Committee: World Health Organization (WHO)

Issue: Advancing the Implementation of the NCD Compact Through the Integration of Telemedicine

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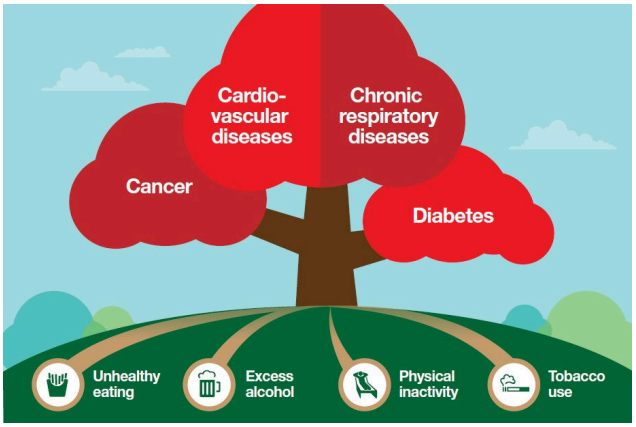
Introduction

Noncommunicable diseases (NCDs) are medical conditions that are not caused by infectious agents and cannot be transmitted from person to person. NCDs are typically chronic, progressing slowly over long periods, and result from a combination of factors (genetic, physiological, environmental, and behavioral) NCDs– including cardiovascular diseases, cancers, chronic respiratory diseases, and diabetes—are the leading causes of mortality worldwide, accounting for over 70% of all global deaths. The influences of NCD are severe worldwide, but are particularly worse in specific Low and Middle Income Countries(LMICs). With limited healthcare infrastructure disrupting effective prevention and treatment, LMICs bear a huge burden. To address this challenge, the Global NCD Compact 2022–2030 was introduced as a political and strategic framework to accelerate action against NCDs.



[Fig1.]

At the same time, telemedicine has emerged as a pivotal innovation in modern healthcare systems, offering remote access to diagnosis, treatment, and long-term monitoring through digital platforms. It was effectively used in several trials during the COVID-19 pandemic, when traditional care pathways were disrupted and virtual care became essential in preserving continuity. Beyond its role in crisis response, telemedicine has demonstrated enduring potential to reduce geographic and socioeconomic barriers to care, which is why it is considered a key instrument for treatment of NCD compacts in LMICs. This report will examine how member states can strategically integrate telemedicine into national and global health systems to advance the objectives of the NCD Compact and improve health outcomes in the global response to noncommunicable diseases.

Definition of Key Terms

Noncommunicable Diseases (NCDs): Chronic diseases not transmitted from person to person. Examples include heart disease, cancer, chronic respiratory conditions, and diabetes.

Telemedicine: The delivery of healthcare services through telecommunications technology, including remote consultations, diagnostics, and patient monitoring through online connections.

NCD Compact: A WHO-endorsed political commitment launched in 2022 to reduce premature mortality from NCDs by 1/3 by 2030, aligning with objectives of Sustainable Development Goal (SDG) 3. Good Health and Well-Being.

Primary Health Care (PHC): Essential health care based on scientifically sound and socially acceptable methods, universally accessible to individuals and families.

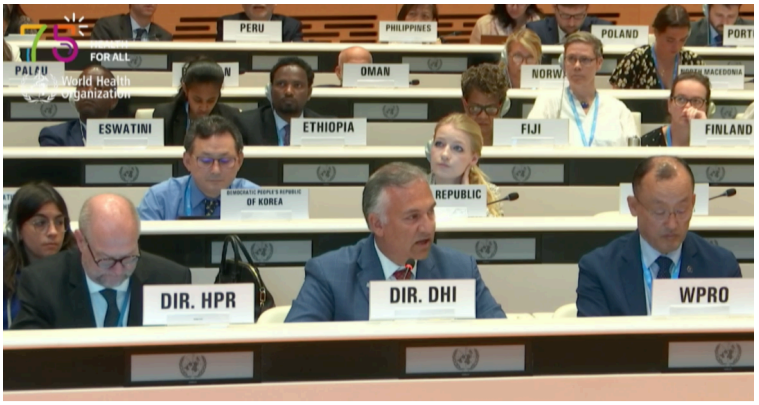
History

The global recognition of NCDs as a serious public health issue was delayed for many years. At the beginning of the 21st century, scientists focused mainly on infectious diseases and maternal-child health, leaving NCDs largely overlooked despite growing evidence of their impact. Diseases such as cardiovascular diseases, cancers, chronic respiratory illnesses, and diabetes were already becoming major causes of death worldwide, but the lack of international attention meant limited funding and legislations, especially in LMICs.

A turning point came in 2011 when the United Nations General Assembly held its first High-Level Meeting on NCDs. The resulting Political Declaration officially recognized NCDs as a global development issue and stressed the need for coordinated action. In the following year, the WHO introduced key policy tools, including the Global Action Plan for the Prevention and Control of NCDs (2013–2020), which outlined voluntary targets, such as reducing premature deaths by 25%, and the Global Monitoring Framework to track country-level progress.

In 2015, the launch of the SDGs further solidified the global commitment to NCDs. Specifically, SDG Target 3.4 called for a one-third reduction in premature deaths from NCDs by 2030. This signaled the first time NCDs were clearly integrated into the global development agenda, linking them to broader goals like poverty reduction, equity, and sustainable health systems. However, many LMICs still encountered difficulties in implementing national NCD strategies due to weak health infrastructure and insufficient funding.

The COVID-19 pandemic exposed major weaknesses in the way chronic diseases are managed. Many NCD patients, especially those in LMICs, experienced disrupted care during lockdowns or resource shortages. In response, telemedicine quickly expanded across many countries as a way to continue care remotely. For the first time, digital health tools became central—not optional—in delivering essential services. This shift led WHO to adopt the Global Strategy on Digital Health (2020–2025), encouraging member states to strengthen digital infrastructure and ensure fair access to virtual healthcare.



At a session on Saturday, WHO, member states and other stakeholders assess the progress, realities, challenges and odds stacked against an ambitious global strategy on digital health.

[Fig2.]

[Fig3.]

In 2022, the WHO introduced the Global NCD Compact 2022–2030 at the 75th World Health Assembly. This compact re-emphasized the need for urgent and accountable action, while also highlighting the role of telemedicine and other digital solutions in making NCD care more accessible and efficient.

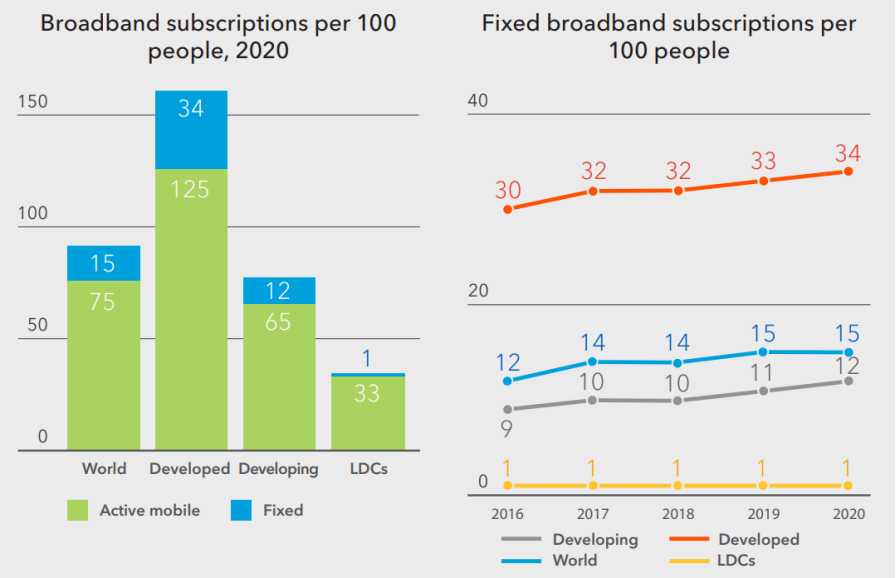
In short, the global approach to NCDs has shifted significantly—from being ignored in early development goals to becoming a central part of current health strategies. As telemedicine continues to evolve, the main challenge will be making sure these tools are effectively integrated into national health systems in a way that is inclusive, ethical, and sustainable for all populations.

Key Issues

Fragmented Telemedicine Infrastructure Across Member States

Many LMICs encounter critical infrastructure gaps, such as poor internet networks, lack of access to portable electronic devices, and unreliable resources of electricity, which hinder the implementation of

telemedicine. For example, according to a 2020 study by International Telecommunication Union (ITU), developing countries and least developed countries (LDCs) had relatively smaller frequency of broadband subscriptions (either active mobile or fixed) compared to world average. Since telemedicine is based on stable digital infrastructure, without any improvements regarding infrastructure in LMICs, this health system cannot be effectively introduced to manage chronic NCDs.



[Fig4.]

Insufficient Integration into National Health Systems

Telemedicine was frequently utilized as isolated pilot programs or temporary tools in emergency circumstances like pandemic-era. These efforts often operate outside national healthcare strategies or public insurance systems, leading to fragmentation. For example, in few Southeast Asian nations that operate telehealth systems, these are not registered by national health insurance policies, discouraging long-term use by both patients and providers.

Health Workforce Unprepared for Digital Transition

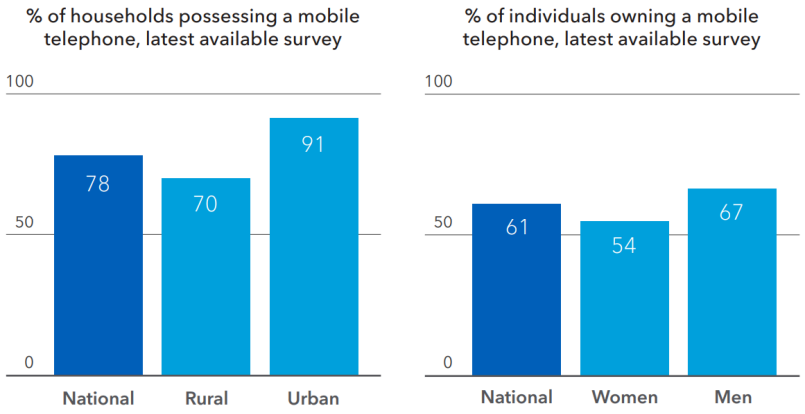
There is a global shortage of healthcare workers trained in both NCD management and the use of telemedicine platforms. In 2020, WHO estimated a global shortfall of 18 million health workers by 2030, mostly in LMICs. Moreover, most medical training curricula do not include digital health competencies. This skill gap reduces the effectiveness and quality of remote consultations, particularly in managing complex, comorbid NCD cases.

Digital Divide and Inequity

Rural populations, elderly patients, and individuals with lower socioeconomic status face substantial barriers to accessing digital services. A 2021 study by ITU found that women in LMICs are

13% less likely than men to own a smartphone or access mobile internet. These inequalities imply that telemedicine may unintentionally widen the health gap.

Figure 3.1: Mobile telephone use in LDCs



Note: Averages are unweighted country averages, based on surveys carried out between 2016 and 2020.
Source: Demographic Health Survey (DHS), Multiple Indicator Cluster Survey (MICS) and national surveys.

[Fig5.]

Regulatory and Legal Ambiguities

Due to its novelty and lack of standard guidance, telemedicine laws do not exist or vary widely between countries. In countries like South Korea, it is even illegal to practice telemedicine. Key issues include physician licensing across borders, potential malpractice during remote care, and long-term approval of telehealth technologies and related devices. For instance, in many African countries, there is almost no formal regulatory guidance for electronic prescriptions or remote patient monitoring devices. As a result, standardized legislations regarding telemedicine seem vital worldwide.

Lack of Sustainable Financing Models

Many telemedicine programs so far have struggled to continue beyond the short term because they rely heavily on temporary donor funding or emergency subsidies made available during pandemic-era like COVID-19. When this support runs out, many services are scaled down or discontinued altogether, especially in LMICs where long-term budget plans are scarce for digital health. As a result, innovation often stays localized or small in scale. Unless governments create stronger and more sustainable financing models, fully integrating telemedicine into national NCD care systems will remain an idea rather than a long-term solution.

Major Parties Involved and Their Views

India

India launched *eSanjeevani*, a national telemedicine platform that delivered over 140 million

consultations by 2023, with a dedicated stream for chronic NCD patients. However, only 25% of rural villages have sufficient internet access for high-quality video consultation. The government has integrated telemedicine into its Ayushman Bharat Digital Mission (ABDM) but still struggles with digital literacy among older adults and community health workers.

Brazil

Brazil's public health system (SUS) offers telemedicine services for hypertension, diabetes, and mental health under its *Telessaúde Brasil Redes* initiative. However, federal-state fragmentation and lack of standardized electronic medical records (EMRs) reduce interoperability. The government is working on a National Digital Health Strategy to address these gaps and improve chronic care coordination.

Rwanda

Rwanda is a regional leader in digital health innovation. Its Smart Health program supports telemedicine kiosks in rural clinics, allowing nurses to connect with remote NCD specialists. The government collaborates with Babyl, a private digital health provider, to offer app-based consultation for diabetes and heart disease. Despite these efforts, device affordability and continuous electricity remain barriers.

United States

The U.S. dramatically expanded telemedicine use during the COVID-19 pandemic, especially for chronic disease follow-up under Medicare. As of 2023, over 30% of adults with NCDs reported using telehealth. The Biden administration aims to make these expansions permanent, focusing on digital equity and cross-state licensing reform. However, private insurance reimbursement policies remain inconsistent.

Bangladesh

Bangladesh has implemented mHealth services such as "mPower" and "Telemedicine Reference Centers" to monitor diabetic and hypertensive patients in rural districts. In partnership with BRAC and Grameenphone, patients can receive reminders and consult community workers by phone. Yet, services are limited by unstable mobile connectivity and lack of centralized health record systems.

World Health Organization (WHO)

WHO leads the NCD Compact and provides technical guidance through its *Global Strategy on Digital Health (2020–2025)*. It advocates integrating telemedicine into universal health coverage (UHC) strategies and assists member states in building regulatory frameworks and digital readiness assessments.

International Telecommunication Union (ITU)

ITU collaborates with WHO to expand ICT access in health, particularly in LMICs. It supports broadband mapping, digital ID systems, and health data interoperability to lay the foundation for sustainable telemedicine programs.

World Bank

The World Bank has invested over $1.5 billion in digital health infrastructure since 2018, supporting eHealth system reforms in countries like Ethiopia, Pakistan, and the Philippines. Its Health System Strengthening projects include telemedicine components for NCD care delivery in rural areas.

The United Nations Children's Fund (UNICEF)

UNICEF addresses the digital divide by promoting inclusive digital health tools for adolescents and maternal health. It supports mobile-based health education, particularly for NCD prevention among youth populations.

NCD Alliance

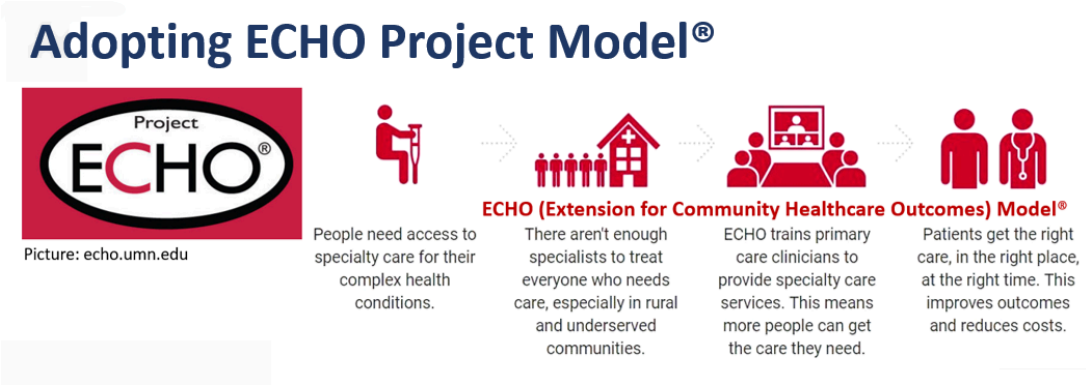
The NCD Alliance works with over 2,000 civil society partners to push for digital health equity and inclusion in NCD policies. It has published toolkits for integrating telehealth in national NCD responses and advocates for patient-centered digital strategies.

Program for Appropriate Technology In Health (PATH)

PATH develops scalable telehealth platforms and diagnostic tools for community-based NCD care. In Kenya and Vietnam, it pilots AI-based risk assessment apps to refer patients to teleconsultation services.

Project ECHO

This NGO builds the capacity of rural and under-resourced clinicians through virtual case-based learning networks. It has launched over 500 NCD-focused hubs globally via hub-and-spoke model.



[Fig6.]

Evaluation of Previous Attempts to Resolve the Issue

Global Frameworks and Policy Implementation Gaps

Over the past two decades, the global health community has made important progress in placing noncommunicable diseases (NCDs) on the international agenda. The WHO Global Action Plan for the Prevention and Control of NCDs (2013–2020) marked a key milestone, including reducing premature NCD mortality by 25%, encouraging countries to adopt national strategies. The accompanying Global Monitoring Framework introduced standardized guidelines. However, despite widespread endorsement, the Action Plan's implementation in many LMICs fell short. Health systems already under strain from infectious diseases lacked the political commitment, workforce, funding, and infrastructure needed to scale NCD programs effectively. Consequently, a gap was observed between global policy development and national-level execution, particularly in integrating NCD care into primary health services.

Telemedicine During the COVID-19 Pandemic

The COVID-19 pandemic highlighted and worsened gaps in chronic disease care, as millions of NCD patients experienced acute interferences due to lockdowns. In response, telemedicine emerged as a temporary yet influential solution in many countries. Nations like India, the Philippines, and Brazil quickly launched emergency telehealth platforms to maintain access to remote consultations, prescriptions, and chronic disease management. However, these efforts lacked long-term planning. Once emergency funds were withdrawn, many services were instantly scaled back or shut down. Common challenges especially in some LMICs included the absence of legal and regulatory frameworks, inadequate digital literacy among both patients and providers, and limited internet or smartphone access. In some LMICs, up to 60% of patients did not have the digital access required to benefit from telemedicine, underscoring major and irrevocable equity gaps.

Examples of Successful National Integration

Meanwhile, a few countries overcame the widespread challenges by integrating telemedicine with

NCD care. In Rwanda, the Ministry of Health partnered with Babylon Health to deliver virtual specialist consultations to rural patients through a centrally coordinated, government-supported system. Thailand also expanded its Universal Coverage Scheme (UCS) to include telemedicine services, particularly targeting older adults and residents of remote regions. These countries succeeded largely due to centralized health governance, strong political will, and early investment in digital infrastructure.

 [Fig7.]

Fragmentation, Donor Dependence, and Lack of Sustainability

One of the most persistent barriers to progress has been the overreliance on donor-funded pilot projects. Many NGOs and international organizations have launched telehealth apps or platforms focused on NCDs, but these often operate in isolation. This leads to parallel reporting systems, fragmented data, and missed opportunities for continuity of care. In some cases, patients receiving NCD treatment from NGO-run platforms cannot have their data shared with government clinics, making follow-up care inconsistent. Additionally, many international partners have prioritized introducing new technologies without equal investment in policy development, provider training, or community outreach. This imbalance has resulted in uneven adoption rates and a widening digital inequity between urban and rural areas, and between high-income and low-income patients.

Possible Solutions

Integrating Telemedicine into National Health Strategies

To meet the goals of the NCD Compact, countries need long-term strategies that fully include telemedicine in their healthcare systems. Many current programs are isolated and not connected to national health insurance or primary care. Governments should develop national digital health plans that clearly show how telemedicine will be used for NCD prevention, diagnosis, and treatment. These plans should follow WHO's Digital Implementation Investment Guide and include clear steps for funding,

training, and regulation.

Building Infrastructure for Digital Access

Many LMIC countries still lack basic infrastructure to support telemedicine. Problems like weak internet, unstable electricity, and a lack of devices make it hard for patients to use digital services. Governments, with help from the ITU, should invest in solutions such as solar-powered health kiosks, low-bandwidth platforms, and mobile diagnostic tools—especially in rural areas where NCD care is most limited.

Training the Health Workforce in Digital Tools

Even where digital tools exist, many healthcare workers are not trained to use them. WHO and its partners should set up training centers or online programs to teach doctors, nurses, and community health workers how to use telemedicine effectively—especially for managing chronic diseases. These programs can include lessons on secure data use, remote consultations, and virtual diagnosis. Recently, WHO created a webinar session to create a telemedicine-ready healthcare workforce.

[Fig8.]

Creating Clear and Fair Regulations

Without proper laws and regulations, telemedicine cannot grow safely or fairly. In many countries, legal frameworks for telehealth are missing or incomplete. WHO should help member states develop or update laws around licensing, cross-border care, data privacy, and e-prescriptions. Also, a standardized global code of ethics for telemedicine, covering privacy, consent, fairness, and transparency, must be established. These international standards will build trust and make it easier for different countries to collaborate.

Ensuring Equity and Inclusion

Telemedicine must be designed for everyone—not just those who are tech-savvy or wealthy. Many elderly, rural, and low-income people still face barriers to digital access. Governments should check how new technologies may impact different groups and offer low-tech options like SMS, phone calls, or

community support where needed. Programs like Bangladesh's mPower show how simple tools can still reach vulnerable populations effectively. In some cases, subsidies for devices or data plans may also be necessary.

Creating Sustainable Financing Models

Many telemedicine programs depend on short-term funding and disappear when donor support ends. Countries need permanent funding plans to keep services running. This means including telemedicine in public insurance systems and exploring innovative financing models like performance-based funding. WHO and the World Bank could support this by creating a global investment fund for telehealth focused on chronic disease care. Tax breaks and grants could also help private companies develop tools for national use.

Tracking Progress and Sharing Results

To make sure efforts are working, countries should collect data on how telemedicine is being used for NCDs, such as the number of remote visits, patient satisfaction, and follow-up rates. These indicators can be added to WHO's NCD Progress Monitor and used to compare progress across countries. WHO could also highlight countries making strong progress through nominations to encourage shared learning.

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[Figures]

1. Fig1. '4 Healthy Habits': mobilizing volunteers to help fight noncommunicable diseases https://www.ifpma.org/news/4-healthy-habits-mobilizing-volunteers-to-help-fight-noncommunicable-diseases/
2. Fig2. Digital Health – Big WHO Ambitions but Progress Lags (Health Policy Watch) https://healthpolicy-watch.news/digital-health-big-who-goals-slow-progress/
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