Integrated operational framework for mental health, brain health and substance use

World Health Organization

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Executive summary

This integrated operational framework provides an overview of the connections between mental health, neurological and substance use (MNS) conditions, and their links to health, well-being and the broader public health and sustainable development agenda. It argues the need for holistic approaches to address these conditions effectively, highlighting the shared determinants, challenges and strategies that MNS conditions have. And it emphasizes the importance of person-centred interventions through MNS services that are integrated with other health programmes.

Mental and brain health are integral components of universal health coverage and must be given the same priority as physical health to ensure comprehensive care. The need for integrated approaches is increasingly recognized as critical to address the complex interactions between mental health, brain health, substance use, and physical health, particularly in light of global threats such as the COVID-19 pandemic.

This framework shines a light on the links between MNS conditions and the links between MNS conditions and other health conditions to show how integrating promotion, prevention and management strategies can lead to a more effective use of resources and better health outcomes and improved efficiency and cost–effectiveness. It also proposes a series of actions for governments and health service planners and advisors to achieve integration across four domains: leadership and governance; care services; promotion and prevention; and health information systems, evidence generation and research.

Integrated, person-centred approaches to MNS and physical health conditions are essential to promote health equity, reduce health disparities, and improve health outcomes globally.

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.

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Introduction

Mental health, brain health and substance use in the public health and sustainable development agendas

The World Health Organization (WHO) defines health as a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity (1). This definition emphasizes the links between different dimensions of health, showing that improvements in one area often lead to benefits in others. This stresses the importance of addressing all aspects of health to achieve optimal well-being and calls for holistic approaches that look beyond the presence or absence of disease and consider other influencing factors (2).

Mental health, brain health and substance use are integral elements of health and well-being. Box 1 provides working definitions of these and other related concepts.

Mental and brain health are integral parts of the idea of universal health coverage (UHC), which emphasizes every individual's right to access essential health care services, including services for MNS conditions, without facing financial hardship (3, 6). Recognizing mental and brain health as fundamental rights within UHC underscores the need to address MNS conditions on an equal basis with physical health conditions (3). To achieve UHC, countries must include services for MNS conditions within their UHC packages of essential services (4). This should include the full range of services, from promotion and protection to treatment and recovery, that enable individuals to lead fulfilling and productive lives (5).

Within the UHC agenda, Sustainable Development Goal (SDG) 3 aims to ensure healthy lives and promote well-being for all at all ages (6). It includes specific targets to address mental health and substance use issues, including mental health promotion (target 3.4) and the prevention and treatment of harmful use of alcohol (target 3.5).

These targets acknowledge the significant impacts of mental health and substance use on individuals, families and communities. They highlight the importance of comprehensive approaches to tackle health challenges globally.

> By addressing both physical and mental health needs together, policy-makers can help achieve sustainable development and ensure well-being for all.

1 Box 1: Key terms

Mental and brain health

Mental health and brain health are closely related concepts. They represent integral elements of health and well-being and extend beyond the presence or absence of disease.

- Mental health has been defined by WHO as "A state of mental well-being that enables people to cope with the stresses of life, to realize their abilities, to learn well and work well, and to contribute to their communities. [It] is an integral component of health and well-being and is more than the absence of mental disorder" (7).

- Brain health has been defined by WHO as "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" (8).

The composite term 'mental and brain health' is used in this document to mean positive aspects of health and functioning; it is an objective of efforts to promote and protect health.

Substance use

Substance use refers to the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs (9). It can impact health and well-being in many ways, including by undermining mental health and brain functioning. Preventing and reducing the negative impact of substance use extends to and beyond mental and brain health.

Mental health, neurological and substance use (MNS) conditions

This term is used to collectively describe a constellation of health conditions and disorders that compromise mental or brain health and functioning and may lead to cognitive, intellectual, psychosocial or physical impairment. This includes mental, behavioural and neuro-developmental disorders and diseases of the nervous system that are defined in the International Classification of Diseases, 11th Revision (ICD-11).

- Mental health conditions include diagnosable disorders such as psychosis and depression, and also other mental states associated with significant distress, impairment in functioning, or risk of self-harm.

- Neurological conditions include neurological disorders (such as stroke, epilepsy, headache disorders, dementia and Parkinson disease), neurodevelopmental disorders (such as autism spectrum disorder), neuromuscular disorders (such as peripheral neuropathy), neuroimmunological disorders (such as meningitis and multiple sclerosis), and neuroinfections, brain tumours and traumatic injuries.

- Substance use conditions include disorders due to psychoactive substance use, as well as hazardous and harmful use of alcohol, psychoactive drugs or other substances.

Towards integrated planning and action

All over the world, mental health, brain health, and substance use are seldom addressed in an integrated way (10, 11, 12). They have long been marginalized and are often kept apart from mainstream health care systems. In many countries, this segregation and fragmentation has led to unequal access to services, limited funding, insufficient and inefficient use of human resources (13), and high levels of stigma (14).

Yet national and international policy-makers have begun to recognize the need for more integrated and person-centred approaches to health care that can address the complex interactions between mental health, brain health, substance use and physical health, and improve outcomes for individuals and communities (15). They increasingly acknowledge the significant consequences that MNS conditions pose on individuals, families, and societies worldwide (16, 17, 18, 19, 20, 21). And they have a growing understanding of the connections between physical and mental and brain health that mean these must be tackled together to promote health and well-being for all.

The result is that WHO Member States increasingly prioritize mental health, brain health, and substance use within global health agendas, in particular as a result of the COVID-19 pandemic and other global threats, including conflict and climate change (22, 23, 24).

When working to promote mental and brain health and address MNS conditions, adopting public health principles and approaches is essential to ensure effective and equitable services (see Box 2).

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2 Box 2: Public health principles and approaches

Leave no one behind
MNS services must be accessible to all, irrespective of socio-economic status, gender, ethnicity, or geographical location. This aligns with the broader UHC goals to remove financial barriers to access and promote equity in health care.

Gender perspective
Different genders experience and express MNS conditions differently, influenced by biological, social and cultural factors. Public health strategies should be tailored to meet these specific needs and address any gender disparities in health care access and outcomes.

People in condition of vulnerability.
Special attention must be given to populations that are disproportionately affected by MNS conditions due to factors like poverty, discrimination, and lack of access to basic services. These include people with physical, cognitive and psychosocial disabilities, all of whom require tailored interventions that address their unique needs.

Life-course approach
Policies, plans and services for MNS conditions need to take account of health and social needs at all stages of the life-course, including infancy, childhood, adolescence, adulthood and older age. From prenatal care to old age, recognizing the critical periods that can influence long-term mental and brain health is crucial for effective prevention and treatment strategies.

Adapting to context
Health interventions must be culturally sensitive and adapted to fit the specific social and cultural contexts of the populations they serve. This includes using language that is accessible and respectful, and incorporating traditional practices and beliefs into health programmes where appropriate.

Multisectoral integration
Integrating MNS services with other health and social services can lead to more holistic care and better health outcomes. This involves coordinating and partnering with multiple public sectors such as education, employment and justice, as well as the private sector, as appropriate to the country situation.

Lived experience contribution
People with lived experience of MNS conditions should be empowered and actively involved in advocacy, policy, planning, legislation, service provision and research and evaluation. These people have unique perspectives and expertise that can enhance the understanding of needs and are crucial to designing and delivering effective services. Their involvement can also help reduce stigma, strengthen community ties and promote a sense of agency, thereby supporting broader goals of inclusivity and equity in health care.

About this document

This document aims to provide WHO Member States and other implementers with rpactical insights and an operational framework to strengthen the public health response to MNS conditions in an integrated way. It will likely be useful to health planners and advisors, including within ministries of health and other sectors, as well as WHO staff working at headquarters, regional and country offices.

The operational framework was developed following a recommendation of the Strategic Technical Advisory Group for mental health, brain health and substance (STAG-MNS) to the WHO Director-General at its Second Meeting in April 2023. First, the WHO Secretariat, in collaboration with a hired consultant, discussed the main concepts to be included in the document to conceptualize and define the structure of the framework. A conceptual overview and mapping of the links that exist between mental health, brain health and substance use was developed, which was shared with the Membership of the STAG-MNS for initial inputs and review before and during one of its scheduled meetings.
The conceptual mapping in the context of this document involved critically analyzing and synthesizing existing theories, frameworks, and models relevant to mental health, neurological, and substance use (MNS) conditions. This review identifies gaps, draws connections between different conceptual approaches, and suggests new or revised frameworks that better address the complexities of MNS conditions. The goal is to provide a robust theoretical foundation that informs the operational framework for MNS integration across health systems.

Subsequently, a purposive (and non-systematic) literature review was carried out to assess and illustrate the available evidence in support of all identified links and commonalities. The literature review involved systematically gathering and analyzing published research studies, reports, and guidelines related to MNS conditions. The purpose was to ensure that the framework is evidence-based and aligned with current best practices.

Steps involved in the literature review included

- **Database Search:** A targeted search was conducted across relevant scientific databases and grey literature sources to collect studies pertinent to the identified evidence topics. This search aimed to gather the best available research to inform the framework's content. The non-systematic nature of the search may have limited the comprehensiveness of the results

- **Data Extraction and Analysis:** From the selected studies, key data were extracted, focusing on intervention outcomes, best practices, and identified barriers related to MNS integration. This step involved critically analyzing the data to determine its relevance and applicability.

- **Synthesis of Findings:** The extracted data were synthesized to create a cohesive and evidence-based narrative that informed the development of the operational framework. This synthesis ensured that the framework was grounded in robust evidence and effectively addressed gaps in service delivery for MNS conditions.

The development phase of the document included the following steps:

- **Development of the First Draft:** Following the literature review, the first draft of the framework was developed. This draft was based on the conceptual structure defined earlier and incorporated the evidence synthesized from the literature review.

- **Review by WHO Teams:** The draft framework underwent an internal review by various WHO departments and regional colleagues. This review was essential to ensure that the framework aligned with WHO's policies and ongoing initiatives, and that it adequately addressed the global health challenges related to MNS conditions.

- **Expert Feedback:** The draft was then reviewed by STAG-MNS members, who provided expert feedback based on their extensive experience in the field. This review ensured that the framework was relevant, comprehensive, and applicable across different contexts.

- **Incorporation of Feedback:** Final adjustments were made to the framework based on feedback from both the internal WHO review and the STAG-MNS review. These adjustments were aimed at refining the content and enhancing the clarity and effectiveness of the framework.

- Finalization: After incorporating all feedback, the framework was finalized and prepared for implementation and dissemination among WHO Member States and other stakeholders.

Declaration of Interest forms were solicited and obtained from all STAG-MNS members; WHO Secretariat reviewed these declarations and no conflicts of interest were identified.

Document structure

The rest of this document is divided into three parts.

PART 1

Part 1: Links between mental health, brain health and substance use conditions

This section highlights the shared characteristics, service needs and care approaches for MNS conditions and makes the case for integrated action.

PART 2

Part 2: Links between MNS conditions and other health conditions

This section emphasizes the benefits of integrating promotion, prevention and management activities for MNS and physical health conditions. Such benefits include better health outcomes and more efficient use of resources.

PART 3

Part 3: Suggested actions for integrated policy and services

This section proposes actions for governments and health service planners and advisors to integrate leadership and governance, care services, promotion and prevention and information systems for MNS and other health conditions.

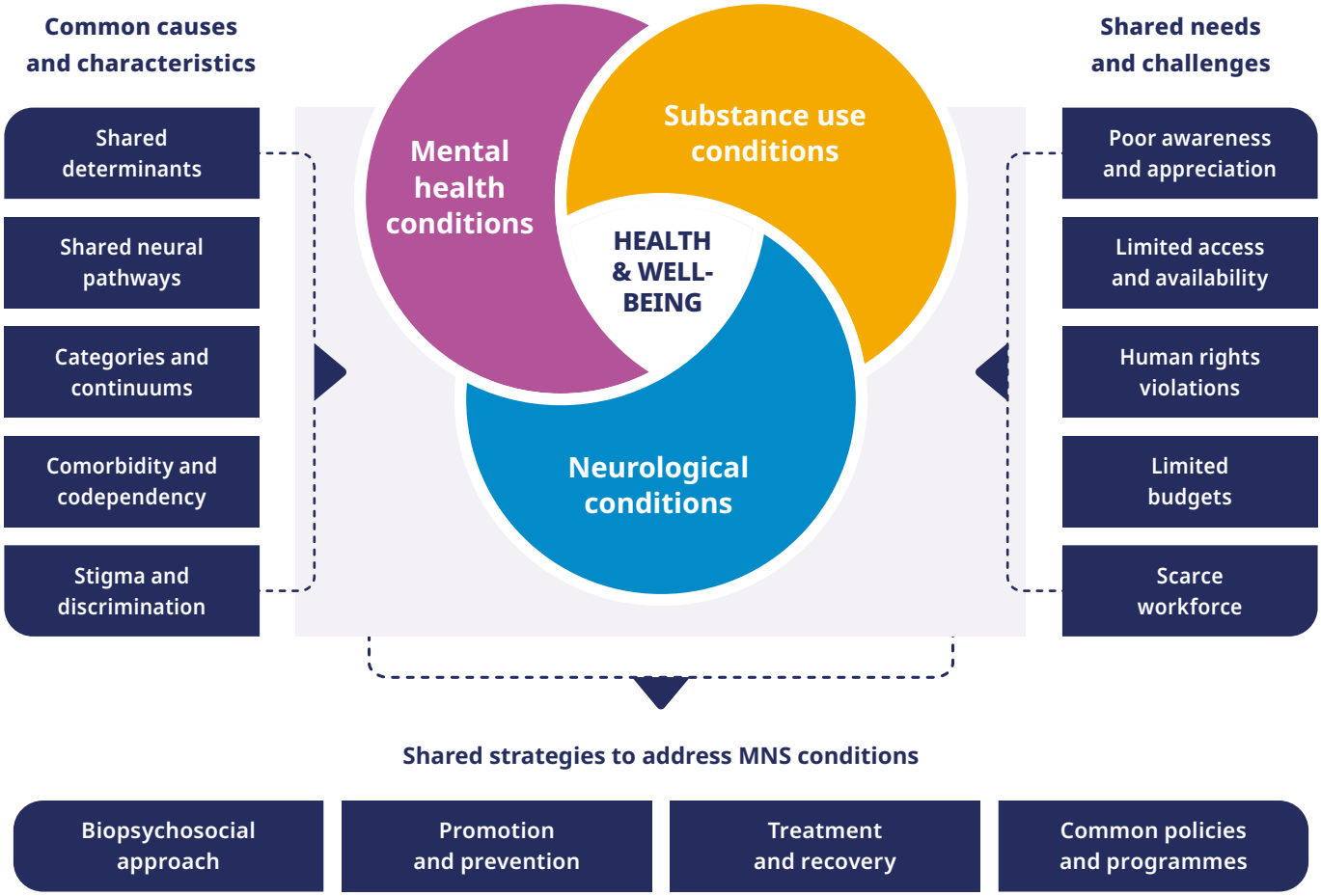
PART 1

Part 1: Links between mental health, neurological and substance use conditions

Links between mental health, neurological and substance use conditions

While MNS conditions are distinct and have their own unique characteristics, there are many aspects that bind them together (see Fig. 1).

Fig. 1. Links between MNS conditions.



Common causes and characteristics

MNS conditions share causes and characteristics. Factors that affect one condition often affect others too. Their presence often overlaps. And all are marked by significant stigma and discrimination.

Shared determinants
MNS conditions have similar social and economic determinants, for example, adverse childhood experiences, violence, poverty, lack of education or work, and being marginalized (25). The risk of MNS conditions is also influenced by similar macroeconomic, political and commercial factors, such as physical insecurity, such as that caused by conflict. This means that the same promotion and prevention activities can benefit all three types of condition.

Shared neural pathways
MNS conditions (and mental and brain health) involve the same neural pathways, particularly those for processing rewards, regulating mood, making decisions and controlling impulses (26, 27, 28, 29, 30).

Categories and continuums
ICD-11 categorizes substance use conditions with mental and behavioural conditions. Neurological conditions are in a separate chapter although some conditions, such as dementia and developmental disorders, are also listed under mental health (31). Diagnoses are useful clinically, but it is best to view MNS conditions as part of a continuum of experiences ranging from an optimal state of well-being to debilitating states of pain and suffering. Adopting a continuum approach helps ensure all levels of severity (including sub-clinical conditions) are included in treatments and promotion and prevention activities (8).

Comorbidity and codependency
MNS conditions often occur together – they can be precursors of one another, consequences, or the result of interactive effects. They can also affect each other's severity (32, 33, 34, 35). For example, suboptimal brain health can lead to suboptimal mental health, which may in turn increase substance use, further harming brain health (36, 37, 38, 39). Similarly, substance use can alter brain structure and function, increasing the risk of mental health conditions (40). Comorbidity of MNS conditions often leads to poorer health outcomes (41).

Stigma and discrimination
Stigma and discrimination are common for all MNS conditions and in all regions of the world, including both structural stigma and self-stigma (42, 43). They tend to increase when someone has more than one condition (44).

Strategies such as education and social contact with people living with MNS conditions can help reshape knowledge, attitudes and behaviours and are proven to reduce stigma for all three types of condition (45, 46, 47).

Shared needs and challenges

Given their common causes and characteristics, MNS conditions face similar public health challenges. They share barriers to demand for care and they are adversely affected by similar gaps in governance, resources and services. Addressing the needs for one condition (for example by raising awareness about depression and anxiety) can significantly reduce the risk of developing other conditions, such as epilepsy or harmful use of alcohol.

Poor awareness and appreciation

Despite growing recognition of MNS conditions as a global priority, they are still not given enough importance in public health policies relative to their impact. There is a lack of awareness and appreciation among people at all levels of society and government that requires substantial and sustained advocacy to overcome (3, 48). Public education around MNS conditions can help increase understanding, promote well-being and resilience and empower people with lived experience of all three types of condition (49).

Limited access and availability

Access to quality services for almost all MNS conditions is limited (50, 6, 51). Service coverage for anxiety, depression and substance use conditions remains strikingly low in most regions of the world, for example, based on 25 national epidemiological surveys carried out between 2001-2012, more than 85% of people in many low-middle-income countries not receiving care (52). This figure reflects significant gaps in both access to and quality of services. But this isn't only a problem of lower income countries. Data from 2016 for substance use conditions in WHO's European Region show a similar trend, with only 10 out of 53 countries reporting more than 40% treatment coverage, 6 countries reporting 21% to 40% treatment coverage, and the remaining 37 reporting less than 20% coverage or no data (53).

There are also big differences in diagnosis and treatment for dementia, the seventh leading cause of death globally. For example, based on a range of studies carried out between 1988-2015, underdiagnosis rates are around 50% in Europe, 60% in North America, and up to 90% in Asia (54). PeopleAs reported through the Global Dementia Observatory over the period of 2017-2020, people in high-income countries have up to 51% more access to community-based services for dementia than those in low and middle-income countries (55).

Many countries still rely too much on institutional care for people experiencing MNS conditions and lack community-based services, which are known have been shown to be effective and cost–effective offer greater access to local care services in various settings (54, 55, 56).

Human rights violations

People with MNS conditions are disproportionately vulnerable to human rights violations – in their homes, schools, workplaces and communities (57). They may be excluded from community life and denied economic, social, cultural, civil or political rights, or the right to health care (58). They may be stripped of their legal capacity, for example to participate in elections or stand before court. Many are discriminated against in employment, education and housing. They may be subject to forced treatment, involuntary detention or neglect within health care systems, which not only violates their basic human rights but also causes trauma and break of trust in health services. Human rights violations perpetuate stigma and marginalization and hinder people's ability to access appropriate care and support (59).

Limited budgets

Most countries allocate a tiny portion of their health budgets to MNS conditions. What little money there is mostly goes to costly and highly specialized services provided in institutions – especially psychiatric hospitals – instead of community-based care (60, 61, 62). Despite the evidential case for investing in scaled-up services and interventions, the continuing low levels of expenditure on MNS conditions strongly influences services availability, access and quality.

Scarce workforce

Most countries lack specialists to provide care for MNS conditions (14, 64, 65). The scarcities in specialists are compounded because few non-specialist health care providers have the knowledge and skills to care for people with MNS conditions in primary health care (63). Yet evidence shows these providers can be trained and supervised to provide effective care for most MNS conditions (64, 65, 66). Many of the core competencies required for MNS conditions are similar, meaning that integrated training can save time and money (67, 68).

Shared strategies to address MNS conditions

Strategies to promote mental and brain health, prevent MNS conditions and provide care to people experiencing MNS conditions have common elements. This means that services for one condition often indirectly help address other conditions. A purposeful, direct and integrated approach to service development and delivery can ensure that the resources used to address one condition will greatly benefit others too.

A biopsychosocial approach

Understanding and addressing any type of MNS condition requires consideration of biological, psychological and social factors. A biopsychosocial approach recognizes the complex interactions between these factors and how they influence MNS conditions (69). It is preferable to a biomedical approach, which focuses purely on biological factors and does not address people's needs and rights for inclusion, social care and protection, among other things.

Promotion and prevention

Activities to promote mental and brain health and prevent MNS conditions overlap and can be easily combined (70, 71, 72). These include but are not limited to addressing the shared determinants of MNS conditions, for example through antenatal care, school-based programmes, emotional skills training, early identification and referral, workplace-based programmes, and others.

Treatment and recovery

Task-sharing for MNS conditions, particularly in primary health care, is extremely popular and particularly effective in low-resource settings (73, 74). Community-based services that are person-centred, recovery-oriented and human rights based are the most effective for treating MNS conditions, with social support also being very important (75, 3). Collaborative or stepped care models are useful (76). They rely on specialized and non-specialized health workers, who are often the same across MNS conditions.

> These integrated approaches to care ensure MNS conditions are considered, managed and monitored simultaneously. Implemented well, they can reduce costs while improving access to services and health outcomes.

Common policies and programmes

Policies and programmes for MNS conditions should focus on public health. Though distinct, they share common themes, for example emphasizing prevention, a life-course approach, equity and human rights, and are based on common strategies, such as deinstitutionalization, creation of community-based services, decentralization of services and human resources, and integration into primary care and other programmes. Actively involving people with lived experience in designing and implementing policies and programmes is crucial for all MNS conditions (77).

A father holds his son. Dengue outbreak and response, Bangladesh, 2023 © WHO / Fabeha Monir

PART
2

Part 2: Links between MNS conditions and other health conditions

Links between MNS conditions and other health conditions

In addition to the connections between MNS conditions, the links between MNS and other health conditions are significant and deserve attention.

Many of the factors that influence mental health, brain health and substance also influence physical health, including early childhood development, living and working environments, social protection, access to healthcare, poverty, discrimination and other social determinants (78). Childhood adversity, which is a major predictor for later MNS conditions, is also related to several adult-onset non-communicable diseases (NCDs), including heart disease, diabetes and asthma (79).

MNS conditions themselves affect and are affected by chronic physical health conditions. For example, high blood pressure, obesity and diabetes are well-known risk factors for dementia (80). Similarly, people with chronic diseases are more likely to experience physical and psychological stress that can trigger depression, post-traumatic stress disorder, substance use or schizophrenia – especially if they are dealing with multiple conditions (81).

The many links between MNS and other health conditions mean they often co-occur, both in communities and health care settings, including for HIV/AIDS, noncommunicable diseases, neglected tropical diseases, tuberculosis and maternal and child health conditions (82, 83, 84, 85, 86).

Moreover, somatic health problems linked to side effects of psychotropic medication are commonly experienced by people with mental health conditions, including those residing in long-term psychiatric institutions (87, 88). Neglected physical health conditions are a major contributor to marked premature mortality among people with severe mental health conditions (89).

Integrating promotion, prevention and management strategies for MNS conditions and physical health conditions brings clear benefits, including significant direct and indirect cost savings, as has been shown in the UK and the US (90, 91).

Promotion and prevention

Promotive and preventive actions for MNS conditions overlap with efforts for other health conditions. They all focus on addressing risk factors, promoting healthy behaviours and strengthening health systems (92, 93, 94). Examples include health education and awareness campaigns; lifestyle interventions to encourage physical activity, healthy diets and no tobacco and alcohol use; early screening and detection programmes in the community; and fiscal measures to reduce the demand for products or substances that harm health.

Integrating promotion and prevention activities streamlines resources and avoids duplication of efforts. By leveraging existing infrastructure – such as health care systems, community programmes, and public health campaigns – integrated approaches make effective use of resources and programmatic synergies.

Management

There are incremental benefits to managing MNS conditions alongside other health conditions, especially HIV/AIDS, non-communicable diseases, neglected tropical diseases, tuberculosis maternal and child health conditions, and physical health conditions in humanitarian emergencies (95, 96, 97, 87, 98, 99). For example, integrated management can improve treatment adherence (100), health outcomes (101, 102) and quality of life (103).

Integrated services can also increase access to care. They ensure that individuals receive comprehensive care no matter where they enter the health care system, which aligns with the goal of UHC.

> By breaking down barriers between MNS and physical health services, integrated models promote equity in access to care and reduce health disparities among different groups.

Additionally, many of the skills and techniques learned to manage MNS conditions, such as active listening, empathy, problem-solving, are also useful for managing other health conditions (104, 105).

A boy plays with a kite on a hillside in Kabul, Health needs, Afghanistan 2022. © WHO / Kiana Hayeri

Camp for refugees from Tigray, Sudan 2022. © WHO / Ala Kheir

PART 3

Part 3: Suggested actions for integrated policy and services

Suggested actions for integrated policy and services

The following sections suggest actions for governments and health service planners and advisors, to promote a more integrated and holistic response to the challenges posed by MNS conditions and enhance mental and brain health for all.

The actions are divided into four areas and split into initial steps, which should be prioritized and are the minimum needed for integration, and enhanced steps that offer a more optimal approach.

All actions are in line with the priorities and commitments of WHO Member States, as stated in resolutions by WHO's governing bodies, such as the Comprehensive mental health action plan 2013–2030 (23), the Global alcohol action plan 2022–2030 (24) and the Intersectoral global action plan on Epilepsy and other neurological disorders 2022–2031 (25).

Please also refer to the annex for further resources and information.

Disability inclusion in health, United Republic of Tanzania, 2023. © WHO / Mwesuwa Ramsey

1. Actions to integrate leadership and governance

Area of work	Initial actions	Enhanced actions
Intersectoral committees, expert groups and task forces	Create MNS intersectoral committees, expert groups or task forces with representatives from health, social services, education, justice, and other relevant sectors – including representatives of people with lived experience of MNS conditions – to coordinate efforts and develop integrated policies and strategies.	Empower these groups to successfully implement plans by giving them dedicated independent office, annual budgets, and power to disburse funds.
Ministerial structures	Establish a fully funded national MNS department or unit within the Ministry of Health (and/or other relevant ministries) to integrate and lead public health efforts on mental health, brain health and substance use.	Create MNS positions in various departments of the Ministry of Health (e.g. primary health care, UHC, NCDs, health information) and other ministries.
Policies, laws and plans	Develop integrated policies, laws and plans for MNS conditions, emphasizing human rights and dignity. Example activities to include: • combined training of service providers; • co-location of services and collaborative care approaches; • common promotion and prevention programmes; • shared governance structures; and • integrated information systems.	Align MNS policies, laws and plans with broader health and social sector policies (e.g. on UHC, primary health care, other health conditions, employment, education, social services) to promote a holistic approach and address underlying health determinants, emphasizing human rights and dignity (see initial actions for example activities).
Coordination in emergencies	Create coordination mechanisms for organizations working on mental health, brain health and substance use in emergencies and integrate work with coordination groups in other sectors, such as health, education and protection.	Support these groups by developing action plans and allocating dedicated budgets, empowering them to operationalize their action plans and monitor their impact.
Community engagement and accountability	Actively involve communities and representatives of people with lived experience of MNS conditions in decision-making processes to ensure that policies and programmes are responsive to the needs and preferences of diverse populations.	Create governance structures to monitor and evaluate government policies and programmes with civil society and representatives of people with lived experience of different MNS conditions.
Public health financing	Advocate for increased and integrated budget allocation for MNS interventions, including through integration into other health programmes.	Develop an integrated national investment case and sustainable financing plan for MNS conditions.
Universal health coverage	Include MNS conditions in basic health packages delivered in primary health care.	Establish or strengthen regulations to cover MNS conditions in public and private health insurance.
Leadership support	Raise awareness among health care leaders on integrated MNS interventions.	Provide capacity building programmes for health care leaders on integrated approaches to addressing MNS conditions.

3 Box 3: Integrated governance and institutional structures for mental health and substance use in Paraguay

Paraguay's journey towards integrated governance for mental health and substance use is a notable example of comprehensive health reform. This case study highlights the integration of law, policy, and planning to enhance these services under a single national directorate.

Paraguay, supported by WHO's Special Initiative for Mental Health, initiated significant reforms to unify mental health and substance use services:

- Recognizing the need for cohesive care, the country enacted a new mental health law, establishing a framework for integrated services.
- Subsequently, the development of the National Mental Health Policy (2024-2030) and the National Mental Health Action Plan (2024-2030) provided clear targets and indicators for implementing integrated care. These plans emphasize both specialized and integrated services for substance use disorders, guiding nationwide accessibility.
- Institutional reforms mandated by the new mental health law elevated the Mental Health Directorate to the National Mental Health Directorate, integrating oversight of the national psychiatric hospital and the National Center for the Prevention and Treatment of Addictions. This consolidation under one authority enhances coordination, resource allocation, and the implementation of new strategies.

The integration of programs under the National Mental Health Directorate has improved care continuity and community-based services, demonstrating positive outcomes. By aligning services administratively, Paraguay is on the road to effectively address mental health and substance use needs in a coherent and integrated manner.

Paraguay's experience showcases the impact of integrated governance on health outcomes. Through legislative and strategic actions the country has established a robust framework for sustainable health service integration, offering valuable lessons for other countries.

2. Actions to integrate care services

Area of work	Initial actions	Enhanced actions
Human resources plans	Develop integrated plans for human resources working on MNS conditions.	Carry out annual reviews of the implementation of these plans.
Pre-service education of non-specialized professionals	Raise awareness among non-specialized health and non-health professionals about integrated care for MNS conditions, as well as promotion and prevention strategies.	Using a competency-based approach, revise and enhance education standards for non-specialized health and non-health professionals on mental health, brain health and substance use in an integrated way.
Integration in non-specialized settings	Expand in-service training and support for primary health care providers and other non-specialized workers on integrated care for MNS conditions (e.g. by using WHO's mhGAP materials).	Implement collaborative care models for MNS conditions in primary health care.
Capacity building of MNS **specialists**	Raise awareness among MNS specialists (including psychiatrists, neurologists, psychologists, social workers, psychiatric nurses, and other professionals) about integrated care for MNS conditions.	Expand pre-service education and training for MNS specialists to include integrated care for MNS conditions, including by integrating or harmonizing their curricula.
Links with social supports and benefits	Facilitate access to social support and benefits for people living with MNS conditions, particularly those needing long-term support.	Establish or strengthen regulations on social support and benefits for people living with MNS conditions, particularly those needing long-term support.
Integrated recovery models	Strengthen recovery services to support individuals with MNS conditions achieve their full potential and participate in community life, focusing on deinstitutionalization models and the development of community-based services.	Establish multidisciplinary teams in primary health care and community-based settings to provide comprehensive recovery-oriented and person-centred care for people with MNS conditions. Ensure these teams comprise psychiatrists, neurologists, psychologists, social workers, and other rehabilitation and recovery professionals.
Access to essential medicines	• Assess the supply chain system for essential MNS medicines. • Develop initial procurement plans based on population needs. • Review legal frameworks that do not allow primary health care staff to prescribe essential medicines for MNS conditions, and consider updating these. • Strengthen coordination and collaboration among stakeholders, including government agencies, international partners, pharmaceutical suppliers, and non-governmental organizations. • Provide basic training on prescription and management of essential medicines for MNS conditions to health care workers involved.	• Ensure that storage facilities meet standards for storing essential MNS medicines. • Implement advanced forecasting methods, such as demand forecasting models and consumption-based ordering, to better predict demand for essential MNS medicines. • Integrate information technology solutions into the supply chain, e.g. electronic inventory management systems and real-time tracking tools. • Implement stringent quality assurance measures throughout the supply chain.

4 Box 4: Integrating mental health and chronic disease services in South Africa

South Africa's health care landscape is marked by a high prevalence of chronic diseases, including HIV, hypertension, diabetes, and various mental disorders such as depression and anxiety. These comorbid conditions were historically inefficiently managed, with mental health often being siloed or treated separately, leading to high costs and logistical challenges.

The Integrated Chronic Disease Management (ICDM) model was designed to deal with comorbidities in a more efficient and effective way. It integrates prevention and management of MNS conditions and chronic diseases into a cohesive system within primary health care. So, for example, rather than running separate clinics for diabetes, hypertension, HIV and mental health, primary care facilities use routine consultations to provide chronic care for all these conditions at once.

ICDM has several key components:

- Health service re-organization. The flow within health care facilities was restructured to reduce bottlenecks. Specific areas were designated for waiting, consultation, and vital signs measurement. And an efficient appointment scheduling system was established.

- Clinical management support. Easy to use clinical guidelines and pre-dispensed medicines enable primary health care workers, rather than specialists, to manage stable chronic individuals, including those with MNS conditions.

- Assisted self-management. People were supported to manage their conditions through community health education, identification of at-risk individuals, and support groups, including mental health support networks.

By using existing infrastructure established for chronic diseases, the ICDM model extends its benefits o people with mental health conditions, optimizing resource use. For people with comorbidities, this approach makes care logistically easier. It also enables a more holistic and person-centered approach to their care. This re-organization of services can also reduce waiting times, improve treatment adherence and deliver high levels of satisfaction among people experiencing MNS conditions.

3. Actions to integrate promotion and prevention

Area of work	Initial actions	Enhanced actions
Addressing social and other determinants	Promote healthy lifestyles, including regular physical activity, balanced nutrition, adequate sleep, stress management, and avoidance of substance use, particularly for higher-risk groups such as older adults, indigenous populations, people affected by humanitarian crises, and people with socio-economic difficulties, among others.	Develop and implement integrated social and economic policies and programmes to prevent MNS conditions and promote well-being throughout the life course, particularly for higher-risk groups such as older adults, indigenous populations, people affected by humanitarian crises, and people with socio-economic difficulties, among others.
Pre-natal interventions	Raise awareness and understanding of safe childbirth, preventable causes of intellectual disability, neurotrauma and infections.	Strengthen health systems to integrate and implement pre-natal promotion and prevention programmes.
Public awareness and early detection	Develop and disseminate integrated public health awareness materials and anti-stigma campaigns in collaboration with people with lived experience.	Implement integrated early detection and intervention programmes for MNS conditions targeting at-risk populations, such as children and adolescents.
Community-based initiatives	Foster social connection and inclusion for people with lived experience of MNS conditions through community engagement initiatives, cultural events, volunteering opportunities, and peer support networks.	Establish community-based support services, such as peer support groups and helplines for people with lived experience of MNS conditions and their families.
Promotion and prevention for children	Implement school-based programmes on social-emotional learning and mental and brain health literacy.	Invest in early childhood interventions that promote nurturing environments, positive parenting practices, and early childhood development programmes to support optimal brain development and mental health outcomes.
Promotion and prevention in the workplace	Integrate workplace mental and brain health considerations into national plans, laws and policies.	Develop workplace mental and brain health programmes that promote a supportive environment, educate staff on mental and brain health, and enable access to confidential counselling and support services.
Integrated suicide prevention	Integrate considerations of MNS conditions into national suicide prevention programmes, and include considerations on suicide prevention into more general health, social and education policies and programmes.	Integrate suicide prevention initiatives into general health, social and education policies and programmes (including public awareness campaigns, training for health care professionals and gatekeepers, and support for individuals and families).

5 Box 5: Holistic promotion and prevention of mental health and substance use in adolescents: the Helping Adolescents Thrive initiative

The Helping Adolescents Thrive (HAT) initiative is a collaborative effort between WHO and UNICEF to promote mental health and prevent mental health conditions among adolescents. This initiative aims to address mental health and mental health conditions from multiple angles by fostering environments that support adolescent mental well-being. While the main focus is on mental health, the initiative recognizes the links between mental health and other health issues, including neurological and substance use disorders.

HAT's goal is to create environments where adolescents can grow and develop without bring impacted by untreated mental health conditions, improving their overall quality of life and enabling them to contribute positively to their communities. The initiative also aims to reduce the stigma associated with mental health conditions and ensure that adolescents seeking help are met with supportand understanding.

The HAT initiative is based on four key strategies:

- Implementation and enforcement of policies and laws provides guidance on and examples of legal and policy provisions aimed at enhancing adolescent mental health outcomes through a comprehensive whole-of-government and whole-of-society approach.

- Environments to promote and protect adolescent mental health emphasizes actions to improve the quality of environments in schools, communities, and digital spaces. This strategy aims to enhance adolescents' physical and social environments through evidence-based activities such as school climate interventions, creating safe spaces for adolescents in communities, and teacher training.

- Caregiver support includes interventions designed to build caregivers' knowledge and skills for promoting adolescents' mental health, strengthen the relationships between caregivers and adolescents, and support the mental health and well-being of caregivers themselves.

- Adolescent psychosocial interventions focuses on implementing evidence-based psychosocial interventions for universal, targeted, and indicated promotion and prevention of mental health issues among adolescents.

4. Actions to integrate information systems, evidence generation and research

Area of work	Initial actions	Enhanced actions
Strengthening information systems	Develop a system to regularly and systematically collect and report data on the prevalence of MNS conditions and MNS service coverage.	Develop and implement integrated data and surveillance systems to evaluate clinical and psychosocial outcomes for MNS conditions.
Evidence for interventions and policies	Evaluate effectiveness and cost–effectiveness of MNS interventions, policies and programmes, especially when integrated with other health programmes.	Develop or strengthen evidence-based guidance on integrated care for MNS conditions, including when integrated with other health conditions.
Support to research	Strengthen capacity of, and foster collaboration between, researchers, policy-makers, and practitioners to generate evidence on effective integrated interventions, service delivery models, and policy strategies for addressing MNS conditions.	Increase national budget for MNS research, particularly around integrated care models, policies and programmes, and make MNS research a priority for national funders.
Understanding influences and manifestations of MNS conditions	Do population-based longitudinal as well as cross-sectional studies to understand determinants and public health impact of MNS conditions within specific populations to guide resource allocation and service planning.	Do longitudinal studies to track trajectories of individuals with MNS conditions over time and gain insights into the natural course of these conditions, factors influencing outcomes, and conduct randomized trials to determine the effectiveness of interventions and treatments.
Knowledge translation and exchange	Develop case studies to learn from pilot work on integrating policy and services for MNS conditions.	Facilitate activities to bridge research, policy and practice for integration. This includes disseminating research findings and facilitating dialogue between stakeholders.
Technology and innovation	Integrate existing information systems on MNS conditions using technology.	Explore the role of technology and innovation in MNS research and practice. This includes developing and evaluating digital health interventions for screening, telemedicine, monitoring and delivering digital MNS interventions.

6 Box 6: Integrated health information systems in Czechia

In Czechia, comprehensive health data from national registries cover all-cause hospitalizations and deaths across the entire population. This integration enables researchers to access a wealth of health data, providing a robust foundation for large-scale epidemiological studies. For example, one study investigated the mortality and life-years lost following hospitalizations due to physical comorbid conditions in individuals previously hospitalized for substance use disorders, compared with their matched counterparts without such disorders (106).

The data integration allowed the team to use a national registry-based retrospective cohort design. This approach not only ensured a comprehensive analysis of health outcomes but also facilitated the study of 28 different physical health conditions affecting these individuals. The findings revealed that individuals with a history of substance use disorders had significantly higher risks of death following the onset of most physical health conditions studied, highlighting the need for integrated treatment approaches.

This research underscores the value of integrated health information systems in generating actionable insights that can inform public health strategies and interventions. The integrated health information system was crucial for this research, providing several benefits.

- Comprehensive coverage. The system's complete national coverage ensured that the sample was representative of the entire population, enhancing the generalizability of the findings.
- Detailed data access. Researchers could access detailed, anonymized data about individuals over a long period, allowing analysis of long-term health outcomes.
- Enhanced research capabilities. The integration enabled data to be linked across different health conditions and demographics, which was crucial to study the complex interactions between substance use disorders and other physical health conditions.

Czechia's experience exemplifies the pivotal role that integrated health information systems play in enhancing public health research. By leveraging comprehensive, longitudinal health data, researchers uncovered critical insights into the mortality risks associated with substance use disorders and their interplay with physical health conditions. This integration not only streamlined the research process but also ensured that findings were robust and representative, providing a solid evidence base to inform policy and clinical practice.

A health worker gives medication, Malaria response following 2022 floods, Pakistan, 2023. © WHO / Panos Pictures / Saiyna Bashir

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Mobile health teams bring COVID-19 vaccination to hard-to-reach communities, Sierra Leone, 2022. © WHO / Michael Duff

Annex

Selected materials and tools to support implementation

General

- Mental Health Action Plan 2013–2020. Geneva: World Health Organization, https://www.who.int/publications/i/item/9789241506021, accessed June 7, 2024.
- Global Alcohol Action Plan 2022–2030. Geneva: World Health Organization, https://www.who.int/teams/mental-health-and-substance-use/alcohol-drugs-and-addictive-behaviours/alcohol/our-activities/towards-and-action-plan-on-alcohol, accessed June 7, 2024.
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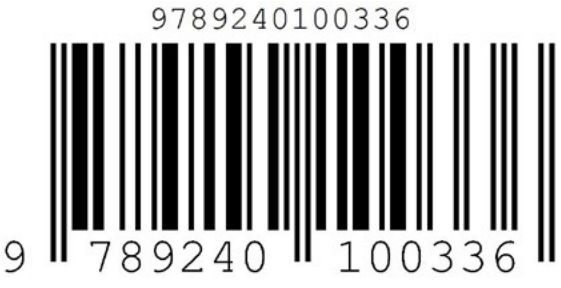
World Health Organization
20 Avenue Appia
CH-1211 Geneva 27
Switzerland
Website: https://www.who.int