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**QUALIFICATION WORK**

**on the topic: «EVALUATING THE EFFECTIVENESS OF NATIONAL  
MENTAL HEALTH POLICIES AND PROGRAMS»**

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## ANNOTATION

The qualification work examines mental health policy at the global and national levels, focusing on the pharmaceutical dimension and the role of pharmacists in Morocco. It highlights access to medicines, system gaps, and pharmacist integration challenges. Key recommendations are proposed to strengthen pharmaceutical care in line with WHO and FIP guidelines.

The qualification work consists of an introduction, 3 chapters, conclusions, a list of used sources, and is laid out on 53 pages of printed text. The work is illustrated with 10 figures and 7 tables. The bibliography includes 52 information sources.

*Keywords:* mental health, policy evaluation, pharmaceutical care, access to medicines, psychotropic drugs, pharmacists, Morocco, WHO guidelines, health system reform

## АНОТАЦІЯ

Кваліфікаційна робота присвячена дослідженню політики у сфері психічного здоров'я на глобальному та національному рівнях, з акцентом на фармацевтичну допомогу та роль фармацевтів у Марокко. Висвітлено доступ до ліків, прогалини в системі та виклики інтеграції фармацевтів. Визначено шляхи вдосконалення згідно з настановами ВООЗ і FIP.

Кваліфікаційна робота складається зі вступу, 3 розділів, висновків, списку використаних джерел та розміщена на 53 сторінках друкованого тексту. Робота ілюстрована 10 рисунком та 7 таблицями. Бібліографія містить 52 джерела.

*Ключові слова:* психічне здоров'я, оцінка політики, фармацевтична допомога, доступ до ліків, психотропні препарати, фармацевти, Марокко, настанови ВООЗ, реформа системи охорони здоров'я.

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## **LIST OF ABBREVIATION**

APA – American Psychiatric Association

CRPD – Convention on the Rights of Persons with Disabilities

DSM-5 – Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition

EML – Essential Medicines List

FIP – International Pharmaceutical Federation

HICs – High-Income Countries

ICD-11 – International Classification of Diseases, 11th Revision

LMICs – Low- and Middle-Income Countries

mhGAP – Mental Health Gap Action Programme

M&E – Monitoring and Evaluation

NEML – National Essential Medicines List

NHS – National Health Service

NGO – Non-Governmental Organization

OECD – Organization for Economic Co-operation and Development

OTC – Over-the-Counter (medicines)

QALY – Quality-Adjusted Life Year

SDG – Sustainable Development Goals

WHO – World Health Organization

## INTRODUCTION

Mental health is a foundational element of overall health and societal well-being. Despite growing global awareness, mental health disorders continue to contribute significantly to morbidity, disability, and premature mortality. Depression, anxiety, schizophrenia, and substance use disorders are now among the leading causes of years lived with disability worldwide. In low- and middle-income countries, the treatment gap remains particularly wide, driven by factors such as underfunded health systems, stigma, lack of trained professionals, and weak policy implementation. The COVID-19 pandemic has further exposed systemic weaknesses, interrupted services and exacerbating mental health needs across all age groups.

Effective national mental health policies and programs are crucial to reducing the burden of mental illness and achieving sustainable public health outcomes. These strategies must integrate mental health care into universal health coverage, ensure access to essential psychotropic medicines, and uphold the human rights of individuals with mental health conditions. However, policy formulation alone does not guarantee impact. Implementation quality, financing, intersectoral collaboration, and monitoring frameworks are equally vital for realizing intended outcomes.

Pharmaceutical care constitutes a critical pillar in the delivery of mental health services. From ensuring the availability of essential psychotropic medications to promoting rational prescribing and supporting patient adherence, pharmacists and pharmaceutical systems play a central, yet often under-recognized, role. In many countries, the lack of formal integration of pharmaceutical support into mental health strategies contributes to fragmented care, treatment discontinuation, and medication misuse.

Assessing the effectiveness of mental health policies requires a comprehensive and multidimensional approach. It involves analyzing not only the existence of strategic documents but also the mechanisms through which services are delivered, financed, and monitored. Moreover, understanding how international

best practices translate into national contexts is essential for identifying reform pathways, especially in countries like Morocco, where mental health is increasingly recognized as a priority but remains underserved in practice.

**The purpose of the study** is to evaluate the effectiveness of national mental health policies and programs, with special emphasis on the pharmaceutical dimension and the role of pharmacists.

**Research objectives:**

- to define the conceptual and strategic foundations of mental health policy from a public health perspective;
- to review key global models for evaluating mental health policy effectiveness;
- to analyze mental health policy frameworks and outcomes in high-, middle-, and low-income countries;
- to assess the inclusion, availability, and accessibility of psychotropic medications in national mental health systems;
- to examine the current and potential roles of pharmacists in the implementation of mental health programs;
- to propose evidence-based recommendations for strengthening pharmaceutical care as a component of mental health policy.

**The object of the research** is national and international mental health policy documents, pharmaceutical regulations, WHO strategic frameworks, and statistical and regulatory sources related to mental health systems.

**The subject of the study** is the structure, implementation, and effectiveness of pharmaceutical support mechanisms within national mental health programs, with a particular focus on Morocco.

**Research methods** include comparative and content analysis, synthesis of WHO guidelines and strategic plans, analysis of essential medicine lists and pharmaceutical service coverage, and the use of graphic modeling to represent disparities and policy gaps.

**The scientific novelty and practical significance** of the work lie in its integrative analysis of the pharmaceutical component in mental health policy, an often-overlooked area in public health discourse. By highlighting both global and national barriers to effective pharmaceutical care, the study contributes to the evidence base for policy innovation and decentralization of mental health services. It also outlines strategic roles that pharmacists can play in prevention, education, medication safety, and community-level support.

**The study results were approved** at the XXXI International scientific and practical conference of young scientists and students "TOPICAL ISSUES OF THE NEW MEDICINES DEVELOPMENT" held on April 23-25, 2025.

**Structure and scope of qualification work.** The qualification work consists of the introduction, three chapters, conclusions to each chapter, a general conclusion, and list of used sources. The results of the study are presented on 53 pages of text, the number of figures – 10, the number of tables – 7, and the list of references – 52 titles.



# **CHAPTER I.**

## **THEORETICAL FRAMEWORK**

### **FOR EVALUATING MENTAL HEALTH POLICIES**

#### **1.1. Conceptual foundations: Mental health, mental disorders, and public health strategies**

Mental health is a fundamental component of overall well-being and human development. It influences how individuals think, feel, behave, interact with others, and cope with life stressors. The World Health Organization (WHO) defines mental health as "a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to contribute to his or her community" [25]. This definition emphasizes not only the absence of mental illness but also the presence of positive psychological functioning.

Mental disorders, on the other hand, represent a wide range of conditions characterized by significant disturbances in cognition, emotional regulation, or behavior. These disorders are usually associated with distress or impairment in important areas of functioning. The two most widely used classification systems for mental disorders are the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), published by the American Psychiatric Association, and the International Classification of Diseases, 11th Revision (ICD-11), published by the WHO [28].

According to DSM-5, mental disorders are grouped into several major categories. The table 1.1 outlines these categories with representative examples.

The ICD-11 offers a global perspective and includes additional categories such as disorders specifically associated with stress, disorders of adult personality and behavior, and neurocognitive disorders [33]. Both systems aim to provide a common language for clinicians and researchers to diagnose, treat, and study mental health conditions.

Table 1.1

**Major categories of mental disorders according to DSM-5, with representative clinical examples.**

<b>Category</b>	<b>Representative Disorders</b>
Neurodevelopmental disorders	Autism spectrum disorder, Attention-deficit/hyperactivity disorder
Schizophrenia spectrum and other psychotic disorders	Schizophrenia, Schizoaffective disorder
Bipolar and related disorders	Bipolar I disorder, Cyclothymic disorder
Depressive disorders	Major depressive disorder, Persistent depressive disorder (dysthymia)
Anxiety disorders	Generalized anxiety disorder, Panic disorder, Phobias
Obsessive-compulsive and related disorders	Obsessive-compulsive disorder, Body dysmorphic disorder
Trauma- and stressor-related disorders	Post-traumatic stress disorder (PTSD), Acute stress disorder
Substance-related and addictive disorders	Alcohol use disorder, Opioid use disorder
Personality disorders	Borderline personality disorder, antisocial personality disorder

Understanding mental health and its disorders within the framework of public health is crucial. Mental health is not merely an individual concern but a societal one, deeply connected to social, economic, and environmental determinants. Factors such as poverty, unemployment, discrimination, social exclusion, childhood adversity, and exposure to violence significantly increase the risk of mental disorders [4]. These social determinants shape the distribution of mental health outcomes and access to care across populations.

Public health strategies aimed at mental health focus on three key levels: promotion, prevention, and treatment. Mental health promotion involves creating supportive environments and empowering individuals to strengthen their mental well-being. It includes strategies such as school-based programs, workplace mental health initiatives, and community-based interventions [27].

Prevention strategies are targeted at reducing the incidence, prevalence, and recurrence of mental disorders. These include early childhood interventions, parenting support, anti-bullying campaigns, and programs to reduce substance abuse and violence. Prevention is categorized into:

- Primary prevention, aimed at reducing risk factors and enhancing protective factors;
- Secondary prevention, which involves early detection and prompt intervention;
- Tertiary prevention, focusing on reducing disability associated with established disorders [48].

Treatment and rehabilitation are essential for individuals with diagnosed mental disorders. Evidence-based interventions include pharmacological treatments (e.g., antidepressants, antipsychotics), psychological therapies (e.g., cognitive behavioral therapy), and psychosocial support. Integration of mental health services into primary health care is a widely recommended strategy by the WHO [31].

In recent years, the global burden of mental disorders has become more visible. Mental and substance use disorders are among the leading causes of years lived with disability (YLDs) worldwide. Yet, mental health systems often suffer from underfunding, limited human resources, and social stigma. Addressing these gaps requires a coordinated public health approach that recognizes mental health as an integral part of universal health coverage and sustainable development [6].

Conceptualizing mental health through a public health lens allows for comprehensive and equitable strategies that go beyond individual pathology to include societal responsibilities. Understanding the classification of mental

disorders, their determinants, and the continuum of public health interventions is vital for shaping effective mental health policies and programs.

## 1.2. Review of key elements of effective mental health policies

Effective mental health policies are essential instruments for improving the mental well-being of populations and ensuring equitable access to quality care. These policies should be designed in alignment with a tiered model of service delivery. This structure is best illustrated by the WHO pyramid model (Fig. 1.1), which visualizes how mental health care services are organized across different levels of need and specialization.

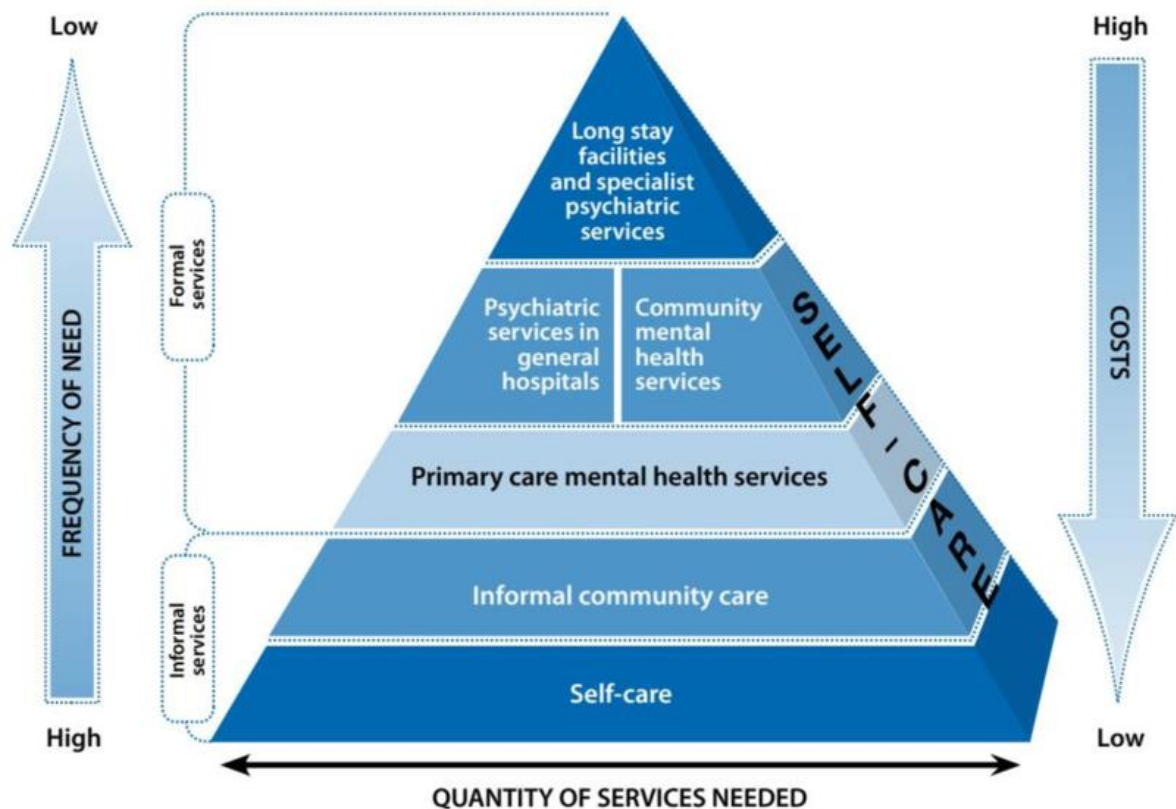


Fig. 1.1 WHO Service Organization Pyramid for the optimal mix of mental health services.

The WHO has identified several core components that distinguish successful mental health policies from fragmented or underperforming ones [6, 15, 16]. These

elements not only provide a strategic framework for policy development but also set benchmarks for implementation, evaluation, and sustainability.

First and foremost, a clear national mental health strategy is fundamental. This document should articulate a vision, guiding principles, and a set of measurable objectives. It must be aligned with broader national health goals and human rights standards. An effective policy clearly defines roles and responsibilities across sectors, including health, education, justice, and social services [15].

A second critical element is the integration of mental health services into primary health care. This approach facilitates early detection, reduces stigma, and enhances accessibility, especially in low- and middle-income countries where specialized services may be scarce [31, 9]. The WHO's Mental Health Gap Action Programme (mhGAP) supports this integration by providing evidence-based guidelines for non-specialized health workers [30].

The organization of mental health services can be effectively visualized using the WHO pyramid model. This model emphasizes a layered structure of care, where the majority of mental health needs are met at the community and primary care level, with fewer individuals requiring specialized hospital-based services.

In the table 1.2 below outlines the specific types of services provided at each level of the pyramid.

Human resource development is another cornerstone. Effective policies invest in the training and retention of mental health professionals, including psychiatrists, psychologists, psychiatric nurses, and social workers. Importantly, task-shifting strategies that empower general practitioners and community health workers to deliver basic mental health interventions have proven effective in settings with limited specialist availability [8, 41].

Table 1.2

**Levels of mental health care services according to WHO pyramid model**

<b>Level</b>	<b>Service Type / Description</b>	<b>Examples</b>	<b>Main Providers</b>
Specialized services	High-intensity care for complex or severe mental disorders	Psychiatric hospitals, long-stay facilities	Psychiatrists, clinical psychologists, psychiatric nurses
Secondary mental health services	Intermediate-level care typically delivered in general hospital settings	Outpatient psychiatric clinics, psychiatric wards in general hospitals	Psychiatrists, psychologists, mental health nurses
Primary health care	First-contact care integrated into general health systems	Mental health screening and treatment in family doctor offices, health centers	General practitioners, nurses, mhGAP-trained health workers
Community and informal care	Non-clinical support based in community or cultural structures	Traditional healers, religious advisors, community outreach groups, peer support networks	Community leaders, peer workers, NGOs
Self-care / Mental health promotion	Health-promoting activities individuals can undertake independently or with minimal supervision	Meditation, stress management apps, educational campaigns, physical activity programs	Individuals, employers, schools, online platforms

Adequate financing is essential to operationalize any policy. Without sustained budgetary support, even the most comprehensive strategies remain theoretical. Effective policies allocate dedicated funds for infrastructure,

medications, training, and monitoring systems. According to the Mental Health Atlas 2020, many countries allocate less than 2% of their health budgets to mental health, highlighting a significant resource gap [28].

Intersectoral collaboration strengthens the policy framework by engaging various ministries and stakeholders. Mental health outcomes are influenced by housing, employment, education, and criminal justice systems. Therefore, a multi-sectoral approach ensures that mental health considerations are embedded in all relevant policies and programs [12, 21].

Equally important is the involvement of service users and their families in policy development and evaluation. Their insights enhance the relevance and acceptability of services, and support recovery-oriented care [15]. Participatory approaches also promote transparency and accountability.

A robust monitoring and evaluation (M&E) system is indispensable for tracking progress. It enables governments to assess implementation fidelity, measure outcomes, and adapt policies based on empirical evidence. Indicators may include service coverage, treatment gaps, patient satisfaction, and reduction in suicide rates [36]. WHO recommends that M&E frameworks be incorporated from the earliest stages of policy design [37].

Lastly, effective policies must address legislation and human rights protections. This includes the decriminalization of suicide, protection against discrimination, and mechanisms to prevent abuse in institutional settings. Mental health legislation should comply with international standards, including the Convention on the Rights of Persons with Disabilities (CRPD) [34, 35].

In conclusion, effective mental health policies are comprehensive, inclusive, and anchored in human rights. They require coordinated action, adequate resources, and the political will to translate plans into practice. A policy's success lies not only in its design but in its capacity to improve population-level outcomes and promote dignity for people living with mental health conditions.

### **1.3 Models and methodologies for evaluating the effectiveness of health policies and programs**

Evaluating the effectiveness of mental health policies and programs is vital for understanding what works, for whom, and under what conditions. A well-structured evaluation process helps policymakers, stakeholders, and practitioners identify successes, address gaps, and ensure that interventions are both cost-effective and equitable. The World Health Organization and other global health institutions emphasize the integration of evaluation as a core element of policy design and implementation [37].

There are multiple models and methodologies used to assess the effectiveness of health policies. One commonly applied framework is the logic model, which maps out the relationships between resources, activities, outputs, outcomes, and impacts. This model supports the development of a theory of change and clarifies how interventions are expected to lead to desired results.

Another widely used model is the Donabedian framework, which evaluates quality of care through three dimensions: structure (the physical and organizational infrastructure), process (the delivery of care), and outcomes (the effects on patient health). This approach is particularly useful for assessing the quality and effectiveness of mental health service delivery at different system levels [36].

Process evaluation methods examine how a policy or program is implemented, focusing on fidelity, reach, acceptability, and adherence to guidelines. This is essential for identifying bottlenecks and ensuring that programs are delivered as intended.

Outcome evaluation, on the other hand, focuses on the end results of interventions. Indicators used in mental health evaluations include reduction in symptom severity, treatment coverage, suicide rates, hospitalization rates, user satisfaction, and community reintegration.

Impact evaluation assesses the long-term, population-level changes resulting from a policy. This is often done using quasi-experimental or experimental designs,



such as difference-in-differences, randomized controlled trials (where feasible), and interrupted time series analyses. These methods help attribute observed changes directly to the intervention.

Mixed-methods approaches are increasingly popular in evaluating mental health programs. They combine quantitative data (e.g., service utilization rates, epidemiological indicators) with qualitative insights from interviews or focus groups with patients, families, and providers. This approach provides a more holistic understanding of program effectiveness.

In the global context, the WHO Evaluation Framework for Mental Health Policy and Plans and its accompanying guidance document, Module 3 of the WHO strategic action plan series [18, 38], outline key dimensions such as relevance, coherence, effectiveness, efficiency, impact, and sustainability. It emphasizes the importance of participatory approaches and local ownership in both the design and interpretation of evaluation findings.

Monitoring and evaluation systems must also be adaptable to country-specific contexts, including available infrastructure, cultural perceptions of mental health, and data collection capacities. In low- and middle-income countries, data scarcity and underreporting are common challenges. In such contexts, pragmatic indicators, like number of functional community-based services or frequency of mhGAP trainings, can serve as meaningful proxies.

Ultimately, successful evaluation is not only about assessing effectiveness but also about fostering a learning culture within the health system. When properly integrated, evaluation contributes to continuous quality improvement, evidence-based policymaking, and greater accountability.

Notably, while the WHO Evaluation Framework for Mental Health Policy and Plans does not explicitly prioritize the role of pharmacists or access to medicines, it allows for partial integration of these components through evaluation of structural and process indicators. This includes assessing the availability of essential psychotropic medications and the involvement of trained personnel, which may include pharmacists. However, to comprehensively evaluate the pharmaceutical

dimension, such as the role of pharmacists in patient care, medication adherence, and supply chain reliability, it is advisable to supplement the WHO framework with the Donabedian model, process evaluation, and mixed-methods approaches.

The evaluation of mental health policies and programs requires a blend of conceptual models, methodological rigor, and contextual sensitivity. Applying diverse and flexible evaluation tools ensures that mental health interventions can be systematically improved, scaled, and sustained across diverse settings.

## **Conclusion to Chapter I**

Within this chapter, the key conceptual and methodological foundations necessary for the evaluation of mental health policies and programs were examined. The definition and classification of mental health and mental disorders were clarified in accordance with international standards (DSM-5, ICD-11), and their integration into the public health context was substantiated.

A review of essential components of effective mental health policy was conducted. It was determined that such policies must be based on strategic vision, multisectoral coordination, sufficient financial and human resources, integration into primary health care, and compliance with human rights principles. The WHO service pyramid was analyzed as a structural model for organizing levels of mental health care, from community-based services to specialized interventions.

Furthermore, various models and methodological approaches for policy evaluation were identified and systematized. In particular, the relevance of the logic model, Donabedian framework, process and outcome evaluation, and mixed-methods research was justified. The WHO Evaluation Framework and Module 3 were highlighted as key tools enabling comprehensive, participatory assessments of policy performance. It was also established that while these frameworks do not explicitly address the pharmaceutical dimension, they permit the inclusion of indicators related to medicine availability and pharmacist involvement when complemented with other models.

## **CHAPTER II.**

### **STUDY ON INTERNATIONAL EXPERIENCE IN MENTAL HEALTH POLICY AND PROGRAM**

#### **2.1 Generalize current trends and strategic priorities in mental health policy**

Over the past two decades, mental health has gained recognition as a global public health priority, spurred by growing evidence on the burden of mental disorders and the societal cost of inaction. International organizations such as the WHO, the Organisation for Economic Co-operation and Development (OECD), and the World Bank have emphasized the need for comprehensive, human rights-based, and sustainable mental health policies. These are closely linked to the Sustainable Development Goals (in particular SDG 3.4), which include targets for reducing mortality from non-communicable diseases and promoting mental well-being [35].

Modern mental health policies increasingly promote integration of mental health care into universal health coverage and primary care systems. According to the WHO's Comprehensive Mental Health Action Plan 2013–2030, the key strategic areas for national policy development include deinstitutionalization, community-based care, multisectoral collaboration, mental health promotion and prevention, and investment in the mental health workforce [6]. These principles are echoed in more recent frameworks, such as the WHO World Mental Health Report 2022 [46] and the Framework for Action on Mental Health 2021–2025 developed for the European region [10].

One of the most prominent global shifts has been the movement away from large psychiatric institutions and towards community-based models that are better integrated with social, educational, and employment services. In the WHO European Region, more than 80% of countries now report having national community mental health policies, although their implementation remains uneven [10]. The global

emphasis is on ensuring that mental health services are person-centered, culturally sensitive, and accessible across the life course.

An equally important trend is the increasing use of digital technologies to expand access and improve efficiency of mental health care. Telepsychiatry, mobile apps, and online counselling platforms are now being adopted across countries of all income levels, though evidence on their long-term effectiveness and equitable reach remains limited [15, 46].

Promotion and prevention are becoming core elements of national strategies. There is a growing focus on mental health in schools, workplaces, and urban planning, with interventions designed to build psychological resilience and reduce risk factors from early childhood [8, 48]. Moreover, the importance of addressing social determinants, such as poverty, education, housing, and discrimination, is now widely recognized as essential for achieving mental health equity [12].

International guidance emphasizes the need for measurable goals, strong governance, and routine evaluation of policy implementation. Monitoring systems and outcome indicators are often weak in low- and middle-income settings, but high-income countries are also facing challenges in aligning their investments with evidence-based planning [20, 29].

These strategic elements are summarized in Table 2.1 based on global WHO and OECD guidance.

The strategic vision and global policy directions are also summarized in Figure 2.1, which illustrates the four main objectives of the WHO Comprehensive Mental Health Action Plan 2013–2030: effective governance, integrated care, promotion and prevention, and information systems, all underpinned by principles such as equity and human rights. This diagram serves as a foundational reference for countries designing national strategies, as it encapsulates a balanced approach to leadership, service delivery, monitoring, and equity.

### Core Strategic Pillars in Global Mental Health Frameworks

Strategic Area	Description
Universal Health Coverage	Integration of mental health into national health strategies and financing
Community-based Services	Decentralized care integrated into local health and social systems
Mental Health Promotion	Focus on early intervention, schools, workplaces, public awareness
Multisectoral Action	Collaboration across education, employment, housing, and justice sectors
Digital Innovation	Use of telepsychiatry, mental health apps, and online therapy
Human Rights & Anti-Stigma	Rights-based approaches, user empowerment, stigma-reduction campaigns

The implementation of these principles varies widely across countries. As shown in Figure 2.2, many countries still do not have a stand-alone mental health policy or plan in place. These visual highlights stark geographic disparities: while most European and high-income countries report the presence of such policies, large parts of Africa, the Middle East, and Southeast Asia still lack comprehensive plans, indicating both a lack of prioritization and implementation capacity.

While the existence of national plans is a prerequisite, population-level epidemiological data offer further justification for urgent action. According to WHO estimates, the global prevalence of mental health disorders, including depression, anxiety, bipolar disorder, and schizophrenia, remains high across all income levels. Figure 2.3 demonstrates that in numerous countries, especially in Europe and the Americas, over 15% of the population live with mental or substance use disorders. This highlights the scale of the challenge and the need for population-wide coverage and early intervention policies.

1. To strengthen effective leadership and governance for mental health	1.1: 80% of countries will have developed or updated their policy or plan for mental health in line with international and regional human rights instruments, by 2030
	1.2: 80% of countries will have developed or updated their law for mental health in line with international and regional human rights instruments, by 2030
2. To provide comprehensive, integrated and responsive mental health and social care services in community-based settings	2.1: Service coverage for mental health conditions will have increased at least by half, by 2030.
	2.2: 80% of countries will have doubled number of community-based mental health facilities, by 2030.
	2.3: 80% of countries will have integrated mental health into primary health care, by 2030.
3. To implement strategies for promotion and prevention in mental health	3.1: 80% of countries will have at least two functioning national, multisectoral mental health promotion and prevention programmes, by 2030.
	3.2: The rate of suicide will be reduced by one-third, by 2030.
	3.3: 80% of countries will have a system in place for mental health and psychosocial preparedness for emergencies and/or disasters, by 2030.
4. To strengthen information systems, evidence and research for mental health	4.1: 80% of countries will be routinely collecting and reporting at least a core set of mental health indicators every two years through their national health and social information systems, by 2030
	4.2: The output of global research on mental health doubles, by 2030.

Fig. 2.1. Strategic Objectives and Principles of the WHO Comprehensive Mental Health Action Plan 2013–2030 [6]

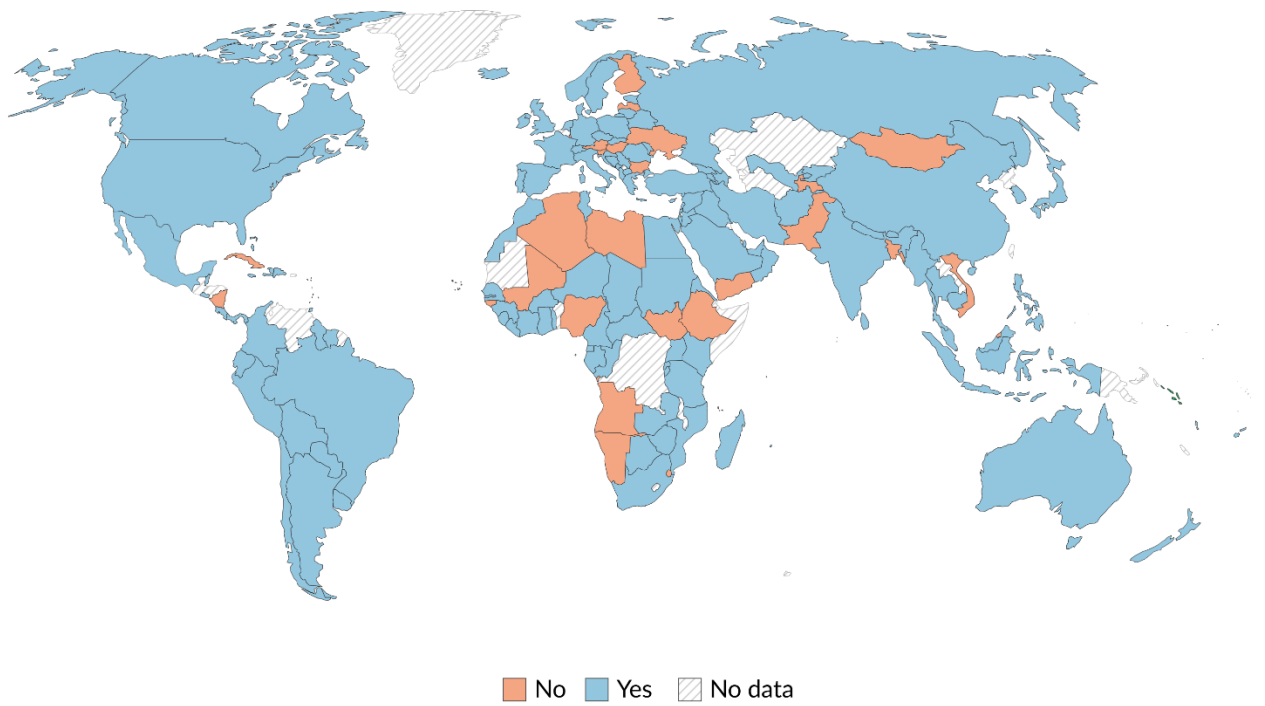


Fig. 2.2. Countries with a Stand-Alone Policy or Plan for Mental Health, 2017

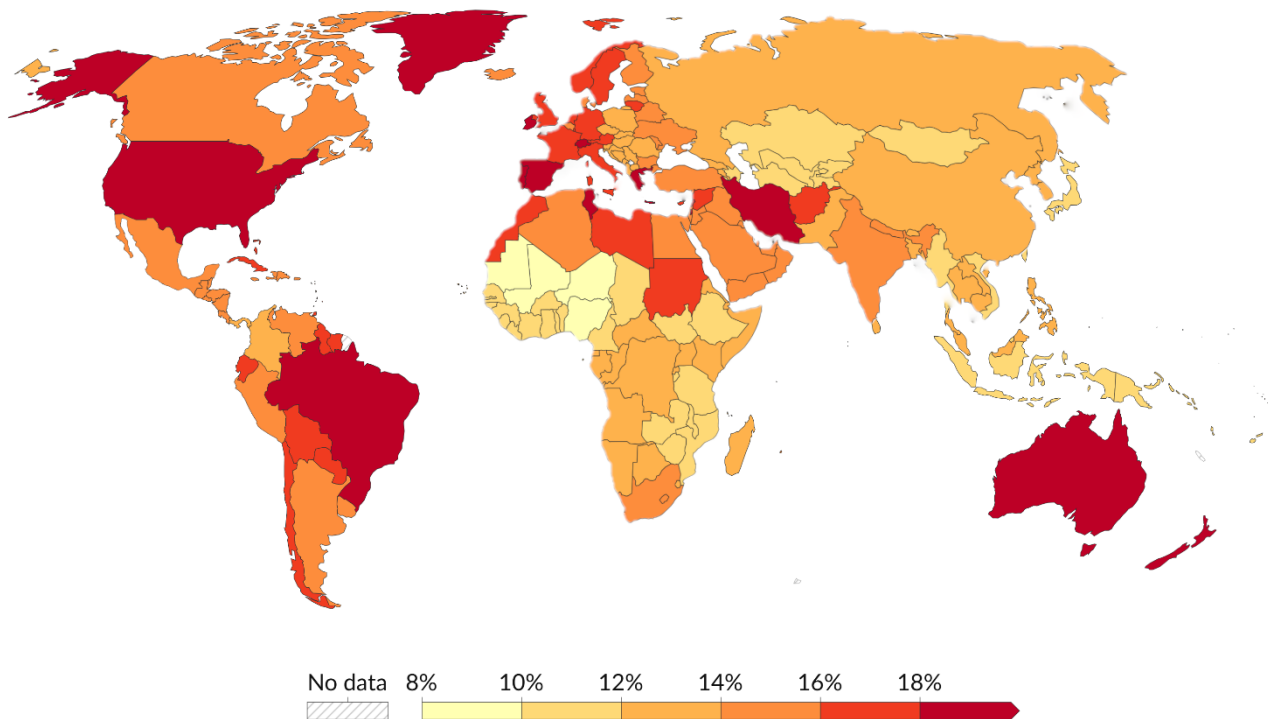


Fig. 2.3. Share of Population with Mental Health Disorders, 2021

Gender disparities are also evident. As shown in Figure 2.4, females consistently report higher rates of mental health disorders than males across all world

regions. The difference is most pronounced in anxiety and depressive disorders, suggesting that mental health policies should include tailored gender-sensitive prevention and treatment services to address specific needs of women and girls.

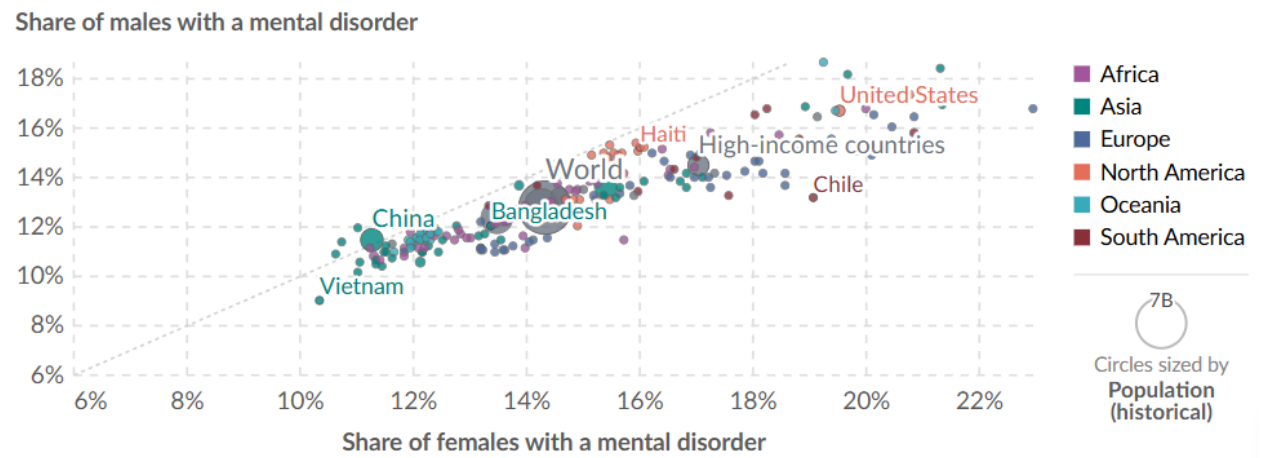


Fig. 2.4. Prevalence of Mental Health Disorders in Males vs. Females, 2021

However, accurate policy planning depends on data availability and quality. As depicted in Figure 2.5, there are significant gaps in mental health data reporting systems, especially in Sub-Saharan Africa and parts of the Middle East. Fewer than half of WHO member states had submitted recent reports on mental health indicators, making it difficult to monitor progress or allocate resources effectively. This lack of transparency and data infrastructure undermines efforts to improve mental health governance.

This global variation highlights not only the burden of mental health needs but also the systemic challenges in planning, monitoring, and evaluating mental health systems. A unified framework exists, but its implementation remains incomplete.

These general global trends provide a critical foundation for understanding how specific countries approach mental health governance. The following section will explore in greater depth how high-income countries have adopted and adapted these priorities within their national mental health policies and strategies.



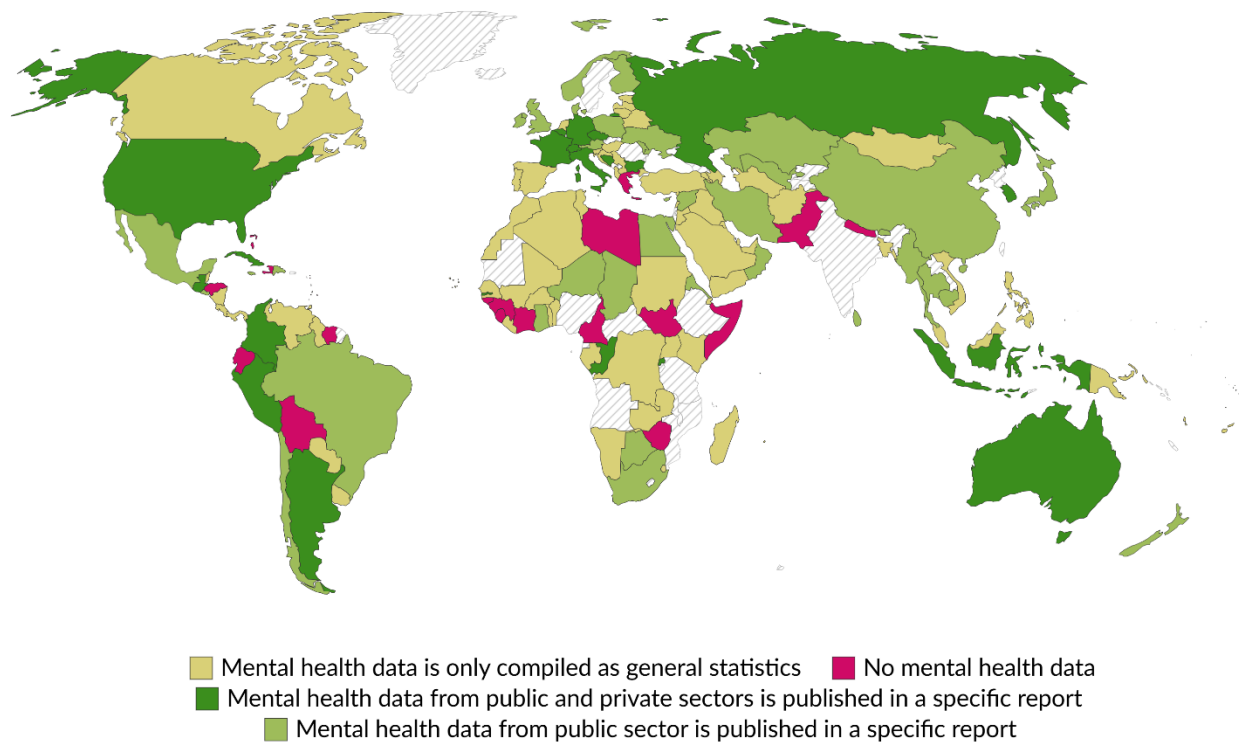


Fig. 2.5. Countries That Have Reported Recent Mental Health Data, 2020

## 2.2 Analysis of mental health policies and strategies in high-income countries

High-income countries have taken a leading role in formulating and implementing comprehensive mental health policies. These strategies reflect decades of accumulated research, institutional reforms, and evolving public awareness. Despite differences in health system organization, many of these countries share common policy priorities: the integration of mental health into primary care, decentralization of services, emphasis on prevention and promotion, digital innovation, and robust legal protections for individuals with mental disorders.

The United Kingdom has been a pioneer in adopting cross-sectoral and outcome-oriented mental health policies. The "No Health Without Mental Health" strategy laid the foundation for integrating mental health across education, employment, and justice systems. The National Health Service (NHS) Long Term Plan (2019) further expanded community-based services, increased funding for child and adolescent mental health services, and introduced digital mental health support.

A distinctive feature of the UK system is its accountability framework: annual benchmarking and public reporting through NHS England ensure transparency and continuous improvement [33].

Canada's federal structure shapes a unique mental health governance model. The Mental Health Strategy for Canada (2012) focuses on six strategic directions, including promotion and prevention, recovery-oriented services, and reducing disparities. Provinces have autonomy in service delivery but collaborate through pan-Canadian initiatives coordinated by the Mental Health Commission of Canada. Special attention is given to marginalized populations, particularly Indigenous communities, through targeted funding and culturally sensitive care models [6].

Australia's approach emphasizes shared responsibility between federal and state governments. The National Mental Health Strategy, initiated in 1992 and regularly updated, supports stepped care models, mental health promotion, and e-mental health initiatives. Medicare funding ensures access to general practitioners and psychologists, while programs like "Headspace" provide youth-friendly services across the country. Australia also operates one of the most advanced national mental health reporting systems [6].

Nordic countries, such as Norway and Sweden, incorporate mental health within universal welfare frameworks. Norway's strategy combines community mental health centers with strong links to social services, housing, and employment support. Policies in these countries are characterized by cross-ministerial coordination and a rights-based ethos. Suicide prevention, early childhood support, and anti-stigma campaigns are systematically integrated into public health policy [6].

Despite these advancements, high-income countries face persistent challenges. Service fragmentation, workforce shortages, and unequal access in rural or socioeconomically disadvantaged areas remain significant barriers. Moreover, rising demand due to population aging and post-pandemic mental health burdens requires continuous adaptation of service models and financing mechanisms.

The United States also represents a distinctive case among high-income countries. Its mental health system is shaped by a combination of federal legislation,

private insurance, and state-level service provision. Major policy frameworks include the Mental Health Parity and Addiction Equity Act (2008), the Affordable Care Act (2010), and the National Strategy for Suicide Prevention. While community mental health centers are present, access often depends on insurance coverage. Federal initiatives such as SAMHSA's Certified Community Behavioral Health Clinics (CCBHCs) and the expansion of telehealth aim to address fragmentation and improve continuity of care. However, disparities remain pronounced, particularly for uninsured individuals, racial minorities, and rural populations, highlighting the need for continued reforms in financing, workforce capacity, and equity-driven policy [6].

Table 2.2 summarizes the key policy components across selected high-income countries, highlighting both convergence and context-specific adaptations.

Table 2.2

Key components of National mental health policies in High-income countries				
Country	Core Policy Framework	Community-Based Services	Digital Tools	Equity Focus
United Kingdom	NHS Long Term Plan; cross-sector strategy	Strong	Yes	Youth, ethnic minorities
Canada	Mental Health Strategy; federal-provincial	Moderate	Yes	Indigenous populations
Australia	National Mental Health Strategy	Advanced	Strong	Youth, rural populations
United States	Parity Act, ACA, SAMHSA programs	Fragmented by state	Strong	Uninsured, racial minorities
Norway	National Action Plan for Mental Health	Integrated with welfare	Moderate	Rural, migrants

Overall, mental health policy in high-income countries reflects a mature and evolving agenda. Strong governance, reliable funding, and progressive public attitudes contribute to a generally favorable environment for policy implementation. These examples offer important insights and benchmarks for countries at different stages of mental health system development.

### **2.3 Analysis of mental health policies and strategies in middle-income and low-income countries**

Middle-income and low-income countries (MICs and LICs) face fundamentally different challenges in developing and implementing mental health policies compared to high-income contexts. Limited financial resources, workforce shortages, stigma, weak health systems, and competing public health priorities often constrain system-wide reforms. Nevertheless, in recent years, many MICs and LICs have demonstrated commitment to reform by developing national strategies, participating in international initiatives, and piloting context-adapted interventions.

In many LICs, mental health care remains institutional, centralized in capital cities, or even absent from public services altogether. The lack of trained professionals, often fewer than 1 psychiatrist per 100,000 population, is one of the most acute barriers. To address this, the WHO's Mental Health Gap Action Programme has supported the integration of mental health services into primary care using a task-sharing approach [27]. the integration of mental health services into primary care using a task-sharing approach. Under this model, general practitioners, nurses, and community health workers are trained to detect and manage common mental health conditions. Countries such as Ethiopia, Uganda, Liberia, and Nepal have adopted mhGAP protocols at scale, although retention of trained personnel and supervision remain ongoing challenges.

Middle-income countries have made more substantial advances, although with significant variation between regions. In Latin America, Brazil's unified health system (SUS) and psychosocial care network (RAPS) have become global

references for deinstitutionalized and community-based care. The model is built on multiprofessional teams, mobile units, and service user inclusion. However, political instability and fluctuating funding threaten program continuity. In India, the National Mental Health Programme (NMHP) supports district-level mental health services, but implementation varies by state. The launch of telepsychiatry services and digital mental health platforms, particularly during the COVID-19 pandemic, marked a turning point in reaching rural populations. In Morocco, the national strategy (2012) emphasizes mental health infrastructure development, human resource training, and integration with general hospitals. Between 2016 and 2021, Morocco expanded the number of psychiatric units in regional hospitals, although mental health professionals remain heavily concentrated in urban areas.

One recurring pattern across LICs and MICs is the limited availability and affordability of essential psychotropic medicines. The WHO Model List of Essential Medicines includes key antidepressants, antipsychotics, and mood stabilizers, yet procurement and consistent supply remain problematic in many countries [2]. key antidepressants, antipsychotics, and mood stabilizers, yet procurement and consistent supply remain problematic in many countries. This is compounded by out-of-pocket payments, lack of insurance coverage, and weak supply chain logistics. For instance, studies show that the availability of fluoxetine or risperidone in public facilities may be as low as 10–20% in parts of Sub-Saharan Africa and South Asia.

Legal and human rights protections for people with mental disorders are often underdeveloped. Stigma and discrimination are entrenched in many societies, leading to social exclusion, poor help-seeking behavior, and institutional abuses. Some countries have adopted new mental health legislation aligned with the UN Convention on the Rights of Persons with Disabilities (CRPD), but enforcement remains inconsistent [31]. Awareness campaigns, peer-led support networks, and school-based interventions are emerging but still marginal.

The role of international actors, including WHO, UNICEF, the World Bank, and regional development banks, remains essential. These organizations provide

both technical and financial support through targeted programs, such as the World Bank's Mental Health Development Initiative and WHO's special initiative on mental health in Africa. Regional frameworks such as the WHO African Region Implementation Framework (2022) [11] and SEARO Action Plan (2023–2030) [29] provide templates for priority setting, intersectoral collaboration, and monitoring.

Nevertheless, many interventions remain pilot-based and donor-dependent, with limited government ownership or long-term funding. Integration into broader health and social systems is often weak, with mental health separated from maternal care, NCD prevention, or education systems. To build resilience, countries need to institutionalize mental health in their national budgets, policy agendas, and human resource planning.

Despite growing momentum, many low-income countries and fragile states, including South Sudan, the Central African Republic, Chad, and parts of Yemen, lack any formal national mental health strategy or dedicated budget lines for mental health services. In some of these contexts, mental health is absent from the primary care system, and services are often delivered only through humanitarian missions or not at all. In such settings, the absence of policy translates into neglect, institutional violations of rights, and extreme treatment gaps.

Several persistent problems undermine progress across both MICs and LICs. These include chronic underfunding, especially where mental health spending accounts for less than 1% of total health expenditure; weak governance structures with unclear lines of responsibility; minimal public health data for planning; lack of standardized training curricula; and limited community awareness or empowerment. The consequences are visible in high untreated prevalence, overreliance on inpatient care, and weak service continuity.

In summary, the experience of MICs and LICs reflects both innovation and fragility. Scalable, low-cost solutions like task-sharing and community-based care are promising, but require sustained investment, stronger governance, and cultural adaptation. These findings underscore the diversity of global experiences and set the stage for the comparative analysis that follows in the next section.

## **2.4 Comparative analysis of national health care policy effectiveness across countries**

Building on the prior analysis of high-income, middle-income, and low-income countries, this section provides a comparative assessment of the effectiveness of mental health policy implementation. Effectiveness is viewed through a multidimensional lens, including policy adoption, service coverage, financial protection, equity, human rights integration, and monitoring capacity. While structural and contextual differences matter, certain trends allow for cross-country insights.

High-income countries generally demonstrate more coherent policy architectures, stable funding mechanisms, and extensive service networks. Mental health is often embedded in primary care, protected by law, and supported by national monitoring systems. Yet, even in these countries, challenges persist: service fragmentation, insufficient community support, and rising demand linked to social isolation and youth mental health issues. For instance, the United Kingdom and Australia have national frameworks with explicit performance indicators, yet gaps in access and rural equity remain.

In contrast, many middle-income countries have made formal policy strides but struggle with implementation. India and Morocco, for example, have comprehensive national strategies, yet face challenges in equitable access, workforce shortages, and intersectoral coordination. Brazil's RAPS network provides a positive model for community-based services, but is vulnerable to political and fiscal instability. Financial protection mechanisms, such as public insurance for psychotropic drugs or therapy, are still limited in most MICs.

Low-income countries, particularly in Sub-Saharan Africa and conflict-affected regions, are still in early stages of mental health system development. Many rely on mhGAP-supported programs and donor-funded pilots, which limits sustainability and scalability. Basic mental health indicators, such as number of outpatient visits, availability of essential medicines, or patient satisfaction, are often

unavailable or not systematically collected. Even where national strategies exist, they are frequently underfunded or not integrated into health sector planning.

One important aspect of comparative effectiveness is the degree to which national mental health policies incorporate and uphold key human rights standards. According to the WHO Mental Health Atlas 2020, high- and upper-middle-income countries tend to show near-universal compliance with principles such as promoting community-based care, ensuring service user participation in decision-making, and adopting recovery-oriented approaches. In contrast, lower-income countries often lag in enabling independent living and participatory processes (Figure 2.6) [27].

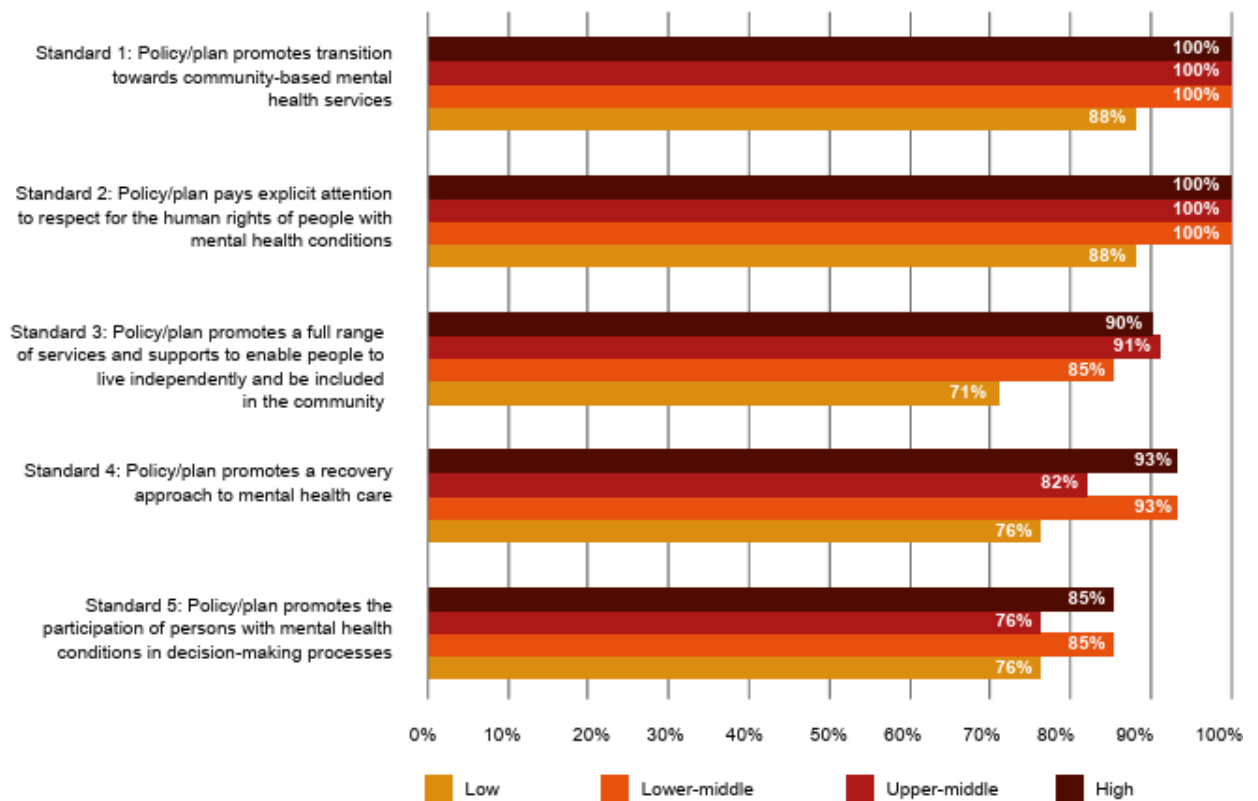


Fig. 2.6. Compliance of Mental Health Policies with Human Rights Standards, by Country Income Group [27]

Table 2.3 provides a comparative overview of mental health policy strengths, challenges, and illustrative country examples across different income groups.



**Comparative Matrix of Mental Health Policy Effectiveness**

<b>Country Type</b>	<b>Policy Strengths</b>	<b>Challenges</b>	<b>Examples</b>
<b>High-Income Countries</b>	<ul style="list-style-type: none"> <li>• Comprehensive national mental health strategies with long-term goals and regular updates.</li> <li>• Integration of mental health into primary health care, reducing stigma and improving early access.</li> <li>• Strong legal frameworks protecting patient rights and promoting deinstitutionalization.</li> <li>• Significant investment in research, data systems, and quality monitoring.</li> </ul>	<ul style="list-style-type: none"> <li>• Aging mental health workforce and shortages in rural/underserved areas.</li> <li>• Persistent social stigma, especially for severe mental illnesses.</li> <li>• Increasing mental health burden due to social isolation, aging population, and post-pandemic effects.</li> <li>• Rising healthcare costs limit program sustainability.</li> </ul>	<p>UK – National Mental Health Strategy, Canada – Wellness Together Canada, Australia – Better Access Initiative</p>
<b>Middle-Income Countries</b>	<ul style="list-style-type: none"> <li>• Growing political recognition of mental health as a public health issue.</li> <li>• Implementation of pilot integration models in PHC and community settings.</li> <li>• Support from global partners (e.g., WHO mhGAP) for scaling up services.</li> <li>• Expanding training of non-specialist health workers to deliver basic mental health care.</li> </ul>	<ul style="list-style-type: none"> <li>• Limited national budgets for sustained implementation.</li> <li>• Lack of mental health professionals and training institutions.</li> <li>• Fragmented service delivery and lack of coordination between ministries.</li> <li>• Urban-rural disparities in access to services.</li> </ul>	<p>Brazil – Psychosocial Care Centers (CAPS), South Africa – Mental Health Care Act, Ukraine – Reform of psychiatric services with community focus</p>
<b>Low-Income Countries</b>	<ul style="list-style-type: none"> <li>• Inclusion of mental health in primary care through task-sharing.</li> <li>• Engagement of NGOs and faith-based organizations in mental health awareness and service provision</li> <li>• Development of essential medication lists including psychotropics.</li> <li>• Use of mobile technologies for mental health education and teleconsultation.</li> </ul>	<ul style="list-style-type: none"> <li>• Absence of national mental health legislation or outdated laws.</li> <li>• Very low mental health expenditure (often &lt;1% of health budget).</li> <li>• Lack of epidemiological data to inform planning.</li> <li>• High treatment gap (&gt;75%) due to weak health infrastructure and stigma.</li> </ul>	<p>Nepal – Community-based mental health care, Ethiopia – National Mental Health Strategy integrated into PHC, Liberia – Post-conflict psychosocial programs</p>

High-income countries typically exhibit structured and regularly updated mental health strategies, with strong legal protections and substantial investment. However, they face challenges such as aging health workforce, persistent stigma, and sustainability issues due to rising healthcare costs. Examples include the UK, Canada, and Australia, which demonstrate integrated care models and progressive policy frameworks.

Middle-income countries show increasing political attention to mental health, often supported by global initiatives like WHO's mhGAP. Brazil, South Africa, and Ukraine illustrate both progress and persistent barriers in implementation. Low-income countries, meanwhile, rely heavily on NGOs and task-shifting approaches, with limited government capacity. Examples include Nepal, Ethiopia, and Liberia, where community-based models and post-conflict programs have shown potential despite high treatment gaps and systemic weaknesses.

This comparison highlights the importance of context-specific strategies, sustainable financing, and coordinated multisectoral efforts to strengthen mental health systems globally. This analysis reinforces the need for context-sensitive, scalable mental health policy models that are both inclusive and sustainable, especially as global mental health continues to gain political attention in the wake of the COVID-19 pandemic and growing burden of mental illness worldwide.

A major structural difference across country groups is the amount of government expenditure on mental health per capita. As shown by WHO data, high-income countries allocate over \$50 per person annually, compared to less than \$0.10 in low-income countries. This stark disparity impacts service availability, workforce recruitment, access to medicines, and implementation of national plans (Fig. 2.7) [27].

Another dimension of inequity is the financial burden borne by patients. In many low-income countries, a significant proportion of individuals must pay for mental health services out of pocket, whereas in high-income countries, public or insurance-based coverage is more prevalent. This difference in financial protection reinforces access gaps and vulnerability in resource-limited settings (Figure 2.8) [27].

	Median government expenditure on mental health per capita (US\$)			Mental health expenditure as percentage of GGHE-D* per capita
	2014 (N=40)	2017 (N=80)	2020 (N=67)	2020 (N=67)
<b>Global</b>	<b>**</b>	<b>2.50</b>	<b>7.49</b>	<b>2.13%</b>
<b>WHO region</b>				
<b>AFR</b>	<b>**</b>	0.10 (n=10)	0.46 (n=8)	2.10%
<b>AMR</b>	<b>**</b>	11.80 (n=18)	7.81 (n=14)	1.80%
<b>EMR</b>	<b>**</b>	2.00 (n=4)	12.08 (n=4)	1.30%
<b>EUR</b>	<b>**</b>	21.70 (n=31)	46.49 (n=22)	3.60%
<b>SEAR</b>	<b>**</b>	0.10 (n=5)	0.10 (n=7)	0.50%
<b>WPR</b>	<b>**</b>	1.10 (n=12)	5.81 (n=12)	1.60%
<b>World Bank income group</b>				
<b>Low</b>	<b>***</b>	0.02 (n=11)	0.08 (n=2)	1.05%
<b>Lower-middle</b>	1.53 (n=7)	1.10 (n=19)	0.37 (n=13)	1.10%
<b>Upper-middle</b>	1.96 (n=16)	2.62 (n=21)	3.29 (n=23)	1.60%
<b>High</b>	58.73 (n=17)	80.24 (n=29)	52.73 (n=29)	3.80%

Fig. 2.7. Median Government Expenditure on Mental Health per Capita, by Income Group [27]

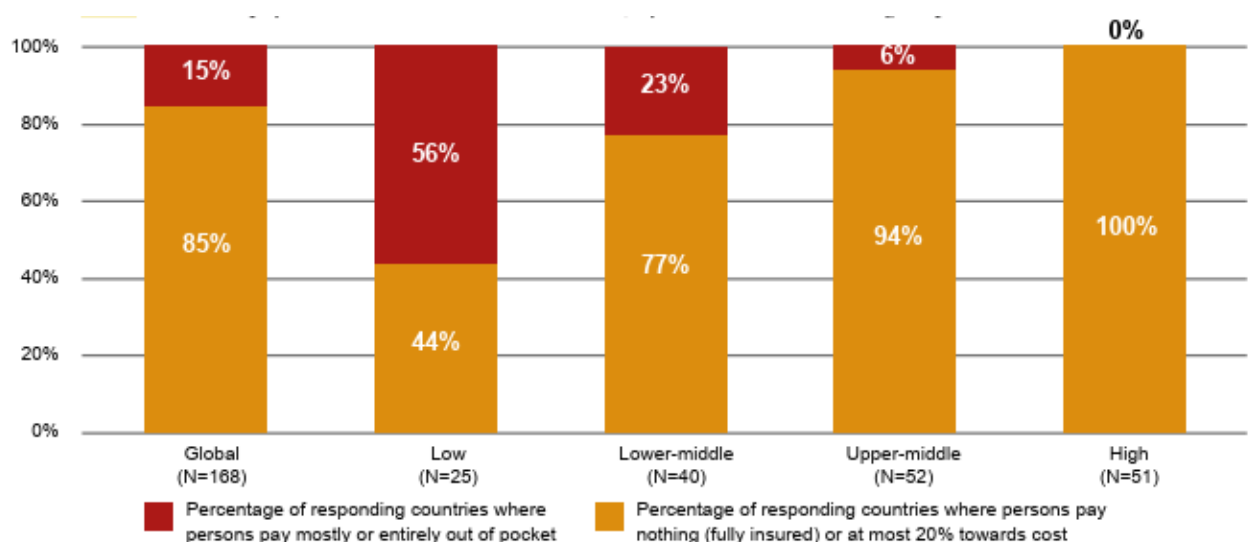


Fig. 2.8. Source of Payment for Mental Health Services, by Income Group [27]

Taken together, these comparisons highlight that effective mental health governance requires more than the formal adoption of strategies. Strong legal

frameworks, reliable funding, community-centered care models, and inclusive participation mechanisms all play a crucial role in determining real-world outcomes. Moreover, without adequate financial protection and monitoring systems, even the best-formulated policies may fail to reach those most in need.

## **Conclusion to Chapter II**

1. Based on our comparative cross-country analysis, we have summarized the key patterns and models of mental health policy implementation in countries with different income levels and health system maturity.
2. Although most countries have adopted national mental health strategies, their actual implementation depends greatly on political commitment, financial capacity, workforce availability, and integration with general health systems.
3. High-income countries typically exhibit comprehensive, well-funded mental health systems supported by legal frameworks and monitoring, but they still face persistent gaps in access, especially in rural and underserved communities.
4. Middle-income countries demonstrate a mix of progressive initiatives (e.g., Brazil's RAPS network, India's telepsychiatry platforms) and persistent barriers such as underfunding, regional disparities, and inconsistent service coverage.
5. Low-income countries face critical deficits in financing, human resources, legal infrastructure, and are heavily dependent on international aid. Policies often exist on paper but are not implemented in practice.
6. Across all contexts, policy effectiveness is determined by: sustainable financing, rights-based legislation, integration into primary care, intersectoral collaboration, and participation of service users.
7. The comparison reveals both transferable practices and structural constraints, underscoring the need for culturally sensitive and context-specific policy design rather than replication.

### **CHAPTER III.**

## **ANALYSIS OF THE PHARMACEUTICAL COMPONENT IN NATIONAL MENTAL HEALTH PROGRAMS**

Pharmaceutical support is an essential element of effective mental health systems. It encompasses a wide range of structural, clinical, and policy mechanisms that ensure access to and rational use of medications for people living with mental health conditions. Key aspects of the pharmaceutical component include the inclusion of psychotropic medicines in national essential medicines lists, the availability and affordability of these medications in public and private sectors, procurement and supply chain management, national clinical guidelines for pharmacological treatment, prescriber training, pharmacovigilance systems, and the evolving role of pharmacists in mental health care.

### **3.1 Study on global guidelines and practices about using medication as a part of mental health treatment**

Pharmacological treatment represents one of the central components in managing mental health conditions, especially for moderate to severe disorders. Globally, the use of psychotropic medicines is shaped by evidence-based clinical guidelines, national formularies, regulatory policies, and health system infrastructure. This section provides an overview of international best practices and guidance documents that define standards for pharmacotherapy in mental health care.

At the international level, the World Health Organization has developed key reference tools, including the Mental Health Gap Action Programme Intervention Guide, which outlines first-line treatment protocols for depression, psychosis, epilepsy, and substance use disorders in non-specialized settings. The mhGAP approach supports task-sharing by enabling general practitioners and non-physician

health workers to administer and monitor medications based on structured clinical algorithms [27].

In addition, the WHO Model List of Essential Medicines identifies a core set of psychotropic medications, including antidepressants (e.g., fluoxetine, amitriptyline), antipsychotics (e.g., risperidone, haloperidol), mood stabilizers (e.g., lithium), and anxiolytics (e.g., diazepam), that should be available in every functioning health system [2]. These medicines are recommended based on their safety, efficacy, and cost-effectiveness, and they form the backbone of most national formularies.

In high-income countries, national clinical guidelines are typically developed or endorsed by professional psychiatric associations or governmental health agencies. Examples include the UK's National Institute for Health and Care Excellence (NICE) guidelines, Canada's CANMAT guidelines, and the American Psychological Association (APA) Practice Guidelines in the United States. These documents provide comprehensive protocols for drug selection, dosage, duration, side effect management, and treatment-resistant cases. Moreover, pharmacotherapy is often embedded within stepped care models, in which medication is combined with psychological or social interventions depending on severity and patient preference.

In middle-income countries, implementation of pharmacological standards often depends on local resources, availability of medications, and prescriber training. Brazil, for instance, includes essential psychotropic medicines in its national list and provides them through the Unified Health System (SUS), while India's District Mental Health Programme (DMHP) supplies basic psychotropics to community health centers. Morocco has adopted the WHO mhGAP recommendations and expanded psychotropic drug access through general hospitals and regional psychiatric units.

Despite the global spread of pharmacotherapy, significant inequities persist in access, affordability, and rational use. WHO data show that in many LICs, key psychotropics are unavailable in more than half of public facilities, and irrational

prescribing, such as polypharmacy or overuse of sedatives, remains a serious concern. Barriers include weak procurement systems, lack of provider training, and stigma associated with psychiatric medications.

In addition to guideline-recommended pharmacotherapy, many countries also see widespread use of over-the-counter (OTC) sedative products, such as herbal remedies (e.g., valerian, passionflower), light antihistamines (e.g., diphenhydramine), or combinations thereof, which are not typically included in clinical protocols but are used for self-management of anxiety, stress, and sleep disturbances. These products often fall outside formal pharmacovigilance systems and may influence help-seeking behavior or mask symptoms that require specialist intervention.

Furthermore, based on the WHO Model List of Essential Medicines and cross-country reviews, a group of core psychotropic agents can be identified for structured comparison across countries. These include:

- Antidepressants: fluoxetine, amitriptyline
- Antipsychotics: haloperidol, risperidone, chlorpromazine
- Mood stabilizers/antiepileptics: lithium carbonate, valproic acid, carbamazepine
- Anxiolytics: diazepam, lorazepam
- Others (used selectively): clozapine, olanzapine

These medicines will be used as tracer agents in the next subsection to analyze their inclusion in national essential medicines lists, availability in public health systems, and implications for treatment coverage. A summary of these medicines, their inclusion in global guidelines, and their regulatory access status is presented in Table 3.1. It reflects their classification, WHO Essential Medicines List (EML) status, relevance in widely adopted clinical guidelines such as mhGAP and NICE, and the general pattern of regulatory access. This typology offers a baseline for assessing national-level availability and alignment with global standards.

Table 3.1

**Overview of Core mental health medications Recommended in Global  
Guidelines**

Pharm. Group	Examples (INN)	ATC- code	WHO EML	Clinical Guidelines		
				mhGAP	APA	NICE (BNF)
Anti- depres- sants	Fluoxetine	N06AB03	+	+	+	+
	Amitriptyline	N06AA09	+	+	+	+
	Sertraline	N06AB06	–	+	+	+
	Escitalopram	N06AB10	–	+	+	+(1)
	Paroxetine	N06AB05	–	+	+	+
	Fluvoxamine	N06AB08	–	+	+	–
	Venlafaxine	N06AX16	–	+	+	+
Anti- psycho- tics	Haloperidol	N05AD01	+	+	–	+
	Risperidone	N05AX08	+	+	+	+
	Chlorpromazine	N05AA01	+	+	–	+
	Olanzapine	N05AH03	–	+	+	+
	Clozapine	N05AH02	+	+	–	+
	Aripiprazole	N05AX12	–	+	+	+
	Quetiapine	N05AH04	–	+	+	+
Mood stabili- zers	Lithium	N05AN01	+	+	+	+
	Valproic acid	N03AG01	+	+	–	+
	Lamotrigine	N03AX09	+	+	+	+
	Carbamazepine	N03AF01	+	+	+	+
Anxio- lytics	Diazepam	N05BA01	+	+	+	+(1)
	Lorazepam	N05BA06	+	–	+	+
Other	Methylphenidate	N06BA04	–	+	+	+(1)
Sedativ es	Herbal (Valeriana)	N05CM09	–	–	–	–
	Diphenhydramine	R06AA02	–	–	+	–
	Doxylamine	R06AA09	–	–	–	+
	Melatonin	N05CH01	–	–	–	+



It is also important to note that in each pharmacological group, new agents continue to be developed and evaluated through clinical research. For example, among antidepressants, medications such as vortioxetine and agomelatine have shown promise in improving cognitive symptoms and sleep regulation with fewer side effects. In the antipsychotic class, cariprazine and lurasidone are gaining wider acceptance due to better tolerability profiles and efficacy in treating negative symptoms of schizophrenia. As for mood stabilizers, newer generation anticonvulsants like lamotrigine and oxcarbazepine are being increasingly used in bipolar disorder, particularly for depressive episodes and mixed states. Although not all of these medicines are yet included in the WHO Model List, many are recommended in national clinical guidelines and are being incorporated into treatment protocols in high-resource settings. The dynamic nature of psychopharmacology underscores the importance of maintaining flexible, evidence-informed policy frameworks that can incorporate new therapeutic options where appropriate.

The international framework for medication use in mental health care is well established through WHO instruments and national adaptations. However, operationalizing these standards at scale, particularly in low-resource settings, requires not only policy alignment but also investment in supply chains, training, and service user engagement. The next subsection will explore how national programs ensure availability and accessibility of these medications.

### **3.2 Evaluation of availability and accessibility of medicines for mental health care in national programs**

The availability and accessibility of psychotropic medicines are fundamental indicators of the effectiveness and equity of national mental health programs. While the inclusion of such medicines in national essential medicines lists (NEMs) is an important policy milestone, it does not guarantee that patients will be able to access them in practice. Multiple systemic and operational barriers, ranging from

procurement inefficiencies and supply chain disruptions to affordability and stigma, can prevent medicines from reaching those in need.

This subsection analyzes how the psychotropic medicines recommended by WHO and listed in Table 3.1 are reflected in national pharmaceutical policies and practice. Specifically, it explores whether key tracer medicines, such as fluoxetine, amitriptyline, haloperidol, risperidone, lithium carbonate, diazepam, and valproic acid, are formally included in national essential lists and whether they are consistently available in public health facilities. The analysis also considers the affordability of these medicines and whether they are covered under public health insurance or require out-of-pocket payment.

Data from the WHO Global Essential Medicines Dashboard, national documents, and published research indicate wide disparities between countries and regions. In high-income countries, most essential psychotropic medicines are not only included in national lists but are also widely available through subsidized or universal health systems. In contrast, many low- and lower-middle-income countries include several of the recommended medicines in their NEMs, but public-sector availability remains limited due to low procurement volumes, irregular supply chains, or inadequate funding allocations.

For example, fluoxetine and diazepam are included in nearly all surveyed countries' NEMs; however, studies show that in Sub-Saharan Africa and South Asia, actual facility-level availability often falls below 50%. Medicines such as risperidone or valproic acid, while listed in some national formularies, are frequently missing in rural or primary care settings. In some cases, they are only stocked in tertiary psychiatric hospitals.

Affordability is another critical issue. Even when psychotropic medicines are technically available, their cost may be prohibitive for uninsured or low-income populations. WHO data show that in several countries, the average cost of a month's supply of a commonly prescribed antipsychotic or antidepressant can exceed a day's wage. This contributes to treatment discontinuation, underdosing, or substitution with less effective OTC sedatives.

This disparity is further illustrated in Figure 3.1, which presents global data on the primary sources of payment for psychotropic medicines. In low-income countries, over 70% of patients rely on out-of-pocket payment, whereas in high-income countries, nearly all receive medicines through fully insured systems or with minimal co-payments. This discrepancy reflects deeper systemic inequities in health financing and contributes to unmet treatment needs.

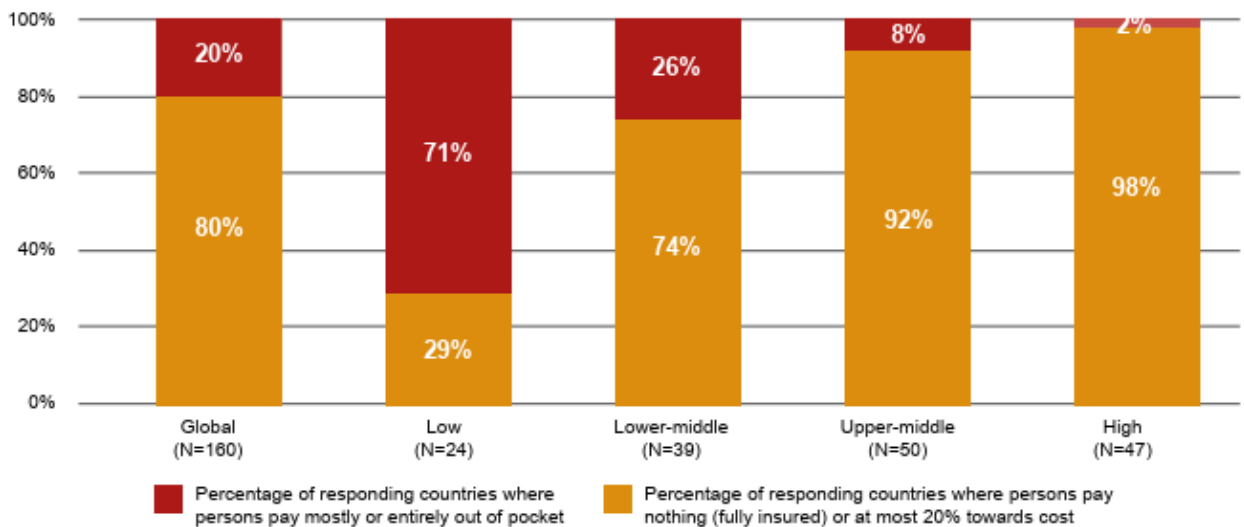


Fig. 3.1. Source of Payment for Psychotropic Medicines, by Income Group [27]

Overall, this analysis highlights the gap between policy and practice in pharmaceutical access for mental health. Cost-effectiveness data further demonstrate the disparities between medicines and their suitability in different settings. For instance, risperidone and olanzapine, while generally more expensive than first-generation antipsychotics, have shown favorable pharmacoeconomic profiles in some low- and middle-income settings. However, cost remains a limiting factor in rural or under-resourced areas. Benzodiazepines, though widely used, have been associated with high levels of unnecessary healthcare expenditures due to misuse and overprescription. In the United Kingdom alone, an estimated £38.5–43.3 million in annual costs between 2015 and 2018 were attributed to unnecessary benzodiazepine-related expenses. In the United States, long-term benzodiazepine use in adults increased annual healthcare costs by an average of US\$ 2334 per patient due to accident-related and sedative-related complications. Furthermore,

inappropriate benzodiazepine prescribing in elderly populations was linked to a reduction of 0.07 QALYs and €3470 in avoidable incremental cost.

In addition, concerns exist around the safe use of certain agents, such as valproic acid, which poses teratogenic risks. WHO recommends avoiding its use in women of childbearing potential unless no alternatives are available. Despite widespread listing of fluoxetine in NEMs, its availability at the facility level varies, and evidence on the cost-effectiveness of SSRIs for anxiety and depression remains context-dependent.

These examples underscore the importance of not only ensuring access but also promoting evidence-based, safe, and cost-effective prescribing practices.

Table 3.2 presents a comparative overview of the inclusion of selected psychotropic medicines in the national essential medicines lists (NEMs) across a range of countries representing various income groups. The selected medicines span major therapeutic categories, antidepressants, antipsychotics, mood stabilizers, and anxiolytics, recommended by the WHO and widely used in clinical practice.

As the data show, high-income countries generally list a broader spectrum of psychotropic agents, including both first- and second-generation antipsychotics (e.g., risperidone, olanzapine, aripiprazole) and newer antidepressants such as escitalopram and venlafaxine. In contrast, most low- and lower-middle-income countries list fewer medicines overall, often limited to older, lower-cost options like fluoxetine, haloperidol, and diazepam.

Notably, Morocco and the Philippines, classified as lower-middle-income countries, include some second-generation antipsychotics, but often lack newer antidepressants. Escitalopram and quetiapine remain underrepresented in many middle- and low-income contexts, likely reflecting challenges related to affordability, procurement systems, or lack of updated treatment guidelines.

Inclusion of Selected Psychotropic Medicines in National Essential Medicines Lists

Country	Income Group	Antidepressants							Antipsychotics							Mood stabilizers				Anxiolytics		Oth	Total
		Fluoxetine	Amitriptyline	Sertraline	Escitalopram	Paroxetine	Fluvoxamine	Venlafaxine	Haloperidol	Risperidone	Chlorpromazine	Olanzapine	Clozapine	Aripiprazole	Quetiapine	Lithium Carbonate	Valproic Acid	Lamotrigine	Carbamazepine	Diazepam	Lorazepam	Methylphenidate	
United Kingdom	High-income	+	+	+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	20
France	High-income	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	21
Sweden	High-income	+	+	+	+	-	-	+	-	+	-	+	+	+	+	+	+	+	+	+	-	+	16
Brazil	Upper-middle	+	+	-	-	-	-	-	+	+	+	+	+	-	+	+	+	+	+	+	-	-	13
Ukraine	Upper-middle	+	+	-	-	-	-	-	+	-	+	-	-	-	-	+	+	-	+	+	-	-	8
Algeria	Upper-middle	+	+	+	+	+	+	-	+	+	+	+	+	-	-	+	+	+	+	+	+	-	17
India	Lower-middle	+	+	+	+	+	-	-	+	+	+	+	+	-	+	+	+	-	+	+	+	-	16
Morocco	Lower-middle	+	+	+	+	-	-	-	+	-	+	+	-	-	-	+	+	-	+	+	-	-	11
Philippines	Lower-middle	+	-	+	-	-	-	-	+	+	+	+	+	-	+	+	+	-	+	+	+	+	14
Rwanda	Low-income	+	+	-	-	-	-	-	+	-	+	-	-	-	-	+	+	-	+	+	-	-	8
Mali	Low-income	-	+	-	-	-	-	-	+	+	+	-	-	-	-	-	+	-	+	+	-	-	7
Afghanistan	Low-income	+	+	-	-	-	-	-	+	-	+	-	-	-	-	-	+	-	+	+	-	-	7

In addition, concerns remain around the safe use of certain widely listed agents, such as valproic acid, which carries teratogenic risks. WHO recommends avoiding its use in women of childbearing age unless clearly justified. Lithium, while clinically effective, is listed in fewer low-income countries, likely due to the need for ongoing laboratory monitoring.

Despite the frequent inclusion of fluoxetine across all income levels, its availability at the facility level and affordability for patients may still vary significantly. Inclusion in the NEML is only a first step toward access; ensuring consistent supply, trained prescribers, and integration into clinical protocols are equally vital.

Finally, many countries continue to witness high demand for OTC sedatives and traditional remedies, such as herbal preparations or antihistamines used for anxiety or sleep disturbances. These substances, though accessible, remain largely unregulated and outside the scope of essential medicines frameworks, presenting a policy gap in mental health regulation.

Despite their apparent safety and low cost, evidence suggests that OTC sedatives are frequently used without medical supervision and may delay formal treatment. In some contexts, they are used as first-line self-management tools due to stigma or barriers to psychiatric care. However, concerns exist regarding dependence, especially with chronic use of antihistamines, and interactions with prescribed medications. Furthermore, there is limited clinical evidence supporting their long-term efficacy for anxiety or insomnia.

A 2021 European study found that up to 30% of adults had used an OTC sedative in the past year, with usage highest among older adults and women. Similar trends are observed in urban markets in Asia and Latin America. The widespread reliance on these products indicates an unmet need for accessible, stigma-free, and affordable mental health services.

Therefore, national pharmaceutical strategies should acknowledge the parallel use of OTC sedatives, promote public education about their risks and limitations,

and incorporate community pharmacists in providing appropriate guidance and referral.

Recent market analyses confirm the scale and economic relevance of this category. For example, the global market for diphenhydramine-based sleep aids alone is projected to exceed USD 1.1 billion by 2030, while the global herbal sedative market (including valerian and melatonin) is valued at over USD 5 billion as of 2024, with annual growth between 3% and 6%. In the United States, the herbal sleep aid segment is expected to reach USD 1.6 billion by 2030. Despite their widespread use, many OTC sedatives are linked to significant health and economic risks. Diphenhydramine is associated with cognitive decline, increased risk of falls, and accidental injury, especially in older adults. Valerian, though culturally accepted, has limited evidence for sustained therapeutic effect beyond mild transient anxiety. The widespread use of these agents, particularly in low- and middle-income countries, often reflects systemic barriers to accessing formal care and highlights the role of pharmacists in mitigating misuse and providing first-line support.

### **3.3 The evolving role of pharmacists in mental health policies and service delivery**

The role of pharmacists in mental health care has evolved significantly over the past two decades, transitioning from a traditional focus on medicine dispensing to a more active involvement in patient-centered care, pharmacovigilance, and public health education. This transformation is particularly important in the context of mental health services, where stigma, fragmented care, and inappropriate medication use remain persistent barriers to effective treatment.

Pharmacists now serve as accessible, front-line healthcare professionals who can support early identification of mental health problems, improve adherence to psychotropic treatment, and reduce the risks associated with polypharmacy and inappropriate prescribing. Their accessibility within communities allows them to

provide crucial support for patients with limited access to psychiatric services, especially in rural and underserved areas.

Numerous international frameworks and national mental health strategies increasingly recognize the contribution of pharmacists. WHO's mhGAP promotes the integration of pharmacists into multidisciplinary teams for managing common mental disorders, particularly in low-resource settings. Similarly, professional associations such as the International Pharmaceutical Federation (FIP) have developed guidance documents that advocate for pharmacist-led interventions in mental health care, including medication reviews, patient counselling, and relapse prevention.

Evidence from various countries supports the value of pharmacists in enhancing mental health outcomes. In Canada, pharmacists are integrated into collaborative care teams for depression and anxiety management. In the United Kingdom, pilot programs such as the Independent Prescribing for Mental Health initiative have demonstrated improved patient satisfaction and treatment continuity. Studies in Australia and the Netherlands have shown that pharmacist-led medication reviews can reduce hospitalizations and improve adherence in patients with schizophrenia and bipolar disorder.

Pharmacists also play a key role in addressing the challenges of over-the-counter sedative use, inappropriate benzodiazepine prescribing, and side effect monitoring for antipsychotic medications. By counselling patients, monitoring drug interactions, and providing psychoeducation, pharmacists help ensure safer and more rational psychotropic medicine use.

Despite these advancements, several barriers limit the full integration of pharmacists into mental health services. These include lack of specialized training, insufficient reimbursement models, limited access to patient health records, and regulatory restrictions on prescribing authority. To overcome these challenges, national policies must support interprofessional training, expand pharmacists' clinical roles, and incorporate them formally into mental health care delivery models.



Strengthening the role of pharmacists represents a cost-effective and scalable strategy to expand access to mental health services and improve treatment quality.

### **3.4 Recommendations for strengthening pharmaceutical support in mental health programs**

Based on the preceding analysis, this subsection outlines a set of practical, evidence-informed recommendations to enhance the pharmaceutical component of national mental health systems. These recommendations are aimed at policymakers, health system planners, and regulatory authorities seeking to close the gap between mental health needs and service delivery.

1. Ensure the inclusion of essential psychotropic medicines in NEMs in accordance with WHO recommendations and update them regularly to reflect current clinical evidence, including second-generation antipsychotics and modern antidepressants where feasible. In addition to inclusion, national policies should prioritize timely updates of NEMs and link them to procurement and prescribing protocols.

2. Improve procurement and supply chain systems to guarantee consistent availability of psychotropic medicines at all levels of care, especially in rural and underserved areas. This includes strengthening logistics infrastructure, enhancing transparency in tendering processes, and building local capacity in pharmaceutical forecasting and planning.

3. Expand financial protection mechanisms to reduce out-of-pocket costs for essential mental health medications through universal health coverage or targeted public funding. Social protection schemes should explicitly include mental health pharmaceuticals and reduce copayments for low-income patients.

4. Monitor and regulate the use of over-the-counter sedatives and benzodiazepines, including through pharmacist oversight, to reduce inappropriate use and related health risks. National regulatory authorities should establish control

frameworks and conduct regular audits of community pharmacy dispensing practices.

5. Support clinical guidelines and prescriber training to promote evidence-based use of psychotropic medicines, rational prescribing, and monitoring of side effects. Training modules should be integrated into continuing medical education and made available to general practitioners, nurses, and pharmacists.

6. Formalize the role of pharmacists in mental health care delivery by integrating them into multidisciplinary teams, enabling independent prescribing in selected contexts, and funding their mental health-related services. Legal frameworks should define pharmacists' responsibilities and ensure adequate reimbursement for clinical services.

7. Enhance data collection and pharmacovigilance systems to monitor medicine use, treatment outcomes, and adverse events, particularly in low- and middle-income settings. Investments in digital health technologies and integration with national health information systems can improve data accuracy and use for decision-making.

8. Raise public awareness about the safe use of psychotropic medicines and available services, while countering stigma that impedes treatment-seeking behavior. Communication campaigns should be culturally adapted, community-based, and implemented in collaboration with civil society and patient advocacy groups.

Together, these recommendations emphasize the need for a systems-based approach to pharmaceutical mental health support – one that addresses both policy-level structures and implementation realities to ensure equitable, sustainable, and effective care.

### **Conclusion to Chapter III**

1. We have analyzed global strategic documents and clinical guidelines (WHO mhGAP, WHO EML, national protocols) that define the role of psychotropic medications in mental health care. These documents confirm the essential function of pharmacological treatment in managing priority mental health conditions.

2. We have summarized evidence that, although most essential psychotropic medicines, such as fluoxetine, haloperidol, lithium carbonate, and risperidone, are included in NEMs, their real-world availability and affordability remain uneven across countries.

3. It has been established that significant barriers exist at the levels of procurement, supply chain, and health financing, particularly in low- and middle-income countries, which limit the practical accessibility of essential medicines.

4. We have identified widespread and often unregulated use of over-the-counter sedatives and inappropriate prescribing of benzodiazepines, both of which lead to increased health system costs and health risks.

5. Our analysis has shown that pharmacists play an increasingly important role in supporting access, adherence, and safe use of psychotropic medications. However, their integration into mental health systems requires clearer policy and legal frameworks.

6. We have demonstrated the need for comprehensive reforms that combine pharmaceutical regulation, professional training, health information systems, and public education to ensure the safe, equitable, and effective use of medicines in mental health.

## CONCLUSIONS

1. The study confirmed that mental health is a core component of public health and sustainable development, requiring a shift from a narrow clinical approach toward integrated, population-wide strategies. Conceptual clarity, anchored in global classifications such as DSM-5 and ICD-11, enables standardization of care, prioritization of services, and formulation of responsive policies tailored to social determinants of mental health.

2. A comprehensive review of policy design and evaluation methodologies revealed that effective mental health policies are built on a foundation of strategic vision, intersectoral collaboration, financial and human resource investment, rights-based legislation, and embedded monitoring systems. Evaluation models such as the logic model, Donabedian framework, and WHO's mental health policy evaluation modules offer complementary tools for assessing policy relevance, implementation, and outcomes – although many do not yet fully account for pharmaceutical and pharmacist-related indicators.

3. The global analysis demonstrated that while most countries have adopted formal mental health strategies, their implementation quality varies substantially by income level. High-income countries such as the UK, Canada, and Australia exhibit more structured governance, community-based models, and digital innovation, although they still face gaps in access, especially in underserved areas.

4. Middle- and low-income countries, including Morocco, have made progress in policy development but remain constrained by underfunded systems, limited service decentralization, and poor data infrastructure. Pilot initiatives, such as mhGAP adaptation and telepsychiatry, show promise but require sustainable investment, institutional ownership, and systemic integration.

5. The comparative analysis highlighted that human rights-based approaches, financial protection, and robust monitoring systems are key predictors of effective mental health governance. Countries with stronger legal safeguards and

community-level care mechanisms tend to demonstrate better treatment continuity, equity, and user participation in care planning.

6. In Morocco, the national mental health strategy provides a valuable policy framework, but its implementation suffers from fragmentation, workforce shortages, and poor intersectoral coordination. Community mental health services are still limited, and urban–rural disparities persist in access to care. This underscores the need for implementation-focused reforms and better resource allocation.

7. The study established that pharmaceutical support is both a technical and policy-critical aspect of mental health care. Although Morocco includes most essential psychotropic medications in its national essential medicines list, availability in public facilities, particularly outside urban centers, remains inconsistent, and cost barriers persist due to weak financial protection mechanisms.

8. Global frameworks (e.g., WHO mhGAP, NICE, APA guidelines) clearly define first-line psychotropic pharmacotherapy, yet their operationalization is highly dependent on national procurement systems, prescriber capacity, and supply chain reliability. In Morocco and similar settings, limited availability of second-generation antipsychotics and regulatory oversight over benzodiazepines or OTC sedatives poses serious challenges.

9. The evolving role of pharmacists in mental health systems is widely recognized in high-resource contexts, where pharmacists contribute to medication adherence, adverse event monitoring, and psychoeducation. In Morocco, their role remains peripheral and largely limited to dispensing, due to regulatory, educational, and systemic constraints.

10. Strategic opportunities exist to optimize pharmaceutical care within national mental health systems. These include integrating pharmacists into care teams, supporting their clinical training, expanding insurance coverage for mental health medicines, and regulating over-the-counter sedatives. Leveraging pharmacists' accessibility can help address treatment gaps, reduce stigma, and support early intervention at the community level.

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## **ANNEXES**

МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ  
НАЦІОНАЛЬНИЙ ФАРМАЦЕВТИЧНИЙ УНІВЕРСИТЕТ

**АКТУАЛЬНІ ПИТАННЯ СТВОРЕННЯ  
НОВИХ ЛІКАРСЬКИХ ЗАСОБІВ**

МАТЕРІАЛИ  
XXXI МІЖНАРОДНОЇ НАУКОВО-ПРАКТИЧНОЇ  
КОНФЕРЕНЦІЇ МОЛОДИХ ВЧЕНИХ ТА СТУДЕНТІВ

23–25 квітня 2025 року  
м. Харків

Харків  
НФаУ  
2025

УДК 615.1

**Редакційна колегія:** проф. Котвіцька А. А., проф. Владимирова І. М.

**Укладачі:** Сурікова І. О., Боднар Л. А., Комісаренко М. А., Комісарова Є. Є.

Актуальні питання створення нових лікарських засобів: матеріали XXXI міжнародної науково-практичної конференції молодих вчених та студентів (23-25 квітня 2025 р., м. Харків). – Харків: НФаУ, 2024. – 515 с.

Збірка містить матеріали міжнародної науково-практичної конференції молодих вчених та студентів «Актуальні питання створення нових лікарських засобів, які представлені за пріоритетними напрямками науково-дослідної роботи Національного фармацевтичного університету. Розглянуто теоретичні та практичні аспекти синтезу біологічно активних сполук і створення на їх основі лікарських субстанцій; стандартизації ліків, фармацевтичного та хіміко-технологічного аналізу; вивчення рослинної сировини та створення фітопрепаратів; сучасної технології ліків та екстемпоральної рецептури; біотехнології у фармації; досягнень сучасної фармацевтичної мікробіології та імунології; доклінічних досліджень нових лікарських засобів; фармацевтичної опіки рецептурних та безрецептурних лікарських препаратів; доказової медицини; сучасної фармакотерапії, соціально-економічних досліджень у фармації, маркетингового менеджменту та фармакоекономіки на етапах створення, реалізації та використання лікарських засобів; управління якістю у галузі створення, виробництва й обігу лікарських засобів; суспільствознавства; фундаментальних та мовних наук.

УДК 615.1

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largest increments, with 20 and 25 new members, respectively. This surge indicated not only the strengthening of pharmacovigilance structures in high-income countries but also the increasing engagement of low- and middle-income countries in global drug safety efforts. In the most recent periods (2016–2025), the expansion of WHO PIDM has continued steadily, marked by the inclusion of countries primarily from Africa and the Middle East, thereby further enhancing the geographic diversity and comprehensiveness of the global pharmacovigilance network.

At the inception of the programme, no African countries were among its members. The first significant steps occurred in 1992 with the accession of Morocco and South Africa, followed by Tunisia in 1993. The 2000s marked a period of intensified involvement, with countries such as Nigeria, Ghana, and others actively joining the PIDM. The period 2006–2010 was particularly notable, witnessing a surge in African membership, including Togo, Uganda, Ethiopia, Namibia, and others. This trend continued throughout the 2010s and into the 2020s, with additional countries such as Benin, Mali, Angola, and the Democratic Republic of the Congo becoming active participants. The progressive integration of African nations into the WHO pharmacovigilance network reflects concerted efforts to strengthen healthcare systems across the continent, aligning pharmacovigilance activities with international standards and enhancing patient safety initiatives on a global scale.

**Conclusions.** The WHO Programme for International Drug Monitoring has evolved into a robust global network, particularly expanding since the 1990s. While early participation was dominated by European and American countries, recent decades have seen a significant rise in membership from Africa and Asia. This trend underscores the growing global recognition of pharmacovigilance as an essential pillar of public health protection.

#### THE AVAILABILITY AND AFFORDABILITY OF MEDICATIONS AS INDICATORS OF THE EFFECTIVENESS OF NATIONAL MENTAL HEALTH POLICIES

Safi Isaam

Scientific supervisor: Surikova I.O.

National University of Pharmacy, Kharkiv, Ukraine

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**Introduction.** The burden of mental disorders continues to grow worldwide, highlighting the need for effective national mental health policies. A critical component of such policies is the pharmaceutical supply system, ensuring the availability and affordability of essential psychotropic medications. Inadequate access to necessary medications remains a major barrier to achieving the objectives of mental health programs, especially in low- and middle-income countries. Thus, assessing medication availability and affordability serves as an important indicator of policy effectiveness and provides insight into broader healthcare system gaps.

**Aim.** The purpose of this study is to analyze how the availability and affordability of psychotropic medications reflect the effectiveness of national mental health policies and to identify best practices for integrating pharmaceutical support into mental health programs.

**Materials and Methods.** The study employed a systematic review of international reports and national policy documents from selected countries (Canada, Morocco, and Kenya). Comparative and analytical methods were used to assess indicators related to medication access, pricing policies,



and insurance coverage. Data from WHO Mental Health Atlas (2020) and national health statistics were utilized to support the analysis.

**Results.** The analysis showed significant disparities in the availability and affordability of medications across countries with different income levels. In high-income countries such as Canada, the existence of national formularies and government-subsidized pharmaceutical programs ensures the wide availability of psychotropic medications with minimal out-of-pocket expenses. For example, over 80% of patients diagnosed with mental health conditions receive medication support through public insurance schemes. Pharmacists in these systems actively contribute to medication management, adherence monitoring, and patient education.

In contrast, middle-income countries like Morocco demonstrate partial availability of essential psychotropic medicines, with significant gaps in public sector supply. Approximately 60% of psychiatric medications are available in public healthcare institutions, while many patients rely on private pharmacies, often facing high out-of-pocket costs. Mental health coverage under national health insurance remains limited, and pharmacists are only partially integrated into mental health service delivery.

In low-income countries such as Kenya, medication availability is critically low, with essential medicines for mental health being available in less than 30% of public health facilities. The high cost of medications in the private sector further restricts access, with psychotropic drug prices exceeding monthly minimum wages in some cases. Community pharmacists, although potentially important actors in expanding access, are underutilized due to systemic limitations and lack of targeted mental health training.

Overall, the study highlights that the broader the integration of pharmaceutical support and pharmacist-led interventions into national mental health policies, the higher the treatment coverage and patient satisfaction rates observed. Countries with strong pharmaceutical frameworks demonstrate reduced treatment gaps and better health outcomes among mental health patients.

**Conclusions.** Availability and affordability of medications are crucial indicators for evaluating the success of national mental health policies. Countries that prioritize pharmaceutical support within mental health programs demonstrate better treatment outcomes and reduced disease burden. Strengthening medication supply systems, expanding insurance coverage for psychotropic drugs, and involving pharmacists in mental health service delivery are key strategies for improving policy effectiveness globally.

## STUDY ON CURRENT DIGITALIZATION TRENDS IN THE PHARMACEUTICAL SECTOR OF HEALTHCARE

Zakaria Wissal

Scientific supervisor: Volkova A.V.

National University of Pharmacy, Kharkiv, Ukraine

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**Introduction.** The pharmaceutical sector is undergoing a profound transformation driven by digitalisation, reshaping operations, research, and patient care. Digital technologies are streamlining medicines discovery, supply chain management, regulatory compliance, and communication between healthcare providers and patients. However, this digital shift comes with challenges, including data security concerns, regulatory constraints, and integration complexities.

**The purpose of the study** was the current trends of digitalisation in the pharmaceutical sector.

XXXI Міжнародна науково-практична конференція молодих вчених та студентів  
«АКТУАЛЬНІ ПИТАННЯ СТВОРЕННЯ НОВИХ ЛІКАРСЬКИХ ЗАСОБІВ»

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## СЕРТИФІКАТ УЧАСНИКА

Цим засвідчується, що

**Safi Isaam**

**Scientific supervisor: Surikova I.O.**

брав(ла) участь у роботі

XXXI Міжнародної науково-практичної конференції молодих вчених та студентів

**«АКТУАЛЬНІ ПИТАННЯ СТВОРЕННЯ НОВИХ ЛІКАРСЬКИХ ЗАСОБІВ»**

В.о. ректора  
Національного фармацевтичного  
університету



Алла КОТВИЦЬКА

23-25 квітня 2025 р, м. Харків

**National University of Pharmacy**

Faculty pharmaceutical  
Department of social pharmacy

Level of higher education master

Specialty 226 Pharmacy, industrial pharmacy  
Educational and professional program Pharmacy

**APPROVED**  
**The Head of Department**  
**of Social Pharmacy**

---

**Alina VOLKOVA**  
“11” of September 2024

**ASSIGNMENT  
FOR QUALIFICATION WORK  
OF AN APPLICANT FOR HIGHER EDUCATION**

**Issam SAFI**

1. Topic of qualification work: «Evaluating the effectiveness of national mental health policies and programs»,  
supervisor of qualification work: Iryna SURIKOVA, PhD, associated professor,  
approved by order of NUPh from “27<sup>th</sup>” of September 2024 № 237
2. Deadline for submission of qualification work by the applicant for higher education: May 2025.
3. Outgoing data for qualification work: data from scientific and periodical literature in accordance with research objectives; reports of international organizations, statistical data.
4. Contents of the settlement and explanatory note (list of questions that need to be developed):
  - to define the conceptual and strategic foundations of mental health policy from a public health perspective;
  - to review key global models for evaluating mental health policy effectiveness;
  - to analyze mental health policy frameworks and outcomes in high-, middle-, and low-income countries;
  - to assess the inclusion, availability, and accessibility of psychotropic medications in national mental health systems;
  - to examine the current and potential roles of pharmacists in the implementation of mental health programs;
  - to propose evidence-based recommendations for strengthening pharmaceutical care as a component of mental health policy.
5. List of graphic material (with exact indication of the required drawings):  
tables – 7, figures – 10

6. Consultants of chapters of qualification work

Chapters	Name, SURNAME, position of consultant	Signature, date	
		assignment was issued	assignment was received
1	Iryna SURIKOVA, associated professor of higher education institution of department Social Pharmacy	11.09.2024	11.09.2024
2	Iryna SURIKOVA, associated professor of higher education institution of department Social Pharmacy	21.11.2024	21.11.2024
3	Iryna SURIKOVA, associated professor of higher education institution of department Social Pharmacy	24.12.2024	24.12.2024

7. Date of issue of the assignment: «11» of September 2024.

**CALENDAR PLAN**

№	Name of stages of qualification work	Deadline for the stages of qualification work	Notes
1	Analysis of scientific, periodic literature on the topic of qualification work	September 2024	done
2	Review key global models for evaluating mental health policy effectiveness	October-November 2024	done
3	Analyze mental health policy frameworks and outcomes in high-, middle-, and low-income countries	December-January 2024-2025	done
4	Evaluate assess the inclusion, availability, and accessibility of psychotropic medications in national mental health systems	February-March 2025	done
5	Summary of the results of the study	April 2025	done
6	Finalizing the work, preparing the report	May 2025	done

**An applicant of higher education**

Issam SAFI

**Supervisor of qualification work**

Iryna SURIKOVA

**ВИТЯГ З НАКАЗУ № 237**

По Національному фармацевтичному університету

**від 27 вересня 2024 року**

Затвердити теми кваліфікаційних робіт здобувачам вищої освіти 5-го курсу Фм20(4,10д) 2024-2025 навчального року, освітньо-професійної програми – Фармація, другого (магістерського) рівня вищої освіти, спеціальності 226 – Фармація, промислова фармація, галузь знань 22 Охорона здоров'я, денна форма здобуття освіти (термін навчання 4 роки 10 місяців), які навчаються за контрактом (мова навчання англійська та українська) згідно з додатком № 1.

Прізвище, ім'я здобувача вищої освіти	Тема кваліфікаційної роботи		Посада, прізвище та ініціали керівника	Рецензент кваліфікаційної роботи
по кафедрі соціальної фармації				
Сафі Іссам	Оцінка ефективності національної політики та програм у сфері психічного здоров'я	Evaluating the effectiveness of national mental health policies and programs	Доцент Сурікова І.О.	Доцент Отрішко І.В.



## **ВИСНОВОК**

**експертної комісії про проведену експертизу  
щодо академічного плагіату у кваліфікаційній роботі  
здобувача вищої освіти  
«10» червня 2025 р. № 331560805**

Проаналізувавши кваліфікаційну роботу здобувача вищої освіти Сафі Іссам, групи ФМ20 (4,10д) англ-05, спеціальності 226 Фармація, промислова фармація, освітньої програми «Фармація» на тему: «Оцінка ефективності національної політики та програм у сфері психічного здоров'я / Evaluating the effectiveness of national mental health policies and programs», експертна комісія дійшла висновку, що робота, представлена до Екзаменаційної комісії для захисту, виконана самостійно і не містить елементів академічного плагіату (компіляції).

**Голова комісії,  
проректор ЗВО з НПР,  
професор**



**Інна ВЛАДИМИРОВА**

## **REVIEW**

**of scientific supervisor for the qualification work of the master's level of higher education of the specialty 226 Pharmacy, industrial pharmacy**

**Issam SAFI**

**on the topic: «Evaluating the effectiveness of national mental health policies and programs»**

**Relevance of the topic.** The burden of mental health conditions is rising globally, particularly in low- and middle-income countries where systemic gaps in service delivery, financing, and pharmaceutical support remain pronounced. In Morocco, the integration of mental health into public health systems is still evolving, with pharmacists often underutilized despite their accessibility and potential role in care delivery. This study addresses a critical and timely issue by assessing how national mental health policies function in practice, with a special focus on pharmaceutical care. The topic is thus of high social and scientific relevance.

**Practical value of conclusions, recommendations and their validity.** The work provides a rigorous and comprehensive analysis of mental health policies, highlighting global standards and national-level implementation gaps. A particular strength lies in the multidimensional evaluation of the pharmaceutical component, medicine availability, affordability, and the role of pharmacists, which is often overlooked in similar studies. The recommendations are based on WHO, FIP, and national policy frameworks and offer feasible strategies for improving pharmaceutical mental health support. They hold practical significance for Moroccan policymakers and stakeholders in health system reform.

**Assessment of work.** The student has demonstrated a high level of analytical skill and academic independence in conducting a cross-country comparative study. The structure of the work is coherent, with clear objectives and logically presented results. The use of up-to-date data, inclusion of visual materials, and incorporation of international and national sources reflect a deep understanding of the subject matter. The conclusions are supported by evidence, and the work meets the



methodological and academic standards required for a master's qualification paper.

**General conclusion and recommendations on admission to defend.** In general, the qualification work of Issam SAFI on the topic: «Evaluating the effectiveness of national mental health policies and programs» is performed at the proper level, meets the requirements of the "Regulations on the preparation and protection of qualification works at the National University of Pharmacy" and can be recommended for defense in the Examination commission.

Scientific supervisor  
«10<sup>th</sup>» of May 2025

Iryna SURIKOVA

## REVIEW

**for qualification work of the master's level of higher education, specialty 226  
Pharmacy, industrial pharmacy**

**Issam SAFI**

**on the topic: «Evaluating the effectiveness of national mental health policies  
and programs»**

**Relevance of the topic.** Mental health is a growing global public health priority, especially in low- and middle-income countries where mental disorders are often underdiagnosed, undertreated, and underfunded. In Morocco, despite strategic progress, gaps persist in access to care, medicine availability, and the involvement of pharmacists in mental health service delivery. Evaluating policy effectiveness with a focus on pharmaceutical support is both timely and essential for addressing unmet mental health needs. Therefore, the topic is highly relevant.

**Theoretical level of work.** The thesis demonstrates a strong theoretical foundation in public health, policy evaluation, and pharmaceutical care. The literature review is thorough and draws on key global sources, including WHO documents. The work clearly defines core concepts and integrates models ensuring analytical depth and coherence

**Author's suggestions on the research topic.** The author puts forward several well-grounded recommendations, including enhancing the integration of pharmacists in mental health teams, improving procurement and accessibility of psychotropic medications, and strengthening regulatory oversight for OTC sedatives. These proposals are practical, data-informed, and aligned with global directions for mental health system strengthening.

**Practical value of conclusions, recommendations and their validity.** The recommendations are based on a comparative analysis and clearly reflect the realities. They are well supported by research findings and provide meaningful input for health system reform. The practical suggestions, especially regarding pharmacist

involvement and pharmaceutical policy reforms, are valuable for national health planners and professional stakeholders.

**Disadvantages of work.** Minor formatting and language inconsistencies occur, but they do not interfere with the comprehension or quality of the research. The overall academic level of the work remains high.

**General conclusion and assessment of the work.** According to the relevance and the results of the research qualification work of Issam SAFI on the topic: «Evaluating the effectiveness of national mental health policies and programs» meets the requirements for master's works and can be recommended for official defense in the Examination commission.

Reviewer

Assoc. prof. Inna OTRISHKO

«11<sup>th</sup>» of May 2025

**ВИТЯГ**  
**з протоколу засідання кафедри соціальної фармації**  
**№ 23 від «11» червня 2025 року**

**ПРИСУТНІ:** зав. каф. доц. Аліна ВОЛКОВА, проф. Ганна ПАНФІЛОВА, проф. Вікторія НАЗАРКІНА, доц. Галина БОЛДАРЬ, доц. Наталія ГАВРИШ, доц. Тетяна ДЯДЮН, доц. Юлія КОРЖ, асист. Альміра НОЗДРИНА, доц. Вікторія МІЩЕНКО, доц. Ірина ПОПОВА, доц. Олександр СЕВРЮКОВ, доц. Ірина СУРІКОВА, доц. Любов ТЕРЕЩЕНКО, доц. Наталія ТЕТЕРИЧ.

**ПОРЯДОК ДЕННИЙ:**

Про представлення до захисту в Екзаменаційній комісії кваліфікаційних робіт.

**СЛУХАЛИ:** завідувачку кафедри доц. Аліну ВОЛКОВУ з рекомендацією представити до захисту в Екзаменаційній комісії кваліфікаційну роботу здобувача вищої освіти спеціальності 226 Фармація, промислова фармація Іссама САФІ на тему: «Оцінка ефективності національних політики та програм у сфері психічного здоров'я».

Науковий керівник: к. фарм. н., доцент кафедри СФ Ірина СУРІКОВА.

Рецензент: к. фарм. н., доцент кафедри фармакології та клінічної фармації, доц. Інна ОТРИШКО.

**УХВАЛИЛИ:** Рекомендувати до захисту в Екзаменаційній комісії кваліфікаційну роботу здобувача вищої освіти Іссама САФІ на тему: «Оцінка ефективності національних політики та програм у сфері психічного здоров'я».

Завідувачка каф. СФ, доцент

Аліна ВОЛКОВА

Секретар, доцент

Наталія ТЕТЕРИЧ

**НАЦІОНАЛЬНИЙ ФАРМАЦЕВТИЧНИЙ УНІВЕРСИТЕТ**

**ПОДАННЯ  
ГОЛОВІ ЕКЗАМЕНАЦІЙНОЇ КОМІСІЇ  
ЩОДО ЗАХИСТУ КВАЛІФІКАЦІЙНОЇ РОБОТИ**

Направляється здобувачка вищої освіти Іссам САФІ до захисту кваліфікаційної роботи за галуззю знань 22 Охорона здоров'я спеціальністю 226 Фармація, промислова фармація освітньою-професійною програмою Фармація на тему: «Оцінка ефективності національних політики та програм у сфері психічного здоров'я».

Кваліфікаційна робота і рецензія додаються.

Декан факультету \_\_\_\_\_ / Микола ГОЛІК/

**Висновок керівника кваліфікаційної роботи**

Здобувачка вищої освіти Іссам САФІ під час виконання кваліфікаційної роботи продемонструвала уміння працювати з науковими даними, проводити їх узагальнення, аналізувати та узагальнювати результати дослідження. Усі поставлені завдання відповідно до мети роботи було виконано у повному обсязі. Результати дослідження належним чином оброблені і представлені.

Таким чином, кваліфікаційна робота може бути рекомендована до офіційного захисту в Екзаменаційній комісії Національного фармацевтичного університету.

Керівник кваліфікаційної роботи

Алла КОТВИЦЬКА

«22» травня 2025 р.

**Висновок кафедри про кваліфікаційну роботу**

Кваліфікаційну роботу розглянуто. Здобувач вищої освіти Іссам САФІ допускається до захисту даної кваліфікаційної роботи в Екзаменаційній комісії.

Завідувачка кафедри  
соціальної фармації

Аліна ВОЛКОВА

«26» травня 2025 р.

Qualification work was defended

of Examination commission on

«    » June 2025

With the grade \_\_\_\_\_

Head of the State Examination commission,

DPharmSc, Professor

\_\_\_\_\_ / Volodymyr YAKOVENKO/