National Stroke Plan

<Template Draft Document>

Document History

Release	Description	Approved On	By	Update
0.0	Draft Template	n.a.	F. Pennacchi F.R. Pezzella	Document template, including ideal document structure, with indication of rationale of each section and use for program & project monitoring, and high level description of content.
0.1	Draft Template	n.a.	F. Pennacchi F.R. Pezzella A. Wilke	Editorial suggestions from the initial review

Document Organization and Rationale

This document must provide a clear description of the project, for all parties to agree upon. It will record any changes that could affect the terms of delivery (i.e. costs, timeline, results).

Plan Statement

National Strategy

National Stakeholders

Project Scope, Integration and Navigation

Project Organization and Governance

Key Principles, Assumptions and Constraints

Timeline and Targets

Resources and Budgetary Requirements

Project Approach

Project Deliverables

Project Roles and Responsibilities

Project Measures and Indicators

Project Communication

Project Issue Management

Project Risk Management

National StrokePlan document

These sections outline the plan'scontext, external and internal. They require preliminaryendorsement by the plansponsor and national authorities.

These sections indicate the plan's prospect timeline, the prospect benefits and needs,and start compiling once the context is clear.

Once boundaries are clear, these sections confirm the ruleswith which the plan becomes a project, its breakdown, and the accountability rules.

These sections, in the early stages of the project, describe the mechanisms to manage communication, issues and risks, throughout the project's lifecycle.

This document will have to be maintained through the projectto ensure it reflects executive decisions.

Updated versions of this document must be released under the approval of the project's Board for every change in the terms of delivery(time, approval authority, nature of the update and the affected sections should reflectin the Document History).

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Glossary

This section will help national teams and readers of this document agree on common terminology. A table must offer, for every acronym or technical term listed in alphabetical order, a unique definition and explanation of concepts. This allows reducing their repetition throughout the document enhancing its readability.

This template includes a glossary section which should be maintained in the various national instances of this document. It is advised that national acronyms or technical terminology be equally represented in this glossary section, in a separate subsection.

Terminology	Definition/Description of concept
Critical Path	In Project Management, Critical Path is defined by the longest sequence of dependent activities, which in turn are those which cannot be started (or completed) until a preceding task is completed. Its analysis is of great importance for planning purposes, to visualize the dependencies and adjust for delays in schedule early in the sequence of activities.
PREMs	Patient Reported Experience Measures. It refers to any survey conducted among outpatients and their families, at the time of discharge, to gather feedback about the quality of services received while under the care of a specific health institution. The review of the surveys' feedback can help hospitals and clinicians understand the strengths and the areas for improvement in any specific service of the hospital (e.g. catering; speech terapy), thus helping prioritize corrective measures and appreciate the perceived importance of all the actions taken by the organization.
PROMs	Patient Reported Outcome Measures. It is a review conducted in the form of a survey, with former patients and their families at precise intervals after discharge. The objective is to evaluate the effects of specific therapies and treatments on the patients well-being after 3, 6 or 12 months from discharge. The domains investigated with such survey include: acute complications (and comorbidities); general and specific health status (including cognitive functioning, motor and non-motor functioning, social functioning, symptoms and health related quality of life) and survival and disease control (including stroke recurrence, smoke habits and others). While often conducted for a limited time-frame and in the framework of treatment-specific scientific studies (which fund their administration), there is a growing tendence to include them in the core health system services (NHS in Uk and NIH in the USA).

SAP-E	Stroke Action Plan for Europe. The Pan-European initiative or programme, launched in 2018, meant at improving stroke care in all European countries, targeting the benefits described in the SAP-E Declaration by the year 2030.
SSO	Stroke Support Organization. A national/regional organizational body, born to provide support to stroke patients and their families. It normally includes caregivers, patients and health professionals, and it is preferably managed by members with with no medical background. Nevertheless physicians can participate to the SSO activities as any other member of the organization.

Plan Statement

This introductory section provides a view over the initial "landscape" over which the Stroke Action Plan for Europe (SAP-E) plan starts.

Before being published, this section should be completed describing at high-level:

- *Background (Country Assessment, As-is picture);*
- *Challenges or shortcomings in the current landscape which demand action;*
- *SAP-E Rationale (Why and What is necessary in country/region);*
- *Goals (End-results the National Stroke Plan is meant to achieve);*
- *Outcomes (Prospect situation at the end, To-be picture);*
- *Objectives (What are the gaps[1] that exist, to be filled by the plan);*
- *Work components (project items ending in monitorable deliverables);*
- *Scope statement.*

Sub-sections could help grouping, categorizing and describing goals, outcomes and overall objectives the plan is meant to attain, articulating them into actionable work components. Ultimately this section is expected to clarify what is included in the plan scope and by when each result would be achieved.

It is useful that each work component be related to the corresponding domain, as described in the SAP-E statement (i.e. primary prevention, organisation of stroke services, management of acute stroke, secondary prevention, rehabilitation, evaluation of stroke outcome and quality assessment, and life after stroke). This will increase the ability to map, associate and compare components across regions and countries and to share experiences and practices within the whole SAP-E initiative.

In case of a regionalized/federal health care model, it is recommended that a Regional Stroke Plan documents be structured, according to this same template, for each local health authority. All documents could be collected, once approved, into a container document.

[1] These are defined as the distance or difference between the to-be (ideal) picture and the as-is (current). They could be quantified (e.g. number of new stroke units, number of patients treated, rate of treatment types) or qualified (e.g. increase the awareness about risk factors, strengthen the relationship between professional-scientific societies and patient support organizations).
It is suggested, should the list become too extensive, to group items by type, or by timeline of implementation.

National Strategy

This section includes a high-level description of the national healthcare context relevant to the key objectives of the SAP-E.
It should clarify the general direction in terms of solutions (e.g. improve primary prevention through the network of general practitioners; implement a national registry of stroke cases for quality management; develop web-based tools to improve life after stroke).

In its first draft, the (teams of) National Coordinators should describe the national healthcare system, listing its key entities, the current legal framework, the organizational breakdown of the healthcare system.

Before being published, this section should be completed describing at high-level:

- *the national stroke plan strategy (e.g. pursue a national change plan; adopt new software solutions; promote digital-health initiatives),*
- *the expected/needed level of commitment (financial and workload) by national and local authorities,*
- *any assumption related to regulation and legal framework;*
- *the prospect impact on healthcare costs and their off-setting value/benefits;*
- *the project's Critical Success Factors (e.g. sponsorship by the government authorities; organization of support hot lines for medical professionals; professional mandatory training programs; network of monitoring focal points with knowledge oflocal realities);*
- *any relevant challenge or constraint, outside project teams' ability to address, that may limit the ability to achieve the planned results;*
- *an early estimate of the effort (in human resources) required to support the project.*

National Stakeholders

This section should acknowledge all parties (individuals, groups or organizations) having a in interest in the scope, objectives or activities of the plan, and be compiled following the Stakeholders' Analysis and Map performed at the project's inception. It would mainly focus on those parties whose influence could promote the plan, and/or that, if not involved, could impair it.

Before being published, this section should be completed listing and describing at high-level:

- *The plan's "customers", defined as the end beneficiaries of the plan, which would include patients and their families (including their gender classification, age groups, survival and mortality rates, comorbidities, etc.), and health professional (by role, specialization, whether they operate in public or private structures, private practitioners, etc.);*
- *The existing public and private entities, including the network of Stroke Support Organizations (SSOs), Professional Associations, Scientific Societies and other groups of interests;*
- *The authorities and governmental entities participating or having a stake in the plan;*
- *The relevant private business players (e.g. pharmaceutical companies, vendors of hospital equipment);*
- *The press, news and communication players;*

Subsections could be useful to accommodate maintainable maps and grids for the stakeholder prioritization or grouping, reflecting their potential influence on the plan's objectives and their respective power to support them. It is suggested that the Stakeholders' Analysis and Map (maintained as an annex) would be updated at this stage to indicate: which parties will be consulted and how often, which team role will manage the relationship,and what risks can associate with each party.

This section will be referred to in the Project Communication section, having to ensure consistency in the parties mentioned there. Any changes to the communication plan will have to be reflected in this section and in the Scope Section.

Where necessary, annexes to this section could be used to track the priorities of the different stakeholders, with reference to the scope of the National Stroke Plan.

Project Scope

This section clearly indicates what is in the scope of the Stroke National Plan.

In a series of bullet points it has to list:

- *The scope boundaries[2];*
- *The fundamental processes included in the plan;*
- *The IT systems to adopt, develop or modify to support the plan's objectives;*
- *The training programs to develop or modify, and deliver to support the plan's objectives;*

Although simple to assume that anything not included in the above list will need to be discussed, a subsection should similarly clarify, if anything exists, what has been established not being in the plans' scope (e.g. development or adoption of PREMs; increase workforce capacity).

It is reasonable to expect that changes to the project scope can affect the Plan's costs or timeline. It is important therefore that any such request for change of the project's scope be subject to a thorough review of their rationale, effort and financial requirements and prospect benefits, before accepting them.
Rules and method for proposing, approving or rejecting changes to project scope have to be documented in an annex.

Another annex must keep the list and description of any proposed, approved or rejected changes to the project scope, which could affect the overall terms of delivery, modifying the project's costs or timeline or any of the prospect results.
The list will have to indicate, for each Request for Scope Change:

- *when and by what party these were proposed;*
- *their expected impact to the project's costs;*
- *their expected impact to the project's timeline;*
- *the possible benefits or advantages originating from them;*
- *their discussion date, approval authority, and final decision made.*

Project Integration

Quite relevant to those countries where a federal/regional Healthcare System is adopted, Project Integration establishes the rules to coordinate requirements and tasks which are mapped or taken forward in separate sub-projects. It also clarifies the horizontal reporting lines, which can ensure that knowledge capital be shared. It establishes the methods and formats, for aggregating information related to progress, issues and risks.
National level legislation, rules and regulation feed into regional/federal level legislation, rules and regulation.
With the aim of building synergies, similar tasks to be conducted in different realities (e.g.

[2] It is suggested that these are described along the corresponding domain, as described in the SAP-E statement (i.e. primary prevention, organisation of stroke services, management of acute stroke, secondary prevention, rehabilitation, evaluation of stroke outcome and quality assessment, and life after stroke).

development of guidelines or procedures; development of training programs and materials) could be grouped under a common coordination or even the responsibility of unique teams. Lastly, this is where all initiatives conducted at national or regional level, whose scope could have points of contact with the National Stroke Plan, must be listed, with an indication of the contact points (stakeholders) and potential overlaps (risks) related to the project scope.

In this section is particularly important to map also the logical integration points between the different domains in the scope of the National Stroke Plan. This will allow to monitor the harmonization of requirements, solutions and results, and to respect the priorities of the various stakeholders.

Project Navigation

In spite of the objectives, strategies and workplans that are adopted at the beginning of the project, it must be considered that the context around it can change unexpectedly (the COVID-19 pandemic is a good example of what can heavily impact a program with the breadth of the SAP-E).
Events beyond the control of the national teams could set back the project or at local, regional or national level. This section should be updated with relevant information should any of such events manifest itself; such changes in the document should be reflected in the document history.

Plans have to be built to face contingencies. Though this may not be a suitable solution for all types of events.
Major issues (or risks) have to be managed with an organizational effort. Strategies and plans may need to be re-written and objectives, requirements and even results need to be re-evaluated for feasibility, possibly discussing entirely different or new approaches.

While navigating the project context is ultimately a Governance Team responsibility, this section must describe the processes and rules with which 'objects' in the project's radar, and outside its immediate control, will be identified by the various teams, escalated, discussed, and the related decision making process.
Also this section should clarify how the impact of established 'navigation' actions will be absorbed, with reference to scope, timeline and financial requirements.

Project Organization and Governance

This section should describe the key roles in the project. This is needed to formally acknowledge all the parties involved in the national/regional plan and describe their relationship.
It is recommended to acknowledge in this section the roles included in the national working group/committee. It should include the national coordinators plus any roles meant at ensuring the involvement of the main interested parties, considering the needs of advocacy and the synergies with existing groups and networks (e.g. scientific societies, other SSOs).

An organigram (Project Organization's chart) will be used to the illustrate the project's structure, the hierarchy of the managerial roles and the established reporting lines. To simplify, when required, it is possible to represent boards, panels, committees or teams as solid entities in the organigram.
Country teams are free to determine the ideal way to represent their structure.
It is suggested that "boxes" be used to simplify the understanding of key roles, with the names and functions of key project roles participating in the project; solid or dotted lines connecting the boxes will serve as a map of the hierarchical or functional reporting lines.

The organigram will have to clearly indicate also those parties or proxies, not actually participating in the plan's implementation, which will have to be informed or consulted during the project's lifecycle, or will participate in the decision making process.

Where federation/regional models exist, it is advised that the section indicate the sub-model adopted for the geographical entities, leaving in the annexes the actual indication of the incumbents for each role, with their contact information.

Following the organization chart a table including the name and roles of the key managerial positions of the project, will provide a description of the project's Governance entities.
For all boards, panels, committees or teams represented in the organigram the table should indicate their function and scope listing all entities represented; when relevant it should also indicate the frequency they are convened.

A specific subsection should describe the composition of the National Audit Committee, chaired by the national coordinators, including representatives of the SSOs, of the critical stakeholders and national experts. This committee should meet at least yearly and establish the national project priorities, the targets (ambitious, yet realistic) for the year, and review them yearly. National data is then gathered, audited and commented, and then posted on the SAP-E platform.
This committee will respond to the SAP-E Steering Committee and to the national stakeholders. The composition of this committee should be described in this section, providing contact information should any need arise.

An annex, with a table will allow mapping to roles and teams, the names and positions of team leaders and key resources. In case of vacant roles, the table will serve to prioritise the

sourcing of the required competences and, during the project life, to keep track of changes in the teams' compositions (in view of the duration of the plan's initiative).

Key principles, assumptions, and constraints

An effort must be made to summarize and acknowledge the project's underlying "conditions". Bullet points should help listing the key items and confirm their consistence with the plan's objectives.

Key principles, defined as the fundamental rules of conduct, choices, and strategies that are established and agreed prior to the beginning of the project, need to be articulated and discussed in this document (e.g. standardization of practices; adoption of common IT solutions across the country), describing their rationale.

Key assumptions, are those conditional context elements that are either valid and confirmed at the beginning or that are expected to be confirmed at certain points in the project's lifecycle (e.g. required funds will be allotted by the regional authorities prior to the start of each project's phase; leadership in the plan coordination will remain with the scientific societies; project's staffing will be sourced by regional authorities).

Key constraints, are those context elements that the project could not work around and that represent the boundaries of the project action (e.g. legal or regulatory prescription related to privacy and treatment of personal information; limits to provide certain types of services applying to the SSOs).

This section should be compiled and finalized at the beginning of the project, and its content must be agreed by all interested stakeholders. It is not supposed to be modified during the project lifecycle, and it would serve as a reference during the operational planning of the specific phases.
In case of federal/regional healthcare system the list of points should indicate any assumption or constraint, specific to a (set of) geographical/administrative entities, that need reflecting into the specific operational plans.

Should changes be required due to context evolution, these should be managed through the Issue and Risk Management processes.

Timeline and Targets

This section is meant at clarifying the sequence of phases/tasks in the project, their foreseen duration, their dependencies (i.e. what comes first and what needs to be completed before a following tasks can commence), and the significant events to be monitored.

Should the timeline not be unique for the whole national delivery (e.g. should a pilot strategy be selected; in case of a phased approach to delivery, to manage a federal/regional health care model) subsections should represent how the various work-streams connect with each other in the delivery process.

Milestones can be defined as crucial points in project timelines be monitored for progress, issues or risks, and that represent significant appointments during the project life (e.g. project kick-off meeting in a region; release of the IT platform for quality monitoring). Their identification in the early stages may help marking the Critical Path of the project, verifying the consistency of the operational plans.
Dates may not be fixed in this document, while they will instead be established approving the phases' operational plans.

A graphical representation of the project plan, in the form of a Gantt chart, will help illustrate the sequence, duration, dependencies, milestones of each phase/task, and the project's critical path[3].

[3] This is defined as the sequence of dependent tasks, which cannot be compressed or rearranged to compensate for delays. Planning strategies should aim at building tolerance intervals (slack or contingencies) inthe critical path sequence to prevent disruption to the plan from delays in any of the interested tasks (i.e. domino effect).

Resources and Budgetary Requirements

Projects will be assigned dedicated human resources to fill the "boxes" in the Project Organization.
This section will indicated the requirements for each role in the organigram, in terms of seniority, type of competence (e.g. medical, administrative, training design, IT development), type of assignment (full or part-time, short-term on request, monthly meetings), workforce (number of people), and sourcing (on loan from public offices, to be hired personally, vendor resources).

A high-level estimate of the financial needs (overall and on the timeline) must be discussed, depending on the staff loan agreements and/or on the rates of vendors' and independent professionals. It is suggested that these estimates be broken down by phase region and, if applicable, by region or administration entity.

Subsections can be used to illustrate the project budget break down (i.e. staff loans; third party services and materials; IT systems; training; any other types of expenditure relevant to the national country plan).

Though not expecting the national projects would generate income or positive cash flow, a reference can be made to the value the initiative would generate, through an estimate of its benefits (quantitative and qualitative[4]).

This section will be used then to discuss and secure funding needs, get commitment from public managers, and during the project's life to monitor expenditure, analyse budget variances, and evaluate the impact/costs of unplanned scope changes.

[4] In this section highlight cost-effectiveness of stroke emergency interventions, WHO best buys in primary and secondary prevention, cost effectiveness of post stroke rehabilitation etc etc.

Project Approach

This section will describe and detail, for each of the phases/tasks, their rationale and objectives, the documents to be produced, the results to attain to and the activities to be performed.

Where relevant for a better understanding of the plan, dependencies from and to other phases tasks will also be described.
If activities can proceed in parallel, rationale and conditions will also be described.

Project Deliverables

A table in this section lists for each phase/task their deliverables (i.e. documents, results, or solutions), and how they fit in the project delivery objectives; the "feeding" and "fed" deliverables to/from the other phases (or tasks); their timeline relationship (e.g. they proceed in parallel, follow or precede the start or completion) and whether any milestones will have to be monitored.

Project Roles and Responsibilities

This section should clarify, for each of the roles displayed in the project organigram, what are their responsibilities[5] in terms of:

- *scope components (domains, tasks, deliverables, procedures, etc.)*
- *authority (sponsorship, decision making, approval, spending, etc.);*
- *planning (management, budgeting, design, knowledge input, etc.);*
- *execution (resource management, quality verification, etc.);*
- *monitoring (testing, oversight, governance, communication, etc.);*

A table should help display the association of responsibilities of each role in the organization chart, while ensuring no duplication or double assignment of the same responsibility.

Changes to this section will happen naturally during the course of the project and, should any such decision be made, these will have to reflect in the document history.

An annex to this section could help visualize changing responsibility of the various roles, for every project task, in the form of a RACI[6] Matrix.

[5] Example phrases could begin with verbs such as lead, advice, plan, ensures, provide, monitor or assist.

[6] RACI is an acronym distinct levels of participation in each task:

- R, stands for “responsible”, mapping to the role meant to complete a task;
- A, stands for “accountable”, mapping to the role signing off on the completed task and appraising its progress;
- C, stands for “consulted”, mapping to the role(s) providing expertise in a two-way communication;
- I, stands for “informed”, mapping to the roles(s) kept up-to-date on progress and content.

Project Measures and Indicators

This section lists the numeric data types which will be monitored through the project lifecycle. Trend Analysis will provide information about the process quality, thus the source of information, the relevance for the project and the role(s) accountable for analysing and sharing these data should also be provided.
A data dictionary annex will be used to document in detail for each piece of information: the type (numeric, percentage, average time), the sources, the gathering rules, the frequency of refresh, the established analysis rules and any detail related to the level quality of the data.

Should any of the data collected by the project team be of a personal nature it is required to ensure be treated according to the national GDPR rules and regulation.
An annex may be used to document what the national team will do for the protection of this data.

This section also lists all Key Performance Indicators (KPIs) for the National Stroke Plan.
For each indicator it also provides its rationale, calculation rules, and any specific fact of the national context[7] helping to clarify the calculation logic.

These KPIs will agree with those established for the SAP-E and described in documentation (Action Plan for Stroke in Europe 2018-2030[8]) as Overarching Targets of the Plan[9]:

1. *to reduce the absolute number of strokes by 10%;*
2. *to treat 90% or more of all patients with stroke in a dedicated stroke unit as the first level of care;*
3. *to have national (or federal/regional) plans for stroke encompassing the entire chain of care from primary prevention to life after stroke;*
4. *to fully implement national strategies for multisector public health interventions, to promote and facilitate a healthy lifestyle, and reduce environmental (including air pollution), socioeconomic and educational factors that increase the risk of stroke[10].*

Subsections will illustrate targets beyond the overarching ones. 31 specific targets were set for the seven domains of the Plan, which could be articulated[11]:

<u>Primary prevention:</u>

1. *Achieving universal access in Europe to primary preventive treatments based on improved and more personalised risk prediction.*
2. *Full implementation of national strategies for multisector public health interventions promoting and facilitating a healthy lifestyle, and reducing environmental, socioeconomic and educational factors that increase the risk of stroke.*

[7] Among these: starting level measures of indicators, to be possibly detailed by federal/regional entity; any regional/federal delegation of regulatory power to consider.
[8] In European Stroke Journal 2018, 0(0) 1-28, Norrving et al.
[9] While these were established for Europe as a whole, each country should also aim at achieving those level,and if possible even higher ones.
[10] This refers to a set of qualitative measures – any indicator established to appreciate the level of achievement would need to describe the method/process for capturing the related facts.
[11] These are detailed in the SAP-E public pages of ESO and SAFE.

3. *Making available evidence-based screening and treatment programmes for stroke risk factors in all European countries.*
4. *Having blood pressure detected and controlled in 80% of persons with hypertension.*

Organization of stroke services:

5. *Establishing a medical society and stroke support organisation in each country, which collaborates closely with the responsible body in developing, implementing and auditing the national stroke plan.*
6. *Guiding 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 circumstances to ensure equal access to stroke care irrespective of patient characteristics, region and time of hospitalisation.*
7. *Managing and delivering stroke care by competent personnel and teams, and creating plans for effective recruitment and training as part of a national stroke plan.*
8. *All stroke units and other stroke services undergo regular certifications or equivalent auditing processes for quality improvement.*

Management of acute stroke:

9. *Treating 90% or more of all patients with stroke in Europe in a stroke unit as the first level of care.*
10. *Guaranteeing access to recanalisation therapies to 95% of eligible patients across Europe.*
11. *Decreasing median onset-to-needle times to <120 min for intravenous thrombolysis and onset-to-reperfusion times to <200 min for endovascular treatment.*
12. *Achieving IVT rates above 15%, and EVT rates above 5%, in all European countries.*
13. *Decreasing first-month case-fatality rates to <25% for ICH and SAH, and increasing the rate of good functional outcomes to >50%.*

Secondary prevention:

14. *Including secondary prevention in national stroke plans with follow-up in primary/community care.*
15. *Ensuring that at least 90% of the stroke population is seen by a stroke specialist and have access to secondary prevention management (investigation and treatment).*
16. *Ensure access to key investigational modalities: CT (or MR) scanning, carotid ultrasound, ECG, 24-h ECG, echocardiography (transthoracic and transoesophageal), blood tests (lipids, glucose, HbA1c, coagulation, erythrocyte sedimentation rate, C-reactive protein and autoantibodies).*
17. *Ensuring access to key preventative strategies: lifestyle advice, antihypertensives, lipid-lowering agents, antiplatelets, anticoagulants, oral hypoglycaemic agents and insulin, carotid endarterectomy and PFO closure.*

Rehabilitation:

18. *Guaranteeing that at least 90% of the population have access to early rehabilitation within the stroke unit.*
19. *Providing ESD to at least 20% of stroke survivors in all countries.*

20. *Offering physical fitness programmes to all stroke survivors living in the community.*
21. *Providing a documented plan for community rehabilitation and self-management support for all stroke patients with residual difficulties on discharge from hospital.*
22. *Ensuring that all stroke patients and carers have a review of the rehabilitation and other needs at three to six months after stroke and annually thereafter.*

Evaluation of outcomes and quality improvement:

23. *Defining a Common European Framework of Reference for Stroke Care Quality that includes:*
    a. *development or update of European guidelines for management of acute stroke care, longer term rehabilitation and prevention;*
    b. *definition of a common dataset covering core measures of stroke care quality to enable accurate international comparisons of care both in hospital and in the community (including structure, process, outcome measures and patient experience).*
24. *Assigning a named individual who is responsible for stroke quality improvement in each country or region.*
25. *Establishing national- and regional-level systems for assessing and accrediting stroke clinical services, providing peer support for quality improvement and making audit data routinely available to the general public.*
26. *Collecting patient-reported outcomes and longer term outcomes (e.g. six months and one year), covering both hospital and community care.*

Life after stroke:

27. *Appointing government-level individuals or teams responsible for championing life after stroke and ensuring that national stroke plans address survivors' and their families' long-term unmet needs. Minimum standards set for what every stroke survivor should receive regardless of where they live.*
28. *Formalising 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.*
29. *Establishing, through national stroke care plans, the support that will be provided to stroke survivors, regardless of their place of residence and socioeconomic status.*
30. *Supporting self-management and peer support for stroke survivors and their families, by backing stroke support organisations.*
31. *Supporting the implementation of digitally-based stroke self-help information and assistance systems.*

The SAP-E Declaration document summarized the above listed indicators in the following set of 12 KPIs to be adopted consistently across the whole SAP-E. This section of the National Stroke Plan should at least focus on these.

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. *Recanalization treatment rate provided for patients with ischaemic stroke (% receiving intravenous thrombolysis or mechanical thrombectomy calculated out of allischemic 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 life style 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).*

If the national plan indicates a set of intermediate results while reaching 2030, these will have to be illustrated in this section.

The National Auditing Committee will ensure the periodic feed of data for the SAP-E data platform.

Project Communication

Referring to the inventory of Stakeholders, and to the Stakeholders' Analysis and Map performed at the project's inception this section describe the agreed communication strategy. A matrix-table should help visualize, for all (groups of) recipients[12]:

- *type of communication (e.g. progress meeting, progress reports, bulletins, social channels, web/in person conferences and meetings);*
- *rationale of involvement (e.g. approve deliverable, inform, request information);*
- *frequency of communication (e.g. following milestones, monthly);*
- *accountable/responsible roles (e.g. national coordinators, regional focal points);*

The most effective way to communicate issues and effectiveness of the project's progress is through adding sound data to the qualitative communication. It is also of great value, to build engagement of all interested parties, to also add "stories", experiences, images, which could strengthen the effectiveness of the communication.
Comments and observations related to this should also be added in this section.

It is of critical importance that communication be managed orderly, and therefore that boundaries, frequency and accountabilities be carefully respected. Engaged stakeholders can support and promote the project's activities, and the right momentum (spin) will ensure the attention to the shared objectives remain high.
For this reason it is advised that specific risks be inventoried and monitored in the Project Risk Monitoring section, in the event that parts of this communication plan prove ineffective.

In compiling this section particular attention should go to the identification of focal points for: advocating the needs of the National Stroke Plan with national, or federal/regional authorities and policy/decision makers; communicating progress with the SAP-E steering committee; feeding news/press with facts and stories related to the implementation.

[12] Beyond the list of national stakeholders listed in the Stakeholders' Analysis and Map document of each country, it is important that the SAP-E Implementation Committee be always considered as a crucial recipient when drafting this section. This will allow keeping a central monitoring function informed about progress, challengesand solutions the national teams will achieve and face.

Project Issue Management

Issues, are defined as any concrete problems materialized during the course of the project, which could affect any of the terms of delivery of the project (i.e. its timeline, budgeting requirements, quality or degree of success). This section records the Issue Management process rules (in line with the Governance model). It will therefore identify what entities will participate in the discussion, depending on the types of issues (e.g. financial or funding related; IT solutions), which role(s) will approve the established actions and what role(s) will be accountable for them.

A table annex will keep the log of all issues discussed, and for every issue:

- *when and by whom they were raised;*
- *their severity (High, Medium or Low, depending on the impact on the project's terms of delivery);*
- *the type of impact (financial, delay, loss of quality, acceptance)*
- *the discussion points/actions established for their resolution, including escalation to project sponsors or other interested parties – this should be a descriptive "cell" of the log detailing, date of discussion, rationale of the decision, planned action, expected results, actual results; updates should be recorded here every time the issue is discussed significantly;*
- *the role(s) accountable for their management;*
- *their progress (from raised, through discussed, approved, assigned, resolved, to closed);*
- *their resolution date;*
- *reference to any relevant document(s);*

In case of Issues originating from risks already being monitored, new records in the Issue Log need to reflect the evolving conditions.

Issues can also evolve "negatively", for instances in case conditions around them were underestimated or actions did not produce the expected results. In such instances it is recommended this evolution be tracked in the discussion/action's descriptive field.

The Issue Log should be reviewed periodically (monthly at least), to keep track of the progress of the established management actions. Versionsof the document need to kept for record. Past versions of the Issue Log should also be available and retrievable for discussion and auditability.

Project Risk Monitoring

Risks, are defined as potential problems which could affect any of the terms of delivery of the project (i.e. its timeline, budgeting requirements, quality or degree of success), but have not yet materialized during the course of the project. This section records the Risk Monitoring and Management process rules (in line with the Governance model). It will therefore identify what entities will participate in the discussion, depending on the types of risks (e.g. financial or funding related; regulatory; staffing or resource related), which role(s) will approve the established actions and what role(s) will be accountable for them.

A table annex will keep the log of all risks discussed, and for every issue:

- *when and by whom they were raised;*
- *their severity (potential impact on the project's terms of delivery);*
- *their likelihood to occur in the short/medium term;*
- *their priority, calculated as the combination of severity and likelihood;*
- *their management strategy (i.e. prevent, avoid or mitigate)*
- *the actions established for their management, including escalation to project sponsors or other interested parties;*
- *the role(s) accountable for their monitoring;*
- *the evolution of their status (from raised, through discussed, assigned and addressed or materialized, to closed);*
- *their closure date;*
- *reference to any relevant comments or document(s);*

If any of the risks included in the inventory materialize, the relevant evolution should reflect that, the risk item should be closed and reopened in the Issue Management log. The corresponding Issue will keep the original date of recording and severity, with status raised. A new discussion will start the relevant management process, also in light of the evolution of the risk.

The Risk Log should be reviewed periodically (monthly at least), to keep track of the changes in the conditions of all risks. Versions of the document need to be kept for record. Past versions of the Risk Log should also be available and retrievable for discussion and auditability.

