

SAP-E Implementation Plan: 2023 Status Report July 2023

1. Background

Following the Action Plan for Stroke published in *European Stroke Journal* (ESJ) 2018 an implementation steering committee was appointed by the European Stroke Organisation (ESO) and including both members from ESO and the Stroke Alliance for Europe (SAFE). The committee first met in August 2019.

The assignment of this committee is defined by the aims and recommendations of the [Action Plan for Stroke in Europe](#), as well as the Terms of Reference as agreed with the Executive Committee of ESO, which initiated this work:

“The implementation includes: 1) Definition of a strategy framework 2) Definition of the Key Performance Indicators (KPI) for monitoring the quality of care and reaching the targets 3) Definition of a dissemination strategy (*Terms of reference*)”.

The work was halted by the Covid-19 pandemic in spring 2020 but reinitiated based on an online approach in the autumn of 2020 and continued mainly based on online activities.

This update aims to provide an overview of the implementation plan with status on progress in the individual steps/areas. This report was circulated in the SAP-E SC on 18 July, and approved by the deadline for comments on 4 August, all comments implemented into the report.

1.1 Definition of a strategy framework

From the beginning the linking of SAP-E to WHO has been identified as of major importance. For this reason, ESO has after application succeeded in becoming a regional non-State actor not in official relations with WHO.

The national scientific societies as well as national stroke support organisations are the key-players looking at an individual country level, as they have the insights into actual status of care as well as knowledge on lines of decision, and are in direct contact with the national Ministries of Health, which are important partners in implementing SAP-E. Further, we decided to include existing quality improvement initiatives in Europe to ensure synergy.

Figure: Overview of strategic network



1.2 Status on strategic framework

WHO: ESO has succeeded to become a regional non-State actor not in official relations with WHO. A joint session (ESO/WHO) was held at ESOC 23 with speakers from WHO (Dr Hans Kluge and Jill Farrington) and from ESO/SAP-E. Positive negotiations are ongoing to include WHO in the process of updating the Action Plan for Stroke in Europe manifesto.

WSO: Has endorsed SAP-E in July 2021.

AHA: A meeting was held between Louise Morgan and Mitchell Elkind (AHA) and representatives from ESO/SAP-E in relation to ESOC 23, as first outcome of the meeting, a proposal for a AHA/ESO joint session for ESOC 24 has been submitted.

EU: ESO has in collaboration with SAFE contributed to the [EU Healthier together \(NCDs\) Guidance document](#), most importantly by succeeding in including stroke and the SAP-E as priority 5 (referred to on page 101).

National Scientific Societies and Stroke Support Organisations: The national scientific societies have been successfully mapped as well as stroke support organisations in 2020. Over 90 national coordinators have been appointed and 49 countries in the WHO European region are involved in the programme.

A first mapping of stroke care including existing stroke plans, quality programmes, etc. was completed in 2020. Responsibilities of national societies and their appointed National Coordinators have been defined (please see below in section 4).

In March and April 2020, one-to-one meetings between national coordinators and Hanne Christensen were conducted. Forty-two countries participated. The format was informal 1-hour zoom-meetings covering the status of stroke care in the countries, the signing of the Declaration in their countries, their individual feed-back on SAP-E, and the availability of data for the Stroke Service Tracker.

One kick-off meeting and three roll-out meetings were held from September 2020 to March 2021 for National Coordinators and were well attended. These were followed up by workshops on advocacy for the Declaration (5 October 2021), the National Stroke Plan template (30 November 2021) and the Stroke Service Tracker (18 January 2022). All recordings of the webinars are available on the [SAP-E website](#). On the pre-conference day of ESOC 2022, a face-to-face symposium was held. This focused on sharing experiences in implementing SAP-E and five (Serbia, Bulgaria, Germany, Greece, and Estonia) countries that had specifically excelled received prizes.

Further online symposia focusing on each of the 7 domains and one on the launch of the first online output from the Stroke Service Tracker were held from mid-2022 to mid-2023, and further are planned for the autumn on 2023.

In March 2023, the first on-site SAP-E NC meeting was held in Riga with 42 participants. The meeting included sharing of experiences, workshops and the introduction of the new leadership structure including regional spokespersons. Participants' evaluations were highly positive.

Ministries of Health: A roll-out plan for engaging Ministries of Health (MoH) in all European countries has been prepared, a model based on the National Societies with support from SAP-E (please see below section 5 for details). So far, 12 (Ukraine, Lithuania, Spain, Kosovo, Portugal, Bulgaria, Catalonia, Slovakia, Romania, Estonia, North Macedonia, and Croatia) countries have signed the SAP-E Declaration.

European quality initiatives: Specifically ESO-East, RESQ and Angels Initiatives are relevant. Several persons in the implementation committee have leading positions in these programmes ensuring synergies. The SAP-E Chair is included into the Steering Committee of Angels Initiative.

2. Key performance indicators (KPI)

The second task for the SAP-E implementation committee according to Terms of Reference was the “*Definition of the Key Performance Indicators (KPI) for monitoring the quality of care and reaching the targets*”.

2.1 KPIs

Twelve KPIs have been identified and finalised after consultations with national coordinators during the roll-out meetings.

1. A national stroke plan defining pathways, care and support after stroke including pre-hospital phase, hospital stay, discharge and transition, and follow-up
2. At least one individual from the respective SSO (if existent) will be involved and supported, in an equal way, during the development of each country's national stroke plan or stroke related guideline
3. A national strategy for multi-sectorial public health interventions promoting and facilitating a healthy lifestyle and risk factor control has been implemented
4. Establishment of national- and regional level systems for assessing and accrediting stroke clinical services, providing peer support for quality improvement, and making audit data available to public
5. All stroke units and other stroke services independent of sector undergo quality auditing continuously or with regular time intervals (% audited/certified)
6. Access to stroke unit care for patients with acute stroke (% admitted to stroke unit care <24 hours).
7. Recanalisation treatment rate provided for patients with ischaemic stroke (% receiving intravenous thrombolysis or mechanical thrombectomy calculated out of all ischemic stroke admissions).
8. Access to: CT/MRI, vascular imaging, ECG, long-term ECG-monitoring, cardiac echo (TTE, TOE), dysphagia screening, and blood tests during stroke unit admission (% of stroke units with access)
9. Access to early stroke unit rehabilitation including early supported discharge (% access)
10. Access to basic secondary prevention including antithrombotics, antihypertensives and statins as well as lifestyle advice (% according to WHO data)
11. A binding personalised, documented rehabilitation and sector transition plan provided at the time of discharge (% patients provided with plan)
12. Follow-up at 3-6 months after the stroke incident including a Post Stroke Check list and a functional assessment and referral for relevant interventions. (% patients with follow-up)

2.2 Data definitions

Data definitions are included in the description of the SAP-E Stroke Service Tracker (Section 3.2).

2.3 Benchmarking

Benchmarking is performed by use of the SAP-E Stroke Service Tracker (Section 3.2)

3. Overview of SAP-E activities

3.1 Main activities

The second task for the SAP-E implementation committee according to Terms of Reference was

the “Definition of the Key Performance Indicators (KPI) for *monitoring the quality of care and reaching the targets*”. To be able to accomplish “the monitoring and the reaching of the targets”, a number of activities have been planned and organised.

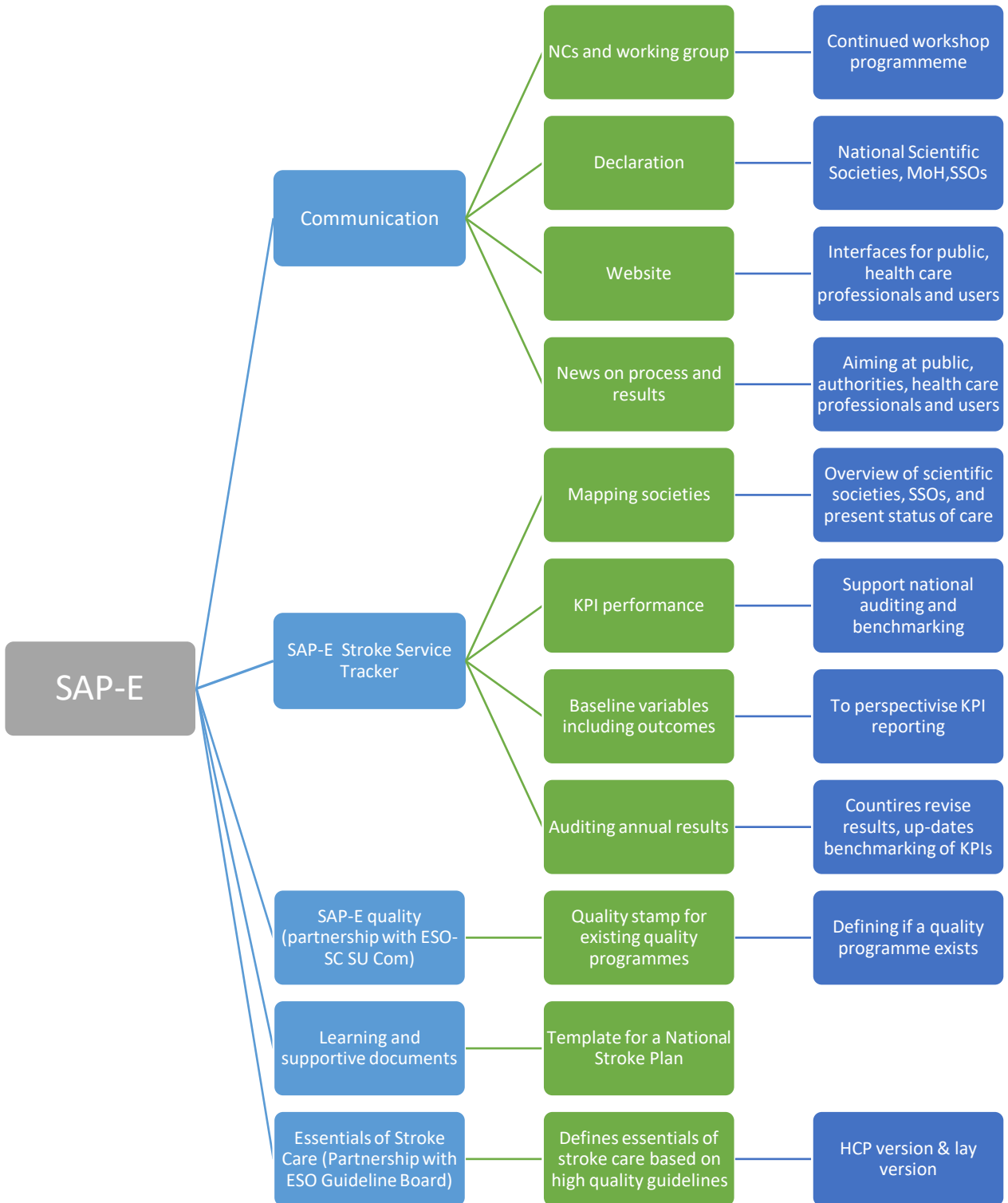
The main activities of SAP-E are the SAP-E Stroke Service Tracker (section 3.2) and communication (section 3.6).

To support these activities, other activities were planned. Collaboration with the ESO Stroke Unit Committee (section 3.3), which presides the existing ESO stroke unit certification model, on coordination of this with SAP-E as well as a potential model of a certification of individual countries’ existing quality models is sought; SAP-E COO Melinda Roaldsen has recently been appointed observer in the Stroke Unit Committee.

An educational platform (section 3.4) consisting of links to existing e-based learning material gathered for easy overview and access through the SAP-E homepage was planned, however, this has been dropped as several other learning platforms have emerged making this task obsolete.

Further, the Essentials of Stroke Care (section 3.5) was prepared in collaboration with the Guideline Board and lists listing primordial evidence-based steps during pre-hospital, hospital stroke care, and the life after stroke phase. A lay version was written and published by SAFE in 2023. NCs are welcome to translate both documents into local languages; a disclaimer and the name of the translator must be included.

Overview of activities



3.2 SAP-E Service Tracker

This platform was established using the REDCap system allowing for Country Leads (please see section 4) to enter data based on a unique access and with logging. Data definitions and Terms for the tracker has been approved by the SAP-E SC and Terms was approved by the EC. The SST was coded in RedCap and two dry runs (Estonia and Greece) was conducted after the approval from SAP-E SC of the included variables. The platform is hosted by an academic institution (Capital Region of Denmark), SAP-E SC has data ownership under the supervision of ESO EC and it is possible to move the platform to another institution if decided. The platform has been designed aiming at feasibility, e.g. time use and easy transfer of data from other platforms. Only summary data is included, the only GDPR issue is the list of national coordinators, and data approval of the filing of this has been achieved. Each national lead will only be allowed access to enter data on their country, after confirming/saving, changes can only be made after application documenting the reason.

Data entry started in December 2021 (2020 data) and preliminary data was presented at the NC meeting on the ESOC pre-conference day, this data will be shared on the website together a short report on status. From 2022, data-upload is planned from October – February (preceding year) and data was first time published in relation to stroke day in May.

A baseline variable dataset is defined in the Data definitions as well as variables on KPIs. Source of data has to be provided when uploading and documentation provided, e.g. a link to a National Stroke Plan to document its existence.

The national benchmarking and auditing boards (please refer to in section 4) are under establishment to review the national benchmarks and audit results to translate into guidance on improvement potential. The comments and conclusions from this body will also be uploaded into the platform.

National coordinators were instructed in the use of the platform at a workshop and have the option of direct assistance from the team if encountering problems, contact to team by e-mail.

KPI performance of individual countries with the uploaded comments will be presented publicly at the SAP-E website. The presentation including the graphic presentation will be based on maps. Coding for maps and other figures have been coded for use on an annual basis.

SST data 2020 and 2021.

Please access <https://actionplan.eso-stroke.org> to see data. Work is ongoing on a full detailed report presenting and commenting on data. After approval by the SAP-E SC, this will be placed on the website, and followed by annual reports from the next years. A resume of the main points from this and including the report as an online supplement, will be submitted to European Stroke Journal for publication.

3.3 SAP-E Quality

Local quality work to improve overall quality is crucial in meeting the targets of SAP-E. ESO Stroke Unit Committee provides a model of stroke unit certification. However, many countries have their own in some cases benchmarking based quality models and are less likely to see the advantages of adhering to two different models of quality work. As our aims is to advance quality work to improve stroke care in general and not to advance one specific model, we are exploring the options with the ESO Stroke unit committee for them to help in setting up a model to certify existing models/certifications so that countries/regions having a valid model could have a general certification for their quality system. A short shared strategic document co-authored with the Stroke Unit Committee is under development to ensure work consistency among ESO activities/committee.

3.4 SAP-E Educational Platform

The plan for a SAP-E platform has been abandoned based on several emerging excellent other platforms rendering this plan obsolete.

3.5 Essentials of Stroke Care

This document is provided as a simple tool to ensure easy access to evidence-based information on stroke care and to define a common basics of stroke care to anchor the Key Performance Indicators. The document covers the chain of care in the pre-hospital setting, the hospital setting, rehabilitation setting, medical follow up, and life after stroke. The document is based on existing evidence-based guidelines with preference for ESO guidelines, these guidelines are cited to ensure further access to more detailed information. It was developed by a sub-committee appointed by the Guideline Board (Thorsten Steiner, Guillaume Turc, Katharina Sunnerhagen, Jesse Dawson & Hanne Christensen). The Essentials of Stroke Care are framed for health care professionals and for people planning stroke care or advocating for stroke care in two different versions and posted on the SAP-E website; the listing of actions has been approved for endorsement by the EC. The version for health care professionals is posted on website in July 2021, a lay version was published by SAFE in 2023; a pathway for translation has been established.

3.6 Communication

A communication plan has been established between ESO and SAFE. A SAP-E website has been developed by Greensplash and Head office under supervision of SC to provide tools (sections 3.2-3.5) and information for health care professionals, users and public. The website was launched

officially on 4 May 2021 and relaunched in May 2023 after update. News on the process will be sent to engage people within the system, to increase visibility for the public and to reach decisionmakers. Presently the website is being updated to ensure a higher degree of user-friendliness and that than the technical set up allows for using a link to the website (eg to the Essentials of stroke care) as a reference. Further, the continued plan to engage National Scientific Societies, Ministries of Health and Stroke Support Organisations is described in section 5 and specific communication activities in section 7. Our communication of success and new initiatives is coordinated between ESO and SAFE – using a combination of email, newsletters, and social media to inform people of the SAP-E progress.

3.7 National Stroke Plan Template

A National Stroke Plan remains the basis of developing organized stroke care and is therefore included as SAP-E KPI 1. A template has been developed and is available as a tool for the NCs to assist them in their work to set up a national framework. The template is available on the website.

3.8 Stakeholder analysis template

A template for stakeholder analysis has been developed and is available on the website.

4. Roles and responsibilities of National Scientific Societies and Stroke Support Organisations: how to induce change on a country level

4.1 Motivation for this role

The national societies know their countries, how their systems work. It would further not be possible for a European Steering Committee to work directly in the countries for multiple obvious reasons. SAP-E must provide them with useful tools and support: the real change will happen locally.

4.2 National Coordinators

The National Coordinator (NC) will be associated with the Scientific Society and appointed for this assignment by the society; many have already been assigned during the mapping process. The responsibility may be shared by more persons, or persons representing regions, depending on what works best with the national structures. Their responsibilities are 1) to be the point of communication to SAP-E, 2) to be the point of communication with the national Ministry of Health, 3) to chair the auditing and benchmarking committee, 4) to ensure SSO involvement in the process, 5) to provide summary data for the Stroke Service Tracker, and 6) to overall work for change including implementation of National stroke plans. To ensure general support and engagement from countries the tasks documents describing the tasks of the NC, e.g. the work of a monitoring and benchmarking committee, and how to perform a stakeholder analysis have been circulated to the NCs. Further, practical steps, e.g. data up load will be planned aiming for a minimal work load. Further, the NCs have been involved in finalization of Declaration and KPIs and had the option to comment on all major tools before finalization. Further, NCs ensure translation of relevant documents into their languages. NCs have received continued supporting e-mails from

head office on the tasks to perform, as well as reminders when needed. The national leads are named at the website.

4.3 Regional spokespersons

The new roles as regional spokespersons (East, West, North, South) were established to support NCs and optimize communication. Spokespersons were elected by NCs:

- Ales Tomek (Czech Republic): **East** (Armenia, Azerbaijan, Belarus, Czech Republic, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Moldova, Poland, Romania, Russia, Slovakia, Ukraine):
- Hrvoje Budincevic (Croatia): **South** (Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Greece, Israel, Italy, Kosovo, Malta, Montenegro, North Macedonia, Serbia, Slovenia, Turkey)
- Gustavo Santo (Portugal): **West** (Austria, Belgium, Catalonia, France, Germany, Luxembourg, Portugal, Spain, Switzerland)
- Aleksandras Vilionskis (Lithuania): **North** (Denmark, England, Estonia, Finland, Iceland, Ireland, Latvia, Lithuania, the Netherlands, Northern Ireland, Norway, Republic of Ireland, Scotland, Sweden, Wales)

They have initiated their work right after election in relation to the in-person meeting in Riga, and presented status in the four regions at the NC meeting at ESOC23 and are included in the SC of SAP-E.

4.3 National Ministries of Health (MoH)

The National MoHs will be involved by contact from the National Scientific Society and Stroke Support organisation with support from SAP-E including relevant informative documents on the process. A cover letter to the Declaration for the MoHs have been produced with assistance from communications experts. Their responsibilities include 1) promoting/providing a national stroke plan, 2) promote/support the provision of summary data for the Stroke Service Tracker, 3) support the auditing and benchmarking committee, 4) ensure collaboration of all sectors involved in stroke care, and 5) Initiate/provide support for establishment of quality programmes, if non-existing.

4.4 Support

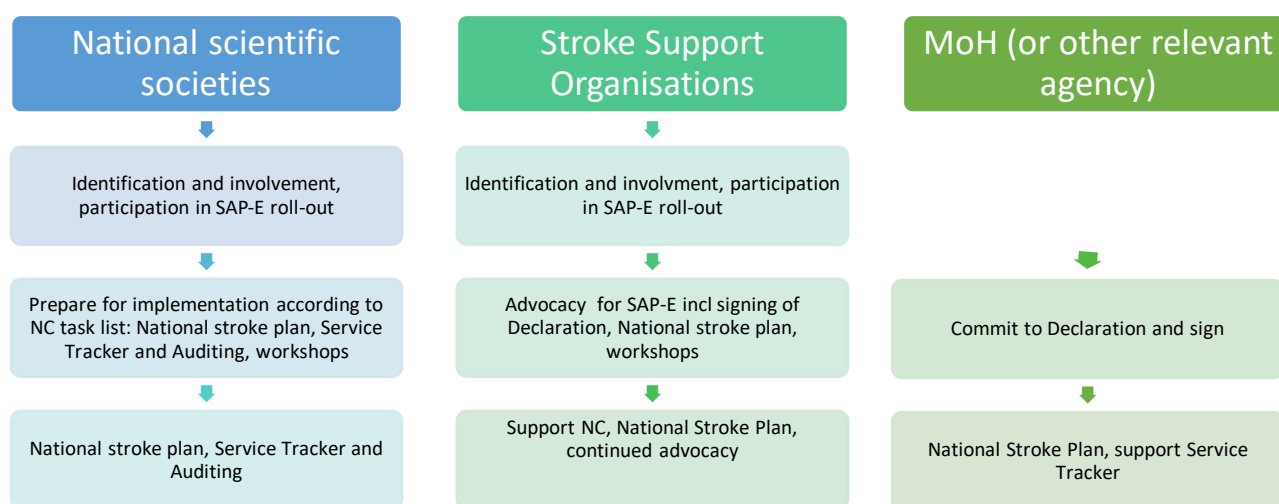
SAP-E will throughout the implementation process support the process by the provided tools as well as by meetings planned to include informative sessions as well as regional work group sessions with focus on the elements of the plan.

4.5 Declaration

To ensure dedication, motivation and establish a profitable and lasting alliance among key-players and stakeholders, a Declaration has been created, launched on 17 May 2021, and is in the process of being signed by the national MoHs. Progress in signing is documented on website. We hope that the direct referral to SAP-E in the priorities of the recently published EU Healthier

Together (NCDs) Guidance document will further support this process. Safe will coordinate a meeting with key ESO contacts to develop a plan and as well as a meeting with the National Coordinators to inform them of the opportunities.

5. Process of involvement of the national societies and stroke support organisations



5.1 Involvement process

An organised process of involvement is necessary. Further, a clear definition on what a society is has been made for this purpose. There are three types of societies:

1. National Stroke Organisations
2. Neurological Societies
3. Stroke Support Organisations (SSO)

The following criteria will be used in re national stroke organisations/neurological societies to confirm their activity and impact on a national level.

- Do they provide national stroke Guidelines?
- Are they the point of reference for MoH?
- Do they have collaboration with patient society?
- Have they organised national stroke conference?
- Do they collaborate with international stroke societies?
- Do they already have an existing national stroke plan?
- Board members have their main medical practice in the country.
- ESO association for scientific societies is preferred, but not mandatory.

5.2 Mapping

Based on these definitions, a mapping of scientific societies has been completed as described in section 1. A survey has been conducted describing the baseline status on stroke care in the countries based on information from scientific societies and a follow up has been completed. Further, existing European quality registries have been mapped.

5.3 Confirmed involvement

One kick-off meeting and three roll-out meetings have been organised as online events from September to March with a strong participation from both SSOs and scientific societies. Further, 42 countries have participated in the online one-to-ones with Hanne Christensen.

5.4 Involvement of the national MoH

The Declaration was officially launched on 11 May 2021 (Stroke Day) and circulated to the NCs to be sent by the NCs to the MoH. So far nine nations have signed the Declaration. At this stage we are very much depending on the NCs supported by local SSOs to ensure the active involvement of the MoHs. After commitment from MoHs to SAP-E they are expected to support the work of SAP-E and the NCs, promote and endorse a national stroke plan as well as its implementation.

5.5 Planned meetings

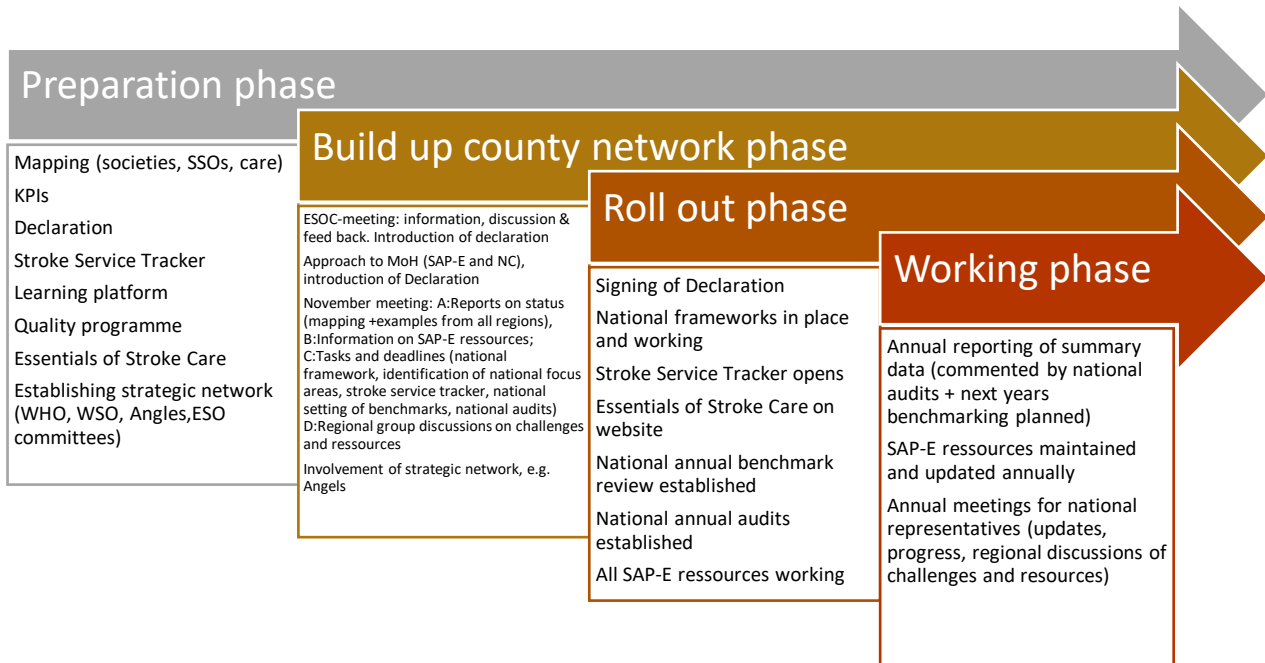
We are presently planning a workshop on advocacy specifically for life after stroke and a series of workshops covering the seven domains individually with focus on sharing experiences on improvement in the individual domains.

5.6 Status and planned progress

Overall, the implementation plan has progressed in accordance with the timelines stated in the annual report form 2022. This means that the planned strategic network has been established as well as our planned tools including the Stroke Service Tracker. However, the signing process of the Declaration is far from finalised and the work to reach the targets of SAP-E has just begun. Most countries lack a national stroke plan and several of the domains are underdeveloped in most countries. High quality national data are lacking in a significant number of countries as documented by the SST severely hampering improvements of access to care. The continued work of SAP-E must focus on the need for organizing and monitoring care at a national/regional level, as well as by use of the key performance indicators and the Essentials of stroke care to set the bar.

SAP-E is by definition a policy project, and we have the possibility of giving general guidance as well as the use of our tools whereas direct work at an institutional level lies with others. Existing quality improvement initiatives including ESO-EAST, ResQ and Angels Initiative have already proven their ability to make significant change especially at the institutional level and in less developed health care systems. Consequently, a closer alignment of our activities is needed to benefit from the potential synergy.

6. SAP-E implementation of SAP-E programme



6.1 Current Phase

The programme is entering the Working phase though signing of Declaration is still ongoing. Focus now is on supporting NCs, by continued workshops with focus on sharing experiences (all workshops include time in 4 geographically defined groups as well as a final plenary discussion to enhance peer learning), increase communication aiming at decision makers, broadening out the communication to include all stroke physicians and other health care professionals, and supporting the individual countries in providing National Stroke Plans. The main focus is on national stroke plans – funded and implemented.

7. Communications activities

7.1 ESOC Activities

In 2023, an in-person opportunistic meeting for NCs was held in relation to ESOC; data from the SST were presented and regional spokespersons presented status in their regions. The SAP-E booth at ESOC 2023 was visited by NCs to discuss issues in their countries and many others. SAP-E SC members attended the booth according to a schedule, and a survey was prepared.

7.2 Social Media

The hashtag #StrokeActionPlan has been established.

7.3 Communication during the past year

A coordinated, wide-reaching communication campaign was put in place for 2023 European Stroke Awareness Day, complete with featured images for the SAP-E website and social media channels, as well as dissemination of a joint statement from ESO and SAFE.

Regular communication with National Coordinators and the SAP-E community are prepared and sent via dedicated mailings and social media posts.

7.4 Communication Plan

A communication plan has been prepared and implemented by ESO Head Office with assistance from SAFE resources. The focus is to ensure that communication will be relevant and timely for the different stakeholders involved: health care professionals working with stroke, decision makers, patients and carers, as well as the public. The website is being updated, especially to increase user-friendliness and to allow for citing features on the website – eg the Essentials of Stroke Care – by a link. Social media especially Twitter is also used. Further, press releases are sent when there are significant news, also to NCs asking them to contact national media. A dedicated communication committee meets on a monthly basis.

7.4.2 Training

Advocacy training for NCs was organised by SAFE for support of their work and they are provided with press releases and material for social media to support their national activity in promoting SAP-E and marking SAP-E milestones. Further advocacy training is planned for the specific domains in relation to the workshops on the seven domains.

7.5 SAP-E website

The website is structured to offer easy access to SAP-E tools and updates on activities. It further aims to provide all needed information for the NCs. All NCs are named on the website, along with a directory of Stroke Support Organisations from countries involved in the project.

The website has undergone changes and improvements over the past year, notably to implement SST data maps for ease of visualising yearly stroke data as submitted by the NCs.

7.6 Press

A press release will be made based on a summary of this document as an update on SAP-E in the last 12 months, to be released via social media and the SAP-E website after presentation of the report to the ESO Executive Committee.

7.7 Publications

- Work is ongoing on a policy paper on SAP-E for Lancet Regional Health.
- Work is ongoing on a resume of the SST report to be submitted to European Stroke Journal.

- A publication planned for ESJ on the data sources available for SST is being considered with the aim on high lightening the need for national quality data as a basis for monitoring quality of care. In addition, we will consider producing relevant supporting advocacy tools for SAPE NCs to use.