EBC
European Brain Council

Towards an EU Coordination Plan for the Brain

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The Urgent Need for Action

Brain disorders – mental and neurological alike – are heterogenous, widespread, disabling and difficult to treat. Conditions affecting the central and peripheral nervous systems emerge throughout the life course and are characterized by disruptions in brain growth, damage to brain structure and/or impaired brain functioning.

There are approximately 400 classified neurological conditions and 200 psychiatric disorders, which include epilepsy, depression, Alzheimer's disease, multiple sclerosis (MS), Parkinson's disease, depression, stroke, schizophrenia, headache, anxiety disorders, chronic pain and rarer brain disorders such as amyotrophic lateral sclerosis (ALS), dystonia and ataxia.

Neurological and mental conditions make of brain disorders the leading cause of disability and the second leading cause of death worldwide, accounting for over 18% of total health loss[1]. In 2021, estimates suggested that 3.4 billion people (meaning 43% of the world's population) experienced a condition affecting the nervous system[2].

Despite great advances in the understanding and managing of brain disorders (with the number of attributable deaths being almost constant over the past three decades), the number of people living with a brain condition has risen sharply due to population ageing. In the European Union alone, dementia and Parkinson's disease are the highest contributors to the disability burden of people aged over 70, alongside falls[3], and the prevalence of dementia is forecasted to grow from 9.1 million in 2018 to 13.4 million in 2030[4]. This development needs to be paralleled with the rapid ageing of the EU population: estimates suggest that one EU citizen in three will be aged 65 or older by 2060[5], which will contribute to the immense and growing toll of brain conditions on healthcare systems and societies.

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[1] Institute for Health Metrics and Evaluation (IHME). Findings from the Global Burden of Disease Study 2019. Seattle, WA: IHME, 2022.

[2] Global, regional, and national burden of disorders affecting the nervous system, 1990–2021: a systematic analysis for the Global Burden of Disease Study 2021. Steinmetz, Jaimie D et al. The Lancet Neurology, Volume 23, Issue 4, 344 - 381

[3] OECD/European Commission (2024), Health at a Glance: Europe 2024: State of Health in the EU Cycle, OECD Publishing, Paris, p.68.

[4] OCDE/ European Union (2018), Health at a Glance: Europe 2018: State of Health in the EU Cycle, Éditions OCDE, Paris/ European Union, Brussels.

[5] : Grubanov Boskovic S., Ghio D., Goujon A., Kalantaryan S., Belmonte M., Scipioni M., Conte A., Gómez-González E., Gómez E., Tolan S., Martínez-Plumed F., Pesole A., Fernández-Macías E., Hernández-Orallo J., Health and long-term care workforce: demographic challenges and the potential contribution of migration and digital technology, EUR 30593 EN, Publications Office of the European Union, Luxembourg, 2021, p.30

It is also worth noting that an ageing population implies an ageing health workforce[6], further increasing the pressure on the healthcare delivery line in EU Member States.

Elevating the importance of addressing brain health

Brain health is essential for health, well-being, productivity and creativity across the lifespan. Its definition goes beyond the absence of disease, embracing all cognitive, emotional, behavioural and social functions which are necessary to cope with life situations. It fosters a person-centred approach focused on promotion, prevention, treatment, care and rehabilitation.

Brain health can thus easily be influenced by external contributing factors. As a matter of fact, the way our environment is designed significantly affects our likelihood to exercise, to connect with others, to access nature as well as our decision-making processes, and hence our overall brain health. Growing threats to brain health do not only include profound changes in both the natural and built environment, but also the recent Covid-19 pandemic, the rise of noncommunicable diseases, as well as the return of armed conflicts to Europe and the exacerbation of climate change.

The last 30 years have been marked by substantial demographic and social changes, thus resulting in an increase of the burden of brain disorders in the EU. In an ever-changing European Union facing a polycrisis and unprecedented challenges, protecting brain health and powering brain health equity across the lifespan stand as societal imperatives, prompting the need for ambitious and cohesive policy approaches.

Promoting brain health throughout the life course calls for actions looking at determinants that affect the brain at different stages of life (such as physical health, healthy environments, safety and security, learning and social connection, and access to quality services determinants). Furthermore, fostering brain research and innovation holds the promise of dramatically reshaping healthcare delivery.

[6] OECD/European Commission (2024), Health at a Glance: Europe 2024: State of Health in the EU Cycle, OECD Publishing, Paris, p.26.

Scaling-up prevention, treatment and rehabilitation efforts to adequate levels could lead to substantial savings (over $4 trillion by 2030)[7].

Challenges in the Field

Heavily impacting the overall well-being of both people living with a brain condition and their loved ones, brain disorders carry a burden which extends far beyond individual consequences, with costs (both direct and indirect, medical and non-medical) pertaining to health services, formal assistance, informal care and productivity losses. Despite significant strides in raising public awareness, tackling stigma and improving health literacy on brain disorders, political awareness and action remain insufficient to properly address the burden of brain conditions.

Slowing or reversing the course of brain disorders and improving the quality of life of those affected is as pressing as ensuring brain health promotion, prevention and early detection. Such actions must be undertaken within a comprehensive and collaborative approach encompassing more effective prevention strategies, access to early diagnostics and a wider range of therapeutic options.

Within the framework of the EU Health Policy Platform Thematic Network "Towards an EU Coordination Plan for the Brain", a public consultation was conducted to gather insights and feedback from a wide range of stakeholders from the 'brain community' (people living with a brain condition, researchers, clinicians, carers, industry representatives and decision makers). When asked about the greatest barriers in implementing a comprehensive EU Brain Health Strategy, respondents flagged the fragmentation of initiatives between EU Member States as the third greatest challenge. In the current context of increased focus on competitiveness and innovation, fragmented initiatives and duplicated efforts will inevitably fall short of the burden posed by poor brain health[8].

On the contrary, collaboration yields tangible outcomes for people living with a brain condition, their carers, and society at large. In 2024, the World Health Organization (WHO) surveyed EU Member States to evaluate the capacity of their mental health systems. 93% of

[7] The value of action. Mitigating the global impact of neurological disorders. The Economist, September 2022.
[8] Integrated operational framework for mental health, brain health and substance use. Geneva: World Health Organization; 2024, p.3.

respondents declared having an existing national mental health policy in place [9]. However, the study also indicated enablers and barriers of policy implementation. The four main enablers for policy implementation listed in the study are "Mechanisms for coordination and cooperation in place", "High level of community cooperation and interaction", "Strong buy-in of mental health sector stakeholders" and "Strong leadership/prioritization in government". On the other hand, the four main barriers, ranked from the most frequently mentioned to the least, are "Limited availability and coverage of the workforce", "Infrastructure insufficient for system needs", "Limited buy-in of people with lived experience/families/carers" and "No or insufficient budget allocated" [10].

Collaborative, overarching approaches and political leadership thus proved pivotal in ensuring mental health policies were efficiently implemented, while existing pressure on the workforce, lack of patient involvement, and funding stood as the main barriers. The need to avoid fragmentation does not only apply to policy initiatives, but also extends to the way these policies are informed and designed. Multidisciplinary collaboration and the need to move away from a "silo mentality in health care" [11] are key prerequisite of efficient policy action in tackling this burden. People with a lived experience of brain conditions (including their informal caregivers), for instance, prove to be crucial interlocutors at each level of the brain innovation value chain: from the bench to the market. Valuing their unique perspective has translated, notably in EU-funded health research, in more user-centric, friendlier and more meaningful innovations, prompting the need to further increase patient engagement at the European level [12,13,14].

[9] Mental health systems capacity in European Union Member States, Iceland and Norway. Copenhagen: WHO Regional Office for Europe; 2024, p.3.
[10] *Ibid.*, p.4.
[11] National plans and awareness campaigns as priorities for achieving global brain health. Winter, Sebastian F et al. The Lancet Global Health, Volume 12, Issue 4, p.700.
[12] Comprehensive mental health action plan 2013–2030. Geneva: World Health Organization; 2021, p.24
[13] Intersectoral global action plan on epilepsy and other neurological disorders 2022–2031: implementation toolkit. Geneva: World Health Organization; 2024, p.16-19.
[14] Feigin VL, Vos T, Nichols E, Owolabi MO, Carroll WM, Dichgans M, Deuschl G, Parmar P, Brainin M, Murray C. The global burden of neurological disorders: translating evidence into policy. Lancet Neurol. 2020 Mar;19(3):255-265.

The need to break down silos also applies to the way policymakers tackle the burden of brain conditions, mental and neurological alike. Main guidelines and policy recommendations emphasize the need to develop transdisciplinary approaches, highlighting the commonalities in policy approaches to tackling brain disorders, neurological and mental alike[15,16,17].

"By recognizing how mental health, brain health and substance use are linked to each other and to other areas of health and well-being, policymakers, health service providers and other stakeholders can work towards achieving sustainable development and ensuring the well-being of all."[18]

As understood by WHO, brain health refers to "the state of brain functioning across cognitive, sensory, social-emotional, behavioural and motor domains, allowing a person to realize their full potential over the life course, irrespective of the presence or absence of disorders"[19].

This definition of brain health helps move away from the perception of brain conditions as a fatality, towards understanding how to prevent them at the individual, societal and institutional level. For instance, nearly half of all dementia cases worldwide prove preventable by acting on 14 risk factors[20].

However, collaborative approaches must rely on a more comprehensive definition, notably the one used in the Coordination and Support Action (CSA) BrainHealth: "a concept that encompasses neural development, neuroplasticity, brain functioning, and recovery across the life course, including mental health and well-being elements.[21]"

[15] Bassetti CLA, Endres M, Sander A, et al. The European Academy of Neurology Brain Health Strategy: One brain, one life, one approach. Eur J Neurol. 2022;00:2.
[16] Rost NS. Author Response: The Brain Health Imperative in the 21st Century-A Call to Action: The AAN Brain Health Platform and Position Statement. Neurology. 2024 May 14;p.574.
[17] Intersectoral global action plan on epilepsy and other neurological disorders 2022–2031: implementation toolkit. Geneva: World Health Organization; 2024, p.11
[18] Integrated operational framework for mental health, brain health and substance use. Geneva: World Health Organization; 2024, VII.
[19] "Brain Health", World Health Organization.
[20] Dementia prevention, intervention, and care: 2024 report of the Lancet standing Commission. Livingston, Gill et al. The Lancet, Volume 404, Issue 10452, 572 - 628
[21] Tackling diseases (Single stage - 2023) (HORIZON-HLTH-2023-DISEASE-03), Calls for Proposals "Towards structuring brain health research in Europe", European Commission, 2023.

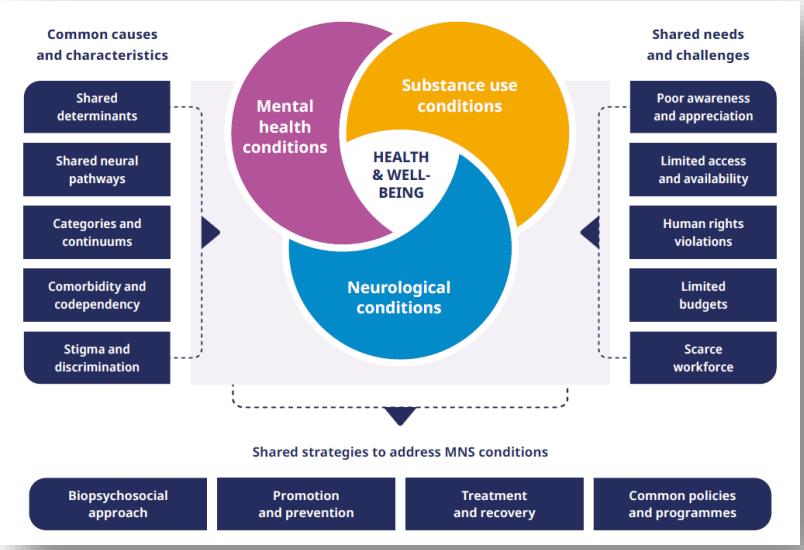

Figure 1: Links between MNS (Mental Health, Neurological & Substance use) conditions, WHO[22]

Tackling these challenges efficiently requires a significant shift from a public-health driven approach of the brain to securing brain-healthy transitions and brain-healthy economies.

Brain Capital & Brain Healthy Economies

A healthy brain is the ultimate prerequisite for quality of life and sustainable well-being. It allows people to thrive: to live in health and in happiness, to power our labour markets and economies, and to build for future generations. Building on cognitive, emotional and social development, the notion of brain capital promotes the prioritisation of brain health as a lever of economic growth, innovation and societal progress through integrated policy responses across policy areas:

- Gender equality in public health, research and innovation, to fill the knowledge gap on sex/gender differences and reduce gendered clinical and social barriers to brain health;

[22] Integrated operational framework for mental health, brain health and substance use. Geneva: World Health Organization; 2024, p.8.

- Environment and urban planning, to integrate environmental influences in brain health in the design of healthier settings;
- Education, employment & social affairs, to enhance brain skills such as resilience, adaptability, critical thinking, problem solving and creativity as competitiveness drivers and essential enablers of socio-economic objectives; to rethink medical education in a way that promotes early career professional development and interdisciplinary learning;
- Disability and demographic change, to shift the perspective from long-term care to healthy longevity and harness the potential of the Silver Economy;
- Internal market and consumer protection, to better address the nexus of brain health and digital technologies.

According to consultation responses, insufficient coordination and funding of brain research, limited brain health literacy and public awareness as well as inefficient policy implementation are currently preventing the concepts of brain capital and brain-positive economy from becoming reality.

The European Union is undertaking a digital transformation that has the opportunity to revolutionise the prevention, early detection, intervention and care of brain disorders across medical disciplines and empower people with a brain condition in being active players in their own treatment and care. As for other societal transitions, the digital revolution faces a set of barriers and challenges including matching the pace of technology and regulation to address unmet clinical needs through inclusive foresight and responsible innovation.

The notion of calling for an Economy of Well-Being aligns here perfectly, with the goal of supporting sustainable economic growth and well-being by working together to the benefit of people and society. A virtuous circle in which the build-up of individual well-being and long-term economic growth are mutually reinforcing should guide policies to promote a brain healthy future. Instead of divesting in a cost, policymakers and society at large should view the prioritization and support of brain health and research as a solution. By prioritising brain health at the highest levels and investing into prevention, wellness and optimisation, we can build a better future for every citizen and the generations to come.

Leveraging Existing Initiatives

The World Health Organization initiated several Action Plans to tackle the growing burden of brain conditions, including the Intersectoral Global Action Plan on epilepsy and other neurological disorders (IGAP)[23] and the Comprehensive Mental Health Action Plan[24] (CMHAP). These plans all intend on helping Member States match the Sustainable Development Goals (SDGs). More specifically, the two action plans aim at Target 3.4: "reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being [by 2030]" under the third SDG: "ensure healthy lives and promote well-being for all at all ages".

These plans require Member States to develop and update their national law to integrate strategies to tackle the burden posed by neurological and mental disorders by 2030 or 2031. The CMHAP, adopted in 2013 and renewed in 2019, prioritizes leadership in mental health, community-based care, prevention strategies, and research. The IGAP, launched in 2022, expanded from epilepsy to address a broader range of neurological disorders, emphasizing stigma reduction, quality of life improvement, and mortality reduction. Both plans outline strategic objectives and practical recommendations to guide global and regional policy action.

Despite these frameworks, significant gaps remain in European implementation. While 93% of EU Member States declared having mental health policies in place[25], the number of comprehensive neurological strategies is significantly lower, with only half the WHO European Region declaring to have comprehensive policies as of 2017[26].

It is also worth noting that several countries are currently in the process of developing or updating overarching brain strategies, encompassing both neurological and mental health conditions. The most recent example can be found in Switzerland, which launched its Swiss

[23] Intersectoral global action plan on epilepsy and other neurological disorders 2022–2031. Geneva: World Health Organization; 2023.
[24] Comprehensive mental health action plan 2013–2030. Geneva: World Health Organization; 2021
[25] Mental health systems capacity in European Union Member States, Iceland and Norway. Copenhagen: WHO Regional Office for Europe; 2024, p.3.
[26] Atlas: country resources for neurological disorders – 2nd ed. Geneva: World Health Organization; 2017. p.19.

Brain Health Plan in November 2023, and Norway, which is currently in the process of updating its National Brain Health Strategy. The effect of incorporating neurological disorders into domestic policies and laws can yield tangible impacts for the population.

The example of Norway's programme on stroke, ischaemic heart disease and dementia is a clear demonstration of this: by implementing an overarching approach, the country managed to decrease the "age-standardised incidence rates of dementia by 5·4%, ischaemic heart disease by 30·0%, and stroke by 35·3%" between 1990 and 2019[27].

At the EU level, initiatives such as Horizon 2020, Healthier Together, the Comprehensive Approach to Mental Health, and Horizon Europe programmes participate in addressing these challenges. To showcase the priorities and needs of basic, translational and clinical researchers together with health care professionals (neurologists and psychiatrists) and patients, the Shared European Brain Research Agenda (SEBRA) was designed and adopted in 2022 as the outcome of a broad consultation and consensus of the brain community to pave the way for future brain research in Europe.

Building on this momentum, the Coordination and Support Action (CSA) BrainHealth aims to foster collaboration among Member States and lay the foundation for the upcoming European Partnership for Brain Health, which stands as a key milestone and ambition for the EU to strengthen brain research and build from existing initiatives.

While existing efforts have paved the way, gaps in awareness and implementation persist and the 2023 UN Report on the SDGs does not register any progress in tackling NCDs. In fact, the aforementioned SDG target 3.4 is far from being met[28]. To fully leverage WHO and EU initiatives, coordinated action is paramount to unify stakeholders, streamline resources, and ensure the adoption of national and regional brain health strategies. With 2030-2031 deadlines looming, the EU has an opportunity to lead by example, prioritizing brain health as a cornerstone of public health policy and research.

[27] WHO. Tackling NCDs: 'best buys' and other recommended interventions for the prevention and control of noncommunicable diseases. Oct 26, 2017.

[28] Sustainable development demands brain health. The Lancet Neurology, Volume 22, Issue 10, 871.

Towards an EU Coordination Plan for the Brain

The global, European and national response to the burden of brain conditions, as demonstrated by the WHO Action Plans and initiatives previously mentioned, displays a greater understanding of the urgent need for collaborative, multidisciplinary, and overarching approaches. Main recommendations and guidelines show a high degree of converging priorities, such as the importance of fostering basic and translational research, addressing workforce development, transitioning to integrated care models, while leveraging synergies and existing initiatives in the brain health ecosystem. These principles form the backbone of both effective strategies and targets Member States committed to reach by 2030-2031, providing a clear framework for EU action.

Brain health, encompassing both neurological and mental health, must urgently be recognized as a foundational pillar of well-being, economic resilience, and a key driver of the transitions initiated by the European Union. Adopting an overarching and comprehensive definition of brain health - one that accounts for neural development, neuroplasticity, mental health, and recovery, across the life course – would serve as a unifying framework for addressing its widespread and growing impact on society at large.

In this regard, the definition proposed by the European Commission in the context of the European Partnership for Brain Health can be used as a starting point. This inclusive definition acknowledges that brain health affects individuals at every stage of their life and that poor brain health leads to immense individual suffering and heavily disrupts productivity, education, healthcare systems, and economies, and societies at large, calling for the EU to scale up its efforts and curb the trajectory of brain conditions.

It should not be neglected that a thriving research and innovation ecosystem in brain health is essential to maintain Europe's leadership in science and technology. Investing in both basic and translational research not only advances understanding and treatments of brain disorders but also fuels economic growth, fosters technological advancements, while attracting and retaining global talent. Research in brain health also has broader implications, contributing to resilience, adaptability, and creativity - essential traits for navigating the major digital, social and economic transitions engaged by the EU in a rapidly changing world.

However, adopting an overarching EU Coordination Plan for Brain Health would complement the research-focused European Partnership for Brain Health and allow for better streamlining of resources and reduced duplication of efforts, while maximizing the impact of policies addressing neurological and mental conditions. By fostering collaboration across Member States, this strategy can drive progress in prevention, treatment, care, and research while reducing the societal and economic burden of brain conditions. By aligning with WHO recommendations, such a plan could harness the strengths of national actors, leverage existing initiatives, develop key performance indicators to monitor progress, and facilitate the sharing of best practices among stakeholders. Anchoring an EU-wide strategy in the growing policy momentum surrounding brain health would enable Member States to facilitate coordinated investments in prevention, early diagnosis, and effective treatments while addressing disparities in access and outcomes across the EU.

Critically, this EU Coordination Plan should also account for the increasingly competitive environment in healthcare and research. EU institutions play a pivotal role in ensuring the steadiness and efficiency of funding streams and innovation, particularly given the risks of stagnating or shrinking budgets in many areas and the existing gaps in EU Member States.

In this sense, fostering robust mechanisms for data sharing and collaborative research will be instrumental in implementing effective prevention strategies and advancing patient care. Brain health research requires vast and diverse datasets to uncover patterns, improve diagnostic tools, and personalize treatment approaches. Streamlined EU-wide data-sharing protocols can enable researchers to pool knowledge and drive innovation more effectively. Meanwhile, prevention strategies including public awareness campaigns, early screenings, and lifestyle interventions can mitigate the onset of many brain conditions, reducing long-term healthcare costs and significantly improving quality of life.

Investing in the healthcare workforce is essential to meet the rising demand for services while addressing existing shortages and inequities across Member States. Collaborative approaches to training, upskilling, and retention can ensure that healthcare providers are equipped to deliver integrated and patient-centred care. The EU's role in supporting these efforts is indispensable, as it can provide the policy framework and resources to enable sustainable progress among Member States.

Collaboration is particularly critical in addressing workforce shortages across the healthcare delivery line. The EU faces a dual challenge: retaining existing healthcare professionals and attracting new talents to sustain care services for an aging population. Addressing workforce gaps demands coordinated efforts to improve working conditions, provide specialized training, and ensure equitable distribution of resources across Member States. By supporting the healthcare workforce, the EU can guarantee better outcomes for patients and reduce the overall burden of brain disorders on society.

Ultimately, a unified EU Coordination Plan for the Brain would reinforce Europe's position as a leader in brain health research and innovation, strengthening its ability to address the societal, economic, and individual impacts of brain disorders.

Endorsing Organizations