

# STROKE ACTION PLAN FOR EUROPE 2018-2030

## SUMMARY OF RECOMMENDATIONS

In May 2017, the Stroke Alliance for Europe (SAFE) launched the Burden of Stroke in Europe Report which unveiled shocking disparities between and within countries along the entire stroke care pathway. In order to take action, SAFE and the European Stroke Organisation (ESO) decided to formalise their partnership which has led, after extensive consultation, to the creation of the stroke action plan for Europe 2018-2030.

The Action Plan provides a clear road map and outlines recommendations and targets for 2030, so that action is taken by governments to improve stroke care and reverse the current trend: an expected increase by 2035 of 34% in absolute number of strokes, 45% in the number of stroke deaths, as well 25% in the number of survivors living with the long-lasting effects of stroke.

## OVERARCHING TARGETS FOR 2030

Four overarching targets<sup>1</sup> for the Stroke Action Plan for Europe 2018-2030 have been identified for 2030.

1. Reduce the absolute number of strokes in Europe by 10%.
2. Treat 90% or more of all patients with stroke in Europe in a stroke unit as the first level of care.
3. Have national plans for stroke encompassing the entire chain of care from primary prevention through to life after stroke.
4. Fully implement national strategies for multi-sectorial public health interventions promoting and facilitating a healthy life-style, and reducing environmental (including air pollution), socio-economical and educational factors that increase the risk of stroke.

These are complemented by further specific targets<sup>1</sup> for each of the seven areas that follow.

<sup>1</sup> The targets may be subject to minor edits for the final version of the Stroke Action Plan for Europe.

# PRIMARY PREVENTION

Policy-makers should implement and strengthen national strategies for primary prevention and risk factor control. Multi-sectorial public health interventions must promote and facilitate a healthy lifestyle and ensure universal access to primary screening and treatment programmes.

*“As a person who has had a stroke, I have a right to be informed and prepared*

✓ *Be informed about the signs of stroke so I can recognise if I am having one.*

✓ *Be fully informed about what has happened to me and about living with stroke for as long as I require it.”*

Global Stroke Bill of Rights, World Stroke Organisation, 2014

Public health interventions and policies that target prevalent risk factors, such as unhealthy diet, physical inactivity, smoking, diabetes and hypertension need to be implemented at several levels, from local to national to pan-European. Major differences among European countries concerning risk factor prevalence and control should be tackled through the development of European level guidelines for risk factor screening and treatment.

*“When I had a stroke, I never heard about stroke. When I recovered in the hospital, the doctors said, “You had a stroke.” “A what? A stroke?” I didn’t know. Although I was a lawyer, etc.”*

Elisabeth Ortinez, Fundacio Ictus, Catalonia, Spain

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## TARGETS FOR 2030

1. Achieve universal access to primary preventive treatment through improved and better-personalised risk prediction.
2. Implement legislation and national strategies for multi-sectorial public health interventions that address the prevalent risk factors for stroke (e.g. smoking, sugar, salt, alcohol, polluted air) by promoting, educating and campaigning for a healthy lifestyle, and reducing environmental, socio-economic and educational determinants.
3. Make available evidence-based screening and treatment programmes for stroke risk factors in all European countries.
4. To have blood pressure detected and controlled in 80% of persons with hypertension.





# STROKE SERVICES ORGANISATION

**All European countries need to establish a continuous quality improvement system for stroke services, including a mechanism for regular monitoring, review and benchmarking.**

Although significant progress has been made when it comes to political awareness around the burden of stroke across Europe, significant differences remain at the organisational level of stroke care.

## TARGETS FOR 2030

1. Establish a medical society and stroke support organisation in each country, which closely collaborate with the responsible entity in the development, implementation and auditing of the national stroke plan.
2. Guide national stroke care by evidence-based pathways that cover the entire chain of care. These pathways are understood by the public and may be adapted to meet regional specificities to ensure equal access, independent of region, time of day and socio-economic status.
3. Ensure stroke care is managed and delivered by competent personnel and teams, and plans for effective recruitment and training are created as part of any national stroke plan.
4. Ensure all stroke units and other stroke services recurrently undergo certifications or equivalent auditing processes for quality improvement.

This includes the need to provide stroke care across the whole pathway in an organised and audited fashion, planning for competence of and adequate staff numbers, the presence of national stroke societies and stroke support organisations, dedicated stroke units capable to provide appropriate interventions through stroke trained personnel and equipment and equipment.

*"There's a programme called Early Supported Discharge, so, that's really moving people out of hospital beds and getting them home earlier. They get their therapy for the first 6-8 weeks at home, and it's been proved in many countries around Europe that that improves outcomes and actually reduces overall costs for the health service as well."*

Chris Macey  
Irish Heart Foundation





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## ACUTE STROKE MANAGEMENT

**Equal access to acute stroke unit care, intravenous thrombolysis (IVT), endovascular thrombectomy (EVT) and other strategies for the management of acute stroke must be ensured in all European countries.**

The benefit of treatment for acute stroke patients is strongly time-dependent, with earlier intervention achieving better outcomes. Stroke is a medical emergency, and the public need education in symptoms and response to enable swift acute care action.

Rapid assessment and initiation of treatment need to be supported by stroke care systems, before brain injury becomes irreversible. Access to acute stroke unit care, IVT and EVT remains highly unequal between and within European countries. On average, the availability of stroke units ranges as low as 1.5 stroke units per annual 1,000 ischaemic stroke incidents. In 2016, IVT treatment was accessible for less than 20% of patients across Europe, while only 1.9% of all acute ischemic stroke patients in Europe received EVT. 28 countries currently lack full EVT coverage.

## TARGETS FOR 2030

1. Treat 90% or more of all stroke patients in Europe in a stroke unit as the first level of care.
2. Guarantee access to recanalisation therapies for 95% of all eligible stroke patients across Europe.
3. Decrease median onset-to-needle times to less than 120min for intravenous thrombolysis and onset-to-reperfusion times to less than 200min for endovascular treatment.
4. Achieve rates for intravenous thrombolysis above 15%, and for mechanical thrombectomy above 5% in all European countries.
5. Decrease first-month case-fatality to less than 25% for haemorrhagic stroke and increase rate of good clinical outcome to more than 50%.



## SECONDARY PREVENTION

**National stroke registries are needed to record the presence of modifiable and non-modifiable risk factors. Through the implementation of national stroke plans in all European countries, interventions used to prevent or treat these factors need to be established.**

Secondary prevention encompasses the reduction of further stroke and other complications in stroke survivors. There are a wide range of different interventions, pharmaceutical, surgical or radiological procedures, long-term follow-up and patient education and professional training.

Currently, a wide variation in the provision of secondary prevention persists across Europe and more accurate monitoring and reporting of secondary prevention is needed.

*“I decided to work for motivating people to work for themselves. That is very important. Never give up.”*

Bjørn Bakke, stroke survivor, Norway

### TARGETS FOR 2030

1. Include secondary prevention in national stroke plans with follow through into primary/community care;
2. Ensure that 90% of the stroke population should be seen by a stroke specialist and have access to secondary prevention management (investigation and treatment).
3. Ensure access to key investigational modalities: CT (or MR) scanning, carotid ultrasound, ECG, 24 hour ECG, cardiac echo (transthoracic and transoesophageal), blood tests (lipids, glucose, HbA1c, coagulation, ESR, CRP, autoantibodies).
4. Ensure access to key preventative strategies: lifestyle advice, antihypertensives, lipid lowering agents, antiplatelets, anticoagulants, oral hypoglycaemias and insulins, carotid endarterectomy, and patent foramen oval closure.



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# REHABILITATION

**All European countries should ensure sufficient resources for rehabilitation and improve the capacity of stroke units to ensure all patients have equitable access to rehabilitation. All stroke survivors should have access to a multidisciplinary team, be entitled to personalised rehabilitation plans and have a regular review of their rehabilitation needs.**

After having a stroke, patients may acquire several disabilities. 30% of survivors will develop communication issues; 50% will experience cognition deficits; and 50-85% will develop motor function impairments. Rehabilitation is critical to help address those disabilities and to enable stroke survivors' return to the community, continuous participation in education, labour market and civic life, as well as to ensure their independence.

Yet, access to rehabilitation varies across Europe. Acute stroke care, skilled care and specialist rehabilitation are all core aspects of comprehensive stroke units, and these are lacking in many countries.

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## TARGETS FOR 2030

1. Guarantee that at least 90% of the stroke population has access to early rehabilitation within the stroke unit.
2. Provide early supported discharge to at least 20% of the stroke population in all countries.
3. Ensure all stroke survivors living in the community have access to physical fitness programs.
4. Ensure all stroke survivors with residual difficulties are provided with a documented plan for community rehabilitation and self-management support at discharge from the hospital.

*"The Norwegian Institute of Public Health published in 2018 numbers on a decrease in death after strokes and heart attacks in Norway, where the percentage is about a 30 percent decrease of death after strokes in hospital. For heart attack the number is 25 percent.*

*For public health reasons this means that health registries such as those for stroke is important. To be able to compare numbers throughout Europe must be a really great advantage for those working with stroke on a daily basis.*

*For those affected by stroke, it shows that if you are treated in a hospital with a stroke unit - your chances are higher to survive. But as I have said a lot of times, a saved life must also be lived."*

Grethe Lunde, stroke survivor and  
Stroke Alliance for Europe  
Board member



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5. Ensure all stroke patients and carers have a review of their rehabilitation and other needs at three to six months after stroke, and annually thereafter.

# EVALUATION OF QUALITY AND OUTCOMES

A common European Framework of Reference for Stroke Care Quality should be developed. This can be the basis to establish auditing of guidelines for stroke prevention, management and rehabilitation as well as common criteria to measure stroke care quality at European level. European countries should have systems in place for assessing clinical services, including through the collection of patient reported outcomes, and share audit data with the general public.

Significant variations in the quality of care for stroke patients across and within European countries persist. Comprehensive stroke guidelines and standards for the measurement of stroke services quality are essential for improvement and required for healthcare professionals and stroke care services (to monitor and improve their practices), funding bodies and healthcare planners (to optimise health budgets and establish optimal care pathways) as well as for the general public (to build trust on the healthcare system and show people are getting high quality of care and rehabilitation).

## TARGETS FOR 2030

1. Develop a European Framework of Reference for Stroke Care Quality which includes:
  - a. guidelines for stroke prevention, management, and long-term rehabilitation;
  - b. the definition of common dataset covering core measures of stroke care quality to enable comparisons of care in hospital and the community, including structure, process, outcomes and patient experience.
2. Assign a named individual who is responsible for stroke quality improvement in each country/region.
3. Put in place at national and regional level systems for assessing and accrediting stroke clinical services and providing peer support for quality improvement, and make audit data routinely available to the general public.
4. Patient reported outcomes and longer term outcomes (e.g. 6 months and one year) should be reported covering hospital and community care.

*“Including the expertise from patients and carers is perennially important, and helps to make the European Stroke Action Plan credible. In many countries stroke support organisations are now included in guidelines work, and speaking from my own country I am happy to report that this is now routine and mandated at the National Board of Health and Welfare and the quality registers level.”*

Prof. Bo Norrving,  
professor of neurology  
at Lund University, Sweden







## LIFE AFTER STROKE

**Policy-makers should develop and implement national stroke plans that address stroke survivors' long-term unmet needs. For better understanding these needs, it is crucial to set minimum standards of care and rehabilitation and collect data on Patient Reported Outcomes Measures (PROMs).**

Existing data reports that survivors and their families experience a wide range of significant day-to-day challenges (e.g. physical disabilities, communication issues, poor cognitive ability, mental health co-morbidities, finance difficulties, social relations barriers and lack of support to return to work). With an ageing population and growing number of stroke survivors, it is vital for health and social care systems to better understand and address stroke survivors' and families unmet needs and improve their quality of life. This requires setting minimum standards of care and rehabilitation, and collecting data on PROMs, enabling assessment of the quality of the entire stroke care pathway from the patient perspective.

## TARGETS FOR 2030

1. Appoint government individuals/teams responsible for championing life after stroke and making sure that national stroke plans address survivors' and their families' long-term unmet needs.
2. Formalise the involvement of stroke survivors and carers, and their associations in identifying issues and solutions to enable the development of best patient and support practices.
3. Set out, through national stroke plans, the support that will be provided to stroke survivors regardless of their place of residence and socio-economic status.
4. Support self-management and peer support for stroke survivors and their families, through backing stroke support organisations.
5. Support the implementation of digitally-based stroke self-help information and assistance systems.

For more information, please visit  
[www.safestroke.eu](http://www.safestroke.eu) and  
[www.eso-stroke.org](http://www.eso-stroke.org)

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ASBL No. 0661.651.450