

Forum: World Health Organization (WHO)

Issue: Advancing equitable access to healthcare services and vaccines in LEDCs

Student Officer: Evangelia Maragaki

Position: President

TOPIC INTRODUCTION

Equitable access to healthcare services and vaccines means access regardless of income, location, gender, or social status. It means that everyone can and must have access not only to healthcare services, but also to vaccines. However, for centuries, a pattern has been visible. Less Economically Developed Countries (LEDCs), such as sub-Saharan Africa, parts of South Asia, and some small island states, due to socioeconomic reasons, have a rather limited access to healthcare services and vaccines. Those gaps show great consequences. Preventable illnesses and deaths are a common occurrence. This inequality became more and more prevalent due to the COVID-19 pandemic, where people in those regions could not be vaccinated, and many of them passed away due to the lacking healthcare systems in those regions.

One of the key factors that contributes to this issue is the fragile health systems and the weak supply chains found in those countries, which don't allow for the optimum level of operation and preparedness, resulting in people not being treated correctly, and often causing deaths that could otherwise be prevented. There is also limited financing for health, which is a contributing factor. Without enough funding, there cannot be properly stocked hospitals, sufficient doctors available, and the list of shortcomings goes on. Last but not least, the global market dynamics also play a deciding role in preventing equitable access to healthcare services and vaccines in LEDCs. Observing that the majority of vaccine manufacturing hubs are concentrated in More Economically Developed Countries (MEDCs), this dynamic can contribute to an uneven global distribution of vaccines, medical personnel, and essential medicines.

This issue is a highly pressing one, seeing as health equity and human rights are being constantly violated through this inequality. Not to mention that those rights are interlinked with international commitments, such as Universal Health Coverage (UHC), Sustainable Development Goal 3 (SDG 3), and human rights treaties, which strengthen the pressing need to take action and ensure there is equality in access to healthcare services and vaccination. To combat this issue, domestic reforms are in order along with international cooperation and help. Primary care in LEDCs must be strengthened, investments must be made in the health workforce, and procurement and cold-chain systems ought to be improved. As far as the international community

is concerned, some measures could be technology transfer, helping them create their own hubs, and start developing vaccines on their own, to have equitable allocation mechanisms and to finance innovation to reduce aid dependence.

DEFINITION OF KEY TERMS

Cold Chain

“The Cold chain is a process that keeps vaccines within the required temperature range at all times of storage and transport. This may include ultra-cold or freezer storage, alongside the familiar +2°C to +8°C range.”¹ This is highly prevalent in the topic, as without it, the vaccines would not be held in the appropriate temperature, and they would all get ruined.

Health Equity

“Health is a fundamental human right. Health equity is achieved when everyone can attain their full potential for health and well-being.”² Health equity means that everyone can access and has access to healthcare services. It is the main principle on which all organizations work, and also their end goal.

Immunization coverage

“Vaccination coverage refers to the proportion of a population that has received vaccinations, which is a critical output indicator of vaccination programmes. It is essential for assessing community protection levels, identifying susceptible individuals, and guiding public health interventions.”³ This term is connected with the topic, to ensure vaccine equity, as without knowing the percentages of immunization for each disease, we cannot effectively ensure that all people are up to date with their vaccines.

¹ “Cold Chain - Immunisation Advisory Centre.” *Immune.org.nz*, 2025, immune.org.nz/vaccine-extractive-infrastructure-built-to-improve-extractive-infrastructure-improving-gain.

² World Health Organization. “Health Equity.” *World Health Organization*, 2025, https://www.who.int/health-topics/health-equity#tab=tab_1. Accessed 20 July 2026.

³ Carrara, Elena, et al. “ESCMID Guidelines on Testing for SARS-CoV-2 in Asymptomatic Individuals to Prevent Transmission in the Health Care Setting.” *Clinical Microbiology and Infection*, vol. 28, no. 5, 1 May 2022, pp. 672–680, [www.ncbi.nlm.nih.gov/pmc/articles/PMC8109494/](https://doi.org/10.1016/j.cmi.2022.01.007), <https://doi.org/10.1016/j.cmi.2022.01.007>.

Sustainable Development Goal 3

“Targets of Sustainable Development Goal 3 to ensure healthy lives and promote well-being for all at all ages”⁴. On the 25th of September 2015 some sustainable goals were set to be achieved by 2030. The SDG that concerns our topic is the 3rd goal, which in summary focuses on healthcare and vaccine equity, which is also what this issue is all about. It ensures that everyone has access to healthcare services and vaccines no matter their background.

Vaccine Equity

“Vaccine equity is the equal distribution of vaccines such that everyone, regardless of socioeconomic status, geographic location, or other factors, gets access to vaccines. It entails addressing discrepancies in vaccine access and uptake among various communities, both domestically and globally.”⁵ Vaccine equity means that everyone can access and has access to vaccination. It is interlinked with the issue at hand, as it is the main principle on which all organizations work, and also their end goal.

BACKGROUND INFORMATION

Colonial Healthcare Systems

During colonial times, healthcare infrastructure and healthcare systems were built around serving the settlers and not the indigenous population. For example, the health policy that the British colonizers adopted was focused on protecting troops, trade, and extractive infrastructure, rather than improving the health of the indigenous people. The hospitals, sanitation systems, and all medical systems that were built in India under the British were developed in military centers, port cities, and railway networks, focusing on the prosperity of the British Empire and the settlers rather than the health of the indigenous people, while also protecting and helping the indigenous people in India.

Neglect of Indigenous Healthcare

The services designed for the indigenous communities were not only underfunded and understaffed, but also poorly developed. This was used as a means of justifying the colonization of regions, as the colonialist argued that due to the state of their healthcare services, they were unable to be self-governed. Furthermore, all action taken to improve healthcare in those regions

⁴ WHO. “Targets of Sustainable Development Goal 3.” 2022.

⁵ James Lind Institute. “Ensuring Vaccine Equity: Challenges and Opportunities – James Lind Institute | Public Health School in Switzerland.” *Jlledu.Ch*, 30 Dec. 2024, <https://jlledu.ch/ensuring-vaccine-equity-challenges-and-opportunities/>. Accessed 20 July 2026.

ended up benefiting the colonizers, rather than the indigenous people, who were and still are in dire need of better healthcare infrastructure, thus further intensifying the inequality in healthcare access. Thus, indigenous people were facing a low life expectancy in contrast with the settlers at this period of time, while also creating long-lasting inequalities that can still be felt to this day.

Epidemics as Colonial Tools

This lack of healthcare led to epidemics. Instead of trying to deal with those epidemics and put an end to them, those epidemics were used as a means to facilitate land acquisition for the settlers and assimilation. A great example would be the Epidemic Diseases Act of 1897 in India, which was introduced after the Bombay Plague epidemic. This act was designed to protect order and state control rather than actually deal with the epidemic. The same framework was also used to deal with the COVID-19 pandemic. Likewise, during the final decade of British rule in India, the Drugs and Cosmetics Act was passed, which to this day underpins India's modern pharmaceutical regulatory framework.

Colonial Health Institutions and their Legacy

People who were employed in the health sector often supported policies that ended up oppressing indigenous people. In the same vein, healthcare aspects were also used as an incentive for indigenous people to relocate, making healthcare infrastructure a mechanism of displacement. Generally, the colonizers neglected the public health infrastructure of indigenous people, which, in the end, resulted in indigenous people having little to no access to land, clean water, safe housing, food security, and self-determination. They also left weaknesses through underinvestment in rural sanitation and legal frameworks that either prioritize fragmented healthcare delivery or prioritize the healthcare of military and strategic populations over the general public. So we can conclude that the colonizers were more interested in improving the healthcare systems made for them, rather than their health systems and the ones for the indigenous population. Instead of improving the conditions, what they did was to worsen the already poor conditions to help them achieve their end goals. Many health institutions established during colonial rule continue to exist today. In India, the Indian Medical Service was created primarily to safeguard British troops, while the railway health system was established to protect workers essential to imperial commerce. These systems remain better funded and more effective than the general public health system, demonstrating the lasting legacy of colonial priorities. Apart from that, they also disrupted the health and livelihoods of the indigenous populations. The colonizers stole their lands and dispossessed them of their agriculture, which, as a result, destroyed the traditional food systems that they had in this region. This also increased overcrowding in some regions, poverty, and poor health outcomes, while at the same time limiting their access to medical services, worsening the situation even more. Thus, the communities were forced to become dependent on the food sources of the colonizers, which contributed to them developing chronic diseases, such as diabetes. At the same time, their traditional health practices

were undermined and replaced by colonial institutions, which in turn made the situation turn for the worse. As if they did not already have limited healthcare access, the colonizers limited it even more by creating reservation systems, segregation, checkpoints, and movement restrictions.

Evidence of Colonial Health Outcomes

Research has also shown the long-term effects of colonial health priorities. Economist Lakshmi Iyer found that districts directly ruled by the British had 70% fewer villages with primary health subcentres, nearly 40% higher poverty rates, and 33% higher infant mortality rates than former princely states.⁶ Similarly, the 1951 Census showed that former princely states such as Travancore-Cochin, Mysore and Madras had substantially lower crude death rates than former British provinces, suggesting that direct British rule did not necessarily produce better public services. Madras Medical College (1835) became one of Asia's earliest institutions to teach European medicine, while Christian Medical College, Vellore developed into a leading medical institution. Cochin established a general hospital in 1845, Trivandrum followed in 1865, and Travancore introduced compulsory smallpox vaccination in 1879 for public servants, prisoners, and students. Early rural health units in these states combined preventive and curative services before many national reforms. Disease outbreaks also encouraged institutional innovation. Following repeated epidemics, including the 1918–1919 mumps outbreak, the Madras Presidency established a separate public health department independent from curative medical services. This created India's only formal public health cadre, which still exists in Tamil Nadu and has contributed to strong performance in immunisation, maternal health and disease surveillance.⁷ Following independence, countries such as India inherited colonial laws, administrative institutions, regional inequalities and health systems hierarchies that remain embedded into today's society, demonstrating the enduring legacy of colonial public health systems.

Post-Colonial Colonial Challenges

During the 1960s - 1970s, decolonization happened abruptly and rapidly, further causing problems for healthcare facilities. Thus, for example, many African States were left unprepared for independence. Earlier colonial plans for self-rule and independence were made, but under the condition that decolonization would have been gradual, and not as it happened in real life. So most new states were ill-prepared, especially in aspects that concerned economic development, public institutions, administrative capacity, and skilled personnel. Which, in the end, ended up greatly impacting vaccination and healthcare services. Furthermore, colonial administrations had

⁶ Ramanan Laxminarayan. "Long Shadow of Public Health's Colonial Legacy | Hindustan Times." *Hindustan Times*, 12 Mar. 2026, https://www.hindustantimes.com/opinion/long-shadow-of-public-health-s-colonial-legacy-101773329026625.html#google_vignette Accessed 20 July 2026.

⁷ Ramanan Laxminarayan. "Long Shadow of Public Health's Colonial Legacy | Hindustan Times." *Hindustan Times*, 12 Mar. 2026, https://www.hindustantimes.com/opinion/long-shadow-of-public-health-s-colonial-legacy-101773329026625.html#google_vignette Accessed 20 July 2026.

never been fully bureaucratised, making it difficult for post-colonial governments to establish effective, independent public services. Those administrations remained heavily influenced by social pressures, ethnic ties and kinship networks, which continued to apply the same pressure to the healthcare systems, as the administration during the colonial times had.

Structural Adjustment Programmes (SAPs)

During the 1980s - 1990s, the International Monetary Fund (IMF) and the World Bank (WB) introduced the Structural Adjustment Programmes (SAPs) across many countries in Asia, Africa, and Latin America, fundamentally reshaping national health systems. Those programmes imposed austerity measures, which ended up requiring governments to cut down on expenditures. The budget the government allocated to public healthcare, nutrition, and family planning was significantly reduced due to those measures. Public healthcare facilities were closed or experienced severe reductions in funding and capacity. Governments also had to reduce the employment of nurses and doctors, leading to a shortage in healthcare staff, along with the budget cuts being made, thus further deteriorating the healthcare systems. During that time, most healthcare services were being privatized, further reducing the role of the state and government in healthcare provision. The reforms weakened publicly coordinated health systems and contributed to the fragmentation of healthcare services, replacing universal public provision with more market-based healthcare delivery. A systematic review found that structural adjustment in Sub-Saharan Africa was associated with approximately 85.6 additional child deaths per 1,000 children and 360 additional maternal deaths per 100,000 live births.⁸ In the past decades, the global health architecture has evolved. Health assistance was mainly driven by cooperation between two countries. However, this type of financial help was often driven by interest and geopolitics, and influenced by many outside factors, which made this help and this monetary help ineffective, as it was something subject to change, and something that was a short-term solution, rather than a long-term solution.

Evolution of Global Healthcare Architecture

Thus, after the Second World War, a shift started to happen: from bilateral cooperation, we moved on to multilateral cooperation and the involvement of organizations that provided the LEDCs with a more stable solution in improving their healthcare systems. The World Health Organization (WHO) became the focal point for coordination, standards, and technical guidance. United Nations International Children's Emergency Fund (UNICEF) expanded the agenda, with child health, nutrition, and immunization support. However, those older organizations could not

⁸ Hickel, Jason, et al. "Structural Adjustment: Damages, Reparations and Pathways to Non-Recurrence." *BMJ Global Health*, vol. 11, no. Suppl 1, BMJ, Mar. 2026, pp. e017221–21, <https://doi.org/10.1136/bmjgh-2024-017221> . Accessed 20 July 2026.

tackle every issue and left some gaps, which led to a new organization being created to fix those gaps. For example, GAVI was created to improve vaccine access, financing, and immunization coverage, and the Global Fund was established to mobilize resources for HIV/AIDS, tuberculosis, and malaria, sicknesses that plagued many LEDCs in the past. However, the expansion of actors involved, even though it brought positive change, also made all processes more complex and more crowded, with policies of different organizations either overlapping or contradicting each other, which poses a threat to decision-making and holds all actions to be made until a consensus is reached.

Advances in Vaccine Technology

In the past few years, with technological and digital evolution, there have also been advances in vaccine technology. Viral vector vaccines are a major advancement, allowing rapid development against emerging infectious diseases. “Viral vector vaccines use a harmless version of a carrier virus, or vector, to deliver specific genetic instructions to human cells. Those instructions help the cells to make proteins known as antigens that can trigger an immune response against the potentially harmful disease-causing virus, teaching the body to recognise and fight it in future.”⁹ The main platforms include adenovirus, VSV, measles virus, influenza virus, Newcastle disease virus, and poxvirus vectors. These vaccines induce both humoral and cellular immune responses, with some also providing mucosal immunity. Viral vector vaccines can be developed and manufactured rapidly during disease outbreaks. Adenovirus vectors are suitable for large-scale, low-cost production and can be stored without a cold chain, simplifying distribution. Existing manufacturing infrastructure supports large-scale production of several viral vector vaccines. Viral vector vaccines can complement mRNA vaccines by serving as effective booster doses.

Key Challenges

One of the main factors that are challenging the achievement of vaccine and healthcare equity are the financial barriers. Vaccine access can be limited by the cost of doses themselves and by the indirect costs of reaching clinics, such as transport, time off work, and repeated visits. These costs tend to hit low-income households hardest and can reduce uptake even when vaccines are technically available. Geographical barriers also contribute greatly to the cause of this inequity. Remote or rural areas often face long travel distances, poor roads, unreliable electricity, and fewer health facilities. These conditions make timely delivery harder and can prevent people from completing multi-dose schedules. Another issue is the limits of the supply chain. Vaccines depend on cold storage, temperature control, and functioning distribution networks, so weak infrastructure can quickly disrupt delivery. Storage shortages, stock

⁹Cepi. “Viral Vector Vaccines – What They Are, and What They Are Not | CEPI.” *Cepi.Net*, 2025, <https://cepi.net/viral-vector-vaccines-what-they-are-and-what-they-are-not> . Accessed 20 July 2026.

management problems, and unreliable transport can all lead to wastage or missed coverage. Governance, and stability, as well as misinformation also hinder vaccine and healthcare equity. Political instability, conflict, and weak governance can interrupt planning, financing, and safe access for health workers and patients. They also make it harder to coordinate procurement, distribution, and community outreach across regions. Whereas, misinformation spreads quickly through social media and can amplify fear, distrust, and refusal. Evidence from survey research shows that exposure to false claims is associated with greater hesitancy and lower intention to vaccinate.

MAJOR COUNTRIES AND ORGANIZATIONS INVOLVED

India

India is also an important player in this issue. India is referred to as a global vaccine manufacturer and supplier, often referred to as the “vaccine mother”. It is a major producer of vaccines via private firms such as the Serum Institute and other public manufacturers. It is also a supplier to LEDCs through bilateral deals and COVAX/Gavi channels. Its core strength lies in the fact that it has large-scale manufacturing capacity, low production costs, and its experience in producing routine and pandemic vaccines has made it an incredibly valuable player in the international scene. It also has a growing biotech sector and regulatory authorities, which are increasing its international presence and abilities in this issue for the better. Some examples of India's involvement include the mass production of COVID-19 vaccines for global distribution, export agreements for vaccines, contract manufacturing and technology partnerships. As far as its influence on LEDCs is concerned, it is a critical supplier for affordable vaccines and plays a critical role in scaling-up and regional supply security.

South Africa

South Africa is a regional healthcare hub and the leading nation in regional manufacturing capacity in Africa. It is also playing an active role in advocacy for IP flexibility and local mRNA capacity building, which are among the main factors LEDCs face when it comes to vaccine equity. It has many research institutions such as Stellenbosch and KRISP, which have conducted research in HIV/TB vaccines, and recently it has made investments in mRNA. Other examples of South Africa's involvement include the hosting of manufacturing initiatives, such as an mRNA hub pilot. Furthermore, the South African Health Products Regulatory Authority (SAHPRA) is a reference point in regional regulatory coordination. It also has significant influence on other LEDCs. It serves as an intercontinental manufacturing and regulatory anchor, training hubs, and

policy-making for African production and distribution, which greatly contributes to vaccine equity and accessibility in LEDCs.

United Kingdom

The United Kingdom is a major donor and technical partner, with the Foreign, Commonwealth & Development Office (FCDO). It has a strong domestic research and manufacturing capacity. It is also influential in multilateral funding mechanisms. Its strengths lie in the significant aid budgets it gives to LEDCs via FCDO, its scientific institutions, like Oxford University and Imperial College London, which provide scientific research for vaccines and healthcare. Some examples of FCDO's involvement include FCDO-funded health system strengthening and its support to manufacturing partnerships and regulatory cooperation. It is also funding Gavi and CEPI, which are main actors in ensuring equitable vaccine access anywhere. It is also known for vaccine collaboration, such as the Oxford-AstraZeneca partnership. As far as the UK's influence on LEDCs is concerned, it provided financing, technical assistance, regulatory recognition, and facilitated tech transfer agreements. However, we need to keep in mind that the aid given is often conditional and subject to political shifts, which can affect the stability of the funding. Also, domestic political pressure may result in the prioritisation of national interest, and further destabilize the funding and the aid given.

African Union (AU)

The AU is a regional political coordination body that, among many things, is also promoting continental strategies for manufacturing, regulatory harmonization, and pooled procurement. One of its main strengths is its political power within the African continent and the African states, which allows it to make initiatives such as the African Pharmaceutical Technology Foundation and the African Medicines Agency (AMA), which, without the AU's help, would not have managed to contribute so much to finding a solution to this issue. Some further examples of the involvement of the AU include the AU-led vaccine manufacturing strategy, the Partnership for African Vaccine Manufacturing (PAVM), and advocacy at the World Trade Organization (WTO) for production and IP issues that will help Africa have better access to vaccines. It is extremely helpful, as it can coordinate cross-country investments, negotiate regional deals, and harmonize regulatory frameworks to ease continental manufacturing and distribution.

Gavi

Gavi, the vaccine alliance is a public-private global partnership that not only finances but also coordinates vaccine purchases and deliveries to LEDCs. It has made significant progress in lowering the prices of vaccines, thus making them cheaper and more accessible to everyone, no matter their financial background. Gavi has also created two core mechanisms to ensure that there are sustainable immunisation programmes in LEDC countries. The first mechanism is the

co-financing, which ensures that countries receive Gavi-supported vaccines for lesser prices to contribute financially to the cost of vaccines and all related immunization supplies. The second mechanism is called Advance Market Commitments (AMCs). They are legally binding commitments that guarantee a market and price for vaccines meeting certain quality standards and performance criteria. Their goal is to incentivize manufacturers to develop vaccines for diseases that primarily affect LEDCs to address a prevalent vaccine market failure. It is also directly supporting routine immunization, negotiating prices to ensure accessibility, financing new vaccine introduction, supporting cold-chain investment, and partnerships in COVAX, which greatly strengthen vaccine equity in LEDCs.

Médecins Sans Frontières (MSF)

Another important organization is Médecins Sans Frontières (MSF). It is a medical humanitarian organization that provides care in conflict zones, epidemics, disasters, and places where people are excluded from healthcare, while also advocating for cheaper and more accessible medicines and vaccines. MSF, also known as Doctors Without Borders, is an international independent organisation that delivers medical assistance to people who are most in need, especially in remote, unstable, or low-resource settings. Through its Access Campaign, MSF works to reduce the price of medicines, vaccines, and diagnostic tests, and to make essential health products more available in countries that need them most. It also pushes research and health innovation toward neglected diseases and underserved populations, because many vaccines and treatments are not designed for the realities of LEDCs. In addition, MSF supports vaccination efforts in emergency and humanitarian settings, where weak health systems and conflict often prevent equitable access to care.

United Nations International Children's Emergency Fund (UNICEF)

UNICEF is the largest single producer of vaccines for routine immunization in LEDCs. It manages logistics and last-mile delivery through partnerships with governments and implementing agencies, where needed to achieve full accessibility. Its core strength lies within its expertise in the vaccine sector. It has global supply-chain expertise, procurement scale, cold-chain logistics capacity, on-the-ground country offices, and community networks that help reach all regions and also correctly identify and resolve any issues that may arise, while ensuring a fair distribution of vaccines in LEDCs. Some examples of its involvement are bulk vaccine procurement, emergency vaccine deployments, cold-chain strengthening projects, and the training of community health workers. As far as its effect in LEDCs is concerned, it plays a critical role in ensuring vaccine supply reaches clinics and communities all around the world, while also making sure that procurement costs get lowered.

TIMELINE OF EVENTS

DATE	DESCRIPTION OF EVENT
1835	Madras Medical College was one of Asia's first institutions that taught European Medicine ¹⁰
1897	The Epidemic Diseases Act was passed, it was an act created by the British to ensure order and state control, rather than effectively deal with the spread of an epidemic ¹¹
1918-1919	Mumps Outbreak in India, Madras Presidency established separate health departments, from the scientific ones. ¹²
1951	The 1951 census showed a gap in healthcare services and their effectiveness between provinces in India that were ruled by the British and by the Indians. ¹³
1960s-1970s	Rapid Decolonization, left the newly independent states unprepared for their independence, healthcare systems were

¹⁰ Ramanan Laxminarayan. "Long Shadow of Public Health's Colonial Legacy | Hindustan Times." *Hindustan Times*, 12 Mar. 2026, https://www.hindustantimes.com/opinion/long-shadow-of-public-health-s-colonial-legacy-101773329026625.html#google_vignette Accessed 20 July 2026.

¹¹ "Redirect Notice." *Google.Com*, 2026, https://www.google.com/url?q=https://gh.bmj.com/content/11/suppl_1/e017221&sa=d&source=docs&ust=1784539165617003&usq=aovvaw0i-jpgppuptz-hhn8kt1-j . Accessed 20 July 2026.

¹²"Redirect Notice." *Google.Com*, 2026, https://www.google.com/url?q=https://gh.bmj.com/content/11/suppl_1/e017221&sa=d&source=docs&ust=1784539165617003&usq=aovvaw0i-jpgppuptz-hhn8kt1-j . Accessed 20 July 2026.

¹³ Ramanan Laxminarayan. "Long Shadow of Public Health's Colonial Legacy | Hindustan Times." *Hindustan Times*, 12 Mar. 2026, https://www.hindustantimes.com/opinion/long-shadow-of-public-health-s-colonial-legacy-101773329026625.html#google_vignette Accessed 20 July 2026.

	either not structured correctly or shattered under the newly immense pressure. ¹⁴
1974	The expanded Programme on Immunization (EPI) was created to ensure all children have access to life-saving vaccines against life-threatening diseases. ¹⁵
1980s - 1990s	Structural Adjustment Programmes (SAPs) forced austerity measures to LEDCs to ensure their economy did not completely shatter. Those programmes enforced budget cuts in healthcare services, making them take a turn for the worse. ¹⁶
2005	International Health regulations were established to give specific actions that countries and organizations must take when dealing with public health risks and emergencies. ¹⁷
25th September 2015	Sustainable Development Goals (SDGs) were adopted by the UN, for this topic the relevant one is the 3rd SDG, which focuses on health and vaccine equity. ¹⁸

¹⁴“Redirect Notice.” *Google.Com*, 2026, https://www.google.com/url?q=https://gh.bmj.com/content/11/suppl_1/e017221&sa=d&source=docs&ust=1784539165617003&usg=aovvaw0i-jpqpuputz-hhn8kt1-i . Accessed 20 July 2026.

¹⁵ “Essential Programme on Immunization.” *Who.Int*, <https://www.who.int/teams/immunization-vaccines-and-biologicals/essential-programme-on-immunization/> . Accessed 20 July 2026.

¹⁶Hickel, Jason, et al. “Structural Adjustment: Damages, Reparations and Pathways to Non-Recurrence.” *BMJ Global Health*, vol. 11, no. Suppl 1, 1 Mar. 2026, pp. e017221-e017221, https://gh.bmj.com/content/11/Suppl_1/e017221 , 10.1136/bmjgh-2024-017221. Accessed 20 July 2026.

¹⁷ “Welcome to Zscaler Directory Authentication.” *Who.Int*, 2025, <https://iris.who.int/server/api/core/bitstreams/1632f577-e897-4da2-8d4b-d0d37751b65c/content> . Accessed 20 July 2026.

¹⁸ 70/1. *Transforming Our World: The 2030 Agenda for Sustainable Development* Transforming Our World: The 2030 Agenda for Sustainable Development. 2015, https://www.securitycouncilreport.org/atf/cf/%7b65bfcf9b-6d27-4e9c-8cd3-cf6e4ff96ff9%7d/a_res_70_1.pdf . Accessed 20 July 2026.

2020	WHO Resolution WHA73.3. It was adopted by creating the global strategy to accelerate the elimination of cervical cancer as a public health problem. ¹⁹
------	---

RELEVANT UN RESOLUTIONS, TREATIES AND EVENTS

International Health Regulations (IHR)

The International Health regulations (IHR) were adopted in 2005. The international framework is legally binding and requires countries to detect, assess, notify, and respond to public health risks and emergencies, making it highly relevant to cross-border disease control, surveillance capacity, and equitable access to health responses in LEDCs. Some of its success can be attributed to its modernization of global health law, and the shift had on countries towards event-based sickness-epidemic surveillance, which improved early detection and rapid response to outbreaks. It also created a legally binding obligation for all parties to detect, assess, notify, and respond to public health events, which strengthened international coordination and transparency. However, the main weakness is implementation. A systematic review found that countries often needed sustained political commitment, local adaptation, and continuous assessment to make the regulations work in practice, and many States had not met all core capacity requirements even years after adoption. This problem was especially serious in LEDCs, where weak health systems, limited financing, shortages of trained personnel, and poor laboratory infrastructure made compliance difficult.

UN Resolution 70/1

It was adopted on the 25th September 2015. It sets the global framework for SDG's, which include health-related goals such as universal health coverage, reducing maternal and child mortality, and strengthening health systems, making it a core reference point for equitable healthcare and vaccine access in LEDCs. It has made a positive impact, as it has given a backbone to countries to start taking action, and given a strict deadline, which has helped countries have a clearer and structured action plan to ensure equitable access to healthcare services and vaccines in LEDCs. It was successful because it created a clear, universal framework that linked health to broader development, making healthcare equity a core part of global policy rather than a separate issue. It also gave governments a structured deadline and

¹⁹ "Welcome to Zscaler Directory Authentication." *Who.Int*, 2025, <https://iris.who.int/server/api/core/bitstreams/1632f577-e897-4da2-8d4b-d0d37751b65c/content> . Accessed 20 July 2026.

measurable goals, which helped countries integrate health priorities into national plans and coordinate action with development partners. It also reinforced the idea that access to healthcare, maternal and child health, and stronger health systems are essential components of sustainable development, not optional policy goals. However, the SDG framework has not translated into equal progress everywhere. WHO reports show that the world is off track for universal health coverage, and progress in health service coverage has slowed since 2015 rather than accelerated. The main problem is implementation. Many LEDCs face funding shortages, weak infrastructure, workforce gaps, and poor coordination, which makes it difficult to see real improvements in access to vaccines and healthcare.

[WHO Resolution WHA73.2](#)

It is a resolution adopted in 2020, which established the Global Strategy to Accelerate the Elimination of Cervical Cancer as a Public Health Problem. It aims to reduce the incidence rate of cervical cancer below 4 cases per 100,000 women globally by 2030, focusing on 3 pillars: vaccination, screening, and treatment. It emphasizes the need for sufficient resources to expand healthcare services for cervical cancer elimination efforts and encourages collaboration to promote knowledge and quality services. It was successful because it turned cervical cancer elimination into a concrete global objective rather than a vague aspiration. The 90–70–90 targets give countries a clear roadmap: 90% HPV vaccination, 70% screening, and 90% treatment by 2030. It was also successful because it framed cervical cancer as an equity issue, which is especially important for LEDCs where more than 85% of deaths occur. However, the resolution is not fully successful in practice because many countries still face barriers such as weak infrastructure, limited financing, shortages of trained staff, and poor screening coverage. WHO itself notes that progress depends on countries scaling up services and resources, which means the strategy is only as effective as national implementation. Its success is also uneven because HPV vaccination and cervical screening remain much lower in low-income settings than in high-income ones, so the gap in access is still large.

PREVIOUS ATTEMPTS TO SOLVE THE ISSUE

Gavi Funding

Gavi has helped raise immunization coverage through donor-backed procurement and delivery support. Its work is the main reason why people in LEDCs have long-term access to vaccines. It is important to note that since 2000, Gavi has invested more than \$8 billion+ since 2000 for vaccine procurement, 2 billion from that amount, they was invested by COVAX and Gavi-supported delivery systems, that helped bring COVID-19 vaccines to around 145 countries and

nearly 2 billion doses overall.²⁰ As a result, Gavi funding has helped significantly increase immunization coverage in targeted countries, by not only improving but also lowering the prices. However, the only thing that hinders the effectiveness of this solution, is the dependence it creates on external funding, and the repercussions it will have in vaccine and healthcare equity, if it is cut or limited. Not to mention, that it does not cover all countries, and not all types of medicines, which is also limiting its overall effectiveness.

Mobile Clinics

Mobile units were deployed by health agencies and NGOs in order for them to be able to reach remote, displaced, or underserved populations. It was a step to ensure that everyone no matter their geographical location, was going to be able to have access to vaccines and healthcare. A prevalent example includes the Afghan Red Crescent Mobile Health Teams in Afghanistan. In Afghanistan rural southern provinces like Herat have been facing for decades a long limited healthcare access due to exacerbated conflict and economic hardships. To help deal with this inequity in vaccine and healthcare services 47 mobile health teams were deployed by IFRC and Afghan Red Crescent Society to remote locations. The teams provided primary care, routine immunization, oral polio vaccines, measles and all catch-up vaccines for children aged between 12 months to 59 months. It had a great impact, as over 390,000 vaccine doses were administered, including 46,000 oral polio vaccines and 5,000 measles second doses.²¹ As a result, service delivery in areas where inaccessible or non-existent were enabled. As a result, we can understand that they are highly effective ways to combat this issue. However, it is implemented on a limited scale, thus not reaching everyone in need. Not to mention that it is not a sustainable solution to this issue, due to its high operation costs.

Free Vaccine Programs

The purpose of free vaccine programmes is to remove all financial barriers at the point of care. It is achieved via government-funded free vaccination programmes that increase coverage without placing a financial burden on the populations. One example could be the Expanded Programme on Immunization (EPI), which has a global implementation. It was launched by WHO in 1974 and aimed to ensure that all children could benefit from life-saving vaccines against

²⁰Unicef. "Covax: 1 Billion Vaccines Delivered." *Www.Unicef.Org*, 19 Jan. 2022, <https://www.unicef.org/supply/stories/covax-1-billion-vaccines-delivered> . Accessed 20 July 2026.

²¹ "World Immunization Week: Afghan Red Crescent Mobile Health Teams Bring Life-Saving Immunization and Care to People in Remote Areas | IFRC." *Ifrc.Org*, 23 Apr. 2024, <https://www.ifrc.org/article/world-immunization-week-afghan-red-crescent-mobile-health-teams-bring-life-saving> . Accessed 20 July 2026.

diseases, such as measles, polio, diphtheria, pertussis, tetanus and BCG. By making vaccines universally available and free, EPI achieved substantial improvements in vaccination rates and contributed to the prevention of over 154 million deaths over 50 years.²² Countries reported significantly higher coverage in children when no out-of-pocket fees were required.

POSSIBLE SOLUTIONS

Strengthening local vaccine manufacturing

To address this issue, a possible solution would be to strengthen local vaccine manufacturing. A huge obstacle LEDCs face when it comes to being supplied with medicines is the transportation and the costs needed to buy them. So, a solution to that would be to create manufacturing hubs for vaccines in Africa, Southeast Asia, and Latin America to reduce dependence on imports and shorten the supply chains, to ensure quicker and cheaper access to vaccines. Not to mention that through these measures, the local economy will also be boosted, which will create local jobs and also attract people with expertise to those areas to work on those newly created hubs, further boosting the local economy, while also ensuring there is equitable access to vaccines in LEDCs.

Universal Health Coverage Funding

To increase healthcare and vaccine access to LEDCs, the creation of the Universal Health Coverage Funding could be introduced. It is going to be a fund designed specifically for LEDCs to help them establish everything needed to ensure that all citizens of a nation have access to healthcare and vaccines, including primary healthcare facilities, cold-chain infrastructure, trained health workers, reliable medicine supply systems, and community outreach programmes. It should also prioritise primary healthcare as the most cost-effective entry point for UHC, because strong primary care is essential for equitable access, prevention, and early treatment. It could be used and financed by newly established international health financing mechanisms, e.g., a global health tax, as well as voluntary state contributions, donor support, and pooled multilateral financing to make the fund more stable and sustainable. In addition, it could support strategic purchasing, strengthen health budget execution, and expand fiscal space through broader macroeconomic reforms, so that countries do not rely only on external. Its goal is to reduce financial barriers and build comprehensive healthcare systems, while also reducing out-of-pocket spending, strengthening health equity, and supporting long-term access to essential services rather than short-term emergency aid. Last but not least, The fund could also reduce

²²“Essential Programme on Immunization.” *Www.Who.Int*, <https://www.who.int/teams/immunization-vaccines-and-biologicals/essential-programme-on-immunization/> . Accessed 20 July 2026.

fragmentation in health financing by consolidating multiple funding streams into a more coordinated system, which would improve efficiency, equity, and accountability.

Digital health infrastructure

Another solution could be to create digital health infrastructure. It should focus on deploying mobile health platforms for vaccine registration, building blockchain-based supply chain tracking, and using AI-powered disease surveillance to identify gaps early, and be able to respond further. Thus, a critical point in LEDCs, mainly the weak information systems, is being tackled. If there was better digital infrastructure, immunization data could be improved, vaccine wastage would be significantly reduced, and health authorities would receive much needed-help with targeting underserved areas more effectively. Mobile registration systems could map which communities are missing which vaccines, blockchain can track stock movement and reduce losses and last but not least, AI surveillance could detect outbreak patterns before they spread widely.

Education and cultural competence

Its purpose is to increase vaccine acceptance and healthcare by addressing trust, language barriers and misinformation. This solution should include a vaccine education campaign in local languages, cultural competence training for healthcare providers, and social media responses to misinformation. One needs to keep in mind that access is not only hindered by a lack of supply. It also has to do with whether people trust the health systems and have a clear understanding of the benefits that come with vaccination. Thus, by adopting this approach, hesitancy can be greatly reduced, demand in low-coverage communities could be increased, and services could be made to be more responsive to local norms. Community radio, faith leaders, and local health workers could improve uptake in hesitant populations, by explaining to them the benefits of immunization. Also through training that providers will undergo, discrimination can be reduced, while improving communication with patients.

BIBLIOGRAPHY

General Bibliography

World Health Organization (WHO), <https://www.who.int/teams/immunization-vaccines-and-biologicals/essential-programme-on-immunization/> . Accessed 29 July 2026.

Google.Com, 2026,
https://www.google.com/url?q=https://gh.bmj.com/content/11/suppl_1/e017221&sa=d&source=docs&ust=1784539165617003&usq=aovvaw0i-jpgppuptz-hhn8kt1-j . Accessed 29 July 2026.

“Strengthening Vaccine Capacity Building on the African Continent. Nature Communications, Vol. 16, No. 1. Aug. 2025, <https://doi.org/10.1038/s41467-025-62839-y> . Accessed 29 July 2026.

Ed, and et al. “An Epidemic of Uncertainty: Rumors, Conspiracy Theories and Vaccine Hesitancy.” Nature Medicine, vol. 28, no. 28, Mar. 2022, pp. 456–59, <https://doi.org/10.1038/s41591-022-01728-z> . Accessed 29 July 2026.

“Annual Progress Report 2018.” Gavi.Org, 20 July 2026, <https://www.gavi.org/progress-report> . Accessed 29 July 2026.

“Annual Progress Report 2024.” Gavi, 30 May 2024, <https://www.gavi.org/progress-report> . Accessed 29 July 2026.

Alam, Shahriar Tanvir. “Challenges to Covid-19 Vaccine Supply Chain: Implications for Sustainable Development Goals.” International Journal of Production Economics, vol. 239, Sept. 2021, p. 108193, <https://doi.org/10.1016/j.ijpe.2021.108193> . Accessed 29 July 2026.

“Checking Your Browser - reCAPTCHA.” Nih.Gov, 2026, p. Accessed 20 July 2026, <https://pmc.ncbi.nlm.nih.gov/articles/pmc12350677/> . Accessed 29 July 2026.

Unicef. “Covax: 1 Billion Vaccines Delivered.” Wwww.Unicef.Org, 19 Jan. 2022, <https://www.unicef.org/supply/stories/covax-1-billion-vaccines-delivered> . Accessed 29 July 2026.

James Lind Institute. “Ensuring Vaccine Equity: Challenges and Opportunities.” JLIedu.Ch, 30 Dec. 2024, <https://jliedu.ch/ensuring-vaccine-equity-challenges-and-opportunities/> . Accessed 29 July 2026.

“Essential Programme on Immunization.” WHO (World Health Organization), 20 July 2026, <https://www.who.int/teams/immunization-vaccines-and-biologicals/essential-programme-on-immunization/> . Accessed 29 July 2026.

“Five Years to Save 8 Million Lives: Everything You Need to Know About Gavi’s Investment Opportunity.” Gavi.Org, 2024, p. Accessed 20 July 2026, <https://www.gavi.org/vaccineswork/five-years-save-8-million-lives-everything-you-need-know-about-gavis-investment> . Accessed 29 July 2026.

OxfordVacGroup. “Funding and Manufacturing Boost for UK Vaccine Programme.” OxfordVacGroup, 18 May 2020, <https://www.ovg.ox.ac.uk/news/funding-and-manufacturing-boost-for-uk-vaccine-programme> . Accessed 29 July 2026.

“Global Health Architecture.” Who.Int, 2026, <https://www.who.int/about/governance/global-health-architecture> . Accessed 29 July 2026.

“Global Strategy to Accelerate the Elimination of Cervical Cancer as a Public Health Problem.” WHO, 2020, <https://www.who.int/publications/i/item/9789240014107> . Accessed 29 July 2026.

“Health Equity.” World Health Organization, 2025, https://www.who.int/health-topics/health-equity#tab=tab_1 . Accessed 29 July 2026.

“How India’s Serum Institute Became a Covid-19 Vaccine Powerhouse.” The World from PRX, 4 Feb. 2021, <https://theworld.org/stories/2021/02/04/how-india-s-serum-institute-became-covid-19-vaccine-powerhouse> . Accessed 20 July 2026.

“India’s Serum Institute Sees ‘Large’ Exports as Output Nearly Quadruples.” Gulf News: Latest UAE News, Dubai News, Business, Travel News, Dubai Gold Rate, Prayer Time, Cinema, 21 Oct. 2021, <https://gulfnews.com/world/asia/india/indias-serum-institute-sees-large-exports-as-output-nearly-quadruples-1.83108815> . Accessed 29 July 2026.

“International Health Regulations (2005) Third Edition.” WHO, 2016, <https://www.who.int/publications/i/item/9789241580496> . Accessed 29 July 2026.

“Large-Scale Manufacturing and Industry Partnerships — the Jenner Institute.” Wwww.Jenner.Ac.Uk, <https://www.jenner.ac.uk/about/the-oxford-astrazeneca-covid-19-vaccine/large-scale-manufacturing> . Accessed 29 July 2026.

Jenner Institute. “Large-Scale Manufacturing and Industry Partnerships — the Jenner Institute.” Wwww.Jenner.Ac.Uk, <https://www.jenner.ac.uk/about/the-oxford-astrazeneca-covid-19-vaccine/large-scale-manufacturing> . Accessed 20 July 2026.

Laxminarayan, Ramanan. “Long Shadow of Public Health’s Colonial Legacy.” Hindustan Times, 12 Mar. 2026, <https://www.hindustantimes.com/opinion/long-shadow-of-public-health-s-colonial-legacy-101773329026625.html> . Accessed 29 July 2026.

Brisbois, Ben. “Mining, Colonial Legacies, and Neoliberalism: A Political Ecology of Health Knowledge Minería, Legados Coloniales Y Neoliberalismo: Una Ecología Política Del Conocimiento En Salud.” New Solutions: A Journal of Environmental and Occupational Health Policy, vol. 31, no. 1, Mar. 2021, pp. 48–64, <https://doi.org/10.1177/10482911211001051> . Accessed 29 July 2026.

Pardi, Norbert, and Florian Krammer. “mRNA Vaccines for Infectious Diseases — Advances, Challenges and Opportunities.” Nature Reviews Drug Discovery, vol. 23, no. 11, Springer Science and Business Media LLC, Oct. 2024, <https://doi.org/10.1038/s41573-024-01042-y> . Accessed 29 July 2026.

Chandler, Julia. "New Funding for Global Health Product Development Partnerships." Global Research and Technology Development, June 2026, <https://www.grtd.fcdo.gov.uk/new-funding-for-global-health-product-development-partnerships/> . Accessed 29 July 2026.

Mwila, Chiluba. "Operationalizing African Self-Reliance in Vaccine Manufacturing." Global Health Action, vol. 18, no. 1, Informa UK Limited, Oct. 2025, <https://doi.org/10.1080/16549716.2025.2560209> . Accessed 29 July 2026.

"Serum Institute Resumes Covid Vaccine Exports." The Times of India, Times Of India, 26 Nov. 2021, <https://timesofindia.indiatimes.com/india/serum-institute-resumes-covid-vaccine-exports/articleshow/87934166.cms> . Accessed 29 July 2026.

---. The Times of India, Times Of India, 26 Nov. 2021, <https://timesofindia.indiatimes.com/india/serum-institute-resumes-covid-vaccine-exports/articleshow/87934166.cms> . Accessed 29 July 2026.

"Targets of Sustainable Development Goal 3." World Health Organisation, 2022, <https://www.who.int/europe/about-us/our-work/sustainable-development-goals/targets-of-sustainable-development-goal-3> . Accessed 29 July 2026.

Mesa-Vieira, Cristina. "The Dark Side of the Moon: Global Challenges in the Distribution of Vaccines and Implementation of Vaccination Plans Against Covid-19." Maturitas, vol. 150, Aug. 2021, pp. 61–63, <https://doi.org/10.1016/j.maturitas.2021.05.012> . Accessed 29 July 2026.

"Transforming Our World: The 2030 Agenda for Sustainable Development." Security Council Report, 2015, p. 70/1, https://www.securitycouncilreport.org/atf/cf/%7b65bfcf9b-6d27-4e9c-8cd3-cf6e4ff96ff9%7d/a_res_70_1.pdf . Accessed 29 July 2026.

Elizabeth, and et al. "Vaccine Distribution and Delivery." National Academies Press (US), 2021, <https://www.ncbi.nlm.nih.gov/books/NBK580009/> . Accessed 29 July 2026.

Zhang, Wei. "Vaccine Distribution Strategies: Overcoming Challenges in Global Healthcare." Walsh Medical Media, <https://www.walshmedicalmedia.com/open-access/vaccine-distribution-strategies-overcoming-challenges-in-global-healthcare.pdf> . Accessed 29 July 2026.

Neely, Stephen R. "Vaccine Hesitancy and Exposure to Misinformation: A Survey Analysis." Journal of General Internal Medicine, vol. 37, no. 1, Oct. 2021, <https://doi.org/10.1007/s11606-021-07171-z> . Accessed 29 July 2026.

"Viral Vector Vaccines – What They Are, and What They Are Not." CEPI, 2025, <https://cepi.net/viral-vector-vaccines-what-they-are-and-what-they-are-not> . Accessed 29 July 2026.

“Welcome to Zscaler Directory Authentication.” WHO (World Health Organization) IRIS Repository, 2025, p. Accessed 20 July 2026, <https://iris.who.int/server/api/core/bitstreams/1632f577-e897-4da7-8d4b-d0d37751b65c/content> . Accessed 29 July 2026.

“World Immunization Week: Afghan Red Crescent Mobile Health Teams Bring Life-Saving Immunization and Care to People in Remote Areas.” IFRC.Org, 23 Apr. 2024, <https://www.ifrc.org/article/world-immunization-week-afghan-red-crescent-mobile-health-teams-bring-life-saving> . Accessed 20 July 2026.