



WHO

STUDY GUIDE

ENSURING EQUITABLE ACCESS TO ESSENTIAL MEDICINE IN LOW-RESOURCE COUNTRIES

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Dear Delegates,

Welcome to HASMUN 2025 — a journey that goes far beyond a typical Model United Nations conference.

This year, we invite you to become part of an experience built on diplomacy, dialogue, and the determination to create change. HASMUN has long stood as a platform for driven individuals to challenge perspectives, develop leadership, and speak for the world they envision. In every committee room, in every debate, we believe your voice has the power to shape not only resolutions, but real ideas for the future.

Whether this is your first MUN or one of many, we encourage you to approach each session with openness, curiosity, and commitment. The friendships you form, the ideas you exchange, and the challenges you overcome will stay with you long after the final gavel falls.

On behalf of the entire Secretariat, we are thrilled to have you with us. Prepare to question, to collaborate, and to grow.

We look forward to meeting you soon.

Warm regards,
Nazrin Sadigova
Secretary-General
HASMUN 2025



2. Letter from the Board Members

Dear Delegates,

We would very much like to welcome you all to the World Health Organization Committee, and we are especially excited to meet each and every one of you.

Our goal is to simulate a debate in the diplomatic atmosphere of the United Nations. Hence, we are expected to abide by the rules of procedure and diplomatic etiquette. It is advised for each delegate to comprehensively study the rules of procedure.

As the representatives of your nations at the WHO Committee, you are expected to study and understand the following sections of this guide and conduct further elaborate research on the position and interests that might be relevant to the nations you represent for engaging in an abundant debate.

We are thrilled to see your contributions and insights during the sessions and hope you enjoy this committee and conference.

Best Regards,

Senrat Şira Çavluer

Abdulrahman Murat



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3. Introduction

3.1. Introduction to the Committee

The World Health Organization (WHO) is the United Nations' specialized agency responsible for directing and coordinating global public health efforts. Founded on the principle that health is a fundamental human right, the WHO defines health not simply as the absence of disease but as a state of complete physical, mental, and social well-being. Guided by this expansive vision, the Organization works to advance the highest attainable standard of health for all people, regardless of geography or socioeconomic status.

Its core functions include setting international health norms and standards, supporting countries through technical assistance, strengthening public health training and education,

and coordinating responses to outbreaks, emergencies, and long-term disease burdens. Over the decades, the WHO has been central to milestone achievements such as the eradication of smallpox, major progress toward ending polio, and breakthroughs in vaccines for emerging diseases like Ebola.

Today, its work spans communicable and non-communicable diseases, nutrition and food security, occupational and environmental health, and the promotion of universal health coverage. The Organization is governed by the World Health Assembly—composed of 194 member states—which determines priorities, approves budgets, and oversees a 34-member Executive Board. Funding comes primarily from member-state contributions alongside support from private and philanthropic donors.

In essence, the WHO functions as both a technical authority and a moral compass in the global health arena, shaping policies, generating data, and fostering international cooperation toward a healthier and more resilient world.

3.2. Introduction to the Agenda Item: Ensuring Equitable Access to Essential Medicine in Low-Resource Countries

Equitable access to safe, effective, and quality-assured essential medicines remains one of the most persistent barriers to achieving global health justice. Although medicines for noncommunicable diseases (NCDs), mental health, and neurological conditions exist, millions of people; especially in low-resource settings, cannot obtain them when they need them most. This inequity directly undermines universal health coverage and the fundamental right to health.

Across the world, the burden of NCDs continues to rise. Cardiovascular diseases alone claim more than 19 million lives every year, and high blood pressure affects over 1.28 billion adults. Yet, in low- and middle-income countries, the majority of people with hypertension remain undiagnosed or untreated due to limited testing, weak follow-up systems, and fragile procurement and supply-chain mechanisms. Similar access inequalities affect diabetes care: in 2022, more than half of people living with diabetes were not receiving medication, with treatment gaps most pronounced in lower-resource nations.

These disparities are not isolated events. A striking number of countries reported stockouts of essential NCD medicines in 2021 — up to 41% of low-income countries, compared with only

4% of high-income states. When pharmacy shelves sit empty, chronic conditions worsen, households fall into financial hardship, and preventable deaths increase. The World Health Organization estimates that two billion people worldwide lack access to essential medicines, a figure likely understated due to incomplete data. Persons with disabilities, older individuals, children, and marginalized communities face the sharpest consequences of this systemic inequality.

These gaps stem from multiple, interconnected challenges: underfunded health systems, weak manufacturing and regulatory capacities, limited supply-chain transparency, and discriminatory or exclusionary health policies. Additionally, global intellectual property regimes and the terms of some bilateral trade agreements constrain countries' ability to provide affordable generic medicines. As highlighted by UN Human Rights, many diseases remain overlooked by global research and development because they offer limited commercial return, leaving millions without adequate treatment.

Conflict settings further complicate access. Attacks on healthcare facilities, medical staff, and supply routes not only violate international humanitarian law but also constitute violations of the right to health. Disruptions in treatment during crises deepen pre-existing inequalities and leave vulnerable populations at even greater risk.

4. Determinants of Access to Essential Medicines

Individual, Structural and Systematic Determinants

Individual determinants refer to the personal attributes and circumstances that shape how easily someone can seek, reach, and benefit from healthcare services. These include income levels, education, health literacy, cultural beliefs, language proficiency, disability status, and lived experiences with the health system. Collectively, these factors influence not only one's capacity to enter the healthcare system, but also the likelihood of receiving timely, appropriate, and continuous care.

A central individual determinant is **income**, as financial insecurity limits the ability to afford consultations, medications, diagnostics, transportation, and insurance premiums. People with low income routinely delay or avoid care, especially preventive care, which leads to more advanced illness and higher treatment costs later. Financial precarity also ties into competing priorities — such as food, shelter, and childcare — which often overshadow health needs.

Closely linked is **health literacy**, which refers to a person's capacity to interpret, assess, and apply health information. Limited health literacy can undermine medication adherence, complicate communication with healthcare providers, and increase the risk of mismanaging chronic diseases. In many settings, health literacy gaps predict hospitalization rates more strongly than socioeconomic status alone.

Addressing individual determinants requires more than information campaigns. It calls for patient-centered care, culturally competent providers, community engagement, and interventions that recognize the social, emotional, and financial realities shaping health decisions.

Structural determinants refer to the distribution, organization, and physical availability of healthcare services within a society. These encompass workforce density, facility placement, infrastructure quality, transportation systems, supply chains, and the resources allocated to different geographic or demographic groups.

A core structural determinant is the **availability of healthcare services** — whether enough clinics, hospitals, diagnostic facilities, and specialized services exist to meet population needs. Underfunded systems often struggle with shortages of trained health professionals, outdated equipment, and insufficient medicines. These shortages are especially severe in rural and peri-urban regions where populations are growing faster than health systems can expand.

The **geographical distribution** of services further deepens inequality. Urban centers tend to concentrate specialists, advanced hospitals, and private providers, while rural communities face long travel distances, limited transportation, and fewer options. Even within cities, wealthier neighborhoods often host higher-quality healthcare facilities, creating “healthcare deserts” in low-income districts.

The **quality of care** also varies structurally. Quality is shaped by safety standards, adherence to evidence-based guidelines, continuity of care, staff training, and the reliability of medical supplies. Inadequate quality can discourage individuals from returning for follow-up or trusting healthcare staff, deepening inequities even when services are technically available.

Strengthening structural determinants requires investment in primary healthcare, decentralization of services, expanded training programs, modernized infrastructure, and

robust supply-chain management. It demands that states and institutions ensure not only the presence of facilities, but their functionality, reliability, and fairness.

Systemic determinants reflect the broader political, economic, and institutional frameworks that shape how healthcare is governed, financed, and regulated. They determine the overall architecture of a country's health system and influence every other level of access.

One of the most influential systemic factors is the **healthcare financing model**. Systems that rely heavily on out-of-pocket payments create major barriers for low-income groups.

Insurance-based systems may exclude informal workers or those unable to pay premiums.

Conversely, strong publicly funded models tend to improve universality but require sustained political commitment and adequate taxation.

Regulation and oversight shape the quality, safety, and affordability of healthcare. Weak regulatory systems may result in inconsistent standards, unlicensed providers, high prices, counterfeit medicines, and unpredictable service quality. Effective regulation ensures accountability, transparency, and patient protection.

The **reimbursement model** — whether fee-for-service, capitation, or value-based care — influences provider behavior. Fee-for-service systems often encourage unnecessary tests and procedures, driving up costs. Models that under-incentivize prevention weaken early detection and chronic disease management, ultimately increasing long-term burdens.

5. Pathways toward Equitable Access

Access to essential medicines, quality assured health products, vaccines and medical technologies in low-resource countries requires coordinated pathways. **Roadmap for WHO action 2025-2030** outlines WHO's role and approach for increasing safe, effective, quality-assured health products and technologies in order to reach sustainable development goal targets for achieving universal health coverage including financial risk protection, access to quality health-care services, access to safe, effective, quality, affordable essential medicines and vaccines for all.

The roadmap 2025-2030 builds on the roadmap 2019-2023 and considers lessons learned from the implementation of the roadmap 2019-2023, from the WHO transformation and from the coronavirus (COVID-19) pandemic. The roadmap 2025-2030 is aligned with GPW14

(The 14th WHO General Program of Work) and contributes its overarching goal to promote, provide, protect health and wellbeing for all people everywhere.

The pandemic exposed the inequalities in access to health products. The pandemic highlighted the need for longer-term strategies to strengthen equitable access to health products, technologies required for emergency response and for ensuring sustainable provision of health products and technologies outside and in emergency situations. Despite progress, safe effective, essential and quality-assured health products are still not reaching to those who need them in many regions, the cost of the health products still remains unaffordable for many countries.

2 billion people are experiencing hardship due to out-of-pocket health spending, a majority of which includes spending on health products, the global estimated spend on substandard and falsified medicines is estimated at 30.5 billion us dollars in low and middle-income countries and 2.5 billion people globally need one or more assistive products.

Technological and scientific innovation offers advances such as artificial intelligence (ai), digital health, robotics and new materials. For example, offers opportunities for the development, delivery of health products and technologies and new approaches to address public health needs.

For example, **WHO's mRNA technology transfer** (mRNA TT) programme supports regional hubs and partner manufactures in developing sustainable production capacity for mRNA-based vaccines for future pandemics and ensuring sustainability in between global health emergencies. This manufacturing supports affordable prices of essential medicines, better quality for vaccines and medicines and easier, faster response for future health crises.

WHO's EMRO (The WHO Regional Office for The Eastern Mediterranean) serves the WHO eastern mediterranean region which comprises 21 member states. The WHO eastern mediterranean (EMR) faces challenges because of the conflicts and crises in more than half of its countries. The major barriers of accessing to essential medicines in the EMR are high prices, weak regulation, falsified products and limited products. Through regional cooperation, member states have shown strong willingness to work together in increasing equitable and timely access to safe, affordable medical products. To achieve this aspiration, policy options that promote generic medicines and alternative financing mechanisms are needed.

5.1. Policy Levers and Regulatory Flexibilities

Ensuring equitable access to essential medicines and health supplies requires global health institutions, policy levers and regulatory flexibilities to reshape economic and legal systems so that safe, affordable and effective essential medicines could reach all nations. **Universal health coverage (UHC)** can only be achieved when there is affordable access to safe, effective and quality medicines in health products. Improving them depends on how governments harness policy levers and regulatory flexibilities to lower barriers. These disparities have serious consequences for the realization of the right to health, particularly for older people, people with disabilities and persons with non-communicable diseases (NCDs) particularly in low and middle income countries.

WHO promotes **regulatory systems strengthening (RSS)** as a policy lever which guarantee the safety and quality of medical products..Through its Global Benchmarking Tool (GBT) and Institutional Development Plans (IDPs). **WHO's regulatory action plan** defines four strategic priorities, two of which direct the work in Regulation and Safety:

1. Strengthen country and regional regulatory systems in line with the drive towards UHC (Universal Health Coverage)
2. Increase regulatory preparedness for public health emergencies
3. Strengthen the expand WHO prequalification and product risk assessment processes
4. Increase the scope and impact of WHO's regulatory support activities

The central tool in this effort is the **GBT (Global Benchmarking Tool)**, its developed by WHO (World Health Organization) to objectively evaluate the performance of national regulatory systems. The GBT (Global Benchmarking Tool) identify strengths and areas for improvements, monitor progress and achievements, prioritize IDP (International Development Program) interventions and facilitate the formulation of an institutional development plan (IDP) to build upon strengths and address the identified gaps. For example improving inspections capacity or legal frameworks. Through this process, a country's regulatory system moves along a scale. As the result it reduces the risk of falsified products, ensuring safety and quality for everyone.

Distributing these policy levers and regulatory flexibilities requires institutional resources, cooperation and transparent governance. When implemented effectively, these tools enable safe, effective, affordable and quality assured products to reach everyone in every state.

5.2. Regional Production Ecosystems

Strengthening critical trials is one critical aspect of improving country ecosystems for research and development. Together with work on improving local manufacturing and production, post marketing surveillance, data systems, national regulatory authority functionality, research ethics committee strengthening, clinical science and medical education.

During the seventy fifth World Health assembly in May 2022, the World Health Organization's member states adopted a resolution (WHA 75.8) to enhance clinical trials worldwide, focusing on producing high quality evidence, improving research quality and coordination. The aim is to build equitable, locally-led clinical trial capabilities that can respond swiftly in emergencies and contribute to better health outcomes for all populations in need. Some of the encouraged actions are:

1. Strengthening local leadership and national support for sustained infrastructure and funding
2. Enhancing involvement and engagement with patients, communities and the public in clinical trial lifecycle
3. Addressing barriers to clinical trial in under represented populations
4. Enabling effective trials through adoption of innovative designs and digital technologies
5. Accelerating access to fit-for-purpose training packages for clinical trials
6. Improving coordination and streamlining regulatory and ethics review
7. Engaging clinical practitioners to integrate clinical trials into health systems and practices
8. Step up the use of trial registries to improve research transparency
9. Expanding international health research and clinical trial collaboration

WHO will convene partners to enable collaborative progress towards these actions with a WHO managed network which is called the **Global Clinical Trials Forum**, a global multi stakeholder network which is intended to support the implementation of WHA 75.8 and aims supporting countries and institutions worldwide. A global stakeholder survey launched in May 2023, collects from researchers and regulators to shape and strengthen actionable recommendations for infrastructure and capacity building.

Additionally, WHO's resolution highlights the importance and the need for inclusivity, transparency and equity.

5.3. Distributional Strengthening and Last-Mile Delivery

To ensure that health products reach everyone, especially those who live in low resource countries and rural areas it is essential to guarantee reliable last-mile delivery. In many low and middle income countries weakness in distribution and the last mile of delivery remain critical unless medicines are transported safely, tracked and stored. Even the most basic essential medicines may never reach to the patients who truly need them. When distribution fails, consequences are severe, stock outs, delays, wastage, uneven availability across geographic regions. Such failures harm rural and other vulnerable populations. Recognizing this, WHO and its partners have recently done such efforts to strengthen last mile logistics. In September 2025, the global **NTD (Neglected Tropical Diseases)** supply chain forum (NTD-SCF) convened over 100 stakeholders, including health ministries, pharmaceutical donors, NGOs (Nongovernmental Organizations), logistics providers and technical partners. Their discussions focused on the changing global health architecture, funding constraints, challenges and experiences on supply chain management and coordination and WHO's transformation.

The forum and other related mechanisms such as the Supply Chain Technical Support Mechanism (SCTSM) aim to strengthen national supply chain systems by bridging the gap between production and patients.

Their work highlights several barriers for example delayed medicine access, weak stock management, lack of integration, inadequate shipment tracking and delays in customs clearance. In response to these challenges WHO and their partners have begun implementing supply chain reforms.

The 2025 NTD (Neglected Tropical Disease) supply chain forum (NTD-SCF) emphasises the need for improved medical tools, better coordination and accountability frameworks which includes last mile delivery monitoring.

6. Global Governance and Institutional Actors

Achieving equitable access to essential medicines in low-resource countries requires coordinated action across a complex global governance landscape. No single state can

overcome structural barriers—such as high pricing, patent restrictions, limited production capacity, and weak supply chains—on its own. Instead, access is shaped by the interaction of multilateral institutions, regional organizations, NGOs, philanthropic foundations, and the private sector. Understanding these actors, their mandates, and their limitations allows delegates to craft realistic and implementable policy proposals.

6.1. WHO Normative Frameworks

The **World Health Organization (WHO)** serves as the primary standard-setting body in global health, establishing the norms and guidelines that countries and donors follow. The cornerstone of this role is the **Model List of Essential Medicines (EML)**, a scientifically curated list identifying the most effective and cost-efficient medicines needed at the primary, secondary, and tertiary levels of care. For low-resource countries, the EML is especially important because it guides procurement decisions, donor support, and national treatment protocols, helping governments allocate limited budgets toward the most impactful interventions.

Additionally, the **WHO Prequalification Programme** ensures that medicines meet global quality, safety, and efficacy standards. This is particularly significant for low-income countries with limited regulatory capacity; WHO prequalification allows these states to safely procure medicines from verified manufacturers, reducing risks of substandard or falsified products. Beyond this, WHO develops normative guidance on issues such as pricing transparency, supply-chain management, and rational medicine use, offering countries a technical roadmap for strengthening their health systems. During emergencies or outbreaks, WHO accelerates guideline development and coordinates international response measures, ensuring that life-saving medicines reach vulnerable populations quickly and equitably. In essence, WHO creates the global architecture within which states and other actors operate.

6.2. Multilateral and Non-State Contributors

A wide range of multilateral organizations and non-state actors play essential roles in financing, procuring, and delivering medicines in low-resource settings. **UNICEF**, for example, is one of the world's largest procurers of vaccines and child-focused medicines, using its purchasing power to negotiate lower prices and ensure continuous supply chains in

countries with limited infrastructure. **UNDP** works at the policy and implementation level, often stepping in when governments lack reliable procurement systems, helping rebuild national supply chains and ensuring transparent and efficient medicine distribution. Financing institutions such as the **World Bank** and regional development banks provide grants and loans to improve health infrastructure, pharmaceutical regulation, and local production capacities—investments that directly affect long-term access.

Global trade rules, particularly under the **WTO's TRIPS Agreement**, also influence access by regulating intellectual property. For low-resource countries, TRIPS flexibilities—such as compulsory licensing—can allow the use of cheaper generic medicines, but their implementation often requires technical expertise and political willingness that some governments lack. Meanwhile, non-state actors like **the Global Fund, GAVI, CEPI, MSF**, and various philanthropic foundations contribute through funding, advocacy, operational delivery, and R&D. These organizations often fill critical gaps left by national governments, especially in fragile states or underserved regions, ensuring that essential medicines reach populations facing structural barriers.

7. Illustrative Cases

7.1. Antiretroviral Availability in Sub-Saharan Africa

Access to antiretroviral therapy (ART) in Sub-Saharan Africa has increased highly over the past decades. At the end of 2024, 31.6 million people were accessing antiretroviral therapy, up from 7.7 million in 2010. According to WHO's regional data by the end of 2022, 380,000 people died from **AIDS** (Acquired Immune Deficiency Syndrome) related illness in the African region.

No effective cure for HIV exists at the present, but **HIV** (Human Immunodeficiency Virus) can be suppressed by a combination of medicines called antiretroviral (**ARV**) therapy consisting of three or more ARV drugs. Antiretroviral therapy does not cure HIV infection, but it suppresses viral replication within a person's body and allows an individual's immune system to strengthen and regain the capacity to fight off infections so that people with HIV can enjoy long, healthy lives by taking ARV treatment. The increases in antiretroviral therapy coverages and the reduction in AIDS (Acquired Immune Deficiency Syndrome) related deaths highlights how effective structural interventions are.

Yet, despite this huge progress important challenges still remain. Not all people living in Sub-Saharan Africa with HIV have access to antiretroviral therapy. Unequal access, supply

chain delivery restrictions and emerging issues like HIV drug resistance shows that availability does not guarantee equitable access.

In the African region, an estimated 1.3 million children aged 0-14 were living with HIV at the end of 2022 and 109,000 children were newly infected. An estimated 69,000 children died of AIDS related illness.

To reduce HIV-related mortality and morbidity among this highly vulnerable population, early testing and treatment is essential. Without access to testing and treatment 50% of children with HIV will die by the age of 2.

WHO recommends that infants born to mothers living with HIV are tested for HIV, at birth, six weeks, during breastfeeding and when the breastfeeding ends given continued risk of transmission during this period. Older children, especially offspring siblings of persons infected with HIV should also be tested. HIV positive children should be started on ARV immediately. Once their treatment begins, children must take their medicine regularly to stay healthy into adolescence and adulthood.

Additionally, WHO recommends the implementation of adolescent-friendly health services in HIV services to ensure engagement and improved outcomes. Involving and engaging in their own care across the treatment cascade and through the cycle of planning, implementing, monitoring and evaluating programs is key. Peer-driven, adolescent services, integrated with other services including psychosocial interventions, are effective ways to improve health outcomes for adolescents.

In conclusion, the expansion of ART availability in Sub-Saharan Africa demonstrates how life saving treatments can be scaled up through coordinated global and national efforts. It also underlines that availability alone is not enough. While many people living with HIV now have access to antiretroviral therapy there are still millions at risk. ARV scale up must be supported by equal efforts to ensure equitable, reliable and quality assured access.

7.2. Global Vaccine Initiatives

Vaccination remains one of the most important public health achievements in the world.

Vaccines have saved more human lives than any other medical invention in history.

According to WHO, global immunization efforts have saved at least 154 million lives over the past 50 years. Over the past 50 years, vaccination against 14 diseases (diphtheria, haemophilus influenzae type B, hepatitis B, Japanese encephalitis, measles, meningitis A, pertussis, invasive pneumococcal disease, polio, rotavirus, rubella, tetanus, tuberculosis and

yellow fever) has directly contributed to reducing infant deaths by 40% globally, and by more than 50% in the African Region. This remarkable achievement underlines the potential of vaccines to prevent diseases and contribute the universal health coverage (UHC).

Immunization has helped reduce the burden of deadly infectious diseases from diphtheria to pertussis. This huge achievement shows the potential of vaccine based prevention in many low and middle income countries where access to advanced, essential and quality assured medical treatment is limited. Immunization provides an equitable way to protect populations especially children who are suffering from life threatening diseases.

In 2024, 14.3 million infants worldwide were identified as zero-dose which means they have never received a single dose of any vaccine and an additional 5.6 million are partially vaccinated. Of the 19.9 million, around 55% of these live in Afghanistan, The Democratic Republic of Congo, Ethiopia, India, Indonesia, Nigeria, Pakistan, the Phillipines, Sudan and Yemen. Although, overall coverage for key vaccines remains relatively high.

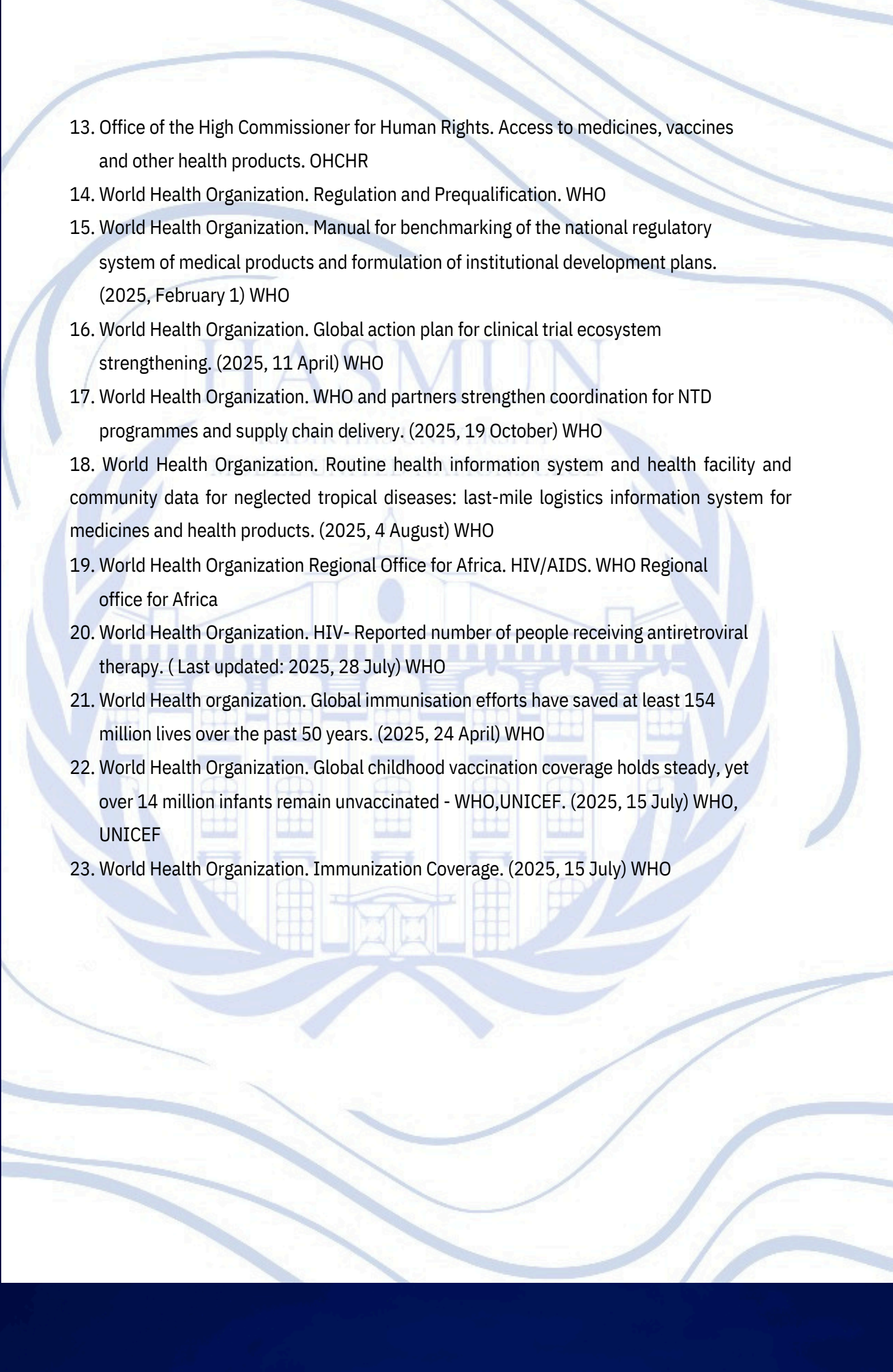
Access to vaccines remains deeply unequal. Since 2019, data from 195 countries show that 131 countries have consistently reached at least 90% of children with the first dose of DTP (Diphtheria Tetanus Toxoid and Pertussis), but there has been no significant movement in expanding this group. Among the countries that reached less than 90% in 2019, only 17 managed to increase their coverage from the past 5 years. Meanwhile in 47 countries, progress is stalling or worsening. This includes 22 countries that achieved and surpassed the 90% target in 2019 but have since declined.

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References

1. Office of the High Commissioner for Human Rights. (2025, July 17). Bridging the global gap in access to essential medicines. OHCHR.
2. Mubangizi, D. (2025, March 11). Ensuring equitable access to essential medicines and health technologies for noncommunicable diseases. World Health Organization.
3. Tzenios, N. (2019). The determinants of access to healthcare: A review of individual, structural, and systemic factors. *Journal of Humanities and Applied Science Research*, 2(1), 1-14.
4. Rodger Bosch. mRNA Technology Transfer (mRNA TT) Programme. WHO
5. World Health Organization. (2025, June 30). Access to safe, effective and quality-assured health products and technologies: roadmap for WHO action 2025-2030. World Health Organization
6. World Health Organization. WHO Model List of Essential Medicines (22nd List). Geneva: WHO, 2021
7. World Health Organization. Good Regulatory Practices: Guidelines for National Regulatory Systems. WHO, 2020.
8. The Global Fund to Fight AIDS, Tuberculosis and Malaria. Results Report 2023.
9. Wirtz, V. et al. Essential Medicines for Universal Health Coverage. The Lancet Commission on Essential Medicines, 2017.
10. Buse, Kent; Walt, Gill; and Lister, Jonathan. Making Health Policy. Open University Press.
11. Hanan Baky. Accelerating access to medical products in the Eastern Mediterranean Region. (2025, May 31). World Health Organization.
12. World Health Organization. Access to medicines and health products. WHO

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13. Office of the High Commissioner for Human Rights. Access to medicines, vaccines and other health products. OHCHR
 14. World Health Organization. Regulation and Prequalification. WHO
 15. World Health Organization. Manual for benchmarking of the national regulatory system of medical products and formulation of institutional development plans. (2025, February 1) WHO
 16. World Health Organization. Global action plan for clinical trial ecosystem strengthening. (2025, 11 April) WHO
 17. World Health Organization. WHO and partners strengthen coordination for NTD programmes and supply chain delivery. (2025, 19 October) WHO
 18. World Health Organization. Routine health information system and health facility and community data for neglected tropical diseases: last-mile logistics information system for medicines and health products. (2025, 4 August) WHO
 19. World Health Organization Regional Office for Africa. HIV/AIDS. WHO Regional office for Africa
 20. World Health Organization. HIV- Reported number of people receiving antiretroviral therapy. (Last updated: 2025, 28 July) WHO
 21. World Health organization. Global immunisation efforts have saved at least 154 million lives over the past 50 years. (2025, 24 April) WHO
 22. World Health Organization. Global childhood vaccination coverage holds steady, yet over 14 million infants remain unvaccinated - WHO,UNICEF. (2025, 15 July) WHO, UNICEF
 23. World Health Organization. Immunization Coverage. (2025, 15 July) WHO