World Stroke Day 2021 Minutes Save Lives

October 29th is World Stroke Day and the annual focal point for the WSO campaign effort. This year saw the launch of a two-year stroke symptom recognition campaign.

We know that when somebody has a stroke, every second that goes by is crucial. As brain tissue and millions of neurons begin to fade away, time could not be more precious. Our #Precioustime campaign aims to raise awareness of stroke symptoms and the benefits of seeking emergency medical treatment. The campaign wanted to highlight what can be saved by taking fast action to access acute stroke care: a life, but also independence, quality of life and precious memories.



WSO provided a toolkit of resources for members and partners via the World Stroke Campaign website containing the campaign video, social media posts, ultra-short videos for Instagram, photography, a public information leaflet, language neutral symptom iconography, animations and posters. Assets were available to download in Arabic, Chinese, English, French, German, Portuguese, Brazilian Portuguese, Russian, Spanish and Latin American Spanish. Several members decided to use the design files provided to produce local translations or to cobrand campaign materials.

For those without technical designs skills, online adaptable poster and social media post builders were provided in all translated languages on www.worldstrokecampaign.org. These enable the easy production of bespoke campaign materials by anyone who wants to help raise awareness of stroke symptoms and the importance of stroke symptom treatment for stroke.

Campaign resource images can be downloaded from:

<https://www.world-stroke.org/world-stroke-day-campaign/world-stroke-day/world-stroke-day-2021-tools>

World Stroke Day High Level Panel

WSO convened a virtual high-level panel event for World Stroke Day to explore and discuss strategies to improve patient access to quality acute stroke care. The panel moderated by former BBC and Al Jazeera correspondent Rageh Omaar featured Olympic Gold Medal winner and stroke survivor Michael Johnson, Dr Queiroga the Minister of Health for Brazil, Slim Slama who is the NCD lead for WHO, AIIMS Neurologist Padma Srivastava and WSO President Marc Fisher and President-elect Sheila Martins.



Olympic Gold Medal winner and stroke survivor Michael Johnson

World Stroke Day High Level Panel

Landmark Light-Ups

A string of buildings and monuments around the world were lit up in indigo blue the color of stroke awareness. This year was our first venture into light ups – next year we hope to see a series of clocks around the world lit in stroke colors to reinforce the message that Minutes Save Lives.



Christ the Redeemer, Rio de Janeiro



Planetarium, Buenos Aires



Bowyer Block, Singapore

World Stroke Day 2021 in numbers



Awareness and Advocacy Campaign skills workshop series

The Campaign and SSO Committee collaborated to provide a series of four workshops for WSO members to support awareness and advocacy skills and capacity. Sessions had contributions from previous World Stroke Campaign Award winners, WHO, NCD Alliance and communication experts from Charles Cannon creative agency. Recordings of all workshops are available on the Stroke Connector platform.

- **World Stroke Day Campaign Launch**
An introduction to the Minutes Save Lives campaign and resource toolkit
- **What needs to change**
Using local data to identify needs and campaign for change in stroke prevention, treatment and support
- **Community connection**
Engaging local communities and amplifying patient voice in awareness and advocacy campaigns
- **Where the magic happens**
Adapting global campaign strategies and choosing creative communication tactics to increase awareness and engagement

World Stroke Campaign Award Winners 2021

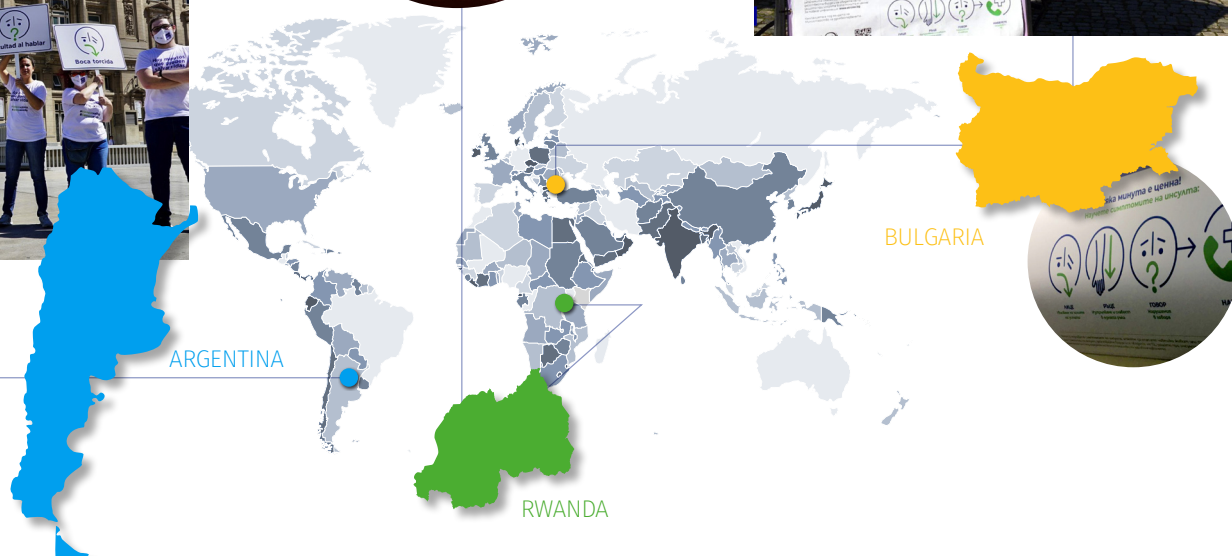
World Stroke Awards are presented each year to WSO members who have shown particular commitment and creativity in bringing the World Stroke Day campaign to life in their communities. This year three awards were made to stroke support organizations and individuals who went above and beyond to deliver impactful World Stroke Day campaigns

Best Campaign in a High-Income Country was awarded to *Por Una Vida Libre de AVC* for a campaign that literally stopped traffic. With activations across Argentina this national campaign made use of actors on the streets to simulate stroke, liveried vehicles and light ups to raise awareness of the signs of stroke and the importance of emergency medical treatment.

Best Campaign in a Low- and Middle-Income Country was scooped by the *Association for Stroke and Aphasia Bulgaria* who translated campaign materials and created billboards and fly posters outside local government and municipal buildings. A locally translated and subtitled version of the campaign video was produced so it could be shown on screens across the public transport network and an impressive media relations strategy generated coverage in the national, local and specialist press as well as on TV and radio. The Ministry of Health were engaged as partners in the campaign, helping to bring attention to the need to provide access to acute stroke care.

Individual Achievement Award was awarded to *Dr Joseph Rukelibuga of Stroke Action Rwanda*. Stroke Action Rwanda commemorated World Stroke Day for the first time in 2021. From a standing start Dr Joseph Rukelibuga led the delivery of highly visible local campaign that has generated great visibility for stroke in the community, as well as securing inclusion of stroke in the NCD Action Plan for the country. The Committee were impressed by Joseph's personal commitment as well as the strong strategic focus and advocacy outcomes that we are sure will provide strong foundations for awareness and advocacy efforts within the country.

World Stroke Awards are presented each year to WSO members who have shown particular commitment and creativity in bringing the World Stroke Day campaign to life in their communities.



Details of award winners and their work are featured in a blog series that can be read on the WSO website: <https://www.world-stroke.org/news-and-blog/blogs>

FAST Heroes

works to enrol children in the fight against stroke. The campaign deploys superhero characters, engaging activities, and games to engage children and raise awareness of stroke symptoms, ensuring that when children spot stroke they know to call a local emergency service number.

The campaign builds on the insight that not only do children spend a great deal of time with their grandparents who are at increased risk of stroke, but also that their enthusiasm and projects can be a big driver of family learning. Primarily aimed at children aged 5 to 9 years of age, it teaches them about empathy and love, as well as providing practical life-saving skills. Using a superhero theme, children are empowered with tools to help fulfil their mission of educating their grandparents.

*Sheila Martins in
superhero facemasks*

This year's World Stroke Day focus on stroke symptom awareness gave considerable scope for collaboration with the FAST Heroes initiative and we worked to highlight the FAST Heroes program with our members, to provide World Stroke Day specific FAST Heroes resources via our website and to support the FAST Heroes Superhero Selfie Guinness World Record attempt which aims to increase visibility for stroke and to encourage more schools and families to engage with the program.



Get ready for World Stroke Day 2022

The Minutes Save Lives campaign will run again in 2022 using many of the existing resources developed for 2021, but we will be looking to increase the visibility of stroke survivors and we will be exploring innovative ideas to help bring the message that time is precious when it comes to stroke.

Building Healthcare Capacity to tackle stroke

World Stroke Congress (WSC) 2021

The WSC 2021 was held as a fully virtual meeting with a focus on live interactive elements on 28 and 29 October 2021. This was the first annual World Stroke Congress that WSO delivered. We were pleased to welcome 2,060 participants from 110 different countries to our 13th WSC. The 2021 Congress provided many benefits to the participants including:

- Highly interactive sessions with opportunity to network with faculty/delegates from all over the world
- Possibility to attend all the sessions at the most comfortable time and location for the delegates
- Opportunity to showcase your work to participants from various continents around the world
- Variety of live and on-demand sessions
- Content available to participants for up to three months after the congress



13th World Stroke Congress in numbers



We are thankful to our participants, speakers, supporters, and exhibitors for taking the time out of their busy schedule to participate and make WSC 2021 a great success and we are looking forward to meeting you all in person for the 14th World Stroke Congress in Singapore, October 2022.

International Journal of Stroke

The International Journal of Stroke, now in its 17th year, is the flagship journal of the World Stroke Organisation, with free access offered as a major benefit for WSO members. The journal publishes reviews, original research, consensus statements and guidelines, and study protocols. We also have a very successful social media programme with twitter and a newly revitalised blog serving to engage our worldwide clinical and research audience.

Hugh Markus has been Editor-in-Chief since 2020. He is joined by five Associate Editors from throughout the world including Julie Bernhardt from Australia, Thomas Leung from Hong Kong, Craig Anderson from Sydney Australia and Beijing China, Ynte Ruigrok from Utrecht Netherlands, and Frank-Erik de Leeuw from Nijmegen Netherlands.

The Journal's Editorial Board is key to successful running of the publication both by providing high quality reviews and also ideas for other journal initiatives, including reviews. We review the membership and composition of the Editorial Board on an annual basis and aim to increase diversity, age range and gender. We are making good progress, in 2021 the proportion of women on the Editorial Board stood at 45% an increase from 39% last year and 28% in 2019 .

Impact factor:

In 2021 the IJS impact factor rose from 4.88 to 5.27. The Journal's impact factor has risen every year from 2015 when it was 3.04.

Responding to the COVID-19 pandemic:

We implemented a rapid review and publication process for papers on COVID-19 and stroke and this has led to several important and highly cited papers being published. For example, in 2021 we published a definitive systematic review on the relationship between COVID-19 and stroke which has received high impact both through citation and the media. We have provided recommendations for preserving stroke care during the pandemic and recently published guidelines on how this can be maintained in LMICs during periods impacted by COVID-19.

Reducing time to publication:

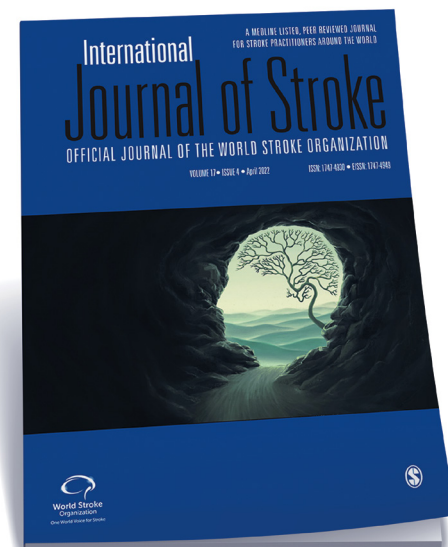
A priority is reducing time to publication for our exciting research. We have markedly reduced the time to first decision from 32 days in 2019 to 15 in 2020 and 14 in 2021 and time to final decision from 43 days in 2019 to 24 days in 2021. All papers are now published as PDFs straight after acceptance, so they are available on PubMed about two weeks after acceptance prior to proof reading and final online publication. We have continued to see an increase in submissions in IJS from 749 in 2018 to 814 in 2019 and 850 in 2021. Like many other journals we had a marked increase in 2020 during the initial COVID pandemic when we had 1,115 papers.

Increasing worldwide coverage through blogs:

As the WSO journal our remit is to cover stroke throughout the world, and we are keen to advertise clinical and research advances not only from well-resourced countries, but also from lesser research-funded countries. To aid this we started new IJS blogs in 2020 and have had exciting blogs from India, Mexico, Ghana, Bhutan, The Maldives, Myanmar, Timor-Leste, Panama, and Georgia over the last year. Do visit our IJS blogs page to see more. <https://www.world-stroke.org/news-and-blog/blogs?cat=67>

Working with our IJS partners to increase impact:

We have developed close working with other WSO program areas to increase impact. We are working with the Guidelines Committee to help increase impact and visibility for planned WSO guidelines on stroke care throughout the world. We are working with the World Stroke Academy and are publishing a special paper highlighting their important work.



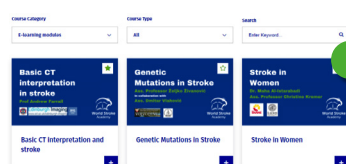
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World Stroke Academy



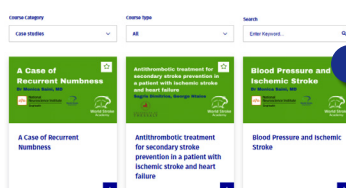
The World Stroke Academy (WSA) is the dissemination and educational platform of the WSO. It facilitates educational activities (e.g., webinars, e-learning modules) and supports the WSO mission by providing high-quality stroke education to healthcare professionals. In November 2021, the Academy re-launched its newly designed website, with the intention to provide a platform that is more user-friendly, enhancing learner engagement and utilizing advanced e-learning technology where users can easily engage in all educational material, reviewed by WSA editors, WSA Leadership Group, WSO Education Committee and other bodies of the WSO.

In the first quarter following its November launch, the Academy saw 4,000 visitors, from 135 different countries. The top content landing pages on the WSA site are e-learning courses, webinars, webcasts from congresses and paper of the month. The content covers stroke diagnosis, prevention, innovative therapies, acute treatment, neurorehabilitation and life after stroke.



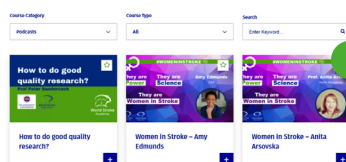
e-Learning Modules

Submission reviewed by the WSA Leadership team



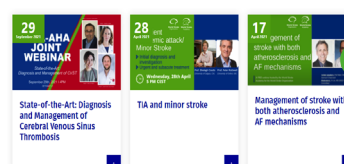
Case Studies

Submission reviewed by the WSA Leadership team



Podcasts

Submission reviewed by the WSA Editor-In-Chief & Associate Commissioning Editor



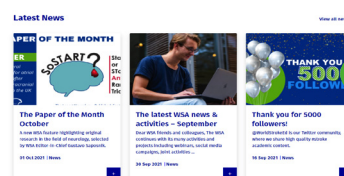
Webinars

- Diagnosis
- Prevention
- Innovative Therapies
- Acute Treatment
- Life after Stroke
- Neurorehabilitation



Paper Of The Month

Article selection, commentary and interviews by WSA Editor-In-Chief & Associate Commissioning Editor



Core News

Dedicated news section for WSO/WSA updates & announcements



WSA hosts

2
webinars
per month**850**
average number
of registrants**350**
average number
of participants**4.7/5**
rating**700**
recording
views

Webinars

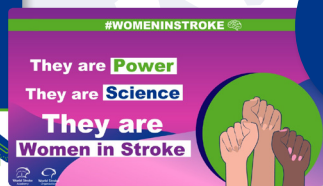
In addition to the free access to education modules and resources available, stroke professionals, researchers and advocates can also access WSA webinars. The WSA hosts 2 webinars per month, with an average number of registrants of 850, an average number of attendees of 350, an average webinar experience rating of 4.7/5 and an average of more than 700 webinar recording views. WSA webinars are free and open to anyone interested in stroke care, research and evidence-based stroke medicine. The WSA also hosts 4 joint webinars per year with the American Heart Association (AHA) and the American Stroke Association (ASA).

Special Projects

The Academy is involved in a variety of special projects developed in collaboration with both the WSO's Future Stroke Leaders and the WSO Education Committee. Each initiative has a different format, ranging from evidence-based stroke care checklists, to stroke diagnosis and management podcasts and our Women In Stroke series. These initiatives are aligned with the WSO Roadmap to deliver quality of stroke care.



Pearls Podcasts Series



Women In Stroke



Social Media

Promotion is a key element of the Academy's role in advocacy and dissemination of information. Engaging activities such as #WeekendLectures and #MondayTips, spearheaded by our social media leader Rodrigo Guerrero, are followed and re-shared by hundreds of users weekly. The WSA YouTube channels hosts webinar recordings, interviews and other educational video material.

**+7K**
followers**+520**
followers**+400**
subscribers

Call for webinar and e-learning proposals!

Please contact us if you are interested in submitting clinically applicable education components for inclusion in the World Stroke Academy. We welcome case studies, clinical practice guidelines or science blogs and actively encourage WSO members and non-WSO bodies to submit ideas and topics for future educational activities.

- WSA and WSO news & updates
- WSA activities promotion (courses, webinars, papers...)
- Weekend Lectures and Monday Tips by Dr. Rodrigo Guerrero
- Pre and post webinar polls
- Conferences highlights

You can submit your proposal here: <https://form.jotform.com/212725774437058>.

We also welcome any feedback on our educational offer and always welcome new ideas or suggestions for improvement – so please get in touch with us at education@world-stroke.org

Mobilize!Brazil

In December, WSO started a new program Mobilize!Brazil, that aims to pilot the implementation of training and task-shifting population primary prevention through the training and deployment of hundreds of community health workers (CHWs). Supported by mobile technology including the WSO endorsed StrokeRiskometer, the program will complement other work evaluating the effectiveness of low dose prevention medication for those with two or more stroke risk factors.

Mobilize!Brazil started with an online training for community health workers across the country on stroke risk factors for prevention, behaviour modification, screening and management of hypertension and atrial fibrillation. The training will layer onto existing WHO HEARTS and Better Cities initiatives to provide a holistic approach that mirrors key aspects of the WSO Prevention Roadmap. CHWs will be directed to translated public information resources and sensitized to the use of mobile technologies to measure, motivate, and track stroke risk factors in the community.

Following the training, the StrokeRiskometer will be used with communities to conduct assessments and familiarize individuals with their lifetime risk of stroke, highlighting where this can be reduced, and sharing information on relevant risk factors and prevention. Motivational push notifications have been designed to help keep 3,000 participating individuals engaged over the course of the program. Follow up on participants is scheduled to take place at 6 months. This will measure the impact of the CHW and technology intervention on individual risks. User feedback from both end users and CHWs will also be gathered to help refine and develop the effectiveness of the app and to tailor the program prior to expansion both within Brazil and potentially in other countries around the world.

”Mobilize!Brazil started with an online training for community health workers across the country on stroke risk factors for prevention, behaviour modification, screening and management of hypertension and atrial fibrillation.

Brain and Heart Global Initiative

The WSO BEAT (Brain & hEart globAl iniTiative), led by Luciano Sposato and Cecilia Bahit, is a program to develop worldwide Neurocardiology collaborations. The WSO BEAT seeks to develop clinical and academic partnerships between stroke physicians and cardiologists in low- and middle-income countries and specific flagship sites in high-income countries under the guidance of the WSO. These efforts include joint case-conferences to discuss mutual patients, or decision making about PFO or LAA closure, as well as topics of mutual interest including AF monitoring and treatment, the best approaches to the evaluation of cardiac stroke sources and the determination of stroke etiologies. Some participating institutions have organized joint clinics staffed by both cardiologists and stroke physicians to expedite the evaluation and decision-making for patients needing input from both disciplines. Hospital protocols have been developed to guide the interaction between the two fields, these will be reviewed in the context of pilot site implementation.

The WSO BEAT program was launched on September 1, 2021. It started with initial meetings with the leaders of each site in Brazil, Mexico, Germany, Romania, China, Japan, Egypt, and the USA to discuss the aims, schedule, and deliverables.

one voice

The WSO BEAT program was launched on September 1, 2021. It started with initial meetings with the leaders of each site in Brazil, Mexico, Germany, Romania, China, Japan, Egypt, and the USA to discuss the aims, schedule, and deliverables.

Training packages were delivered to each site in the first week of December of 2021. The package contained pre-recorded talks and clinical care pathways. The pathways were developed by reviewing American Heart Association, Canadian, and European Guidelines.

The program is intended to be concluded by the end of June. A report for the WSO Board will be prepared, and a manuscript will be submitted to the International Journal of Stroke. Among other knowledge translation activities, two proposals have been submitted to the AHA Sessions 2022 and World Stroke Congress 2022 to include talks describing the methods and results of the WSO BEAT Program.



Kick-off meeting held with the team of the

Beijing Tian Tan Hospital on January 14, 2022

Establishment of research priorities

In 2021 the WSO Research Committee established our Research Activity Framework which has four key pillars: Research education, mentoring and networking, research support and advocacy and endorsement of research related activity. This framework has helped our committee to establish and complete a range of activities to support the goals of the WSO.

Two key research education activities were completed in 2021. First, our 3rd Early Career Investigator Workshop – held virtually in December. This two-day program, run in partnership with the European Stroke Organisation and the Global Alliance of Independent Networks in Stroke (GAINS), included over 200 registrants from across the globe and 45 mentors, and covered both career development and research project mentoring. This workshop combined guest lectures from eminent scientists and emerging leaders about what is available to support stroke research and researchers; stories of career progression (and lessons from failure); and interactive talks about the experience of mentoring and being mentored with smaller group workshops.

Recorded talks from this workshop can be found here:

<https://www.world-stroke.org/news-and-blog/news/eso-gains-wso-early-career-virtual-training-workshop>

The second education activity piloted two longitudinal mentoring sessions for early career researchers seeking feedback on their research project development or delivery. Both were well attended. We also continue to support WSO Congress workshops, training and World Stroke Academy activities.

The Research Committee also led the review and evaluation of early career research grants in 2021. These small grants will support teams to conduct the projects mentioned below throughout 2022.

- Secondary prevention of stroke at community level using smart phone based application: An open-label cluster-randomized controlled trial
- MAP-Stroke LATAM – Mapping the Access for the Patient with Acute Ischemic Stroke in Latin America
- Reducing under-representation of women in stroke clinical trials
- Program to Improve Stroke Care and Outcomes through a Global Platform with Embedded Randomized Controlled Trials (PROSPECT)

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In 2021 the WSO Research Committee established our Research Activity Framework which has four key pillars: Research education, mentoring and networking, research support and advocacy and endorsement of research related activity.

Future Stroke Leaders

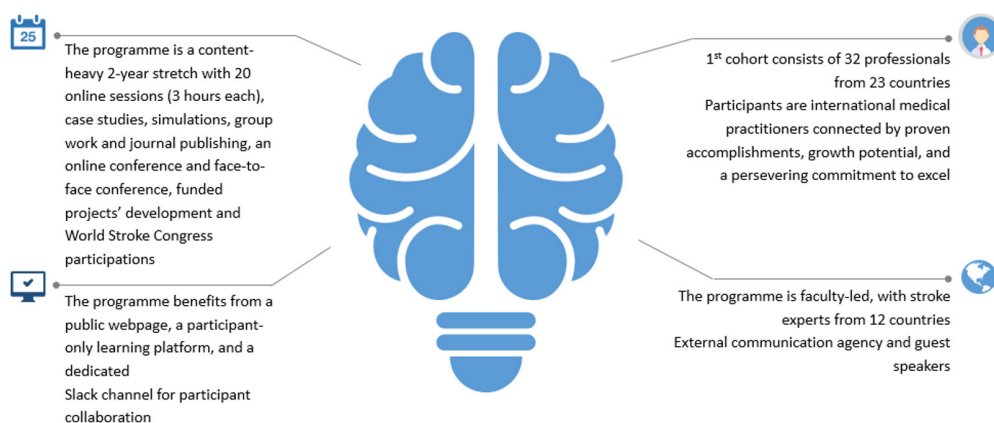


The Future Stroke Leaders Program (FSLP) is a WSO initiative to develop the technical and research skills of the next generation of stroke professionals. The program curriculum meets the evolving demands of the current complex landscape and pairs the accessibility of distance learning with the strength of WSO faculty-led coaching sessions, creating a hybrid learning environment that is as efficient as it is effective. Besides the online sessions, the program offers a face-to-face conference, project mentoring sessions and seed-funded initiatives.



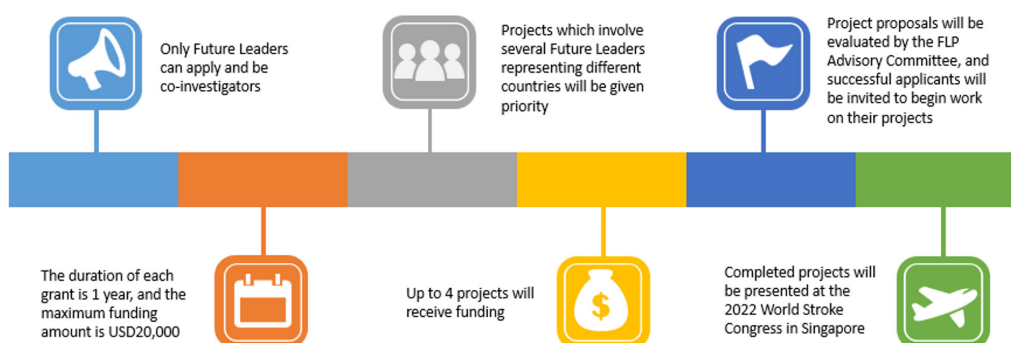
Cohort 1 Program Overview

Funded research projects are a key element of the Future Stroke Leaders Program



The theme of the 2020 intake is 'Implementation of Quality Stroke Care'. The first cohort program consisted of twenty sessions of three hours each. Each session had a predefined format and structure: participants received pre-work and post-session assignments, which helped them to build more advanced practical skills to change their regional stroke care situation. The taught program is followed by the design and implementation of funded projects, guided and supported by WSO mentors, culminating in the presentation of results and key learnings at the World Stroke Congress 2022 in Singapore.

Future Stroke Leaders Changemaker Projects



Cohort 1: 2020 – 2022:

The first cohort consisted of 31 international medical practitioners connected by proven accomplishments, growth potential, and a persevering commitment to excel. The group had a balanced gender and professional background ratio. During the first year of the program, participants took leading roles in the field of stroke care by developing and participating in multiple global initiatives.

Cohort 2: 2022 -2024:

Given the interest in the first FSLP cohort, the WSO invited applications to the second cohort in February 2022. Despite the challenges caused by the COVID-19 pandemic, the WSO received over 100 applications and will announce the new participants in Spring 2022.

Future Stroke Leaders Changemaker Projects

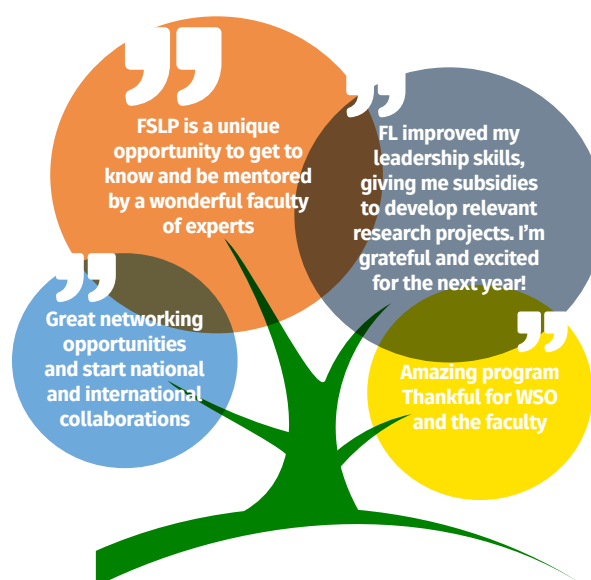
**Faculty**

The faculty consists of the task force and speakers from 11 countries. The taskforce is led by Werner Hacke, Christopher Chen and Valeria Caso.

The feedback from the first cohort was overwhelmingly positive

“The WSO FSLP one of its kind. The program allows me to learn more on stroke care and the engagement with stroke leaders increase the confidence and motivation to continue developing stroke care in our country. Congratulations WSO leaders!!”

“The FSLP has definitely given a boost my research career in rehabilitation in terms of accessing small funds, international collaborations and opportunities for leadership in stroke recovery”



“I have learned a lot. It provides great opportunities for young clinicians and researchers to contribute to stroke care research”

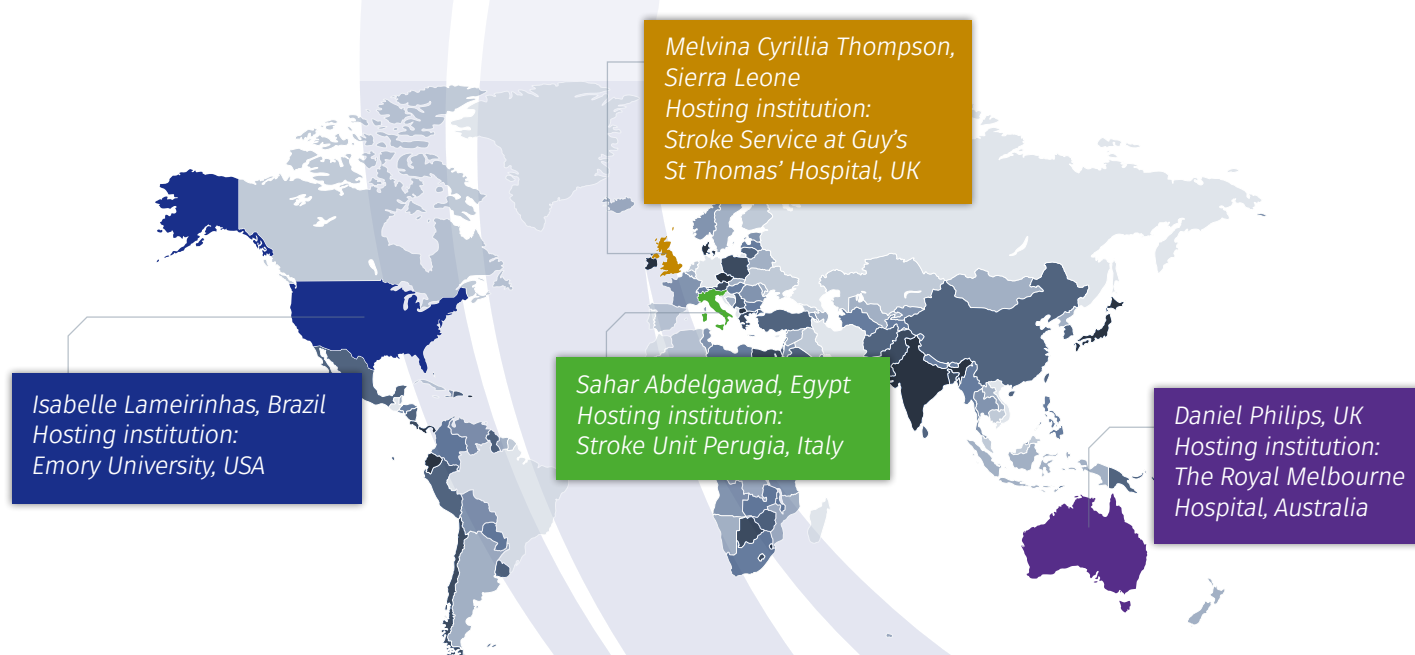
“FL program has allowed me to develop international networks and work towards improving a common goal- stroke care and outcomes. This has really helped to improve my clinical practice and research.”

Brief Clinical Exchange Program

Marieta Peycheva from Bulgaria completed her exchange in Bern, Switzerland. Her exchange included time in the Emergency Department where all stroke patients arrive from different parts of Switzerland and thrombectomy cases are performed in the Interventional Neuroradiology department. During her stay she participated in ward rounds in the stroke unit as well as in meetings of the Neurovascular Board. One of the most interesting experiences for her was her visit to the ultrasound laboratory. Her aim is to transfer the good practice and level of organization of the Inselspital stroke team to her workplace in Bulgaria.



Inselspital Stroke team with Marieta Peycheva Bulgaria (in the middle)



Promoting Best Practices

Global guidelines and tools

2021 has been very productive for our Guidelines Committee. We reconvened the Committee and welcomed various new members that have enhanced our diversity. We also established a Guidelines Development group composed of a select group of highly motivated colleagues, chosen from many applicants for their expertise and experience. The Guidelines Development group will complement the work of the Guidelines Committee to allow the completion of our ambitious goals and will support greater regional representation to support the successful dissemination of our work.

The Guidelines Committee have undertaken to update the WSO Global Stroke Services Guidelines and Action Plan published in 2014 and to focus on their wide dissemination and implementation. This will be followed by updates to the WSO Roadmap for Quality Stroke Services, published in 2016, it is anticipated that only minor adjustments to the Roadmap will be required.

To update the guidelines in a fully representative manner, we conducted a systematic review of all existing guidelines worldwide. After submitting the protocol of the systematic review to PROSPERO, we rigorously proceeded with the following steps: 1) Performance of the initial literature search through an expert librarian from the University of Edinburgh; 2) Phase 1: screening of abstracts (from more than 13,000 articles, each by two reviewers with a third reviewer resolving any conflicts); 3) Phase 2: Review of full text articles (n=850 including texts in all languages by engaging fluent interpreters and again with each article being reviewed by two members of the committee and conflicts resolved by a third reviewer). We are now entering Phase 3 in which we will perform a final trimming of the remaining 191 articles (to eliminate older versions of more recently updated guidelines and confirm that each guideline fulfils our inclusion criteria) and then extract the recommendations from each document. Also, every included guideline will be evaluated for risk of bias using a validated tool (AGREE II). To do this labour effectively we have decided to divide the team into three groups respectively focused on Acute Care, Secondary Prevention and Rehabilitation/Life after Stroke guidelines. Once recommendations are extracted and synthesized, we will draft corresponding manuscripts for each of these major topics. In these manuscripts the recommendations will be categorized according to their anticipated feasibility in low-, middle-, and high-resource environments.

This very broad and rigorous search will ensure global representation by including any peer-ãregional or professional organizations. Our plan is to have the manuscripts ready for submission before the end of 2022.

As we move along the completion of the new WSO guidelines, we will coordinate efforts with the WSO Educational Committee, the World Stroke Academy, and the WSO-AHA Quality Workgroup to optimize the value of future dissemination efforts.



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2021 has been very productive for our Guidelines Committee. We reconvened the Committee and welcomed various new members that have enhanced our diversity.

WSO – Angels Awards

WSO is committed to improving outcomes for stroke, by ensuring patients worldwide get access to stroke care that optimizes their survival and recovery. As part of this work, we partner with the Angels Initiative (Boehringer-Ingelheim), to increase the number of patients who are treated in stroke ready hospitals and to optimize the quality of treatment in all existing stroke centers.

The WSO Angels Awards aims to:



We are pleased to report that the total number of 563 awards were distributed in 2021. This is significant increase compared to 2020 when due to healthcare system challenges a total of 278 awards were distributed. Diamond, Platinum, Gold, Silver and Bronze Angels Awards are allocated on the basis of the standard of care being provided by institutions. This year a total of 223 Diamond Awards, 259 Platinum and 328 Gold Awards were distributed at several virtual congresses around the world.

The top five countries in terms of institutions receiving Angels awards were Thailand, India, Vietnam, Egypt, and South Korea.



”

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Stroke Certification

The certification of stroke centers is critical to ensure that hospitals implement and monitor all priority strategies that change the outcomes of stroke, reducing patient mortality and disability. It is a great opportunity to support continuous improvement of services and implementation of high quality comprehensive care. Certification is a priority step to guide national stroke care development along evidence-based pathways.

On October 22nd 2020 WSO launched a new Stroke Certification Program together with the IberoAmerican Stroke Society (SIECV). The certification process is based on the WSO Roadmap for Quality of Stroke Services, which provides an evidence-based framework for the implementation, monitoring and evaluation of stroke services globally, regardless of resource setting. It provides standardization and consistency for the selection of evidence-based recommendations, approaches to implementations in clinical practice to create an environment of continuous quality improvement.



Sheila Martins handing over a certificate to Hospital de Clínicas in Uruguay

The certification criteria were structured by experienced WSO and SIECV members working in collaboration with the Society of Vascular and Interventional Neurology / Mission Thrombectomy and together with country Medical Societies and Health Managers (Ministries of Health/ Health Secretaries). Committees were created in 13 Latin American and Caribbean countries, supported by an international team of stroke experts, currently with 80 people working on the implementation of the program.

With our focus on patient outcome, the WSO-SIEVC Certification Program has no costs for participating hospitals – public or private. We believe that certification will increase the quality of stroke care in the region improving the long-term outcomes of stroke patients and we want to guarantee that all stroke centers have the opportunity to participate, to improve and to receive formal certification.

In 2021 eight hospitals in Uruguay, Brazil and Colombia achieved certification, four more were visited pending certification. In 2022, visits are already planned at 20 hospitals during March and April.



The certification of stroke centers is critical to ensure that hospitals implement and monitor all priority strategies that change the outcomes of stroke, reducing patient mortality and disability.



Sheila Martins at the Ministry of Health in Uruguay together with a representative from PAHO and the Ambassador of Brazil in Uruguay

Building Capacity of Stroke Support Organizations

Stroke support organizations are making their presence known globally

During 2021 the stroke support organization (SSO) global community continued to grow; we saw collaborations between SSOs, clinicians and academics to raise awareness of stroke and to drive improved stroke outcomes, and we were excited to see the collaboration of SSOs in delivery of impactful stroke awareness campaigns for World Stroke Day.

SSO activities

Our capacity strengthening activities with SSOs in 2021 were informed by the findings of our [SSO Global Mapping Report](#). The SSOs included in the report highlighted campaigning and advocacy skills as a key area where they would like support. We worked with the Campaign Committee to deliver three [Campaign Skills Workshops](#) on using data, community engagement and communications, and welcomed speakers from the NCD Alliance and the WHO Global Coordination Mechanism on NCDs.

We further developed [Stroke Connector](#), our online hub for awareness, advocacy and long-term support resources. The platform now includes a patient education repository and stroke survivor testimonials. It's a place where users can connect with others globally and start discussions.

At the 2021 World Stroke Congress we worked with SSOs to ensure the involvement of people with lived experience of stroke. In the four life after stroke sessions we were privileged to have speakers with lived experience from Australia, Nigeria, Singapore and Cyprus. The sessions focused on peer led interventions for stroke recovery, best and promising practices to strengthening SSOs, increasing the impact of prevention campaigns, and online delivery in the time of COVID 19.

”

At the 2021 World Stroke Congress we worked with SSOs to ensure the involvement of people with lived experience of stroke. In the four life after stroke sessions we were privileged to have speakers with lived experience from Australia, Nigeria, Singapore and Cyprus.

SSO achievements

Throughout the year, the global SSO community gained increased visibility and recognition for its contribution to stroke awareness and long term support particularly during COVID-19, as well as campaigning and advocating for improvements in stroke treatment and care.

Championing the lived experience of stroke

In four sessions at the World Stroke Congress 2021 we heard directly from people with lived experience of stroke. Gaining insights and learning from people affected by stroke will help us all to improve awareness, research, treatment and long term care. Our [lived experience blog series](#) championed these voices.

Continuing community rehabilitation and recovery support during COVID 19

From the UK to Singapore, stroke groups and community activities are vital in supporting people in their stroke recovery. SSOs play an important role in delivering these activities and we heard about their adaptations in the face of COVID-19 in our [Bridging the Distance](#) webinar.

New SSOs join the global community

In 2021, WSO welcomed [Bhutan Stroke Foundation](#) as a new stroke support organization member. Established in 2020, the Foundation's mission is to create awareness of stroke prevention, to support stroke patients, and to educate and assist families and caregivers in stroke care.

Also this year, exciting steps forward were made in Malawi in raising awareness and improving stroke care. WSO welcomed the [Stroke Support Organization in Malawi](#) as a member. The organization was registered in 2021 and it aims to work with the Malawi government in the reduction of stroke burden through prevention, treatment, and long-term care.

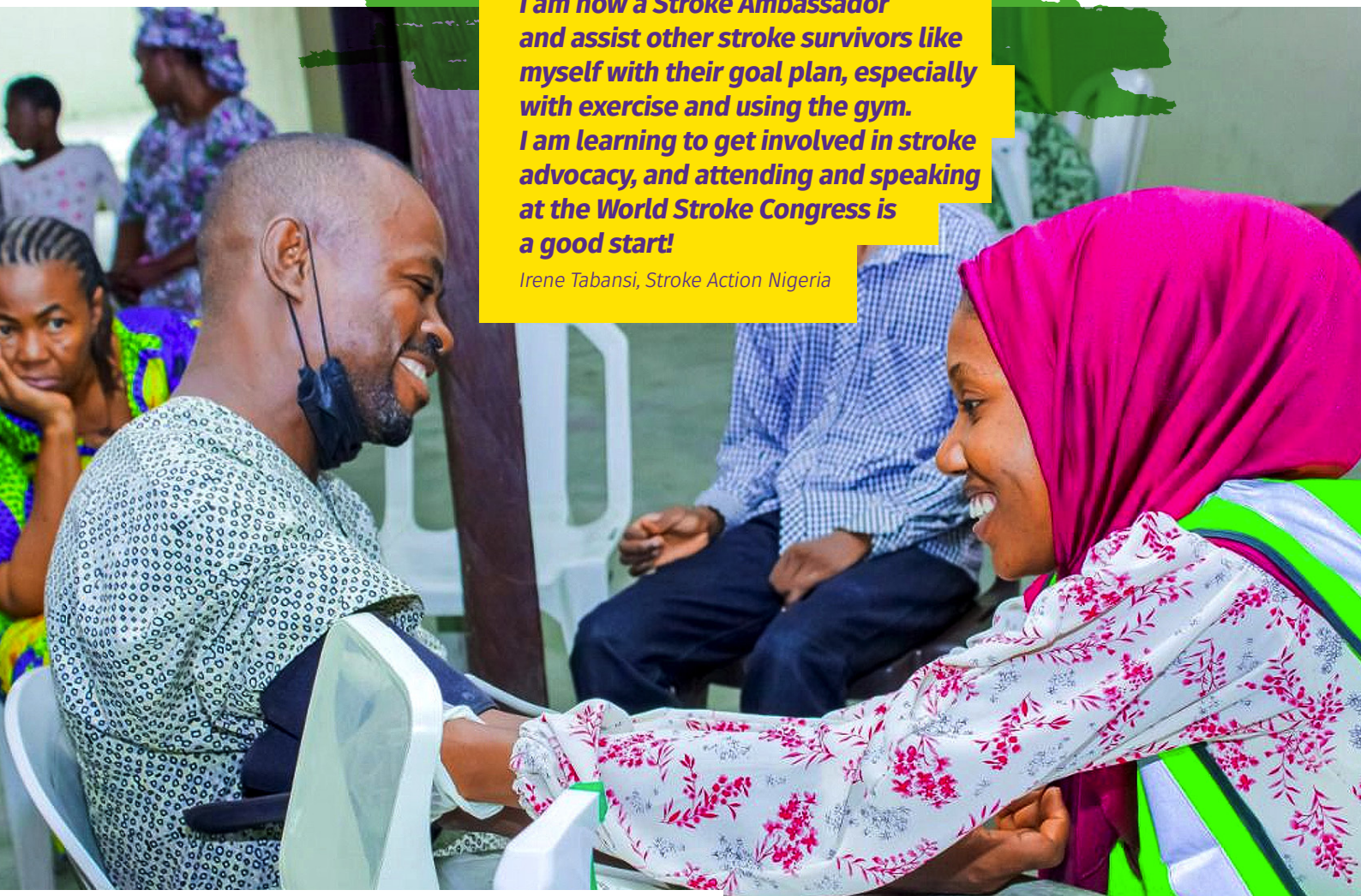
[Cyprus Stroke Association](#) continued to create a safe and supportive environment for people with stroke in Cyprus and to mitigate the negative impact of lockdowns on people affected by stroke.

Acha Memorial Foundation Nigeria

”

I am now a Stroke Ambassador and assist other stroke survivors like myself with their goal plan, especially with exercise and using the gym. I am learning to get involved in stroke advocacy, and attending and speaking at the World Stroke Congress is a good start!

Irene Tabansi, Stroke Action Nigeria



”

We urge the government to scale up health care services and ensure increased awareness of risk factors and the need to act FAST among the population.

George Chimatiro, SSO Malawi



Stroke Support Organisation Malawi



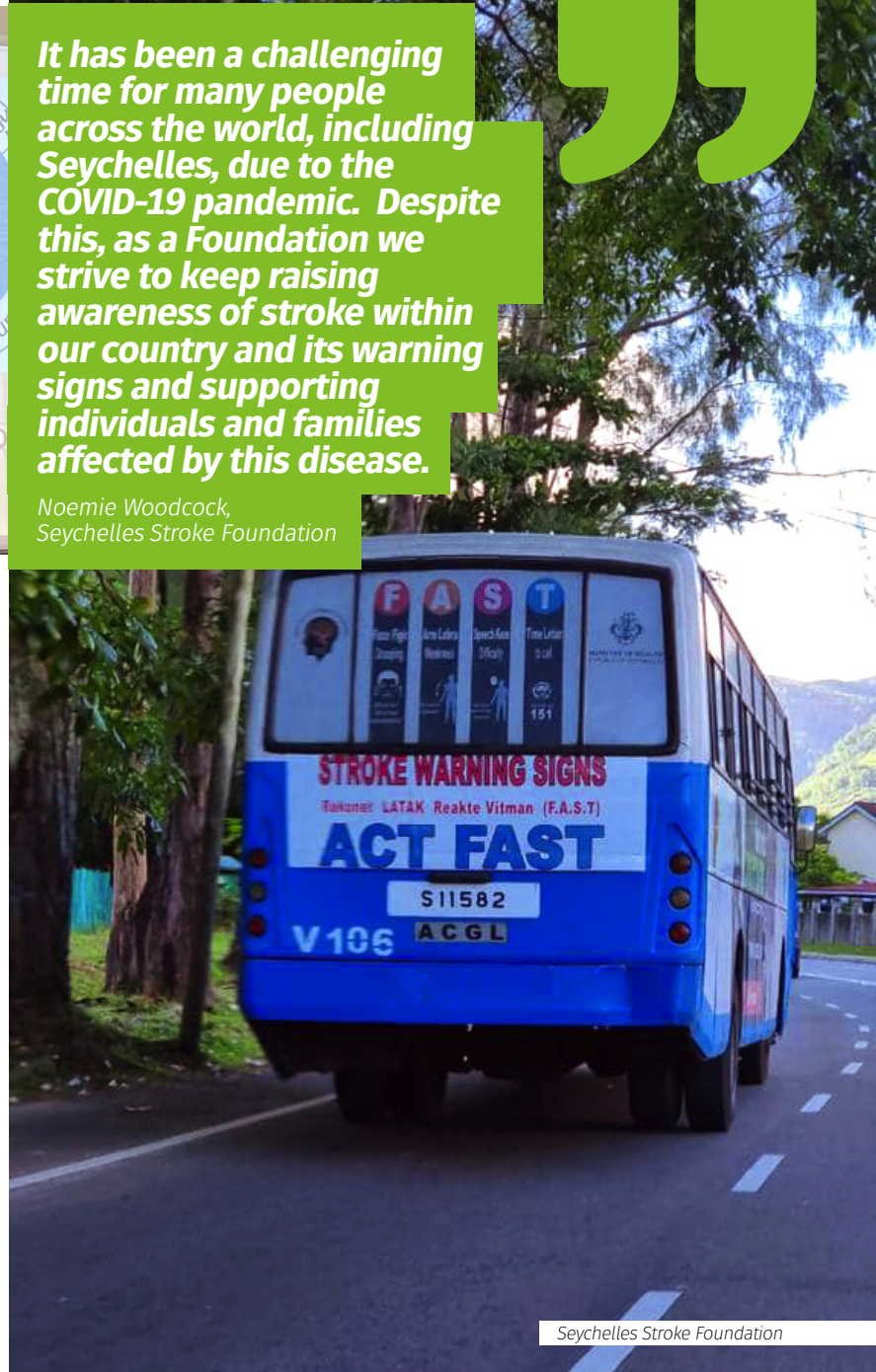
Dawa Tshering Bhutan Stroke Foundation

It has been a challenging time for many people across the world, including Seychelles, due to the COVID-19 pandemic. Despite this, as a Foundation we strive to keep raising awareness of stroke within our country and its warning signs and supporting individuals and families affected by this disease.

Noemie Woodcock,
Seychelles Stroke Foundation

We encourage all organisations, health professionals and medical researchers to consider consultation with survivors as crucial to improving stroke care. People with lived experience are the experts in their own lives and should have the opportunity to play an active role in decision making, strategic planning and research.

Kylie Facer and Dee Banks,
Little Stroke Warriors, Australia



Seychelles Stroke Foundation

Uniting the Stroke Community Membership

2,995 individual members and a record number of society members

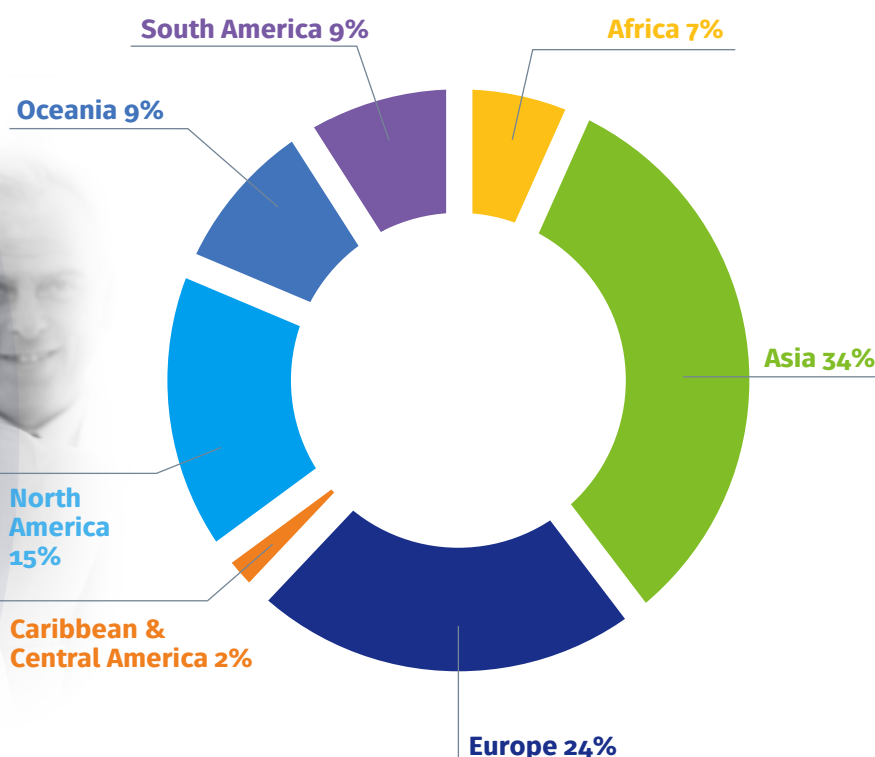
Throughout 2021, WSO has continued to attract new and engage current members. WSO recorded 2,995 individual members and 105 society members from 95 countries. We are very proud to announce that this is the highest number of society members ever and delighted to see that 72 of our organizational members are SSOs with 10 organizations joining WSO for the first time in 2021. Our new SSO members come from Bulgaria, India, Bhutan, Dominican Republic, Pakistan, Rwanda, Malawi, Sierra Leone, Georgia and Monaco. This marks the steady growth of the WSO membership and the healthy advance of the organization's global influence.

We are very proud to have among our members, eminent stroke clinicians and allied health professionals, distinguished research, and young scholars, as well as major stroke societies, research institutions and patient groups.

We thank our members, and we assure you that we will rely on your continuous trust and support in 2021 as well.

2,995
individual members
105
society members from
95 countries
72
of our organizational
members are SSOs

2020 WSO MEMBERSHIP BY REGION



Stroke Support Organisations:

A Stroke of Luck, UK
Acao AVC, Brazil
Acha Memorial Foundation, Nigeria
Alice Italia Onlus - The Italian Stroke Association, Italy
ANCIC, Mexico
Association for fight against stroke, North Macedonia
Association for Stroke and Aphasia, Bulgaria
Azur Vigilance, Cameroun
Bangalore Stroke Support Group, India
Barbados Heart and Stroke Foundation, Barbados
Bhutan Stroke Foundation, Bhutan
Brazilian Stroke Association, Brazil
Counterstroke, Fiji
Croí, The West of Ireland Cardiac and Stroke Foundation, Ireland
Cyprus Stroke Association, Cyprus
Dr Bindu Menon Foundation, India
Finnish Brain Association, Finland
Fundace, Dominican Republic
Healings in Motion, USA
Heart and Stroke, Canada
Heart to Heart Foundation, Bulgaria
Helderberg Stroke Support Group, South Africa
International Alliance of Paediatric Stroke, USA
Jamaica Stroke Alliance, Jamaica
Japan Stroke Association, Japan
March of Dimes, Canada
Michael and Francisca Foundation, Nigeria
Mineira Stroke Association, Brazil
Monaco AVC Association, Monaco
National Stroke Aid, Zambia
National Stroke Association, Malaysia
National Stroke Foundation, Australia
Nepal Stroke Association, Nepal
Neurology Awareness & Research Foundation, Pakistan
Orbi Foundation, Russian Federation
Por una Vida Libre de ACV, Argentina
Porazka.sk, Slovakia
Red Bracelet Volunteers Corps, China
Road 2 Recovery Foundation, Nigeria
Rwanda Stroke Action, Rwanda
Seychelles Stroke Foundation, Seychelles
Slovenia Stroke Organisation, Slovenia
SSO Malawi, Malawi
Stroke Action, Nigeria
Stroke Aid Foundation, Ghana
Stroke Alliance for Europe, Belgium
Stroke and Aneurysm Support, Philippines
Stroke And Diabetes Education and Aid Foundation, UK
Stroke and Nervous System Disorders Foundation, Nigeria
Stroke Association, Sierra Leone
Stroke Association of Kenya, Kenya
Stroke Association Support Network, Ghana
Stroke Association, UK
Stroke care International Initiative, Nigeria
Stroke Central Region, New Zealand
Stroke Foundation, New Zealand
Stroke Foundation of Bengal, India

Stroke Foundation, Uganda
Stroke Organisation, Zimbabwe
Stroke Support Group Pretoria, South Africa
Stroke Support India, India
Stroke Support Organization- East Azerbaijan, Iran
Stroke Support Organization for Sri Lankans, Sri Lanka
Stroke Survivors Foundation, South Africa
Survivors 4 Survivors, USA
Tanzania Heart Club, Tanzania
The Heart and Stroke Foundation, South Africa
The Singapore National Stroke Association, Singapore
The Stroke Recovery Association of Manitoba, Canada
Together against stroke, Georgia
Trinidad and Tobago SSO, Trinidad and Tobago
Young Stroke Inc, USA

Scientific Organizations

American Stroke Association, USA
Asia Pacific Stroke Organization (APSO), China
Asociación Mexicana de Enfermedad Vascular Cerebral, A.C., Mexico
Association of Neurovascular Clinicians, USA
Belgian Stroke Council, Belgium
Brazilian Stroke Network, Brazil
Brazilian Stroke Society, Brazil
Cambridge Diagnostic Imaging, UK
Cameroon Academy of Neurology, Cameroon
Canadian Stroke Consortium, Canada
Central And Eastern European Stroke Society, Croatia
China Stroke Association, China
European Society of Neuroradiology - Diagnostic and Interventional, Switzerland
European Stroke Organization, Switzerland
Finnish Neurological Association Kuopio University Hospital, Finland
Indian Stroke Association, India
Iranian Stroke Association, Iran
Korean Stroke Society, Korea
MENA Stroke Organisation, UAE
Pockit diagnostics, UK
Sociedade Portuguesa do Acidente Vascular Cerebral, Portugal
Society of NeuroInterventional Surgery, USA
Society of Vascular and Interventional Neurology, USA
Spanish Society of Neurology (SEN)-GEECV, Spain
Stroke Society of Australasia, Australia
Swiss Stroke Society, Switzerland
The British and Irish Association of Stroke Physicians (BIASP), UK
The Danish Stroke Society, Denmark
The Japan Stroke Society, Japan
Türk Beyin Damar Hastalıkları Dernegi/Turkish Cerebrovascular Disease Society, Turkey
World Heart Federation, Switzerland
World Hypertension League, USA

Endorsed events

WSO has endorsed 16 events around the world in 2021. WSO encourages organizers of endorsed events to use the especially designed WSO “Endorsed Meeting” logo and to send a detailed narrative report with high resolution photos after the event to support effective communication of key activities and impact.

B.R.A.I.N Conference 2021

December, United Kingdom

13th Brazilian Stroke Conference

November, Brazil

African Stroke Organization Conference 2021 – Virtual

November, Nigeria

8th International Symposium on Collaterals to the Brain

November, USA

10th National Stroke Conference

October, Pakistan

XXI Nordic Stroke Society Congress

August, Latvia

Virtual Indian Stroke Association Stroke Summer School

August, India

7th Annual Scientific Session of Chinese Stroke Association & TISC

July, China

31th Summer Stroke School

June, Croatia

Tianfu International Stroke Conference 2021

May, China

Stroke in Asia, Teaching Cases in Stroke Medicine

April – August India

Master Stroke

April – August, India

18th Singapore International Stroke Conference (18SISC)

March, Singapore

International Virtual Conference on Neurology and Epidemiology

March, Poland

SAFE's European Life After Stroke Forum

March, Spain

15th Portuguese Stroke Congress (SPAVC) - Virtual Edition

April, Portugal

Working in partnership for *lives free from stroke*

Achieving our vision of lives free from stroke is a task that WSO cannot achieve alone. We are committed to building our partnerships at global, regional and national level to scale up and deliver improvements in prevention, treatment and support to reduce the burden of stroke.



Working with WHO

WSO is a formal implementing partner for WHO, contributing our stroke expertise to WHO global guidance, programs and collaborations.

We help our members to implement the HEARTS technical package which supports Ministries of Health to strengthen CVD management in primary health care settings as part of their strategic NCD response.

Another key area in which WSO continues to contribute stroke expertise is in the assessment of evidence for inclusion of stroke treatments and technologies in the WHO Essential Medicines List. The Essential Medicines List describes treatments that all UN-member states are encouraged to offer, at a reasonable cost, or free through local healthcare provision.



We are committed to building our partnerships at global, regional and national level to scale up and deliver improvements in prevention, treatment and support to reduce the burden of stroke.



Working to address shared drivers of disease with the NCD Alliance

We work closely with our partners in the NCD Alliance, coordinating our policy advocacy efforts to ensure that the voices of stroke experts, survivors and caregivers are heard, and that the specificity of stroke is articulated with the overall NCD policy agenda.

Our President and Executive Director participate in the Global NCD Alliance Forum and the Secretariat engages with the NCD Alliance Member Advocacy Network, PLAN (Peer Learning Advocacy Network) and we support stroke community participation in the Global Week of Action on NCDs.



Global Coalition for Circulatory Health

WSO contributes to the Leadership Group of the Global Coalition for Circulatory Health. The Coalition hosted by the World Heart Federation, is focused on advancing the principles and commitments outlined in the Mexico Declaration. Through this partnership we coordinate our work to develop collaborative and innovative approaches to improve CVD and stroke prevention. We also work together with other members of the Coalition on submissions to UN committees where deliberations are related to primary prevention of CVD and stroke, access to universal healthcare and disability.

Our members

Our engagement in external partnerships is informed and driven by our working partnerships with our Member Associations, who contribute their expertise and work with us to raise awareness and advocate around key issues in stroke treatment, prevention and support.

Our partnerships with industry

We partner with a number of corporations that share our commitment to reducing the global burden of stroke. These relationships are guided by our policy on working with industry which ensures independence of decision-making and content.

We are grateful to our corporate supporters

PLATINUM PLUS SPONSOR PARTNER



PLATINUM SPONSOR PARTNER



SILVER SPONSOR PARTNER



Bristol Myers Squibb™



Medtronic

BRONZE SPONSOR PARTNER



Financial Report

We are pleased to report that WSO ended the year with a profit of USD 225'284. As a result, WSO enters 2022 with a reserve of over USD 2.3 million which provides us with operational security in an uncertain global context.

The main income was derived from the 2020 virtual congress, donations from partners followed by membership dues.

The operational expenses were managed in line with the budget. Some of the projects that we received support for in 2021 have been postponed to 2022 mainly due to the pandemic. As a result, the liabilities have increased to USD 397'743.

The 2021 financial results of WSO Switzerland were audited by Fiduciaries Chavaz SA in March 2021 and it showed that the financial statements have been presented fairly and in accordance with Swiss accounting rules. The audit report will be approved at the next General Assembly which will be held in October.

A detailed financial report for all WSO activities is shown below, this includes operations of both WSO Switzerland and WSO US.

WSO consolidated income and expenses for the year ended December 31, 2021 (in United States dollars)

| | | Total | |
|----------------------------|-----------------------------------|------------------|------------------|
| | | 2021 | 2020 |
| Cash & Other Assets | | 2,859,650 | 2,484,882 |
| Liabilities | | 507,572 | 353,388 |
| Reserves | | 2,352,079 | 2,131,494 |
| Income | | | |
| | Membership dues | 167,534 | 120,019 |
| | Donations & Corporate grants | 567,138 | 569,368 |
| | Income on congress | 546,298 | 0 |
| | Bank interest | 1,825 | 6,463 |
| | Journal royalties | 59,697 | 50,941 |
| | Contribution IJS Editorial Office | 107,634 | 100,227 |
| | Other income | 0 | 43,608 |
| Total of Income | | 1,450,127 | 890,626 |
| Expenses | | | |
| | Operational costs | 369,624 | 323,658 |
| | WS Academy | 98,238 | 77,689 |
| | Awareness & Advocacy | 276,996 | 177,876 |
| | Capacity building | 46,007 | 41,000 |
| | IJS Editorial office | 96,337 | 101,486 |
| | Future Leaders | 124,987 | 3,388 |
| | Journal subscriptions | 33,975 | 33,005 |
| | WSO projects | 88,678 | 15,340 |
| | WSO grants and scholarships | 89,700 | 30,000 |
| Total of Expenses | | 1,224,543 | 803,441 |
| Result for the year | | 225,584 | 87,185 |
| | Reserves brought forward | 2,126,494 | 2,039,309 |
| | Reserves carried forward | 2,352,079 | 2,126,494 |

Executive Committee and Board of Directors

The Executive Committee and Board of Directors is composed of outstanding and committed individuals, representing all spectrums of stroke prevention, care and rehabilitation from across the world. 10 board members are representing stroke support organizations and 10 are representing scientific organizations.

Marc Fisher will remain President until 2022, when Sheila Martins will take over the Presidency.

In 2021 the Board of Directors had three virtual meetings and members of the Executive Committee had six phone conferences.

In addition, WSO has 16 committees and four task forces. Each committee and task force has 2 Co-Chairs and up to 10 members.

The 2020 – 2022 Executive Committee and Board of Directors are presented below.

WSO EXECUTIVE COMMITTEE MEMBERS

President – Marc Fisher, USA
President-Elect – Sheila Martins, Brazil
Vice President – Jeyaraj Pandian, India
Vice President for SSOs – Michelle Nelson, Canada
Immediate Past President – Michael Brainin, Austria
Treasurer – Bernard Yan, Australia
Secretary – Pooja Khatri, USA
Member at Large – Valery Feigin, New Zealand
Member at Large – Gloria Ekeng, Nigeria
Member at Large – Ralph Sacco, USA
Ex-officio Member – Werner Hacke, Past President, Germany
Ex-officio Member – Hugh Marcus, Editor of IJS, UK

WSO BOARD OF DIRECTORS

INDIVIDUAL MEMBERS

Sub-Sahara Africa, Middle East/East Mediterranean
 Mayowa Ojo Owolabi, *Nigeria*
 Natan Bornstein, *Israel*
 Ad Adams Ebenezer, *Ghana*
 Gloria Ekeng, *Nigeria*
 Mehdi Farhoudi, *Iran*
 Babak Zamani, *Iran*

Americas
 Argye Hillis, *USA*
 Gustavo Saposnik, *Canada*
 David Liebeskind, *USA*
 Michelle Nelson, *Canada*
 Claudio Sacks, *Chile*
 Gisele Silva, *Brazil*

Europe
 Philip Bath, *UK*
 Stephanie Debette, *France*
 Kennedy Lees, *UK*
 Atte Meretoja, *Finland*
 Else Charlotte Sandset, *Norway*
 Joanna Wardlaw, *UK*

Asia/Oceania
 Craig Anderson, *Australia*
 Julie Bernhardt, *Australia*
 Epifania Collantes, *Philippines*
 Deidre de Silva, *Singapore*
 Andrew Lee, *Australia*
 Keun Hwa-Jung, *South Korea*
 Kazuo Kitagawa, *Japan*
 Jeyaraj Pandian, *India*
 Anna Ranta, *New Zealand*
 Kazu Toyoda, *Japan*

SCIENTIFIC SOCIETIES

Gabriel Rodriguez de Freitas - *Brazilian Stroke Society*
 Vida Demarin - *Central and Eastern European Stroke Society*
 Valeria Caso - *European Stroke Organization*
 Gord Gubitz - *Canadian Stroke Consortium*
 Teruyuki Hirano - *Japan Stroke Society*
 Jong Sung Kim - *Korean Stroke Society*
 Patrik Michel - *Swiss Stroke Society*
 Karen Furie - *American Stroke Association*
 Roland Veltkamp - *German Stroke Society*
 Bernard Yan - *Stroke Society of Australasia*

STROKE SUPPORT SOCIETIES

Anita Arsovska - *Macedonian Organization For a Fight Against Stroke*
 Mary Kay Ballasiotes - *International Alliance for Pediatric Stroke*
 Juliet Bouverie - *UK Stroke Association*
 Amy Edmunds - *YoungStroke.Inc*
 Rita Melifonwu - *Stroke Action Nigeria*
 Sheila Cristina Ouriques Martins - *Brazilian Stroke Network*
 Sharon McGowan - *Stroke Foundation, Australia*
 Pamela Naidoo - *Heart and Stroke Foundation South Africa*
 Arlene Wilkie - *Stroke Alliance For Europe*
 Haruko Yamamoto - *Japan Stroke Association*

CO-OPTED MEMBERS

Liping Liu, *China*

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ACT NOW!

By making a donation on:

<https://www.world-stroke.org/about-wso/make-a-donation>

**By using the WSO advocacy Toolkit to support
your local Stroke Advocacy Events:**

<https://www.world-stroke.org/world-stroke-day-campaign/world-stroke-campaign/advocacy-toolkit>

**By using the Global Stroke Guidelines and Action Plan
to establish and implement stroke systems of care globally:**

http://www.world-stroke.org/images/GSGAAP/Global_Stroke_Guidelines_and_Action_Plan_All_in_one.pdf

**By becoming our members and joining our global team
to fight against stroke:**

<http://wso.multiregistration.com/>

**By learning and promoting the Global Stroke Bill
of Rights to stroke care providers and governments:**

<https://www.world-stroke.org/world-stroke-day-campaign/world-stroke-campaign/global-stroke-bill-of-rights-campaign>

By marking your dates for the virtual World Stroke Congress 2021:

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our Website**

<https://www.world-stroke.org/>
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Contact us

admin@world-stroke.org

one voice

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One World Voice for Stroke



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