

# Stroke achievements of 2023

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SAP-E countries A to Z



# Stroke achievements of Northern Ireland in 2023

The most important achievement of year 2023

- Further development of a cohesive stroke network agreeing regional standards of care and delivering service improvement across the stroke pathway

Advance in acute stroke care

- Delivering thrombectomy to 5.8 % of ischaemic strokes whilst improving equity of access, particularly to those furthest from the thrombectomy centre, through a region wide thrombectomy forum

Advance in secondary prevention

- Development of a regional pathway for TIA service provision

Advance in rehabilitation

- Agreement on a regional approach to spasticity management

Advance in life after stroke

- Standardised regional service model for Long Term Support

# Stroke achievements of **Spain** in 2023

- Update of the **National Strategic Stroke Plan in October 2023** (previous plan launched in 2009) including participation of representatives of **Ministry of Health and Neurology Spanish Society**, responsible from **Regional Stroke Plans** across nation, **stroke experts** and three **Stroke Support Organizations**).

The updated Stroke Plan includes **6 strategic areas** revising state of the art and proposal of objectives and recommendations:

- 1. Health Promotion and Primary Prevention
- 2. Secondary prevention
- 3. Hyperacute phase. Care organization and treatment
- 4. Stroke Units
- 5. Rehabilitation and life after stroke
- 6. Research and Training

- **Meetings with representatives of Ministry of Health** to upload data in SAPE-SST

# Stroke achievements of **Armenia** in 2023

## The most important achievement of year 2023

- Two new stroke centers; national stroke database

## Advance in acute stroke care

- One new comprehensive stroke center in Yerevan, one stroke ready hospital using tele stroke in Lori region, Armenia

## Advance in secondary prevention

- Extensive collaboration with MOH and preparation of governmentally sponsored stroke prevention program (pilot phase): will be launched in coming months

## Advance in rehabilitation

- Poststroke rehabilitation will be reimbursed by government since 2024 for all stroke patients

## Advance in life after stroke

- No major advances

# Stroke achievements of **Austria** in 2023

## The most important achievement of year 2023

- Linkage between ASUR and Hospital records and causes of death statistics

## Advance in acute stroke care

- Discussion on new benchmarks (compliant with E-SAP) and update of the quality standard Stroke

## Advance in secondary prevention

- Lower age- and sex-standardized incidence rates of stroke

## Advance in rehabilitation

- Capacity calculation for rehabilitation demands until 2030

## Advance in life after stroke

- Role out of post-stroke care (supported by hospital financing)

# Stroke achievements of **Belgium** 2023



The most important achievement of year 2023

➤ **2 Flemish Stroke care quality projects on acute stroke care**

➤ BIC4Stroke -**Breakthrough Improvement Collaborative for Stroke**

➤ VIP<sup>2</sup> (VIKZ - (Flemish Institute for Quality of Care) – Flemish Government driven

➤ **Collaboration with Belgian Alliance for Cardiovascular Health (BACH) –team up against stroke!**

Advance in acute stroke care

➤ **Belgian Stroke Centre (thrombectomy -S2) accreditation: 3/15 centres (all in Wallonia)**

Advance in secondary prevention and life after stroke

➤ **National survey (GP's and neurologists) on post stroke management inc secondary prevention and chronic residual symptoms after stroke**

Advance in rehabilitation /



# Stroke achievements of **Bulgaria** in 2023

## The most important achievement of year 2023

- Joining the efforts of major stake holders and wide range of other organizations into Alliance for Cardiovascular Health in Bulgaria

## Advance in acute stroke care

- Updated stroke EMS protocol

## Advance in secondary prevention

- Introduction of the electronic patient record (although at the moment it does not cover all the information necessary for tracking stroke)

## Advance in life after stroke

- Established the first peer-to-peer stroke support group in Bankya, Sofia

# Stroke achievements of **Catalonia** in 2023



## The most important achievement of year 2023

- Renewal of the Stroke Strategy for Catalonia 2023 - 2025

## Advances in acute stroke care

- Addition of 2 other Thrombectomy capable, ESO-certified, hospitals

## Advance in secondary prevention

- No specific advances

## Advance in rehabilitation

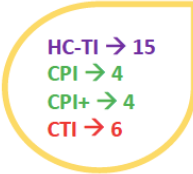
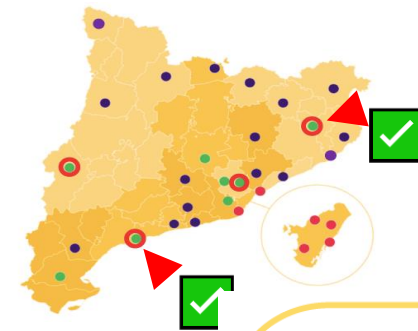
- Publication of the Rehabilitation Plan for Catalonia. Stroke is a priority:

- Assessment of rehab needs and initiation of rehab treatment 23-48 h after onset
- Sets criteria for intensity, inpatient/outpatient

- Map of Rehab resources & professionals, design of a Stroke-related Disability Registry

## Advance in life after stroke - Scaling-up of the **ABRIC** Programme

- Stroke Foundation of Catalonia, ABRIC = coat → protection, comfort, support
- Telephone-based, no cost, > 1000 active patients





# Stroke achievements of **Croatia** in 2023

The most important achievement of year 2023

➤ **Pilot project of national stroke registry**

Advance in acute stroke care

➤ **Increase % of mechanical thrombectomy**

➤ **Advance in secondary prevention**

➤ **Availability of endovascular PFO occlusion / Nothing**

Advance in rehabilitation

➤ **Availability of robotic rehabilitation / Nothing**

Advance in life after stroke

➤ **Stroke awareness campaigns (WSD, Red Dress Day) / Nothing**

# Stroke achievements of **Czechia** in 2023

## The most important achievement of year 2023

- Signing SAP-E declaration

## Advance in acute stroke care

- IVT rate 2023 looks above 31,4% (2022), EVT above 9,2% (2022), results from detailed regional analysis on care availability

## Advance in secondary prevention

- Plan for establishing network of out-patients stroke neurologist submitted to MoH, education programme and Certification of Stroke neurologists started

## Advance in rehabilitation

- Start of compulsory quality monitoring in rehabilitation, obtaining the data about all rehabilitated pts, MoH funding programme for neurorehabilitation

## Advance in life after stroke

- Plans for case managers and obtaining data on social support from Govt.

# Stroke achievements of **Denmark** in 2023

## The most important achievement of year 2023

- Implementation of measuring functional outcome 3 months (modified Rankin Scale) after stroke on a national level

## Advance in acute stroke care

- ~23 % of patients with ischemic stroke receives reperfusion therapy (IVT 19%, MT 6%)

## Advance in secondary prevention

- In 94 % of patients with stroke and AFIB (without contraindications) oral anticoagulation is initiated within 14 days and after one year 91 % of the patients is still on oral anticoagulation

## Advance in rehabilitation

- ~ 82 % of patients receives rehabilitation with physiotherapist and/or occupational therapist within 5 days

# Stroke achievements of **England** in 2023

The most important achievement of year 2023:

## **Advance in acute stroke care**

- Royal College of Physicians (RCP) 2023 guidelines, rolling out of AI, National Optimal Stroke Imaging Pathway (NOSIP)
- Integrated Stroke Delivery Networks (ISDNs)
- The National Stroke Programme

## **Advance in secondary prevention**

- NHS Rightcare stroke toolkit

## **Advance in rehabilitation**

- National Stroke Service Model
- And national service model for an integrated community stroke service (ICSS)

## **Advance in life after stroke**

- Patient Reported Outcome Measure Survey (PREMs)

# Stroke achievements of **Estonia** in 2023

- Regular meetings with ESO Stroke Action Plan collaborating partners in Estonia and developing different activities for better stroke care.

## Advance in acute stroke care

- Seminars on Stroke acute care for ambulance personnel

## Advance in secondary prevention

- Seminars on secondary stroke prevention for family doctors in all counties

## Advance in rehabilitation

- .....

## Advance in life after stroke

- Estonian Health Insurance Fund supports stroke coordinator position in hospitals (currently available only in Tartu University Hospital and West Tallinn Central Hospital) and stroke nurses.

# Stroke achievements of **Finland** in 2023

## The most important achievement of year 2023

- Despite major challenges (reorganisation of the health care system, severe nurse shortage) stroke care has been kept in high level

## Advance in acute stroke care

- Median DNT ca 20 min in tertiary hospitals (range 12-27 min)

## Advance in secondary prevention

- No clear advances were seen

## Advance in rehabilitation

- No clear advances in 2023

## Advance in life after stroke

- Post Stroke Checklist (PSC) implementation

# Stroke achievements of Georgia in 2023

- Increased number of EVT capable stroke centres (6 in total, 4 in Tbilisi, 2 in regions)
- Increased number of IVT and EVT
- Decree of the Minister of Health of Georgia by April 21, 2023 on Establishing Stroke Care System in the Country
  - Joint efforts of the Georgian Stroke Association, hospitals and MoH of Georgia
  - Criteria for primary stroke units and comprehensive stroke centers
  - Protocol for EMS (detailed pathway including drip-and-ship and mothership models)
  - Task force established for certifications of primary stroke units and stroke centers
  - Need for setting up national quality registry by 2024 emphasized
- Increased use of DOACs and statins when appropriate
- Reimbursement by state of short term (2 weeks) post-stroke rehab courses

# Stroke achievements of **Hungary** in 2023

## The most important achievement of year 2023

- We have reorganized the leadership of the League, active members are some stroke survivors

## Advance in acute stroke care

- The number of thrombectomy centers has increased (including Szent János Hospital)

## Advance in secondary prevention

- Analysing and publishing the data of the national stroke screening program

## Advance in rehabilitation

- After the downturn caused by the COVID pandemic, the possibility of patients in need of rehabilitation is increasing

## Advance in life after stroke

- Interest and knowledge of dysphagia and nutritional therapy in stroke patients has increased significantly



# Stroke achievements of **Iceland** in 2023

## The most important achievement of year 2023

- Laying strong foundation for a sustainable work on SAPE
- Translate the public version of the action plan into Icelandic (in final stage)
- Establish an executive committee working with us NSC - Regular documented meetings
- Contact and now cooperation with the Board of Landspítali and the Ministry of Health. A meeting with the Directorate of Health is scheduled
- A study of the current quality in stroke treatment and services in Iceland (a clear current status in relation to the SAPE goals)

## Advance in acute stroke care

- Updating protocols in acute stroke treatment at Landspítali
- Preparing a new Stroke Ready Hospital (Selfoss) – addition to 4 others

## Advance in secondary prevention

- Study of the current status of secondary prevention (workup, treatment, transfer of care and follow-up)

## Advance in rehabilitation

- We need to look into our current status

## Advance in life after stroke

- Study of the current status of follow-up and outcome of Icelandic stroke patients. Cooperation of professionals with a strong SSO



# Stroke achievements of Ireland in 2023



## Acute

- Thrombectomy at 9% of ischaemic stroke (IS) population
- Mortality for IS at historic low at 7.5% (INAS 2022)
- Rate of swallow screening improved to 71% (from 68%) and national QI commenced with a target of 100% of swallow screens completed.
- Public awareness campaign launched to improve patient attendance times
- Safe nurse staffing levels established in acute stroke units and a nationally agreed core competencies for stroke nurse training . Curriculum submitted for national sign off.

## S.Preiv.

- Over 300k euro made available to 15 stroke centres to buy atrial fibrillation and blood pressure monitoring equipment
- GP contract changed to include detection and management of grade 1 hypertension in all adults
- Pathway of care for Atrial Fibrillation agreed

## RHB

- Early Supported Discharge (ESD) now commissioned across 11 of our 22 acute stroke centres and 10% patients go home with ESD.

## Life after stroke

- 979 referrals made to Irish Heart Foundation “Stroke Connect” in 2023, 78% from acute Hospitals. Target reached of 1 in 4 referrals.

## Education

- Clinical Advisory Group “Education and Training” committee was established.
- National Clinical Guidelines for UK and Ireland published and endorsed by RCPI

# Stroke achievements of **Israel** in 2023

## The most important achievement of year 2023

- Continuous increase in re-canalization rates

## Advance in acute stroke care

- New Stroke units in 3 hospitals (previously treating stroke patients in regular wards).

## Advance in secondary prevention

- Establishing inter-disciplinary teams in tertiary centers (heart-brain and neuro-hemostasis)

## Advance in rehabilitation

- ...

## Advance in life after stroke

- ...

# Stroke achievements of **Kazakhstan** in 2023

## The most important achievement of year 2023

- Launched 5 stroke centers in remote regions, Ministry of Health approved a national guideline on ischemic stroke management

## Advance in acute stroke care

- launched a telemedicine channel only for stroke patients and consulted around 900 patients

## Advance in secondary prevention

- Joined cardiologists to tackle atherosclerosis prevalence among citizens

## Advance in rehabilitation

- Printed a handbook for patients and their relatives on care and exercises after stroke

## Advance in life after stroke

- ...

# Stroke achievements of **Kyrgyzstan** in 2023



## **The most important achievement of year 2023**

- First the new angiography complex was installed in May 2023 in National Hospital (main capital hospital with neurosurgical and stroke departments)

## **Advance in acute stroke care**

- In National Hospital were done over 150 endovascular operations (4 thromboextractions, 50 embolization (Coiling),

## **Advance in secondary prevention**

- In National Hospital were done 20 angioplasty with stenting vertebral and carotid arteries), 10 endoarterioectomies by open access...

## **Advance in rehabilitation**

- In National Hospital is planning to open rehabilitation department for patients with stroke (now at the stage of approval of regulatory documents)

## **Advance in life after stroke**

- No

# Stroke achievements of **Lithuania** in 2023

## The most important achievement of year 2023

- preparation of new national guidelines of acute stroke service, including all stages

## Advance in acute stroke care

- Increased number of reperfusion treatment
- Starting of telemedicine project in stroke

## Advance in secondary prevention

- improvement of reimbursement of DOACs

## Advance in rehabilitation

- individualisation of rehabilitation treatment (accessibility, duration, and etc.)

## Advance in life after stroke

- still great problem

# Stroke achievements of **Malta** in 2023

## The most important achievement of year 2023

- Full stroke unit and neuro ward capacity post covid,

## Advance in acute stroke care

- 30% increase in thrombectomies from 2022 (90 total), regression in acute review by neurology team due to lack of human resources.

## Advance in secondary prevention

- Nurse led clinic after 3 months

## Advance in rehabilitation

- New specialist in rehab, and new service of ultrasound guided botox in rehab facility

## Advance in life after stroke

- None 😞

# Stroke achievements of **Moldova** in 2023

## The most important achievement of year 2023

- Establishment of National Stroke Service

## Advance in acute stroke care

- 11 primary Centre, 1 multidisciplinary Centre, 1 comprehensive Centre
- First IVT in primary Centers – Causeni, Comrat, Orhei

## Advance in secondary prevention

- Secondary and primary prevention service in Comprehensive Stroke Center

## Advance in rehabilitation

- Neurological Rehabilitation Unit in Chisinau
- Regionalized Rehabilitation service in Primary Centres

## Advance in life after stroke

- No palliative care service



# Stroke achievements of **Montenegro** in 2023

The most important achievement of year 2023

➤ Montenegrin stroke organization

**Advance in acute stroke care**

➤ Second radiologist interested into MT, more neurologists in general hospitals

**Advance in secondary prevention**

➤ Better collaboration with vascular surgeons

**Advance in rehabilitation**

➤ Physiotherapists dedicated to our Clinic

**Advance in life after stroke**

...

# Stroke achievements of **The Netherlands** in 2023

## **The most important achievements of 2023:**

Consensus on outcome information to support shared decision making

### *Advance in acute stroke care:*

- median door-to-groin time: from 87 (in 2018) to 48 minutes (2023)
- median door-to-door-to-groin time: 122 minutes (newly applied indicator)

### *Advance in secondary prevention:*

- national healthy & active living agreement (GALA) across social and health care domains

### *Advance in rehabilitation:*

- national guidance to strengthen interdisciplinary rehab for people with ABI in primary care
- consensus on clinimetric instruments used in stroke rehabilitation

### *Advance in life after stroke:*

- research on gender differences to strengthen person centred care and improved outcomes

# Stroke achievements of **N.Macedonia** in 2023



9 municipalities  
12 field activities  
10 internet activities  
10 „Covid 19“ activities  
2700 visitors  
2700 stroke risk examinations  
2700 individual consultations  
2700 visitors of educational activities

STROKE RISKMETER

МОЗОЧНИОТ УДАР  
EUROPE причинител за смртност на планетата

Report for Quality of Improving Quality of Accessibility of Social Services Center Health Region - QI HEALTH (CNI - S.C. RM)

Be #GreaterThan Stroke

## Advance in acute stroke care

- Mechanical **thrombectomy ready comprehensive centre**- Skopje
- Acute stroke nurses education -simulation center (60 acute stroke nurses)
- Work in progress –organizing new regional stroke center (Population: 177 000)
- Train the trainer *Angels Initiative* (9 neurologist)

## Advance in secondary prevention

- 6 Scientific meetings including different medical specialists.
- Quality health project : mobile clinic, education. Direct access to health care service -2700/ social service 20 000
- WSO day

## Advance in rehabilitation

- Implementation of early rehabilitation and early neuropsychological assessment (Neurology Clinic)

## Advance in life after stroke

- Self management support groups
- Brochures for stroke patients and their carriers next steps on patient's path to recovery



# Stroke achievements of **Poland** in 2023

## The most important achievement of year 2023

- Neurology as a priority speciality

## Advance in acute stroke care

- Positive recommendation of the National Agency for Health Technology Assessment and Tarification for full reimbursement for thrombectomy
- Implementation of the 24 hour time window for thrombectomy (incl. Basilar occlusion)

## Advance in secondary prevention

- Reimbursement of PCSK-9 inhibitors strictly for stroke within the framework of the national treatment programme for hyperlipidemia

# Stroke achievements of **Portugal** in 2023

## **The most important achievement of year 2023**

- Stroke Unit Certification Academy Angels/ESO/SPAVC (2 stroke centres have submitted) 😊

## **Advance in acute stroke care**

- Emergent Endovascular therapy started in the south of Portugal (we didn't have any stroke center in the south of Portugal before);
- Azores-Madeira islands protocol for large vessel occlusion patients

## **Advance in secondary prevention**

- none

## **Advance in rehabilitation**

- transition to rehabilitation still not working well

## **Advance in life after stroke**

- Peer support groups: more and with large coverage (have started in Madeira Island)

# Stroke achievements of **Romania** in 2023

## The most important achievement of year 2023

- Launching of the national strategy against stroke and cardiovascular diseases

## Advance in acute stroke care

- 50% increase in MT, 3 new MT centers, 3 new stroke units

## Advance in secondary prevention

- Full reimbursement for antithrombotics, statins and antihypertensive medication

## Advance in rehabilitation

- ☹️ ☹️ ☹️

## Advance in life after stroke

- ☹️ ☹️ ☹️

# Stroke achievements in **Scotland** in 2023

## The most important achievement of year 2023

- Improved admissions to stroke units
- More patients achieving brain imaging target (<12 hours)

## Advance in acute stroke care

- Thrombectomy now available in three centres (155 procedures 2023)

## Advance in secondary prevention

- Consistent early antiplatelet use

## Advance in rehabilitation

- Annual rehabilitation reviews highlighting good practice and gaps in services

## Advance in life after stroke

- Plan for six monthly reviews for all patients

# Stroke achievements of **Serbia** in 2023

## **The most important achievement of year 2023**

- Preparation of a national plan for prevention, treatment and rehabilitation of patients with CVD
- The commission for drafting this plan was appointed by the Ministry of Health
- The national plan is harmonized with the SAP-E
- The signing of the Declaration is planned after the adoption of the national plan

## **Advance in acute stroke care**

- Increased in the number of patients treated with IVT and/or MT
- Shortened of OTT, DTN and DTP

## **Advance in secondary prevention**

- Increased number of stroke patients with AF using NOACs

## **Advance in rehabilitation**

- Increased in the number of early rehabilitation therapists

## **Advance in life after stroke**

- Raised the level of awareness on this topic among health professionals, stroke survivors and the public in general



# Stroke achievements of **Slovakia** in 2023

## The most important achievement of year 2023

- achievements are listed below

### Advance in acute stroke care

- stable rate of IVT with a slight rise in MT over the last 3 years - IVT 25%, MT 10-11%

### Advance in secondary prevention

- in the most of the hospitals we achieved 85% in OACs, and > 85% in antiplatelets

### Advance in rehabilitation

- no big, we analysed data about neurorehabilitation and discussed them with Ministry of health, some new neurorehabilitation centers in stroke hospitals

### Advance in life after stroke

- we have no obvious progress, somewhere cognitive functions are being monitored and speech training is being done

# Stroke achievements of **Sweden** in 2023

## The most important achievement of year 2023

- Continual increase in reperfusion rates and a new TBY center established

## Advance in acute stroke care

- 19% of all ischemic stroke treated with reperfusion, 9 % with thrombectomy

## Advance in secondary prevention

- Very high proportions of ischemic stroke patients with AF treated with anticoagulants (ceiling approaching)

## Advance in rehabilitation

- Half of all hospitals reach target for early supported discharge

## Advance in life after stroke

- Structured follow up including post-stroke checklist increasingly used

# Stroke achievements of **Ukraine** in 2023

## The most important achievement of year 2023

- Stroke is still considered as a priority for the MoH and NHS despite the war

## Advance in acute stroke care

- New order of the MoH with the definition of 3 types of hospital (basic, basic+neurosurgery, basic+endovascular) and prehospital triage based on scales
- tPA rate is close to 10% (10 527 cases)
- MT rate is about 1,5%
- New Angiographs with specific neuro package are bought (2 biplane, 14 monoplane). No region left in Ukraine without the possibility of MT

## Advance in rehabilitation

- New rules and tariffs for the inpatient rehab for the 2024 (upto 8 cycles 14 days each – each cycle costs 31000 UAH (about 750 EUR) and only when proper number of rehab personnel is present in hospital)

# Stroke achievements of **Wales** in 2023

## **Advance in acute stroke care**

RCP 2023 guidelines, rolling out of AI Nationally

Pre-hospital Video Triage (PVT) pilot

Amber 1 extension 10 hours agreed

Inter-Hospital thrombectomy transfer – Red Category

The National Stroke Programme

## **Advance in secondary prevention**

CVS Prevention Steering Group

## **Advance in rehabilitation**

And national service model for an integrated community stroke service (ICSS)

## **Advance in life after stroke**

PREMs - Deployment