OIC HEALTH REPORT 2025

ORGANISATION OF ISLAMIC COOPERATION

STATISTICAL, ECONOMIC AND SOCIAL RESEARCH AND TRAINING CENTRE FOR ISLAMIC COUNTRIES

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Concluding a Decade of Health Cooperation under OIC-SHPA – Achievements, Challenges, and the Road Ahead

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CONTENTS

ACRONYMS

AI	Artificial Intelligence
AIDS	Acquired Immunodeficiency Syndrome
AMr	Adult Mortality Rate
AMR	Antimicrobial Resistance
ANC	Antenatal Care
ARI	Acute Respiratory Infection
ARR	Annual Reduction Rate
ART	Antiretroviral Therapy
BMI	Body Mass Index
CAGR	Compound Annual Growth Rate
CDR	Crude Death Rate
CDs	Communicable Diseases
COPD	Chronic Obstructive Pulmonary Disease
COVID-19	Coronavirus Disease of 2019
CRD	Chronic Respiratory Diseases
CVDs	Cardiovascular Diseases
DDD	Defined Daily Dose
DTP	Diphtheria-Tetanus-Pertussis
GDP	Gross Domestic Product
GHS	Global Health Security
GMDN	Global Medical Device Nomenclature
GPEI	Global Polio Eradication Initiative
HIV	Human Immunodeficiency Virus
HTA	Health Technology Assessment
ICT	Information & Communication Technology
ICU	Intensive Care Unit
IDD	Iodine Deficiency Disorder
IDPs	Internally Displaced Persons
IHR	International Health Regulations
IsDB	Islamic Development Bank
ITN	Insecticide-treated Mosquito Net
LEB	Life Expectancy at Birth
LMIC	Low- and Middle-Income Countries
MDG	Millennium Development Goals

MENA	Middle East and North Africa
MMR	Maternal Mortality Ratio
MNCH	Maternal, Newborn, and Child Health
NCDs	Non-Communicable Diseases
NMR	Neonatal Mortality Rate
NRA	National Regulatory Authority
OIC	Organisation of Islamic Cooperation
OOPS	Out-of-pocket Spending
ORS	Oral Rehydration Salts
PLHIV	People Living with HIV
PPP	Purchasing Power Parity
SDGs	Sustainable Development Goals
SESRIC	Statistical, Economic and Social Research and Training Centre for Islamic Countries
SHPA	Strategic Health Programme of Action
SPAR	State Party Annual Reporting
SSA	Sub-Saharan Africa
TB	Tuberculosis
U5MR	Under-5 Mortality Rate
UAE	United Arab Emirates
UMDNS	Universal Medical Device Nomenclature System
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNICEF	United Nations Children's Fund
US$	United States Dollar
VAS	Vitamin A Supplementation
WASH	Water, Sanitation and Hygiene
WHA	World Health Assembly
WHO	World Health Organization
WPV	Wild Poliovirus

FOREWORD

Health is fundamental to human development and socio-economic progress, and it remains a key priority for joint Islamic action under the Organisation of Islamic Cooperation (OIC). From the *Ten-Year Programme of Action* adopted in 2005, which set out a vision for combating diseases and epidemics, to the subsequent *OIC-2025: Programme of Action* that identified health as a core area for cooperation, Member States have consistently reaffirmed their collective commitment to improving health outcomes across the OIC geography. In line with this vision, the Islamic Conference of Health Ministers has convened seven times to coordinate and advance shared health priorities. Notably, the *OIC Strategic Health Programme of Action (OIC-SHPA) 2014–2023*, endorsed during the 4th Ministerial Session in 2013, has served as the guiding framework for policy coordination and collaborative action among Member States.

It is with great pleasure that I present the *OIC Health Report 2025*, launched at a critical juncture coinciding with the conclusion of the OIC-SHPA implementation period. This report provides a comprehensive overview of the health landscape in OIC Member States by evaluating performance, progress, and persisting challenges across the six thematic areas identified in the SHPA. Drawing on the latest available data, the report offers both a retrospective assessment and a forward-looking perspective, benchmarking regional trends against global averages and international health goals.

While celebrating substantial progress—such as steady improvements in life expectancy, reductions in maternal and child mortality, and notable achievements in communicable disease control—it is important to recognise the profound disruption caused by the COVID-19 pandemic. The SHPA implementation period coincided with multiple high-impact global emergencies, most notably COVID-19, which exposed deep vulnerabilities in health systems and derailed hard-won gains in many OIC countries. The pandemic served as a powerful reminder of the interdependence of our health systems and the urgent need for more resilient, inclusive, and equitable health infrastructures.

The report also brings into focus ongoing disparities. Many OIC countries—particularly low-income and fragile states in Sub-Saharan Africa and South Asia—continue to face considerable barriers to achieving universal health coverage and improving population

health. These include chronic underinvestment, limited health workforce capacity, supply chain constraints, and widening intra-OIC disparities in access and outcomes.

Amid these challenges, there are also clear opportunities. The report draws attention to the potential of intra-OIC solidarity, knowledge-sharing, and strategic partnerships. Initiatives such as the SHPA along with broader OIC frameworks, have laid solid foundation for cooperation. As the global health situation evolves with growing threats—from antimicrobial resistance and climate-related health hazards to future pandemics—our collective efforts must also deepen and adapt. Building on the lessons of the past decade, Member States are encouraged to align their national strategies with emerging global frameworks and to continue leveraging OIC platforms for cooperation and mutual support.

As the statistics, research, and training centre of the OIC, SESRIC remains committed to supporting Member States in building stronger health systems. Through evidence-based analyses, statistical activities, technical cooperation, and capacity-building programmes, we aim to promote effective, inclusive, and sustainable health solutions across the region. SESRIC has actively contributed to both the development and implementation of the OIC-SHPA and continues to collaborate closely with the OIC General Secretariat in shaping the agenda for the next phase of health cooperation.

I would like to acknowledge the dedication and contributions of the SESRIC team in preparing this comprehensive report, and I hope that its findings will inspire renewed collaboration in pursuit of a healthier future for all—while offering timely insights to shape the emerging health cooperation agenda among OIC Member States.

Zehra Zümrüt SELÇUK
Director General
SESRIC

EXECUTIVE SUMMARY

The COVID-19 pandemic has highlighted, with striking clarity, the indispensable role of health systems in protecting lives and sustaining development. It also exposed systemic vulnerabilities—particularly in low- and middle-income countries—and reinforced the urgency of strengthening national and regional capacities for prevention, preparedness, and response. For OIC Member States, many of which face overlapping challenges such as underinvestment in health infrastructure, limited access to care, and high disease burdens, the pandemic became both a wake-up call and a catalyst for accelerated action.

Against this backdrop, the OIC Strategic Health Programme of Action (OIC-SHPA) 2014–2023 has provided a valuable platform for cooperation and coordination in the health sector. Developed and led by the OIC General Secretariat and SESRIC, in collaboration with Member States and international partners, the SHPA articulated a shared vision for improved health outcomes across the region. It focused on six strategic thematic areas and emphasised national ownership, capacity-building, and intra-OIC solidarity.

This report evaluates the progress achieved under the OIC-SHPA during its decade-long implementation. Using the most recent available data, it presents a thematic review of health systems and outcomes in OIC countries, identifies areas of improvement and persistent gaps, and offers insights into emerging trends and priorities. The analysis also benchmarks performance against global averages and international targets, highlighting where the OIC region has advanced—and where further efforts are needed.

Organised around the six thematic areas of the OIC-SHPA, the following sections summarise the main findings of each chapter. Together, they provide a comprehensive overview of the current health landscape in OIC countries and serve as an evidence base to inform the post-SHPA agenda.

Chapter 1: Health System Strengthening

Strong and resilient health systems are the cornerstone of universal health coverage and sustainable development. This chapter assesses the core components of health systems in OIC countries—namely health financing, workforce capacity, and service infrastructure—highlighting progress and persistent gaps, particularly in comparison to global and regional benchmarks.

Health Expenditures and Healthcare Financing

Health financing remains a key challenge across many OIC countries, where low levels of health spending continue to limit access to quality care. As of 2022, health expenditures as a percentage of GDP is only 3.9% in the OIC region, less than half of the global average of 9.8%. Similarly, although some improvements have been observed in recent years, overall per capita health expenditure in the OIC region (US$ 171) remains significantly below the global average (US$ 1,237) and the levels observed in other developing countries (US$ 400). The share of government expenditure on health in total government expenditures also tends to be modest—8.9% compared to the global average of 16.6%—reflecting broader fiscal constraints and competing development priorities. As a result, out-of-pocket payments remain high in many OIC countries—averaging 35.3% in the OIC region compared to 17.2% worldwide—posing a substantial barrier to equitable access and financial protection. To strengthen health financing systems, there is a pressing need to mobilize public resources more effectively, expand risk pooling mechanisms, and reduce dependence on out-of-pocket payments.

Health Workforce and Healthcare Facilities

Health workforce shortages present a critical constraint to achieving universal health coverage in the OIC region. The density of medical doctors, nurses, and midwives in OIC countries—30.6 per 10,000 population—remains well below both the global average (57.5) and the minimum threshold (44.5) identified by WHO to deliver essential health services. This shortfall is most pronounced in low-income member countries and is compounded by geographic disparities, skill gaps, and limited investments in education and training.

The availability of healthcare infrastructure, particularly hospital beds and intensive care capacity, also falls short of global norms. On average, OIC countries have 14 hospital beds per 10,000 people, less than half the global average, pointing to notable gaps in facility-based care and limited inpatient capacity across much of the region. Indeed, most OIC countries maintain lower-than-average bed-to-population ratios, which affect their ability to respond effectively to routine care needs and crisis situations alike. The COVID-19 pandemic underscored these limitations and demonstrated the importance of surge capacity, especially in times of public health emergencies.

Chapter 2: Disease Prevention and Control

Disease prevention and control are at the core of a functioning public health system and form a foundational pillar of the OIC-SHPA, which aimed to reduce the burden of both communicable and non-communicable diseases across Member States. This chapter evaluates the progress made in the implementation period and identifies continuing gaps, using the latest available global and country-level evidence.

Life Expectancy, Adult Mortality, and Causes of Death

Before the pandemic, life expectancy at birth (LEB) had steadily improved across the OIC countries, rising from 62.2 years in 2000 to 68.0 years in 2019, in parallel with global gains. Adult mortality rate (AMr) also declined significantly—from 230 to 179 deaths per 1,000

people. During the pandemic (2020–2021), however, these gains were reversed. LEB in the OIC region dropped to 66.6 years in 2021, while AMr climbed to 204. Annual deaths in the region surged by over 2 million between 2019 and 2021, reflecting both direct and indirect impacts of COVID-19.

As of the latest data (2022–2023), early signs of recovery are visible, but pre-pandemic levels have not yet been fully restored. Life expectancy and adult survival rates remain below global averages, especially in low-income OIC countries, underscoring persistent challenges in health system resilience and mortality reduction.

In terms of causes of death, the long-term transition from communicable diseases (CDs) to non-communicable diseases (NCDs) continued—with the exception of COVID-19 impact. The share of CDs-attributable deaths decreased from 51.0% in 2000 to 33.2% in 2019, but it bounced back to 37.0% in 2020 (of which 7.6% was attributed to COVID-19) and further to 38.9% in 2021 (of which 11.7% was attributed to COVID-19), remaining much higher than the global averages. Consequently, the burden of CDs remains substantial in many OIC countries, highlighting the need for a dual-track approach in disease control.

Communicable Diseases

The OIC-SHPA prioritised infectious disease control through immunisation and targeted interventions. The findings show a mixed picture of progress:

- HIV/AIDS prevalence among adults aged 15–49 has remained stable at 0.7% in the OIC group and in the world over the past two decades. However, the number of people living with HIV (PLHIV) is constantly increasing. Despite progress, Sub-Saharan Africa continues to have the highest HIV prevalence rate and account for a vast majority of PLHIV.
- The number of deaths from diarrhoeal diseases has been steadily declining since 2000. Nevertheless, in 2021, diarrhoeal diseases were responsible for killing 1.24 million people worldwide, and 34% of them were children under the age of five. In the OIC region, diarrhoea claimed 458 thousand lives, of which 57% were children under-5.
- Malaria case incidence (i.e. cases per 1,000 population at risk) in the OIC countries declined from 141.9 in 2000 to 107.5 in 2015, but it remained elevated in the following period, reaching 111.2 as of 2023, which was 3.5% above the 2015 level. Moreover, it continued to be well above the global average.
- Pneumonia caused approximately 420,000 under-five deaths in OIC countries in 2021—accounting for nearly 60% of the global toll. Nigeria alone contributed over one-fifth of the global under-five deaths from pneumonia.
- Tuberculosis (TB) incidence dropped from 170 per 100,000 in 2014 to 158 in 2020 but rose again during the pandemic, reaching back to 170 in 2023. This translated into more than 3.5 million TB cases in 2023—equivalent to 32% of the global total, up from 27% in 2014.
- Polio eradication efforts yielded significant results. However, despite historic gains, polio remains endemic in two OIC countries: Afghanistan and Pakistan. Alarmingly,

the year 2024 saw a resurgence of wild poliovirus (WPV) cases in both countries, with Pakistan reporting 74 cases, and Afghanistan 25, compared to only 6 cases per country in 2023.

Despite SHPA-supported vaccination and surveillance programs, setbacks due to COVID-19 underscore the importance of resilient health systems and sustained investment in communicable disease control.

Non-Communicable Diseases

NCDs are now the dominant cause of death in OIC countries, driven by demographic transition and modifiable risk factors. They account for more than 7 million annual deaths in the OIC region.

Notably, cardiovascular diseases (CVDs) alone are responsible for 3.4 million deaths, accounting for nearly one quarter (24.2%) of all-cause deaths and half (48.8%) of all NCD-attributable deaths. While mortality from digestive and respiratory diseases declined between 2000 and 2021, death rates from CVDs, cancer, and genitourinary diseases continued to rise. Still, the average crude death rate for OIC countries was lower than the global average in CVDs, cancers, and respiratory diseases, while in digestive diseases and genitourinary diseases, OIC countries had comparable rates to the global average.

NCD risk factors remain widespread. High rates of tobacco use, unhealthy diets, insufficient physical activity, and obesity contribute to the growing burden. Obesity prevalence, for instance, has increased markedly in most OIC countries, averaging 19.7% in 2022 compared with 15.9% in 2015. Prevalence of insufficient physical activity has also increased, from 27.6% to 29.3% over the same period, though it remained below the world average.

Although NCD prevention and control was a major theme in the SHPA, implementation progress varied. Many Member States still lack comprehensive policies, multi-sectoral coordination, and reliable surveillance systems to guide targeted action.

Chapter 3: Maternal, Newborn, and Child Health and Nutrition

The health of mothers, newborns, and children is a cornerstone of sustainable development and human well-being. As emphasised in the OIC-SHPA, reducing maternal and child mortality and improving nutrition outcomes has remained a central priority. This chapter evaluates the progress achieved by OIC countries over the past decade, particularly during the implementation of SHPA, while highlighting persistent disparities and areas needing focused policy action.

Progress and Gaps in Maternal and Child Survival

OIC countries have made substantial strides in reducing maternal and child deaths, yet significant disparities remain between and within regions. With the exception of the pandemic-hit years of 2020–2021, the maternal mortality ratio (MMR) in OIC countries has followed a downward trend over the past two decades, reaching 299 maternal deaths per 100,000 live births in 2023. Moreover, the period under OIC-SHPA coincided with a relatively faster decline in MMR in OIC countries compared to other developing regions. Nevertheless,

MMR in the OIC region is still nearly four times the SDG target and remains well above the averages observed in other country groupings.

Similarly, under-five mortality in the OIC region fell down to a historical low of 52 per 1,000 live births by 2023. However, it still remains well above global averages and far from the SDG target. In addition, unlike in MMR, the pace of decline decelerated more in the OIC region during the SHPA period, resulting in an increasing share of OIC countries in the global number of under-five deaths—from 50.5% in 2015 to 54.9% in 2023.

Major Causes of Child Mortality

The vast majority of under-five deaths in the OIC region are preventable and attributable to common causes. Indeed, unlike adult mortality, which is dominated by non-communicable causes, about 85% of under-five deaths in OIC countries were caused by communicable conditions in 2021. Prematurity (16.1%), acute lower respiratory infections (14.8%), malaria (12.0%), and birth asphyxia and trauma (11.7%) remain the top contributors, collectively accounting for more than half (54.7%) of all under-five deaths in the region.

These trends reflect continued challenges in timely access to essential care, low immunisation coverage, poor water and sanitation infrastructure, and limited quality of neonatal services—particularly in rural and underserved areas

Coverage of Essential Maternal and Child Health Services

Majority of maternal, new-born and child deaths are preventable through interventions like antenatal care, skilled attendance during birth, immunisation, and early care seeking for infectious diseases. While access to some key maternal and child health services has improved, coverage gaps remain significant. As of 2023, only 59% of pregnant women in OIC countries received the recommended four antenatal care visits—below the global average of 65%. Similarly, a significant number of births in the OIC countries were still taking place unassisted, as only 75% of deliveries were assisted by a doctor, nurse or midwife compared to 87% in non-OIC developing countries and 83% in the world.

In addition, coverage of life-saving childhood immunisation has shown signs of stagnation and decline. The coverage for the third dose of DTP (diphtheria, tetanus, pertussis) vaccine dropped from 83% in 2019 to 80% in 2024 in OIC countries, mirroring global setbacks linked to the COVID-19 pandemic. It also continued to be lower than the global averages.

Nutrition and Feeding Practices

Proper child nutrition is one of the most powerful tools to raise a healthy and productive generation. However, malnutrition remains a major public health concern. Latest estimates show that stunting prevalence in children under five years of age in OIC countries continuously declined over the period 2000–2022, from as high as 33.4% in 2000 to 26.1% in 2022, though it remained above the global average. During the same period, the proportion of children under five who were overweight also decreased, from 6.0% to 5.5%, effectively closing the gap with the global average. Wasting represents an acute form of

under nutrition with heightened risk of disease and death for children. Wasting prevalence is estimated at 8.3% in OIC countries in 2022, slightly above the global average of 8.1%.

Proper feeding especially during the first two years of life is critical for a child's survival, growth and development. However, the latest estimates on feeding practices reveal that a significant proportion of infants and children are not breastfed and are not receiving adequate and diverse nutrition during the crucial early years. In the OIC region, less than half (44.6%) of infants are put to the breast within first hour of birth, as is the case in the developing world (46.5%). Only 48.8% of infants are exclusively breastfed during the first six months of life, compared to the world average of 50.3%. The average coverage of breastfeeding until age 2 is 62.6% in OIC countries, compared to 60.1% in the world. Considering appropriate feeding of children with adequate and safe complementary food, 73.2% of infants in the OIC region are introduced to solid, semi-solid or soft foods at 6 to 8 months, a rate that is again comparable to the world average (72.2%).

Micronutrient Deficiencies

Micronutrient deficiencies like deficiencies of vitamin A, iron, iodine, zinc, and folic acid are very common among women and children in low income developing countries, including many OIC countries. Based on available data on 54 out of the 64 countries identified as "priority" for current national vitamin A supplementation (VAS) programming, approximately 59% of children aged 6 to 59 months received the recommended two high-dose supplements in 2022, with the OIC and non-OIC countries having broadly comparable coverage rates, 57% and 62%, respectively.

According to the latest estimates, globally, 87% of households consumed salt with some iodine (>0 parts per million or more) in 2020. The OIC countries had an average coverage of 80%, which was lower than that of non-OIC developing countries (90%).

Iron deficiency anaemia also remains a major health challenge, continuing to affect a staggering proportion of children and women. As of 2019—the latest year with available data—half (50.2%) of children aged 6–59 months in OIC countries were affected by anaemia, down from 58.0% in 2000 but remaining well above the global average. Concerning anaemia in women, the situation is more worrying. The average anaemia prevalence among women in OIC countries declined from 36.8% in 2000 to a low of 34.4% between 2014 and 2018, but has since begun to rise, reaching 35.4% in 2023 and also remaining well above the global average.

Chapter 4: Medicines, Vaccines, and Medical Technologies

Chapter 4 examines the landscape of medicines, vaccines, and medical technologies in OIC countries, drawing attention to both the progress made during the OIC-SHPA period and the persisting challenges that require further policy attention in the post-SHPA era.

Medicines

The global pharmaceutical market continues to expand, with spending projected to exceed US$ 2.2 trillion by 2028. Medicine expenditures in many regions that include OIC countries—

such as the Middle East, Africa, and parts of Asia—are expected to increase by more than 30% in the five years leading to 2028. The cumulative global spending related to COVID-19, including vaccines and therapeutics, is estimated at US$ 186 billion as of 2023 and projected to reach over US$ 1.2 trillion by 2028.

Despite ongoing investments, access to essential medicines remains uneven across the OIC region. Data from the WHO Country Capacity Surveys show improvements in the availability of non-communicable disease (NCD) medicines between 2015 and 2023, with notable gains for several drug categories. However, significant disparities persist across income groups. All high-income OIC countries reported full availability of 11 key NCD medicines in public facilities, while availability stagnated or partially improved in many low-income countries.

On the trade front, the OIC countries remain net importers of pharmaceuticals. While pharmaceutical exports from OIC countries rose to US$ 8.4 billion in 2023, their share of global exports has remained around 1% throughout the past five years. Imports increased from US$ 39.6 billion in 2019 to US$ 49.4 billion in 2023. However, their share in global imports slightly declined, suggesting that pharmaceutical demand in other regions is growing faster. Intra-OIC trade remains limited but presents a significant opportunity for regional cooperation and supply chain resilience.

Vaccines

The COVID-19 pandemic transformed the global vaccine landscape, driving unprecedented innovation, investment, and demand. By 2023, 116 manufacturers were supplying 88 vaccines to 207 countries. However, the global market remains highly concentrated, with 10 manufacturers accounting for 85% of vaccine value and 73% of doses. Geographic concentration is also significant, with most production centred in a few countries, including China, India, the European Union, Indonesia, Japan, and the United States.

OIC countries received around 17% of all global COVID-19 vaccine deliveries (approximately 2.8 billion doses), mainly through the COVAX Facility and multilateral or bilateral arrangements. However, disparities remain: while a few countries achieved full population coverage, others, particularly low-income members, fell far short of global vaccination targets. As of early 2023, the average full vaccination rate in OIC countries stood at 47.9%, well below the global average of 64.1%.

Several OIC countries engaged in COVID-19 vaccine development, with Indonesia, Iran, Kazakhstan, and Türkiye approving domestically developed vaccines. However, regulatory systems in most OIC countries remain underdeveloped. As of late 2024, six OIC countries had achieved WHO-assessed maturity level 3 (Egypt, Indonesia, Nigeria, Senegal, and Türkiye) or level 4 (Saudi Arabia) for vaccines and/or medicines regulation.

Vaccine trade volumes surged in 2021, with global exports rising by 272% to US$ 122.4 billion. OIC vaccine imports followed a similar pattern, jumping 426% to peak at US$ 18.2 billion in 2021 before declining to US$ 3.1 billion in 2024. Vaccine exports from the OIC region—historically limited—also spiked in 2021 due to a surge in exports from the United Arab Emirates, but then dropped sharply before rising again to US$ 297.4 million in 2024.

Indonesia was the largest exporter in 2024, while Saudi Arabia, Türkiye, Nigeria, Indonesia, and Bangladesh were the top importers. Notably, Indonesia ranked among both the top vaccine importers and exporters, highlighting the complexity of the regional supply ecosystem.

Medical Technologies

Medical technologies—particularly medical devices—are indispensable in supporting health services for prevention, diagnosis, and treatment. However, many OIC countries face persistent gaps in access, regulation, and integration of such technologies.

Only 42% of OIC countries have a national policy on health technologies, while another 42% have none, and the remainder lack available data. National lists of essential medical devices are similarly limited, with only 16% of countries maintaining official lists for procurement or reimbursement, and another 23% having advisory lists. The presence of these official lists is more common among lower-income countries and less frequent in high-income ones.

Health technology assessment (HTA) units exist in 58% of OIC countries—33 out of 57—yet only 13 have units that cover medical devices. The absence of integrated HTA systems constrains evidence-based procurement and adoption of technologies. Regulatory capacity also varies, with at least 63% of countries having a national regulatory authority for medical devices.

Medical device nomenclature systems are in use in only 44% of OIC countries, with nationally developed systems more prevalent than international standards. Considering the availability of medical equipment, on average, around 90% of OIC countries have at least one mammography (MAM) unit, 64% have at least one Computerized Tomography (CT) scanner, 44% have at least one Magnetic Resonance Imaging (MRI) unit, and 41% have at least one Radiotherapy (RT) unit per million population. By contrast, only 6% of countries have at least one Positron Emission Tomography (PET) scanner per million population. There are also countries that do not have any of the selected high-cost medical equipment.

Chapter 5: Emergency Risk Management for Health

Emergency risk management for health has become an increasingly critical component of health systems, particularly in light of the COVID-19 pandemic, which exposed the vulnerabilities in emergency preparedness, response, and recovery across the globe. For OIC countries, building stronger frameworks of emergency risk management for health has been one of the strategic goals under the OIC-SHPA. This chapter reviews the progress and challenges faced by Member States in this domain and emphasises the need to strengthen their capacity to prevent, prepare for, and respond to diverse health emergencies—including pandemics, epidemics, natural disasters, and humanitarian crises.

Nature and Impact of Emergencies

Health emergencies in the OIC region have been shaped by a complex and growing mix of natural hazards, conflicts, climate change, and fragile governance settings. Between 2015 and 2024, OIC countries accounted for nearly 24% of all natural disasters globally, compared

to 22% during the 2005–2014 period, indicating a clear upward trend in the region's exposure to natural hazards. The share of disaster-related deaths also increased significantly, with OIC countries registering more than one-third (36%) of global disaster mortality in the most recent decade, compared with only 17% in the previous decade. In parallel, the region hosts a disproportionate share of forcibly displaced populations; 14 of the 21 conflict-affected countries globally in 2024 were OIC members; and nearly 60% of all conflicts around the world have recently occurred in OIC countries. These mounting pressures not only strain health systems and disrupt service delivery but also exacerbate vulnerabilities to epidemics, chronic diseases, and malnutrition. Emergency risk management must therefore be approached holistically—addressing root causes and overlapping risks—to strengthen health system resilience across the region.

COVID-19 Preparedness and Response

The COVID-19 pandemic served as a critical stress test for emergency preparedness in the OIC region. As of mid-2020, only one in five OIC countries were assessed to have high readiness levels, and many experienced severe disruptions in essential health services, shortages of personal protective equipment, and delays in vaccine access. Despite these challenges, a number of Member States demonstrated adaptive resilience through swift policy shifts, community mobilisation, and cross-sectoral coordination.

Under the OIC umbrella, collective responses were mobilised through both financial and institutional channels. The Islamic Development Bank (IsDB), along with the Islamic Solidarity Fund (ISF), played an instrumental role in supporting OIC countries—most notably through the Strategic Preparedness and Response Programme (SPRP) and the Vaccine Access Facility (IVAC), which collectively benefited dozens of Member States. These efforts aligned with the broader objectives outlined in the OIC-SHPA and the OIC Self-Reliance in Vaccine Production (SRVP) agenda, initiated with the First Session of the Islamic Conference of Health Ministers (ICHM) in 2007, which now requires renewed momentum in light of the lessons from COVID-19.

Going forward, there is an urgent need for the OIC region to align more closely with emerging global health security frameworks, including the proposed WHO Pandemic Agreement, to enhance coordination, strengthen local and regional production capacities, and improve emergency governance. Building on the OIC's collaborative mechanisms will be key to ensuring timely, equitable, and sovereign responses to future pandemics and cross-border health threats.

Health System Capacity: Assessments and Gaps

Assessing preparedness capacity is essential to identifying systemic gaps and guiding targeted interventions. Three key tools—the International Health Regulations State Party Annual Reporting (IHR SPAR), the Global Health Security (GHS) Index, and the WHO SCORE assessment—offer insights into the core capacities of countries to prevent, detect, and respond to health emergencies. Across all three measures, OIC countries on average scored below global benchmarks. For instance, the average IHR SPAR score for OIC countries was 60 compared to the global average of 64; similarly, in the GHS Index, OIC countries averaged

32.8 against a world average of 38.9. The WHO SCORE index also revealed notable weaknesses, with only 52% of OIC countries having either *well-developed* or *sustainable* capacity to detect public health threats, compared with 68% worldwide. These findings point to structural gaps in emergency risk governance and underscore the urgency of building core capacities in line with international frameworks.

Strengthening National and Regional Preparedness

As made clear by recent global health crises, including COVID-19, robust emergency preparedness systems are indispensable for safeguarding public health, supporting rapid recovery, and ensuring sustainable development. Resilient emergency health management systems—capable of preparing for, detecting, and responding to health threats—are foundational to national security and human development. Their importance is reaffirmed under global frameworks such as the Sustainable Development Goals, particularly targets 3.b, 3.c, and 3.d.

The OIC-SHPA recognised this imperative early on, warning of the cross-border nature of communicable disease risks and the heightened vulnerability of countries with limited infrastructure and capacity. The COVID-19 pandemic underscored the prescience of these concerns, validating the SHPA's emphasis on proactive, coordinated preparedness. As many OIC countries continue to face systemic weaknesses, urgent investment is needed to reinforce national response systems, build early warning capacity, and promote regional collaboration. These efforts are essential not only to manage current risks but also to safeguard future development against the unpredictable nature of global health threats.

Chapter 6: Information, Research, Education, and Advocacy

Access to accurate health information, investment in health research and education, and culturally responsive public health advocacy are vital components of resilient health systems. This chapter underscores the critical importance of these interlinked domains in improving health outcomes across OIC countries and shaping the future of health policy and system preparedness. It draws upon implementation experiences from the OIC-SHPA, supplemented by comparative data and good practices.

Health Education, Literacy, and Workforce Development

Despite the central role of health education in strengthening public health systems, many OIC countries face persistent workforce shortages and low health literacy levels. The region's average health workforce density remains far below global thresholds, particularly in Sub-Saharan African member states. Contributing factors include limited investment in medical training infrastructure, "brain drain," and insufficient quality assurance in education. While 34 OIC countries have national accreditation bodies for medical education, there is a notable imbalance in regional representation. There is a need to expand educational opportunities and adopt hybrid teaching models post-COVID-19 to ensure future resilience. Continuous professional development, community-based health workers, and women's empowerment are also important in building a capable, inclusive, and motivated health workforce.

Advancing Health Research for Policy and Innovation

OIC countries have made substantial progress in life sciences and biomedical research, with a 149% increase in scientific output between 2015 and 2024, raising their global share to nearly 10%. However, this output is highly concentrated among a few countries, notably Türkiye, Iran, Saudi Arabia, Egypt, and Pakistan. Meanwhile, the region remains underrepresented in emerging areas such as artificial intelligence (AI) in life sciences, with about 5% of global publications. Addressing these disparities requires greater investment in digital research capacity, interdisciplinary collaboration, and equitable access to research infrastructure and training—especially in low-capacity member states.

Rational Use of Medicines and Antimicrobial Resistance

Antimicrobial resistance (AMR) is a growing global health crisis, threatening the effectiveness of essential medical treatments and increasing the risk of widespread infections that are difficult or impossible to treat. If unaddressed, the economic burden of AMR could result in GDP losses between US$ 1 trillion and US$ 3.4 trillion per year by 2030, disproportionately affecting low- and middle-income countries and undermining health gains made over the past decades.

In many OIC countries, irrational medicine use—including over prescription, self-medication, non-compliance with dosage, and widespread availability of antibiotics without prescription—remains prevalent. Data from 17 reporting OIC countries show that antibiotic consumption was, on average, 18% higher than the global median in 2022. The overuse and misuse of antibiotics in both human and animal health contribute significantly to the rising resistance trends. This is compounded by limited awareness, gaps in diagnostic capacities, weak regulatory oversight, and the absence of coherent national action plans in some countries.

Although many OIC countries are engaged in global efforts such as the WHO's Global Antimicrobial Resistance Surveillance System (GLASS) and have endorsed the Global Action Plan on AMR, implementation of core interventions—including surveillance, stewardship, and public education—remains inconsistent across the region.

Tackling AMR requires a multi-pronged approach: strengthening pharmaceutical governance and national regulatory frameworks, integrating AMR strategies into national health plans, building laboratory and diagnostic capacities, promoting rational prescribing practices through clinician training, and mobilising communities through awareness campaigns. Health insurance schemes can also play a role by discouraging the overuse of antibiotics through smarter reimbursement policies. Coordinated, cross-sectoral collaboration—including the One Health approach that links human, animal, and environmental health—is vital to containing this global threat within the OIC region.

Social and Cultural Dimensions of Health Service Utilisation

Social values, cultural beliefs, and traditional practices significantly shape health behaviours, influencing how individuals perceive illness, seek care, and adhere to treatments. In many OIC countries, gender norms, stigma, religious interpretations, and local customs affect

health-seeking behaviour, particularly in areas such as maternal health, mental health, sexual and reproductive health, and immunisation. These factors often create barriers to timely care, especially for women and children.

To enhance service uptake and effectiveness, it is essential to design health interventions that are culturally sensitive and community-driven. Experience from several OIC countries has shown that involving trusted local actors in health promotion and advocacy helps bridge the gap between public health objectives and community acceptance. For instance, culturally tailored family planning programmes or vaccination campaigns that address religious concerns directly and respectfully have yielded significant improvements in coverage.

Moreover, building trust in health systems requires sustained efforts to engage communities not merely as beneficiaries but as active partners in shaping service delivery. This includes integrating community feedback mechanisms, investing in health literacy, and ensuring services are respectful of cultural contexts. Strategies that combine evidence-based interventions with respect for local traditions are essential to closing equity gaps and ensuring universal health coverage reaches the most vulnerable populations across the OIC region.

Public Health Awareness and Digital Health Literacy

Public health awareness is the bridge connecting health system interventions with community-level outcomes. Between 2019 and 2024, OIC countries conducted over 1,100 health campaigns, with a peak during the COVID-19 pandemic. These efforts usually addressed issues such as vaccine-preventable and neglected tropical diseases, with countries like Nigeria, Pakistan, Cameroon, and Benin among the most active. As internet access grows, digital platforms have become increasingly relevant tools for spreading health information. However, the rise in misinformation underscores the need for strong digital literacy, regulation, and community engagement. ICT tools—from telemedicine to electronic health records—can enhance both service quality and emergency preparedness, provided they are integrated within well-governed health systems.

INTRODUCTION

Health is a fundamental human right and a cornerstone of sustainable development. It contributes directly to economic growth and social stability by enabling people to live longer, more productive lives. While ministries of health are the principal stewards of national health systems, effective healthcare delivery relies on broad cooperation involving various government agencies, development partners, and civil society actors.

Over recent decades, health has gained greater prominence as a driver of human development. Global investments in health have expanded, and overall health outcomes have improved—people are living longer, and the burden of many preventable diseases has declined. However, significant disparities persist. In many OIC countries—particularly in Sub-Saharan Africa and South Asia—millions of people still face barriers to accessing quality health services. Inadequate infrastructure, limited financial resources, and shortages in trained health workers continue to constrain health system performance and equity.

The COVID-19 pandemic offered a stark reminder of these vulnerabilities. What began as a health crisis quickly escalated into a global socio-economic emergency. The pandemic took a devastating toll—claiming millions of lives, overwhelming health systems, disrupting economies, and exacerbating poverty and inequality. The shock exposed widespread gaps in preparedness, response, and resilience—both within and across countries.

Notably, the pandemic reversed much of the progress made in reducing poverty and improving health and education. Vulnerable groups—including women, youth, informal workers, and migrants—were disproportionately affected. Although many governments launched emergency relief programmes, the scope and effectiveness of these responses varied widely, reflecting differences in national capacities. As a result, existing disparities within and between countries deepened, and global inequalities widened.

The experience of COVID-19 underscored the urgent need to place health at the centre of development planning. Countries must invest in resilient health systems, strengthen public health infrastructure, and build a capable and protected health workforce. This includes ensuring access to essential health services, medicines, and technologies, while also addressing broader determinants of health and vulnerability.

In this context, the OIC Strategic Health Programme of Action (OIC-SHPA) 2014–2023, prepared by SESRIC in collaboration with OIC Member States and relevant international organisations, served as a timely framework for enhancing cooperation and coordination in health across the OIC region. Endorsed by the 4th Islamic Conference of Health Ministers in 2013, the OIC-SHPA provided a comprehensive roadmap to guide national and collective actions aimed at improving health outcomes and advancing universal health coverage in Member States (see SESRIC, 2014).

This report assesses the progress made during the implementation of the OIC-SHPA, drawing on the latest available data and global comparisons. It reviews the current health landscape in OIC countries through six thematic lenses, corresponding to the priority areas of the SHPA. These include: strengthening health systems; preventing and controlling diseases; improving maternal, newborn, and child health and nutrition; enhancing access to medicines, vaccines, and medical technologies; advancing emergency health response and preparedness; and fostering health information, research, education, and advocacy.

By analysing progress, gaps, and disparities, the report aims to inform the post-SHPA agenda, identify policy priorities, and promote evidence-based strategies for building more equitable, effective, and resilient health systems across the OIC region.

OIC-SHPA 2014-2023

The OIC-SHPA 2014–2023 was launched with the vision of improving health outcomes across OIC countries by promoting equitable access to quality healthcare services and fostering stronger public health systems. It served as a strategic framework for Member States to work collectively in addressing key health challenges while advancing shared development goals.

Structured around six thematic areas, the SHPA addressed a wide range of health issues:

1. **Health System Strengthening** – Supporting the development of resilient, inclusive, and efficient health systems, with a focus on governance, financing, and workforce development.
2. **Disease Prevention and Control** – Combating communicable and non-communicable diseases through surveillance, immunisation, awareness, and risk factor reduction.
3. **Maternal, Newborn, and Child Health and Nutrition** – Reducing maternal and child mortality through improved access to antenatal care, skilled birth attendance, and nutrition service.
4. **Medicines, Vaccines, and Medical Technologies** – Advancing self-reliance and access through stronger regulatory systems, local production, and regional collaboration.
5. **Emergency Health Response and Interventions** – Strengthening national and regional capacities to prevent, prepare for, and respond to health emergencies and disasters.
6. **Information, Research, Education, and Advocacy** – Promoting evidence-based policy-making, health literacy, and research collaboration to support public health.

The implementation of the SHPA was led by designated countries for each thematic area, working in partnership with OIC institutions, international organisations, and other stakeholders. It promoted South-South cooperation, knowledge exchange, and resource mobilisation by engaging governments, academia, civil society, and the private sector.

As the SHPA's ten-year term concludes, its outcomes, lessons, and remaining challenges offer critical insights for shaping the next phase of health cooperation in the OIC region.

CHAPTER 1

Health Systems Strengthening

According to the World Health Organization (WHO), a health system comprises the sum total of all organisations, institutions, resources, and activities whose primary purpose is to improve health outcomes. A well-functioning health system is essential for building a healthy population, fostering social well-being, and supporting sustainable economic development. However, for a health system to deliver effectively and equitably, it must be supported by a robust financing mechanism, a competent and fairly compensated workforce, reliable health information systems, and accessible infrastructure with essential medicines and technologies (WHO, 2014).

Health systems strengthening, therefore, refers to the wide range of actions and reforms that aim to improve the performance of these core components or "building blocks" of the health system. It is a cross-cutting objective that underpins progress in all areas of health and development.

In line with the OIC Strategic Health Programme of Action 2014–2023 (OIC-SHPA)—which identified "Health System Strengthening" as one of its key thematic areas—this chapter reviews recent trends and progress in the OIC region. The analysis focuses on three foundational elements of the health system: health financing, health workforce, and health infrastructure, providing a basis for assessing the region's performance over the course of the SHPA period and highlighting areas that require greater policy attention moving forward.

1.1. Health Expenditures[1]

The COVID-19 pandemic, declared a "Public Health Emergency of International Concern" in early 2020,[2] had a profound impact on health systems and economies worldwide. Beyond its health consequences, the pandemic triggered a severe and synchronized global economic contraction. In 2020, global GDP declined by 2.7% in real terms, with 160 out of 194 countries

[1] The terms "health expenditures" and "total health expenditures" in this report are used synonymously with "current health expenditure." Capital expenditure on health is not included.

[2] On 30 January 2020, following the recommendations of the Emergency Committee, the WHO Director General declared that the outbreak constitutes a Public Health Emergency of International Concern (PHEIC) (WHO, 2020).

experiencing negative growth.[3] OIC countries were not immune to this shock: 37 of the 56 OIC countries with available data recorded economic contraction, and the combined GDP of the OIC fell by 1.3% in that year (SESRIC, 2025).

In response to the crisis, many countries adopted exceptional fiscal measures, including emergency health spending, reprioritisation of national budgets, and external financing. These actions led to a surge in health-related expenditures in the initial years of the pandemic. Indeed, recent data show that global health spending peaked during the COVID-19 response but has since begun to normalize.

The evolving trajectory of health spending reflects both the extraordinary mobilization of resources during the pandemic and the subsequent recalibration of national health budgets. In the OIC context, these shifts are particularly relevant for assessing the resilience and adaptability of health financing systems. To this end, the current assessment examines health expenditure trends in OIC countries using three key indicators:

- Health expenditures as a percentage of GDP, which reflects the relative priority given to health within the overall economy;
- Per capita health expenditures, which provides a measure of the financial investment in health per individual; and
- Government health expenditures as a share of total government expenditures, which indicates the extent to which public budgets prioritise health within the broader fiscal framework.

Together, these indicators offer a broad yet meaningful lens through which to evaluate how OIC Member States have mobilised, allocated, and sustained resources for health—both before and in the aftermath of the COVID-19 pandemic.

1.1.1. Health Expenditures in GDP

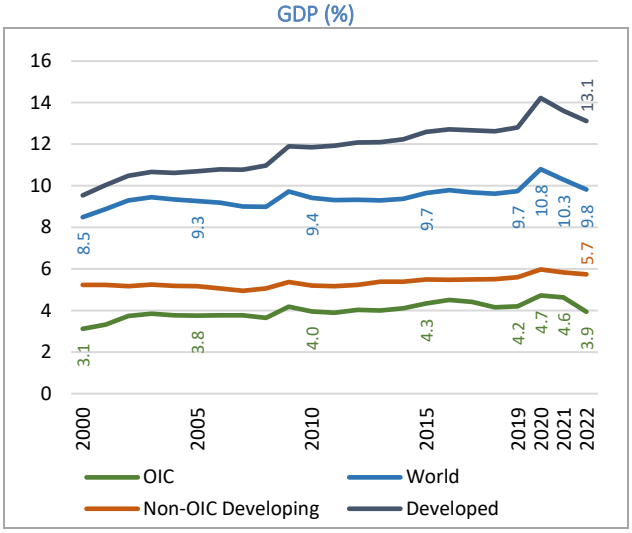
According to WHO (2024), global health spending reached US$ 9.8 trillion in 2022,[4] representing 9.9% of global GDP. This marks a decline from the pandemic-induced peak of 10.8% in 2020, yet it remains above the pre-pandemic level of 9.7% recorded in 2019, reflecting the enduring fiscal impact of COVID-19 on health budgets. In the OIC region, health expenditure as a share of GDP has historically remained low, though modest gains were recorded in the years leading up to the pandemic. From just 3.1% in 2000, the figure rose steadily to 4.3% in 2015, reaching a peak of 4.7% in 2020 during the pandemic. However, this upward trend was not sustained. In 2022, the share of health expenditure in GDP among

[3] According to the International Monetary Fund's (IMF) World Economic Outlook Database, April 2025.

[4] Geographical distribution of financial resources for health is uneven and global health spending remains highly concentrated in developed countries, which accounted for over three-quarters (77%) of the world total in 2022. In OIC countries, total health expenditures amounted to approximately US$ 348 billion in 2022, accounting for just 3.5% of global health spending. This represents a noticeable decline from the average of 4.1% observed during the 2012–2015 period, indicating that the relative global share of health financing attributed to the OIC has been shrinking over time.

OIC countries fell to 3.9%, retreating to near pre-pandemic levels and reversing much of the temporary fiscal expansion observed in 2020 (Figure 1.1).

Figure 1.1: Current Health Expenditure as a Percentage of GDP (%)



Source: SESRIC staff compilation based on data from WHO Global Health Expenditure Database (GHED), December 2024.

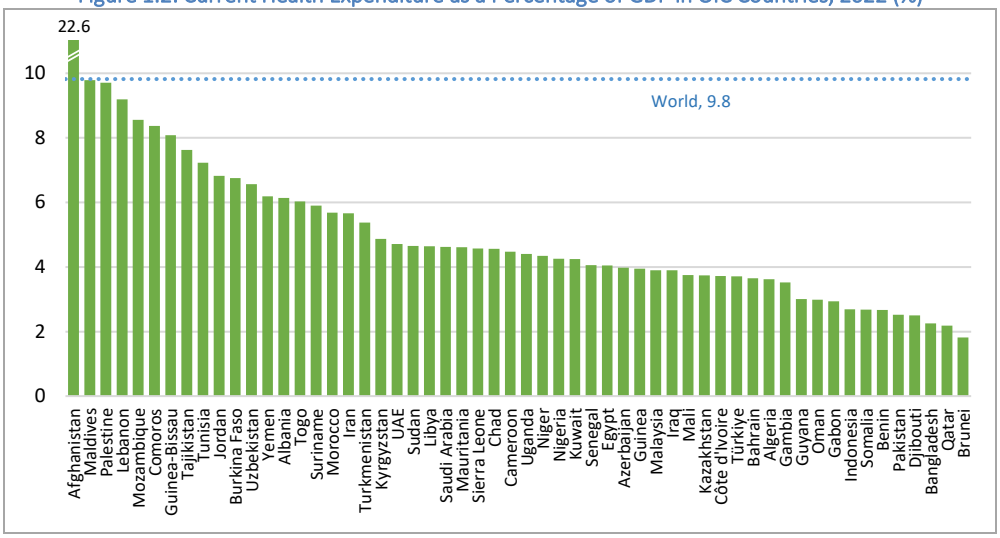
Compared to global averages, OIC countries continue to spend a significantly lower share of GDP on health, underlining the structural underinvestment in health systems that persists across much of the region. While global health expenditure stood at 9.8% of GDP in 2022, and non-OIC developing countries averaged 5.7%, the OIC's average of 3.9% highlights a continuing disparity in health investment. Narrowing this gap will be essential for enhancing the resilience and equity of health systems across the region in the post-pandemic era.

At the country level, health expenditure as a share of GDP in 2022 remained below the global average in all OIC countries with available data, with the sole exception of Afghanistan (Figure 1.2). Notably, Afghanistan recorded the highest ratio at 22.6%, driven in part by external funding and a sharp decline in GDP. Other countries approaching or near the global average included Maldives (9.8%), Palestine (9.7%), Lebanon (9.2%), and Mozambique (8.6%). These relatively high ratios reflect a combination of increased health spending and, in some cases, economic contraction that inflated the proportional figure.

At the opposite end of the spectrum, health expenditure accounted for just 1.8% of GDP in Brunei Darussalam, the lowest among OIC countries. In addition, eight other Member States—including Gabon, Indonesia, Somalia, Benin, Pakistan, Djibouti, Bangladesh, and Qatar—allocated less than 3% of their GDP to health in 2022, reflecting structural underinvestment relative to global trends.

When compared to pre-pandemic levels in 2019, trends were mixed. Roughly half of OIC countries recorded an increase in health expenditure as a share of GDP in 2022, signalling some efforts to sustain or prioritise health financing in the post-COVID recovery. The most notable increases were observed in Afghanistan (+7.7 percentage points), Comoros (+3.2), Maldives (+2.3), Uzbekistan (+1.7), and Mauritania (+1.5).

Figure 1.2: Current Health Expenditure as a Percentage of GDP in OIC Countries, 2022 (%)



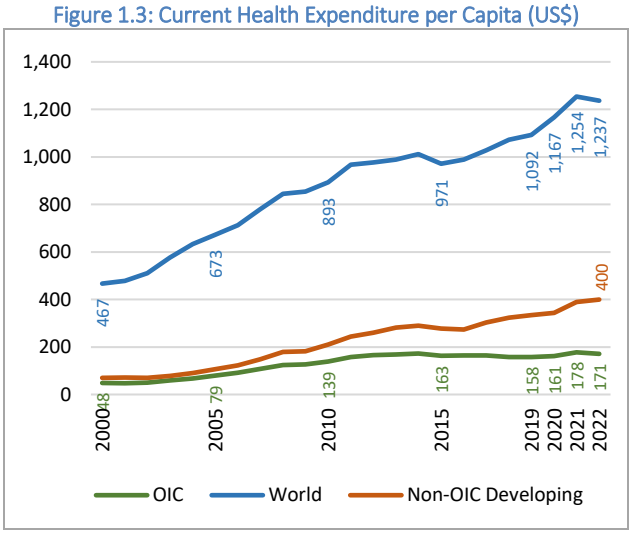
Source: SESRIC staff compilation based on data from WHO Global Health Expenditure Database (GHED), December 2024.

Conversely, some countries experienced notable declines over the same period, potentially reflecting reallocation of budgets or improvements in GDP outpacing health spending. The largest decreases were recorded in Suriname (-3.1 percentage points), Iran (-2.5), Guyana (-1.9), Algeria (-1.8), and Niger (-1.3).

1.1.2. Health Expenditure per Capita

Per capita total expenditure on health reflects the average spending on health goods and services per person and serves as a key indicator of resource availability at the individual level. Over the past two decades, global per capita health spending has risen substantially, nearly tripling in current US dollars—from $467 in 2000 to $1,254 in 2021, the highest level recorded. In 2022, however, global per capita health expenditure declined slightly to $1,237, reflecting the fact that growth in total health spending did not keep pace with population growth (Figure 1.3).

Figure 1.3: Current Health Expenditure per Capita (US$)



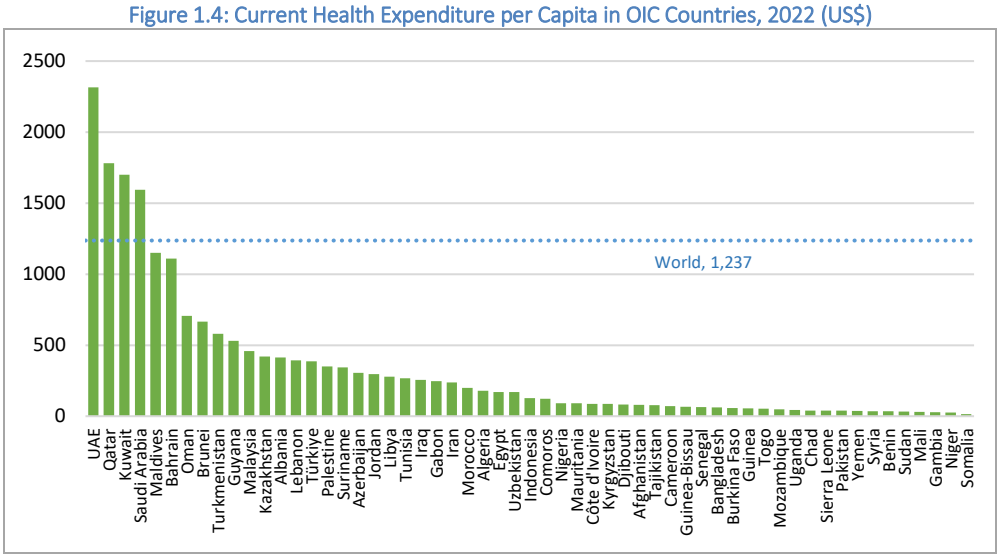
Source: SESRIC staff compilation based on data from WHO Global Health Expenditure Database (GHED), December 2024.

Despite this growth at the global level, per capita health expenditure in developing countries—particularly in the OIC region—remains well below global averages. In 2022,

OIC countries collectively spent an average of $171 per person, up modestly from $163 in 2015 and $158 in 2019. This remains considerably lower than the $400 per capita spent in non-OIC developing countries and starkly contrasts with the $7,119 per capita average observed in developed countries—nearly 42 times higher than the OIC average.

Moreover, the gap between OIC countries and the rest of the world has widened over time, suggesting that increases in health spending within the OIC have not kept pace with global trends. This widening disparity underscores a critical challenge for OIC Member States as they seek to build more resilient and equitable health systems.

Figure 1.4: Current Health Expenditure per Capita in OIC Countries, 2022 (US$)



Source: SESRIC staff compilation based on data from WHO Global Health Expenditure Database (GHED), December 2024.

At the country level, there is considerable variation in per capita health spending across the OIC (Figure 1.4). In 2022, the lowest spending was recorded in Somalia, at just $15 per person, while the United Arab Emirates reached as high as $2,315. As expected, higher-income countries such as the United Arab Emirates, Qatar, Kuwait, and Saudi Arabia recorded per capita health expenditures that exceeded the global average, while many low-income countries—including Gambia, Niger, and Somalia—spent less than $30 per person, signalling severe limitations in available health resources.

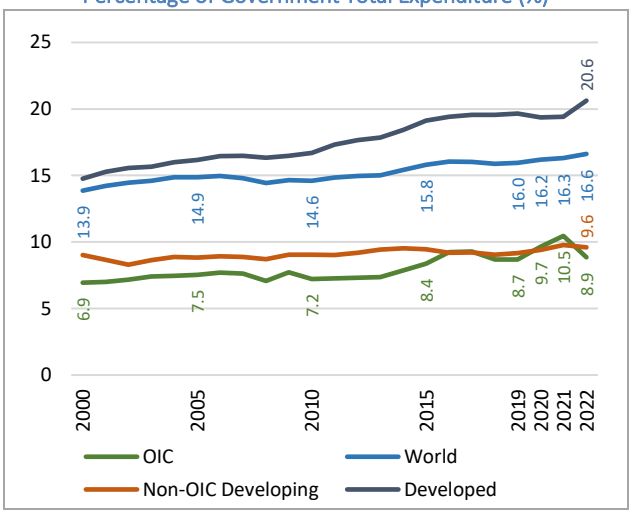
When comparing post-pandemic 2022 levels with pre-pandemic 2019 figures, 42 OIC countries registered increases in per capita health expenditure. The most substantial gains were observed in Uzbekistan (+72%), Guyana (+69%), Mauritania (+65%), Kazakhstan (+60%), and Comoros (+57%), reflecting increased prioritisation or improved economic recovery. However, 15 countries experienced declines, including significant drops in Lebanon and Libya (each -50%), Suriname (-43%), Syria (-32%), and Algeria (-26%). These reductions may reflect fiscal tightening, currency devaluation, or prolonged conflict and economic instability.

1.1.3. *Government Expenditure on Health*

Government spending on health as a share of total government expenditure serves as a critical indicator of a country's commitment to health in its broader development agenda. It reflects how much priority is given to health relative to other sectors in public budgeting and reveals the extent to which governments finance their health systems directly.

Between 2000 and 2022, there was a general upward trend in health prioritisation across all country groupings. Among OIC countries, the share of government expenditure allocated to health increased from 6.9% in 2000 to 8.9% in 2022, marking a 2 percentage point rise over the two-decade period. In comparison, developed countries recorded a much larger increase—from 14.8% to 20.6%, while non-OIC developing countries saw a marginal gain of just 0.6 percentage points, from 9.0% to 9.6% (Figure 1.5).

Figure 1.5: Government Health Expenditure as a Percentage of Government Total Expenditure (%)



Source: SESRIC staff compilation based on data from WHO Global Health Expenditure Database (GHED), December 2024.

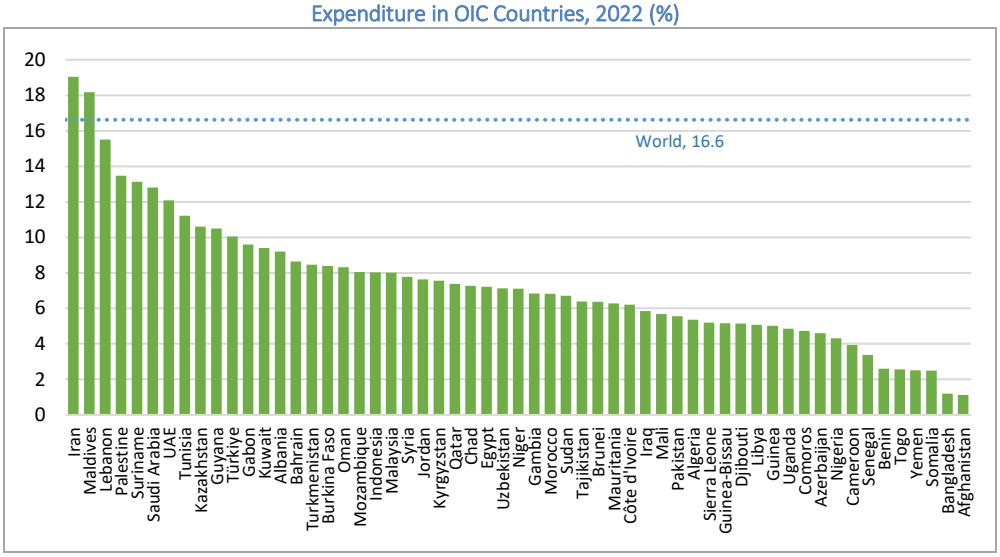
However, this upward trajectory in the OIC was not uninterrupted. Following a gradual increase over the SHPA implementation period—from 8.4% in 2015 to a peak of 10.5% in 2021—the share of health in government budgets declined sharply to 8.9% in 2022. This reversal was driven not only by competing expenditure growth but also by a reduction in government spending on health, which fell from US$ 197 billion in 2021 to US$ 181 billion in 2022. This contraction reflects shifting fiscal priorities in the early post-pandemic period and raises concerns about the sustainability of pandemic-era health investments.

In comparison to global benchmarks, OIC countries continue to allocate a relatively smaller portion of their public budgets to health. In 2022, the global average stood at 16.6%, with developed countries dedicating more than one-fifth (20.6%) of total government expenditure to the health sector. Non-OIC developing countries also modestly outpaced the OIC, with health comprising 9.6% of total government spending, compared to 8.9% in the OIC. It is noteworthy that non-OIC developing countries, many of which face similar resource constraints, historically allocated a higher share of government expenditure to health than OIC countries. This gap was more pronounced in the early 2000s but has narrowed considerably since 2015. Over the past several years, the two groups have maintained largely comparable averages, with only minor year-to-year fluctuations.

At the individual country level, the prioritisation of health within government budgets remains limited across much of the OIC. In 2022, with the exception of Iran and Maldives, all OIC countries with available data allocated a smaller share of government expenditure to health than the global average of 16.6% (Figure 1.6). The highest shares were recorded in Iran (19.0%), Maldives (18.2%), Lebanon (15.5%), Palestine (13.5%), and Suriname (13.1%)—reflecting relatively strong fiscal commitment to the health sector in these countries.

Conversely, the lowest shares were observed in Afghanistan (1.1%) and Bangladesh (1.2%), with health expenditure accounting for less than 3% of total government spending in four additional countries: Somalia, Yemen, Togo, and Benin. These figures underscore the limited fiscal space or competing priorities that constrain government investment in health in some of the most vulnerable settings.

Figure 1.6: Government Health Expenditure as a Percentage of Government Total Expenditure in OIC Countries, 2022 (%)



Source: SESRIC staff compilation based on data from WHO Global Health Expenditure Database (GHED), December 2024.

A comparison with pre-pandemic 2019 levels reveals divergent trends across the OIC. Several countries recorded notable increases in the share of government spending allocated to health, including the United Arab Emirates (+4.2 percentage points), Guinea-Bissau (+2.7), Egypt (+2.4), Chad (+2.4), and Kazakhstan (+2.3). Importantly, in all of these cases, the 2022 levels were also higher than those observed in 2015, indicating sustained improvements in health prioritisation over the OIC-SHPA period.

On the other hand, a number of countries experienced significant declines. The most pronounced reductions between 2019 and 2022 occurred in Algeria (-3.5 percentage points), Libya (-3.3), Togo (-2.8), Jordan (-2.5), and Niger (-2.3). All but Niger also recorded lower shares in 2022 than in 2015, suggesting a broader trend of declining fiscal commitment to health in these settings.

Together, these findings point to a divergent landscape of health spending across the OIC, where encouraging progress in some Member States contrasts with persistent or even

worsening vulnerabilities in others. While several countries increased their health spending—both in absolute terms and as a share of government budgets—many continue to allocate limited resources to health, reflecting structural constraints, competing fiscal priorities, or instability.

The COVID-19 pandemic brought renewed attention to the critical importance of resilient and well-funded health systems, and several OIC countries responded with temporary boosts in spending. However, post-pandemic trends suggest that in many cases, these gains have not been sustained, raising concerns about the longer-term commitment to health system strengthening.

Importantly, the OIC-SHPA underscored the need to improve health financing as a cornerstone of broader health system development. While the SHPA period saw incremental improvements in many countries—particularly in health expenditure as a share of GDP and per capita terms—progress has been uneven, and overall investment levels remain well below global averages.

Going forward, ensuring adequate, efficient, and sustained financing for health—especially in low-income and fragile contexts—will be vital not only for delivering essential health services, but also for advancing equity, resilience, and universal health coverage across the OIC region.

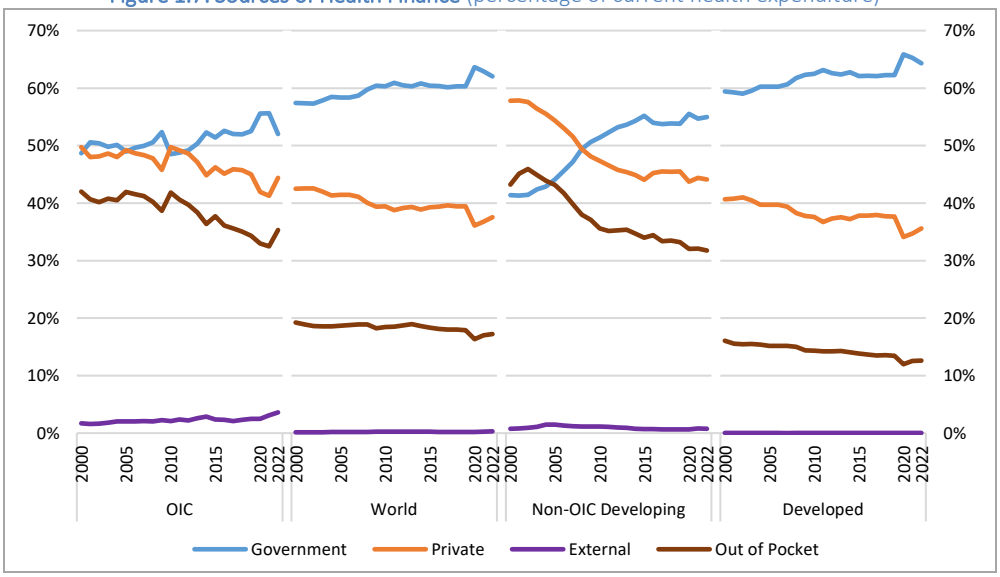
1.2. Financing of Health Care

Health financing is a cornerstone of health system performance. It encompasses the generation, allocation, and use of financial resources to deliver accessible and affordable health services. Total health expenditure is financed through a mix of public, private, and external sources. Public financing mainly includes funds from government budget and social security schemes whereas private financing includes mainly private health insurance and out-of-pocket spending (OOPS). Health spending from external sources covers expenditures funded by nondomestic sources, which corresponds mainly to external aid, including grants, concessional loans and donations in kind to countries from bilateral, multilateral and private external donors (WHO, 2022). The relative share of these sources in total health expenditures has many implications for access, equity and financial sustainability of health care services in a country.

Worldwide, the public sector has been the main source of health financing, but it gained even more weight in total health spending in 2020, given that government spending on health increased substantially as controlling the pandemic and protecting households and businesses from the severe economic slowdown became top priorities. Although it has slightly declined since 2020, it still remains above pre-pandemic levels as of 2022. Public health financing remains quite higher in developed and high-income countries than in developing and low-income countries (Figure 1.7 and 1.8). Of the US$ 9.8 trillion in global health spending in 2022, 62% was from government sources, 37.6% was from private sources (including OOPS), and 0.3% was from external sources. Similarly, in developed countries,

almost two-thirds (64.3%) of health expenditures were financed from public sources and 35.6% from private sources.

Figure 1.7: Sources of Health Finance (percentage of current health expenditure)



Source: SESRIC staff compilation based on data from WHO Global Health Expenditure Database (GHED), December 2024.

In the OIC region, public financing has shown a modest but steady improvement, rising from 51.4% in 2015 to 55.6% in 2020, and slightly declining to 53.3% in 2022. This is still higher than pre-pandemic levels (52.5% in 2019), suggesting some retention of the fiscal expansion seen during the COVID-19 response. The OIC-SHPA identified increased public spending as a key priority, and progress made in this area reflects growing national efforts to enhance domestic financing for health systems.

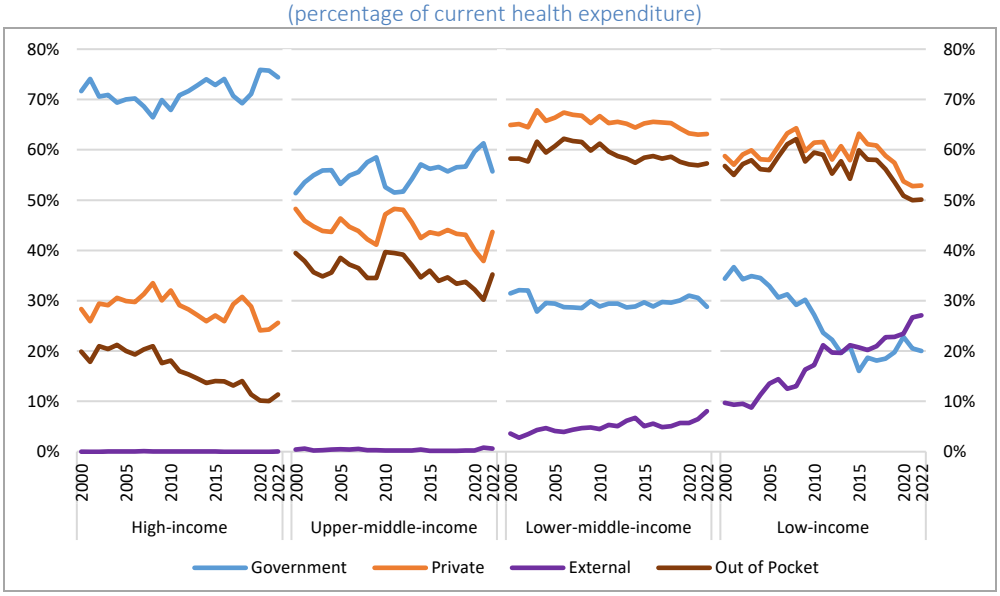
Nevertheless, private sources still finance a substantial portion (43.6%) of health expenditure in OIC countries, including a high share of out-of-pocket spending, which remains a major concern. In 2022, OOPS accounted for 34.8% of total health spending in the OIC region—down from 42.0% in 2000, and slightly lower than 35.3% in 2015. While this decline is encouraging, the current level remains more than double the global average of 17.2%, and higher than 31.6% in non-OIC developing countries.

The persistence of high OOPS in many OIC countries undermines financial protection and disproportionately affects low-income households. As emphasized in the OIC-SHPA, reliance on out-of-pocket payments is one of the most regressive forms of health financing, often pushing vulnerable families into poverty or forcing them to forgo essential care.

This challenge is especially acute in low-income OIC countries, where government capacity remains limited and health systems rely heavily on external aid and household contributions. In 2022, external sources accounted for 27.1% of total health spending—exceeding government contributions, which stood at 20.0%. The remaining 52.9% came from private sources, almost entirely driven by out-of-pocket payments (50.1%). Although this level

remains critically high, it reflects a notable improvement from 2015, when OOPS accounted for 59.9% of total health spending. This reduction is largely attributable to a rise in public financing—from 16.0% in 2015 to 20.0% in 2022—and a parallel increase in external support, which rose from 20.7% to 27.1% over the same period (Figure 1.8).

Figure 1.8: Sources of Health Finance in OIC Countries by Income Group
(percentage of current health expenditure)



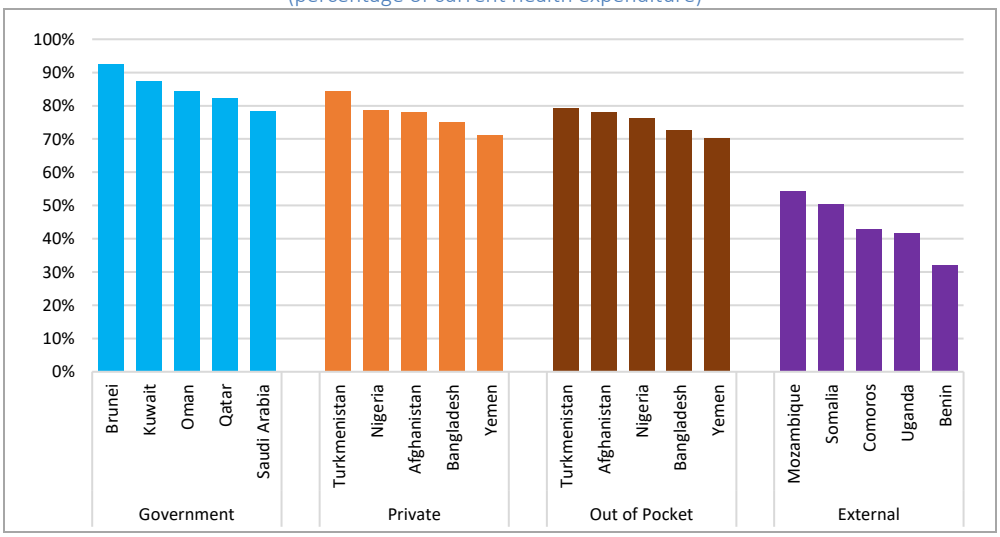
Source: SESRIC staff compilation based on data from WHO Global Health Expenditure Database (GHED), December 2024.

A similar pattern can be observed in lower-middle-income OIC countries, where OOPS remains high. In this group, OOPS declined modestly from 58.4% in 2015 to 57.3% in 2022, a relatively weak reduction. The underlying reason lies in the limited change in public financing, which remained relatively stable at around 29.7% in 2015 and 28.8% in 2022. The moderate increase in external financing—from 5.1% to 8.1%—helped alleviate some of the pressure on households but was insufficient to drive a more substantial shift toward pooled financing mechanisms.

These patterns reinforce the urgency of strengthening domestic public health financing in low- and lower-middle-income OIC countries, not only to reduce financial vulnerability among households but also to move toward more sustainable and equitable health systems. The OIC-SHPA rightly emphasised this need, and while progress has begun, it remains uneven and fragile across many Member States.

Indeed, the wide variation in financing patterns underscores the heterogeneity of health systems across the OIC region, shaped by differences in fiscal capacity, institutional maturity, and reliance on external aid. As of 2022, of the 57 OIC countries, 22 financed the majority of their health expenditures through government sources, while 32 relied primarily on private sources, including 28 countries where OOPS was the dominant financing mechanism. In contrast, only 3 countries—Somalia, Mozambique, and Uganda—depended primarily on external sources for financing their health systems.

Figure 1.9: Top 5 OIC Countries by Source of Health Finance, 2022
(percentage of current health expenditure)



Source: SESRIC staff compilation based on data from WHO Global Health Expenditure Database (GHED), December 2024.

Countries such as Brunei Darussalam, Kuwait, Oman, Qatar, and Saudi Arabia illustrate models where the state plays a dominant role in financing health, with government contributions exceeding 75% of total health expenditure in 2022 (Figure 1.9). These high-income countries benefit from strong public institutions and robust fiscal space, allowing them to shield their populations from excessive out-of-pocket payments.

At the other end of the spectrum, countries such as Turkmenistan, Nigeria, Afghanistan, Bangladesh, and Yemen reflect heavy reliance on private spending, with more than 70% of total health expenditure coming from private sources, predominantly in the form of out-of-pocket payments. OOPS reached as high as 79.2% in Turkmenistan, followed by 77.9% in Afghanistan, 76.1% in Nigeria, 72.5% in Bangladesh, and 70.2% in Yemen—placing significant financial strain on households and raising serious concerns about access and equity.

Meanwhile, aid-dependent countries such as Mozambique, where external sources financed over half (54.2%) of total health spending, Somalia (50.4%), Comoros (42.8%), Uganda (41.6%), and Benin (32.0%) continue to rely heavily on external sources. For these countries, the sustainability of health financing is closely tied to international donor flows, making their health systems particularly vulnerable to funding volatility.

As emphasised in the OIC-SHPA, countries at both ends of this spectrum—those with high out-of-pocket burdens and those reliant on external aid—require targeted policy interventions to strengthen domestic health financing systems and expand risk pooling mechanisms. This is critical for building resilient and equitable health systems and reducing the risk of financial hardship for millions across the OIC region.

1.3. Health Workforce

Today, it is now well-recognised that the size, skill mix, geographical distribution, and productivity of health workers are central to the timely and efficient delivery of quality healthcare. In fact, health systems cannot function without health workers—they are the backbone of service delivery and one of the fundamental building blocks of any health system. A well-trained and equitably distributed health workforce is also essential for ensuring system resilience and the capacity to respond to public health emergencies.

The COVID-19 pandemic clearly illustrated this critical role, with health professionals serving on the frontlines worldwide. Yet, many countries were already grappling with workforce-related challenges long before the pandemic—particularly shortages, inequitable distribution, and mismatches between workforce skills and health system needs. These challenges were further intensified during the pandemic, which disrupted routine services and placed extraordinary demands on already strained human resources for health. Indeed, insufficient staff availability—due to COVID-19 deployment or related disruptions—was cited among the top causes of essential service interruptions globally (66% of countries) and in 63% of OIC countries (SESRIC, 2022).

According to WHO (n.d.) estimates, there was a global shortfall of 15 million health workers in 2022, projected to decline to 10 million by 2030, with the majority of this gap concentrated in low- and lower-middle-income countries.[5] Countries across all income levels face ongoing challenges in the education, employment, deployment, and retention of health workers. Chronic underinvestment in health education, limited alignment between training systems and actual health needs, and weak incentives for rural deployment contribute to persistent shortages and inefficiencies. These challenges are further compounded by rising international migration of health professionals, which risks exacerbating shortages in countries already facing workforce deficits.

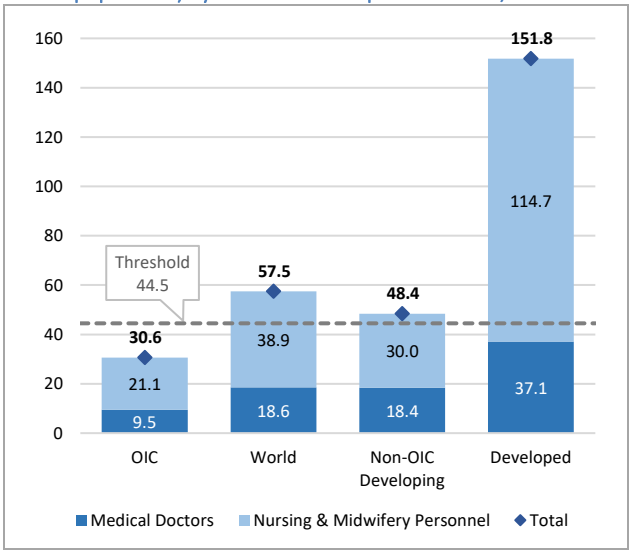
There is a strong positive correlation between health workforce density and service coverage and outcomes. Yet, health workers are unevenly distributed around the world, and the shortages are particularly acute in many OIC countries. According to the latest available data, the average density of health workers (physicians, nurses, and midwives) in OIC countries stood at 30.6 per 10,000 population, well below the global average (57.5) and also lower than in non-OIC developing countries (48.4). More importantly, this figure falls short of the WHO's SDG index threshold of 44.5 per 10,000, a benchmark associated with adequate service coverage for the health-related targets of the 2030 Agenda[6] (Figure 1.10).

The OIC-SHPA identified the development of a qualified health workforce as a strategic objective. While notable progress has been made in some Member States, many continue to face significant challenges in terms of workforce quantity, diversity, and competency. As illustrated in Figure 1.11, 16 OIC countries have reached or exceeded the global average in

[5] Despite this encouraging aggregate finding, the WHO notes that there are caveats: the data and projections are based mainly on pre-COVID-19 trends, and the pandemic impact on health and care workforce is grave and substantive.

[6] For further information on this threshold, see Scheffler et al. (2016).

Figure 1.10: Density of Health Workers (per 10 000 population) by Cadre and Group of Countries, 2023

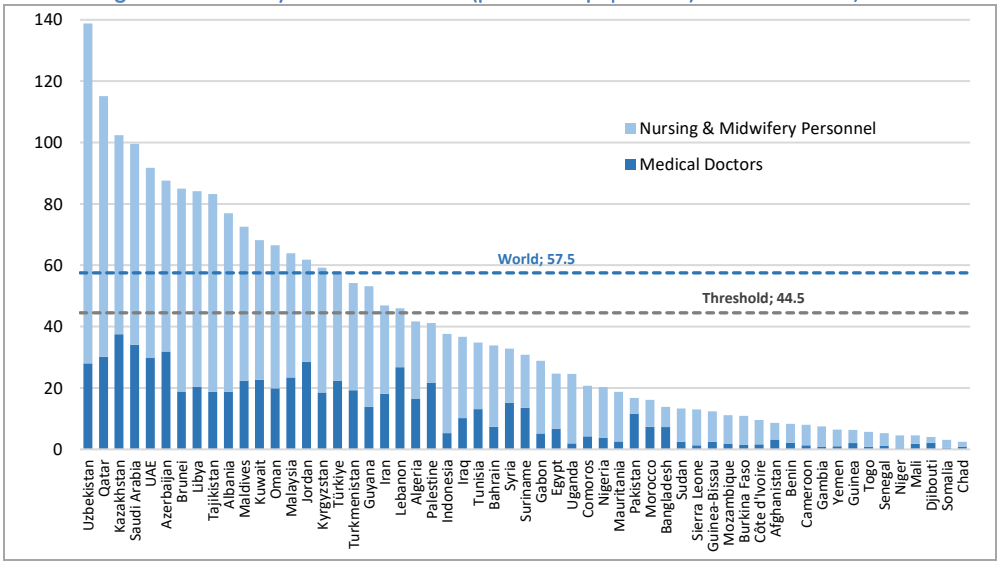


Source: SESRIC staff compilation based on data from WHO Global Health Observatory (GHO) Database.
Note: The underlying country data are for the latest year available between 2014 and 2023.

health workforce density, yet 36 countries remain below the WHO threshold. Of particular concern, 14 OIC countries—11 of them in Sub-Saharan Africa—have fewer than 10 health workers per 10,000 population.

On the higher end of the scale, countries such as Uzbekistan (138.9), Qatar (115.1), Kazakhstan (102.4), Saudi Arabia (99.6), and the United Arab Emirates (91.8) report the highest densities among OIC members. In stark contrast, countries such as Chad, Somalia, Djibouti, Mali, and Niger have fewer than 5 health workers per 10,000 people, placing them among the most under-resourced in the world. These workforce deficits are especially alarming given that the greatest relative need—in terms of disease burden and population growth—is found in these very countries.

Figure 1.11: Density of Health Workers (per 10 000 population) in OIC Countries, 2023



Source: SESRIC staff compilation based on data from WHO Global Health Observatory (GHO) Database.
Note: Country data are for the latest year available between 2014 and 2023.

As the OIC region looks beyond the SHPA period, it is clear that investments in workforce planning, training, and retention—particularly in underserved and rural areas—must be a priority. Without sufficient and well-distributed human resources, efforts to expand service coverage, improve quality of care, and build resilient health systems will remain limited in their impact.

1.4. Healthcare Facilities

Healthcare facilities—ranging from hospitals and health centres to health posts—are critical components of any efficient and effective health system. The number, distribution, and quality of these facilities are important indicators of a country's capacity to deliver essential health services and support the well-being of its population. Although comprehensive and up-to-date data on facility infrastructure remain limited,[7] existing information provides valuable insights into system readiness and capacity.

The COVID-19 pandemic has highlighted the need for the adequate capacity of hospital beds, particularly the intensive care unit (ICU) beds, to address sudden surges in seriously ill patients. The pandemic has also revealed that countries need to be flexible and creative to boost infrastructure capacity in case of emergencies. Health systems around the world have employed three common approaches to rapidly scale up health system infrastructure to meet sudden spikes in COVID-19 cases: constructing new, dedicated treatment facilities, repurposing non-medical spaces to create temporary field hospitals or testing centres, and reconfiguring existing medical facilities (Haldane et al., 2021; OECD, 2021). Additionally, countries often relied on home care for patients with mild to moderate COVID-19, while making facilities available if patients were unable to safely self-isolate within their homes. Many countries also cancelled elective surgeries in an effort to ensure system capacity for COVID-19 care, which was reported as a cause of disruptions to essential health services (SESRIC, 2022).

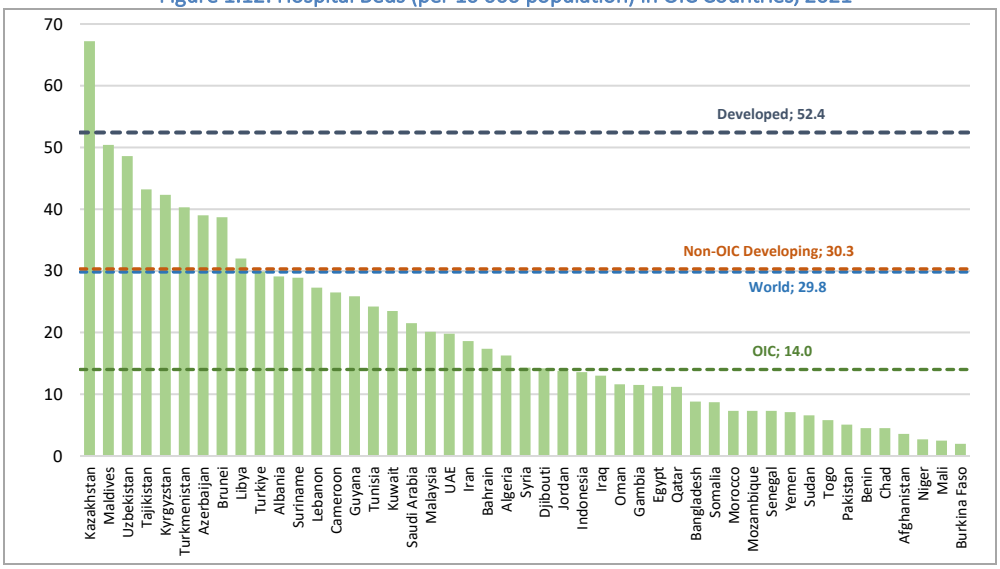
Among the key indicators of infrastructure capacity is the number of hospital beds per 10,000 population, which reflects not only the availability of inpatient care but also the overall resilience of the health system. According to the latest data, OIC countries lag significantly behind both the global average and the average for non-OIC developing countries. On average, OIC countries have 14 hospital beds per 10,000 people, less than half the global average, pointing to notable gaps in facility-based care and limited inpatient capacity across much of the region (Figure 1.13).

Hospital bed availability also varies widely across OIC countries. While Kazakhstan has more than 65 beds per 10,000 population, a number of countries—including Burkina Faso, Mali, Niger, Afghanistan, Chad, and Benin—have fewer than 5 beds per 10,000, reflecting severely limited access to inpatient services. In countries with such low capacity, infrastructure

[7] Currently, the latest data on the number of healthcare facilities, provided by the WHO, date back to 2013. See SESRIC (2019) for those data.

development remains a foundational priority for improving health service delivery and system preparedness—especially in the face of future public health emergencies.

Figure 1.12: Hospital Beds (per 10 000 population) in OIC Countries, 2021



Source: SESRIC staff compilation based on data from World Bank, World Development Indicators.
Note: Country data are for the latest year available between 2012 and 2021.

As emphasised in the OIC-SHPA, expanding and improving the delivery of quality care through integrated networks of primary health care facilities, supported by community health workers, outreach teams, volunteers, and partnerships with non-governmental organisations, is crucial for building sustainable and inclusive health systems. Nevertheless, current infrastructure levels remain insufficient, particularly in low-income and fragile contexts. Strengthening healthcare infrastructure—both in quantity and quality—must remain a key priority in the post-SHPA phase to ensure equitable access to essential services and system-wide resilience.

CHAPTER 2

Disease Prevention and Control

The prevention and control of diseases and pandemics are crucial aspects of public health. Collaboration in this area is a shared priority among the international community and all OIC countries. Developing nations, including those within the OIC, have been actively implementing various measures to combat diseases and pandemics through their national health programs and global partnerships.

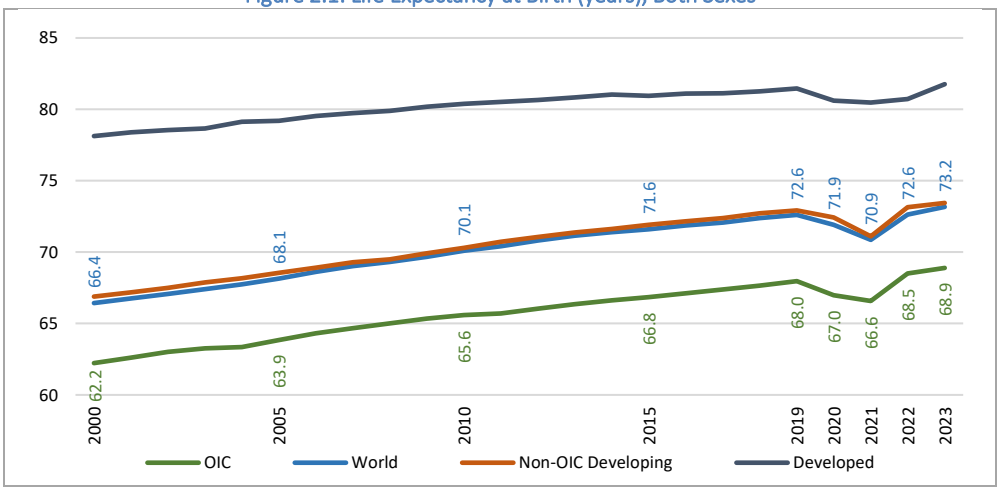
The approach taken by the OIC-SHPA towards disease prevention and control encompasses both communicable and non-communicable diseases (NCDs) through comprehensive strategies aimed at reducing risks, raising public health awareness, and strengthening healthcare systems. The focus is on fostering a holistic approach at both the national and international levels. Furthermore, the OIC-SHPA strongly advocates for increased political commitment and financial investment to enhance healthcare infrastructure and workforce, creating a conducive environment for sustainable disease prevention initiatives.

Overall, the OIC-SHPA integrates public awareness campaigns, cross-sectoral collaboration, and a resilient healthcare system to effectively address both communicable and non-communicable diseases. This comprehensive framework was anticipated to improve the health outcomes of member states and effectively tackle emerging global health challenges. In light of the above, this chapter first discusses life expectancy and mortality patterns to evaluate the overall health situation, and then analyses the recent trends in the prevalence of communicable and non-communicable diseases, their death burden, and progress towards addressing major risk factors.

2.1. Life Expectancy

Life expectancy at birth (LEB) is an important indicator on overall health situation of the people in a country and the quality of health care services they are receiving. It is defined as the average number of years that a newborn is expected to live if health and living conditions at the time of birth remained at the same levels. In general, life expectancy at birth in a country is determined by a variety of socio-economic factors such as state of poverty and undernourishment, access to clean water and sanitation, availability of primary health care services and immunisation coverage.

Figure 2.1: Life Expectancy at Birth (years), Both Sexes

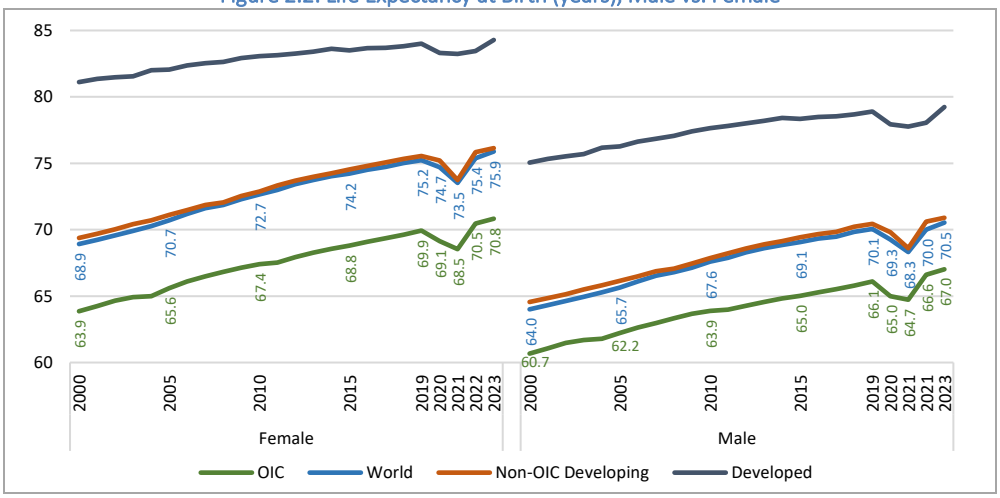


Source: SESRIC staff compilation based on data from United Nations, Department of Economic and Social Affairs, Population Division (2024). *World Population Prospects 2024*, Online Edition.

Figure 2.1 displays the life expectancy rates between 2000 and 2023 across the globe. On average, the world in general and OIC countries in particular witnessed a trend of improvement in LEB until 2019. However, the COVID-19 pandemic triggered an unprecedented rise in mortality that translated into life expectancy losses all around the world with few exceptions (Schöley et al., 2022). Estimates show that global LEB had increased by 6.2 years between 2000 and 2019 to 72.6 years before declining to 71.9 years in 2020 and further to 70.9 years in 2021, indicating a worsening mortality burden over the course of the pandemic. In the aftermath, LEB rebounded to 73.2 years as of 2023, returning to its upward trend. Meanwhile, LEB in OIC countries increased from 62.2 years in 2000 to 68 years in 2019, but it declined to 67 years in 2020 and further to 66.6 years in 2021. As of 2023, it is estimated at 68.9 years, above the pre-pandemic level. While similar trends were also observed in non-OIC developing countries and to a lesser extent in developed countries, OIC countries continued to lag behind with a comparatively lower LEB (Figure 2.1).

Historically, LEB has been higher for females than males all around the world, and the COVID-19 does not seem to have altered this gap. Figure 2.2 shows that the global LEB for males dropped from 70.1 years in 2019 to 68.3 years in 2021 (a loss of 1.8 years) whereas for females, it dropped from 75.2 years to 73.5 years over the same period (a loss of 1.7 years). In the OIC countries, the impact was less prominent: a loss of 1.4 years both for males (from 66.1 years to 64.7 years) and for females (from 69.9 years to 68.5 years). With the pandemic conditions fading away, in 2023, global LEB rebounded to 70.5 years for males and to 75.9 years for females, while in the OIC region, male LEB rose to 67 years and female LEB reached 70.8 years. Consequently, as of 2023, female LEB was higher than male LEB by 3.8 years in the OIC countries and by 5.4 years worldwide. Overall, while LEB continued to be lower in the OIC group than the world average for both males and females, the discrepancy between male and female LEB was narrower in the OIC group.

Figure 2.2: Life Expectancy at Birth (years), Male vs. Female

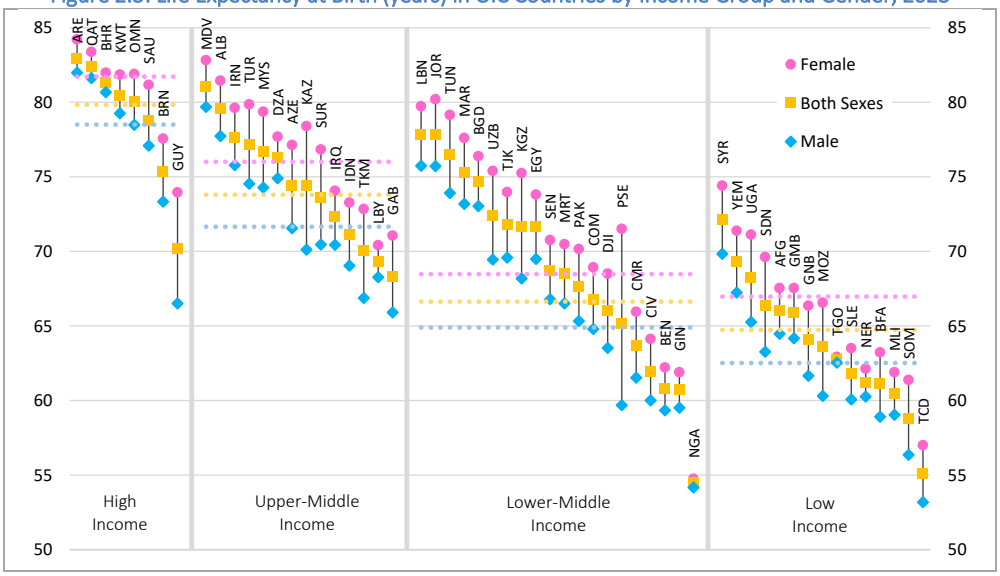


Source: SESRIC staff compilation based on data from United Nations, Department of Economic and Social Affairs, Population Division (2024). World Population Prospects 2024, Online Edition.

The analysis of the temporal change in LEB (both sexes) in individual OIC countries shows that all but two countries (Yemen and Syria) recorded an improvement during the pre-pandemic period from 2010 to 2019. Sub-Saharan African countries of Somalia, Sierra Leone, Uganda, Mozambique, Guinea-Bissau, and Côte d'Ivoire added 5 to 8 years to their LEB over that period. Demonstrating the impact of the pandemic is the fact that LEB was at or above the 2019 level in only 16 countries in 2020 (Syria, Suriname, Benin, Burkina Faso, Malaysia, Chad, Mozambique, Nigeria, Sierra Leone, Brunei Darussalam, Comoros, Togo, Uganda, Guinea, Cameroon, and The Gambia) and nine in 2021 (Syria, Sierra Leone, Nigeria, Togo, Chad, Uganda, Guinea, Côte d'Ivoire, and Turkmenistan). Aside from the loss of a potential increase in LEB that would have occurred with the continuation of the pre-pandemic trend, the combined loss in 2020 and 2021 as compared to 2019 was as much as 4.8 years in Guyana, 4.5 years in Lebanon, 3.9 years in Oman, 3.6 years in Kazakhstan, 3.5 years in the United Arab Emirates, 3.1 years in Iran, and 2 years or more in twelve other countries.

Figure 2.3 shows that, as of 2023, the United Arab Emirates has the highest LEB (82.9 years) among the OIC countries, followed by Qatar (82.4), Bahrain (81.3), Maldives (81.0), Kuwait (80.4), and Oman (80.0), all but one are middle-eastern, high-income countries. At the other side of the spectrum are Sub-Saharan African, low- or lower-middle income countries of Nigeria (54.5), Chad (55.1), Somalia (58.8), Mali (60.4), and Guinea (60.7). It should be noted here that Nigeria and Chad have the lowest LEB in the world. Income level, as a significant determinant of health and living conditions, evidently has a strong influence on LEB. Indeed, considering the income-group averages, Figure 2.3 also demonstrates that the higher the income level is, the higher the LEB is, and vice versa, reflecting a correlation between the two. To put it precisely, LEB averages at as high as 79.8 years for the high-income countries, 73.8 years for the upper-middle income countries, 66.6 years for the lower-middle income countries, and as low as 64.7 years for the low-income countries.

Figure 2.3: Life Expectancy at Birth (years) in OIC Countries by Income Group and Gender, 2023



Source: SESRIC staff compilation based on data from United Nations, Department of Economic and Social Affairs, Population Division (2024). World Population Prospects 2024, Online Edition.
Note: See Annex A for the country codes and Annex B for the classification by income. The dotted horizontal lines represent the averages for the respective income-group.

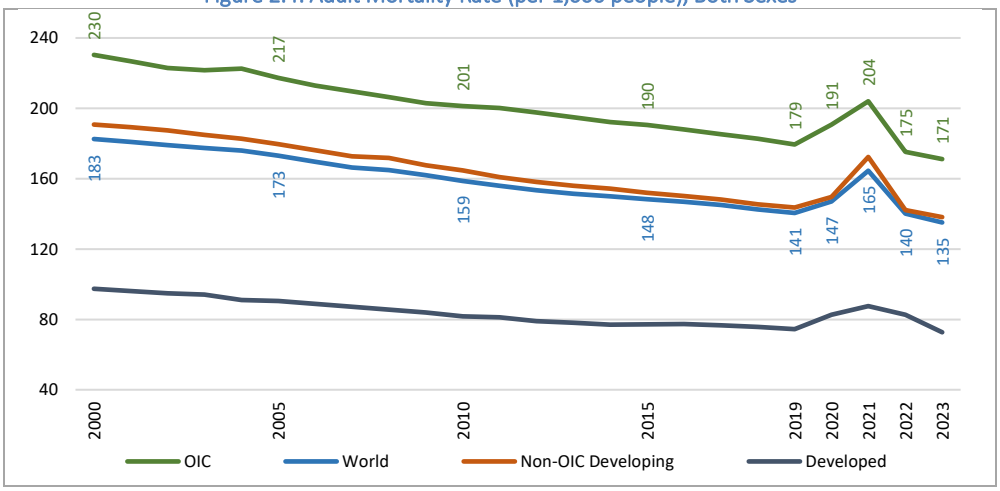
As mentioned above, the group of OIC countries has a lower gender disparity in LEB than the global averages, but large differences exist among the OIC countries (Figure 2.3). While female LEB is higher than male LEB in all countries around the world, the difference, in the OIC countries, ranges from 0.4 years in Togo –the lowest in the world– to 11.8 years in Palestine. Beside these countries at the two ends, the countries with relatively lower disparity (2.5 years or less) included Nigeria, Bahrain, Qatar, Niger, Libya, the United Arab Emirates, and Guinea, while those with relatively higher disparity (6 years or more) included Kazakhstan, Guyana, Kyrgyzstan, Suriname, Sudan, Mozambique, Turkmenistan, and Uzbekistan. A comparison between the income groups reveals that the low-income countries usually have a higher disparity, averaging at 4.5 years.

2.2. Adult Mortality Rate

Adult mortality rate (AMr) is defined as the probability of dying between the ages of 15 and 60 years per 1,000 population. It is considered as one of the most common measures to assess the health situation in a country. Looking into the change in AMr over time for country groups would be helpful to understand the level of progress they make in the disease prevention and control.

As shown in Figure 2.4, the world in general and the OIC countries in particular recorded a downward trend in AMr until 2019. However, with the unprecedented rise in mortality due to the COVID-19 pandemic, AMr increased all over the world in 2020 and 2021. Estimates show that global AMr had decreased by 23% between 2000 and 2019 to 141 before increasing to 147 in 2020 and further to 165 in 2021, indicating a worsening mortality burden

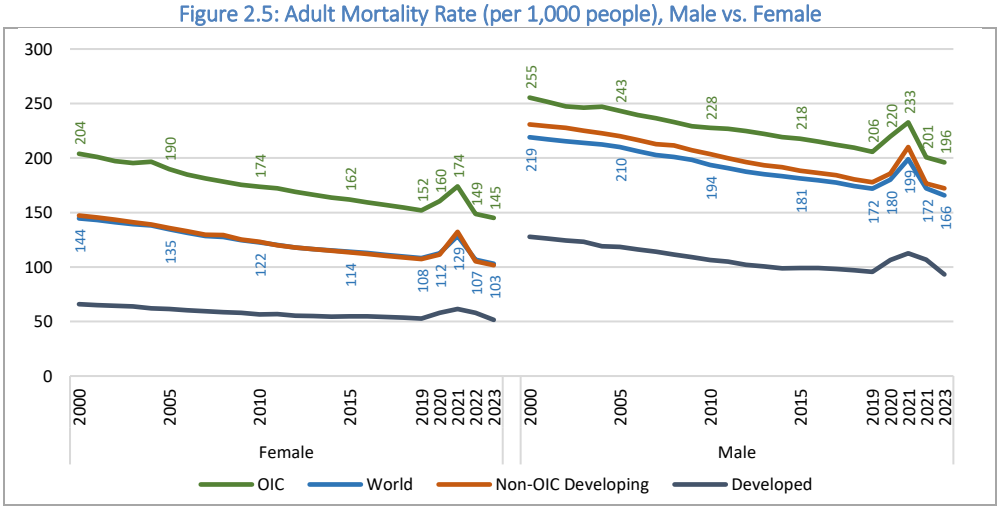
Figure 2.4: Adult Mortality Rate (per 1,000 people), Both Sexes



Source: SESRIC staff compilation based on data from United Nations, Department of Economic and Social Affairs, Population Division (2024). World Population Prospects 2024, Online Edition.

over the course of the pandemic. In the aftermath, AMr declined to 135 as of 2023, returning to its downward trend. Likewise, in the group of OIC countries, AMr decreased by 22% from 230 in 2000 to 179 in 2019, but it increased first to 191 in 2020 and then to 204 in 2021, before falling down to 171 in 2023. Overall, while similar developments were also observed in non-OIC developing countries and developed countries, the OIC countries continued to have a comparatively higher AMr.

Figure 2.5: Adult Mortality Rate (per 1,000 people), Male vs. Female



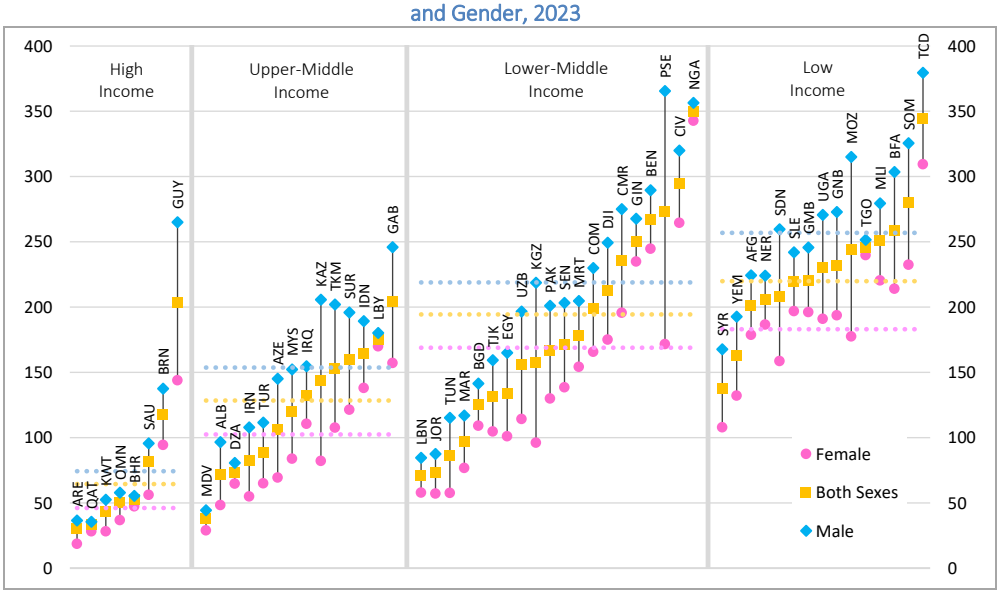
Source: SESRIC staff compilation based on data from United Nations, Department of Economic and Social Affairs, Population Division (2024). World Population Prospects 2024, Online Edition.

Historically, AMr has been higher for males than females all around the world, though the OCVID-19 pandemic somewhat narrowed this gap. Figure 2.5 shows that the global AMr for females rose by 19% from 108 in 2019 to 129 in 2021 whereas for males, it rose by 16% from 172 to 199 over the same period. In the OIC countries, the impact was less remarkable: a rise of 13% for males (from 206 to 233) and 14% for females (from 152 to 174). After the

pandemic-hit years, in 2023, global AMr decreased to 166 for males and to 103 for females, while in the OIC region, male AMr fell to 196 and female AMr to 145, signalling a return to historical downward trend and indicating a comparatively lower discrepancy between male and female AMr in the OIC region.

The analysis of the temporal change in AMr (both sexes) in individual OIC countries shows that all but three countries (Syria, Yemen, and Libya) recorded an improvement during the pre-pandemic period from 2010 to 2019. The decline in AMr was particularly important in some Sub-Saharan African countries, such as Mozambique (-104), Sierra Leone (-101), Uganda (-85), Somalia (-79), and Côte d'Ivoire (-77), and in Kazakhstan (-86). However, in 2021, with two years into the pandemic, AMr was higher than the pre-pandemic levels in all but two countries (Syria and Uzbekistan). As of 2023, AMr in most OIC countries had declined below 2019 levels. However, a few countries, including Qatar, Albania, Lebanon, Sudan, and Saudi Arabia, recorded slight increases (less than 5 points), while others, such as Palestine (+181; due the prolonged inhumane attacks on Gaza), Libya (+22.4), and Türkiye (+9.7), experienced more substantial rises.

Figure 2.6: Adult Mortality Rate (per 1,000 people) in OIC Countries by Income Group and Gender, 2023



Source: SESRIC staff compilation based on data from United Nations, Department of Economic and Social Affairs, Population Division (2024). World Population Prospects 2024, Online Edition.
Note: See Annex A for the country codes and Annex B for the classification by income. The dotted horizontal lines represent the averages for the respective income-group.

Figure 2.6 shows that, as of 2023, the United Arab Emirates (30) has the lowest AMr among the OIC countries, followed by Qatar (33), Maldives (38), Kuwait (44), and Oman (50). At the other side of the spectrum are Sub-Saharan African, low- or lower-middle income countries of Nigeria (349), Chad (345), Côte d'Ivoire (294), and Somalia (280), as well as Palestine (273). Considering the income-group averages, Figure 2.6 also demonstrates that the higher the income level is, the lower the AMr is, and vice versa. To put it precisely, AMr averages at as

low as 64 for the high-income countries, 128 for the upper-middle income countries, 194 for the lower-middle income countries, and as high as 220 for the low-income countries.

As mentioned above, the group of OIC countries has a lower gender disparity in AMr than the global averages, but large differences exist among the OIC countries (Figure 2.6). While male AMr is higher than female AMr in all OIC countries, the difference ranges from 7.3 in Qatar to 194 in Palestine. Beside these countries at the two ends, the countries with relatively lower disparity included Bahrain, Libya, Togo, Nigeria, and the Maldives, while those with relatively higher disparity included Mozambique, Kazakhstan, Kyrgyzstan, Guyana, and Sudan. A comparison between the income groups reveals that the low-income countries usually have a higher disparity.

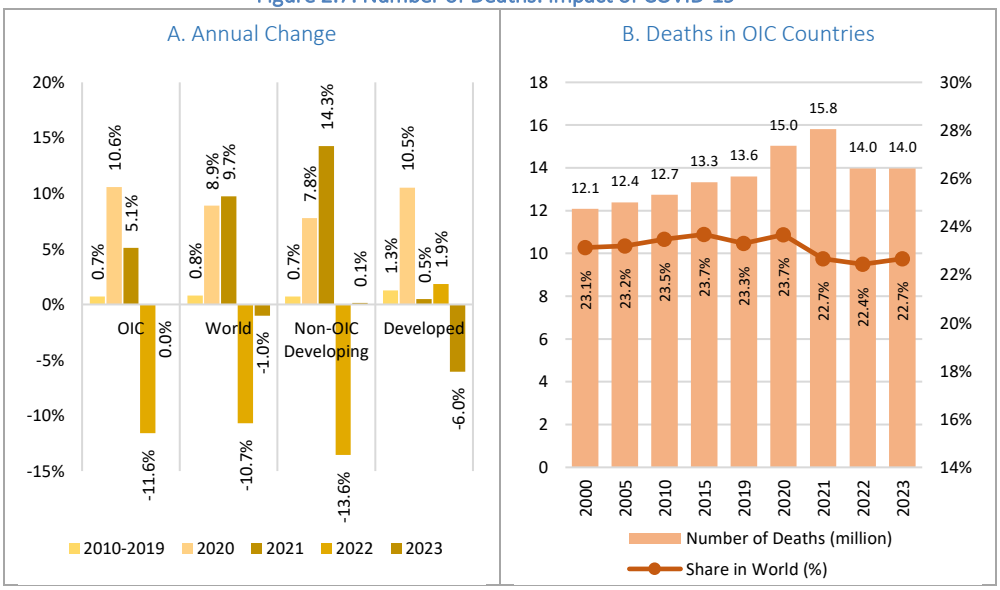
2.3. Deaths and Causes of Death

In a country or a region, the number of total deaths could be decreased by improving the availability and access to health services and fighting with diseases such as through disease prevention efforts and the use of new technologies. In addition, a negative trend in the number of conflicts, wars, and natural disasters could contribute to the reduction in the number of total deaths in a certain country or a region.

Figure 2.7 shows that annual number of deaths worldwide is estimated to have grown at much higher rates in 2020 and 2021 than in the pre-pandemic period of 2010-2019. In addition, while the three country groups analysed had comparable growth rates in 2020, the situation changed significantly in 2021, when non-OIC developing countries recorded an even higher rate of growth compared with 2020 whereas the OIC countries and developed countries in particular recorded a slowdown (Figure 2.7.A). This helped reduce the share of OIC countries in total number of deaths worldwide to 22.7% in 2021. Estimates show that the number of annual deaths in the OIC countries increased by 1.5 million between 2000 and 2019 to 13.6 million, while it increased by 1.4 million only in 2020 to 15.0 million and by around 800 thousand in 2021 to 15.8 million (Figure 2.7.B). These figures clearly reflect the impact of direct deaths from COVID-19 and other excessive deaths associated with disruptions to healthcare services during the pandemic. Over 2022-2023, the annual number of deaths in the OIC region stabilised at around 14 million, representing less than 23% of the global deaths.

According to the WHO, causes of death can be grouped into three major categories: communicable diseases (infectious diseases, along with maternal, perinatal and nutritional conditions), non-communicable diseases (chronic diseases), and injury. Development levels of countries not only affect mortality rates, life expectancy, and life quality of their inhabitants, but also determine their major causes of death. As countries become more developed over time, they can invest more in fighting against easily preventable communicable diseases (CDs) and therefore their inhabitants do not usually die from such diseases. However, more developed countries tend to suffer more from non-communicable diseases (NCDs) that threaten their people, such as cardiovascular diseases, cancers, and diabetes.

Figure 2.7: Number of Deaths: Impact of COVID-19

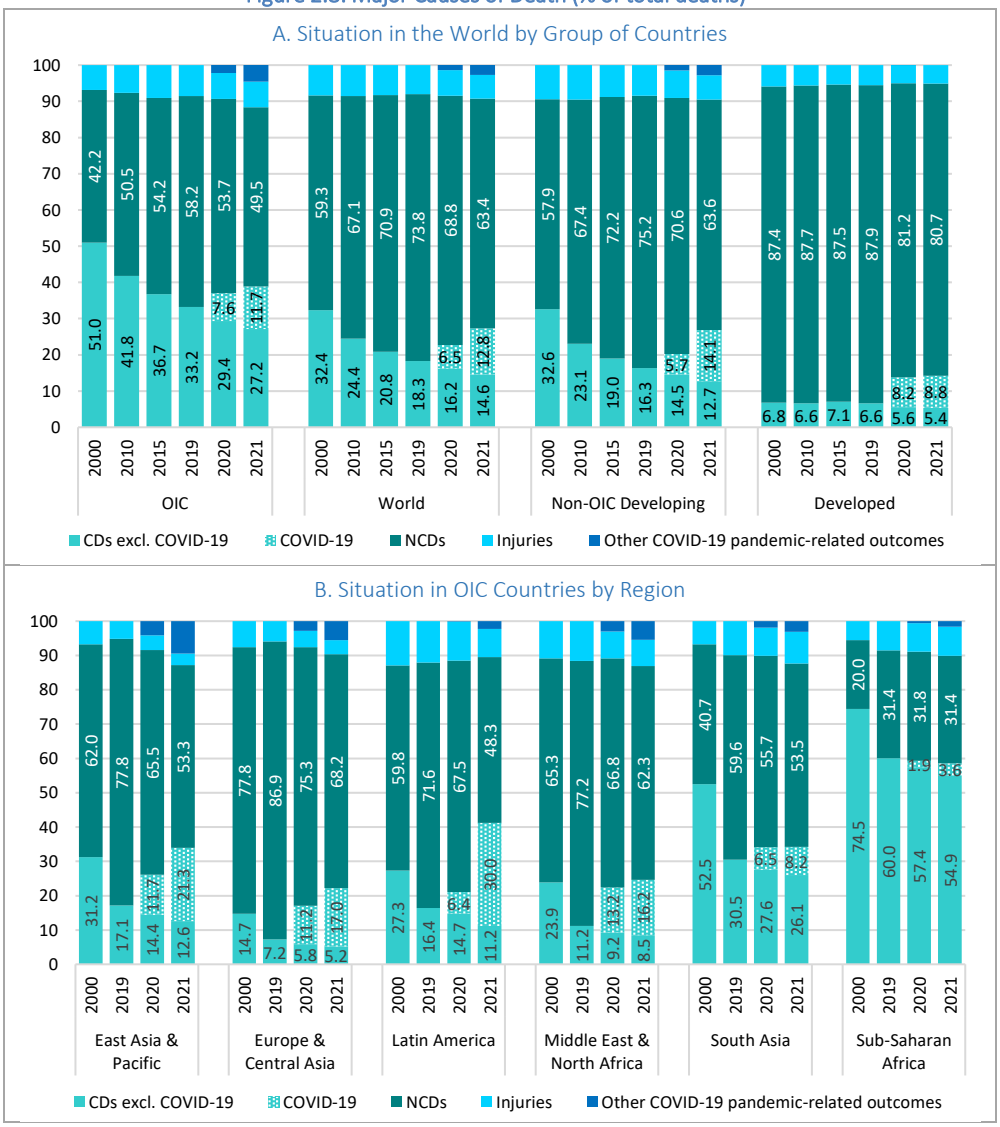


Source: SESRIC staff compilation based on data from United Nations, Department of Economic and Social Affairs, Population Division (2024). World Population Prospects 2024, Online Edition.

Figure 2.8 displays the major causes of death across country groups over the period from 2000 to 2021 according to the latest estimates by the WHO. Accordingly, NCDs continue to be the major cause of death worldwide as of 2021 although COVID-19— as a newly emerged cause of deaths—triggered an increase in the contribution of CDs to global mortality after a long period of decline. Indeed, the share of global deaths attributed to CDs had been on a decreasing trend thanks to the global efforts to eradicate infectious diseases and to improve maternal, prenatal and nutrition conditions. While approximately 1 in 3 people died from CDs in 2000, these diseases were responsible for less than 1 out of 5 deaths in 2019, and when deaths caused by COVID-19 were excluded, the share of CDs in global deaths actually reached as low as 14.6% as of 2021. Deaths directly attributed to COVID-19 are estimated to account for 6.5% of all-cause deaths in 2020 and 12.8% in 2021, rebounding the overall share of CDs to 22.7% in 2020 and to 27.3% in 2021. Globally, 12.8 million people are estimated to have died from COVID-19 infection during 2020-2021, while additional 2.7 million deaths were attributable to other COVID-19 pandemic-related outcomes.

Compared to developing countries, developed countries have a higher share of deaths caused by NCDs, which remained unchanged at about 88% in the pre-pandemic period but declined to about 81% during the pandemic. In the OIC group, NCDs caused 42.2% of all deaths in 2000, and this share had increased to as high as 58.2% by 2019 before regressing to 49.5% in 2021. Correspondingly, the share of CDs decreased from 51.0% in 2000 to 33.2% in 2019, but it bounced back to 37.0% in 2020 (of which 7.6% was attributed to COVID-19) and further to 38.9% in 2021 (of which 11.7% was attributed to COVID-19), remaining much higher than the global averages. In the OIC countries, about 2.7 million deaths are estimated to be caused by COVID-19 infection in 2020/21, with additional 936 thousand deaths resulting from other COVID-19 pandemic-related outcomes.

Figure 2.8: Major Causes of Death (% of total deaths)



Source: SESRIC staff compilation based on data from WHO, Global Health Estimates 2021: Deaths by Cause, Age, Sex, by Country and by Region, 2000-2021. Geneva, World Health Organization; 2024a.
Note: 'Other COVID-19 pandemic-related outcomes' refers to all excess deaths due to the COVID-19 pandemic that are not attributable to SARS-CoV-2 infection, after attributing all other excess deaths to known causes. It may include deaths associated with deferred careseeking or other societal, economic, or behavioural changes tied to the pandemic, but which could not be attributed to a specific cause (see IHME, 2024).

Regarding the situation at the regional level within the OIC group, it is observed that the share of NCDs increased vis-a-vis a decrease of the share of CDs in all regions between 2000 and 2019, with an opposite trend in 2020-2021 because of the COVID-19-attributed deaths (Figure 2.8B). Sub-Saharan Africa continued to suffer the most from CDs, with about 60% of

all deaths caused by these diseases, and with relatively low influence of COVID-19. The proportion of deaths caused by CDs was also relatively high in the South Asia region, where 34.3% of people died from these diseases in 2021, of which 8.2% percentage points were due to COVID-19. In 2021, COVID-19 deaths were most notable in Latin America, where they accounted for as high as 30% of all-cause deaths, while all other CDs claimed only 11.2% that year, compared with 27.3% in 2000. A similar situation was observed in East Asia & Pacific, Europe & Central Asia, and Middle East & North Africa, which have also significantly reduced mortality from CDs over the past two decades but witnessed a high percentage of deaths from COVID-19. In terms of deaths caused by NCDs, Europe and Central Asia paid the highest bill, with these diseases accounting for 68.2% of all deaths in the region.

For individual OIC countries, the WHO estimates show that, as of 2021, the proportion of deaths caused by CDs was highest in Chad and Niger, where 2 in 3 people (66%) died from these diseases. More than half of all deaths were also attributed to CDs in another 14 countries, all of which were in Sub-Saharan Africa, too: Somalia, Nigeria, Mali, Mozambique, Guinea-Bissau, Sierra Leone, Guinea, Gabon, Cameroon, Benin, Côte d'Ivoire, Burkina Faso, Uganda, and the Gambia. NCDs were responsible for 81% of all deaths in Brunei Darussalam and 80% in Uzbekistan, which were the highest shares among the OIC countries, closely followed by the Maldives, Bahrain, Morocco, and Algeria, within a range of 74-78%. COVID-19 deaths accounted for as high as 31.7% of all deaths in Guyana and 25% or more in seven other OIC countries: Lebanon, Suriname, Oman, Tunisia, Iran, Azerbaijan, and Jordan.

Overall, it becomes evident that NCDs increasingly pose a challenge for the health of people living in the OIC countries, while CDs still claim more lives in the OIC group than they do in the other groups of countries. The progress on reducing the burden of CDs must be continued, particularly in Sub-Saharan Africa, where this burden remains unacceptably high. Therefore, strengthening health systems remains a crucial measure across the OIC region. However, while implementing policies to continue fighting against CDs, policymakers need to pay a special attention to the rise in deaths caused by NCDs by prioritising disease prevention and treatment policies.

2.4. Communicable Diseases

Infectious diseases are caused by pathogenic microorganisms, such as bacteria, viruses, parasites or fungi. They can be spread, directly or indirectly, from one person to another. These types of diseases usually called as communicable diseases, and most of the time, these diseases are preventable.

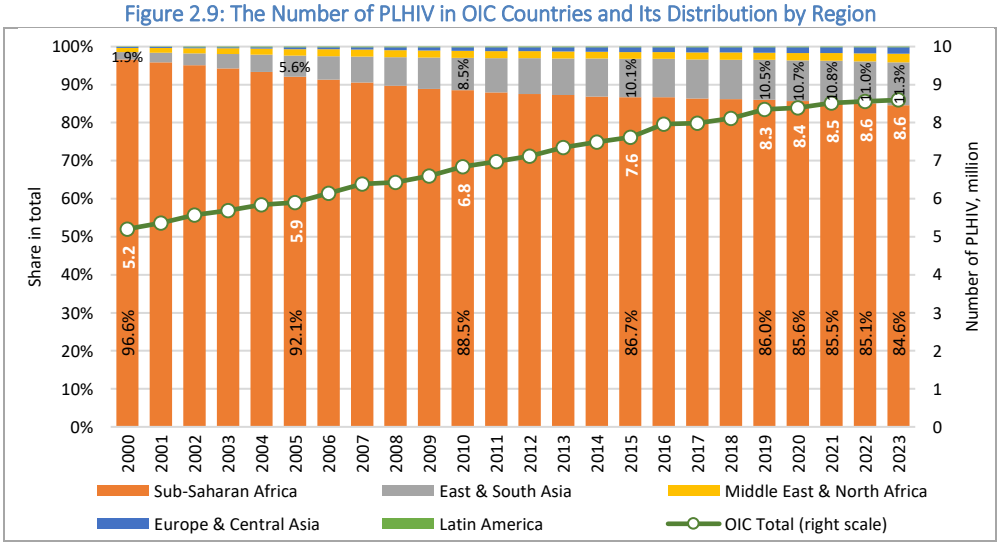
In addressing communicable diseases, the OIC-SHPA advocates for community awareness initiatives, improved access to vaccines, and the promotion of safe sanitation and hygiene practices. Efforts are directed towards enhancing immunisation coverage, particularly among vulnerable populations, while also bolstering laboratory capabilities and fostering cross-border collaboration to prevent outbreaks. This section looks into the recent situation of some major communicable diseases in the OIC countries.

2.4.1. HIV/AIDS

The Human Immunodeficiency Virus (HIV) targets the immune system and weakens people's surveillance and defence systems against infections and some types of cancer. As the virus destroys and impairs the function of immune cells, infected individuals gradually become immuno-deficient. HIV can be transmitted via the exchange of a variety of body fluids from infected individuals, such as blood, breast milk, semen and vaginal secretions. In order to diagnose, an HIV test is required that reveals infection status by detecting the presence or absence of antibodies to HIV in the blood.

HIV continues to be a major global public health issue, although the burden of the epidemic varies considerably between countries and regions. Estimates show that the number of people living with HIV (PLHIV) is constantly increasing. According to the Joint United Nations Programme on HIV/AIDS (UNAIDS), there were approximately 39.9 million PLHIV around the world at the end of 2023, compared with 27.2 million in 2000. In the OIC countries, this number is estimated to have increased from 5.2 million to 8.6 million over the same period (Figure 2.9). The Sub-Saharan Africa (SSA) region continues to be the most affected region, with 7.3 million PLHIV as of 2023. While the number of PLHIV has increased in all OIC regions over the past two decades, the share of SSA decreased to 84.6% in 2023 from 96.6% in 2000. Correspondingly, the most notable increase was in the share of the East & South Asia region—from 1.9% to 11.3%. The number of PLHIV in the region in 2023 (about 973 thousand) was almost 10 times that in 2000.

Figure 2.9: The Number of PLHIV in OIC Countries and Its Distribution by Region



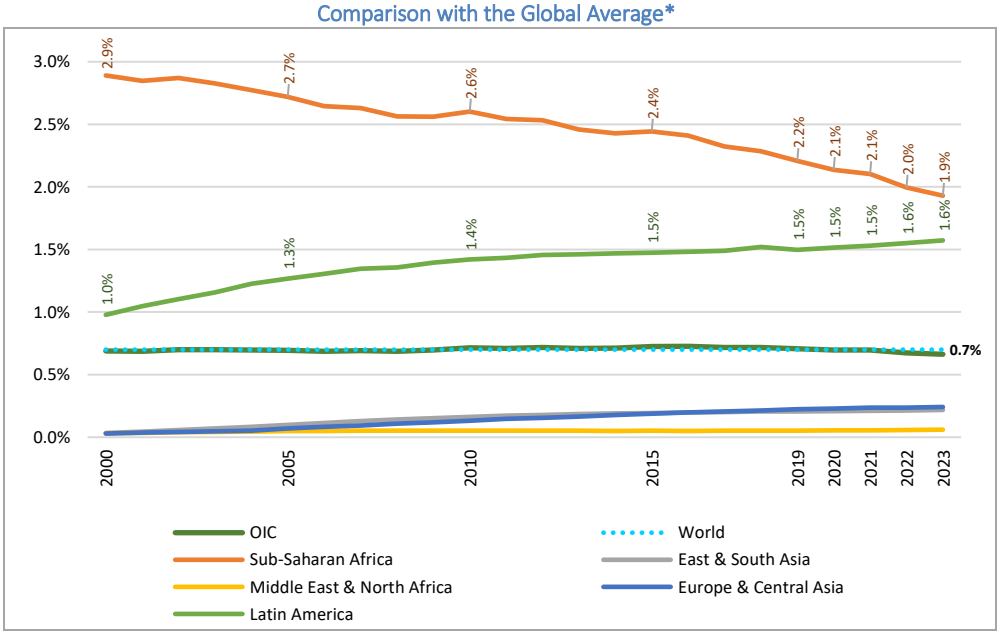
Source: SESRIC staff compilation based on data from AIDSinfo.
Note: The figure covers 50 OIC countries with available data, with the exception of Bahrain, Brunei Darussalam, Cameroon, Maldives, Palestine, Türkiye, and Turkmenistan.

One bright spot on the horizon is that the number of children living with HIV is on a declining trend worldwide as well as in the group of OIC countries. Of the estimated 39.9 million PLHIV worldwide in 2023, 1.4 million were children aged 0–14. This figure peaked at 2.6 million during 2005-2007, reflecting a decrease of nearly half (46%) since that time. Similarly,

available data shows that the number of children living with HIV declined by a quarter (25%) in the OIC countries from its peak at 693 thousand in 2008 to about 521 thousand in 2023.

HIV prevalence rate for adults aged 15-49 has remained relatively constant at the global level over the past two decades. It is estimated to remain at 0.7% as of 2023, which means that approximately one in every 140 adults is living with HIV. HIV prevalence in the group of OIC countries is also estimated at around 0.7%, though there are significant differences across geographical regions. Sub-Saharan Africa achieved a significant reduction in HIV prevalence, dropping from 2.9% in 2000 to 1.9% in 2023, though it remained the region with the highest rate. However, Latin America witnessed a significant increase in HIV prevalence rate over the same period, from 1.0% to 1.6%, approaching the rate seen in Sub-Saharan Africa. Europe & Central Asia and East & South Asia also witnessed an increase, but the prevalence rate was as low as 0.2% in both regions as of 2023 (Figure 2.10).

Figure 2.10: HIV Prevalence among Adults Aged 15-49 in OIC Countries by Region in Comparison with the Global Average*



Source: SESRIC staff compilation based on data from AIDSinfo. Population data used for weighting come from United Nations, Department of Economic and Social Affairs, Population Division (2024). World Population Prospects 2024, Online Edition.
* The figure covers 49 OIC countries with available data, with the exception of Bahrain, Brunei Darussalam, Cameroon, Maldives, Palestine, Türkiye, Turkmenistan, and the United Arab Emirates.

Globally, the number of people acquiring HIV is on a downward trend. It is estimated that 1.3 million people were newly infected with HIV in 2023, less than half (46%) of the number observed in 2000. Nevertheless, this number is over three times more than the target of 370 thousand or fewer new infections in 2025, as outlined in the *Global AIDS Strategy 2021-2026* (see UNAIDS, 2021: 40). The group of OIC countries also reduced the number of new infections by more than half (52%), from 636 thousand in 2000 to 307 thousand in 2023. Expectedly, a large majority (79%) of the new infections in the OIC countries in 2023 still

occurred in Sub-Saharan Africa, though the region accounted for 94% of the new infections back in 2000.[8]

Access to testing and Antiretroviral Therapy (ART) is an important part of preventing HIV. Although there is no cure for HIV infection, antiretroviral drugs given to people without HIV can prevent infection, and ART has been shown to reduce mortality among those infected with HIV, as it allows a person's immune system to get stronger, helping them to fight other infections (WHO, 2024b). Efforts are being made to make it more affordable within low- and middle-income countries. At the end of 2023, three quarters (77%) of all PLHIV worldwide were receiving ART, up from 24% in 2010. ART coverage in the group of OIC countries also showed a parallel trend, increasing from 16% in 2010 to 75% in 2023. Despite this significant improvement over the past decade, however, it is obvious that millions of people living with HIV still lacked access to this treatment as of 2023.

Antiretroviral drugs can also be used to prevent passing of HIV from mothers to their children, a critical issue requiring utmost attention to accelerate progress to eliminate HIV transmission. Global coverage of ART among pregnant and breastfeeding women was 84% in 2023, but coverage expansion seems to have stagnated as this rate has already been within a range of 80-84% since 2014. A similar situation is also observed in the OIC countries, where the coverage rate ranged between 70% and 73% over the same period (72% as of 2023).

As the HIV epidemic matures, increasing numbers of people are reaching advanced stages of HIV infection. The most advanced stage is Acquired Immunodeficiency Syndrome (AIDS), which can take from 2 to 15 years to develop depending on the individual. AIDS is associated with the development of certain cancers, infections, or other severe clinical manifestations. It is estimated that 630 thousand people died of HIV/AIDS-related illnesses worldwide in 2023 compared with 1.3 million in 2010, corresponding to a 52% decline over that period. In the group of OIC countries, the decline in mortality is estimated at 40% to 200 thousand, and it is especially evident in the SSA region (51%), which was home to 74% of the deaths in 2023 compared with 90% in 2010. In comparison, deaths in East & South Asia almost doubled over the period under consideration, representing 21% of total AIDS deaths in the OIC region as of 2023 compared to 6.5% in 2010.

2.4.2. *Diarrhoea*

According to the WHO (2024c), diarrhoea is defined as the passage of three or more loose or liquid stools per day (or more frequent passage than is normal for the individual). It can last several days and can leave the body without the water and salts that are necessary for survival. Severe dehydration and fluid loss once dominated diarrhoea-related deaths, but septic bacterial infections – spread through contamination because of inadequate water, sanitation, and hygiene (WASH) services – now contribute increasingly to the toll.

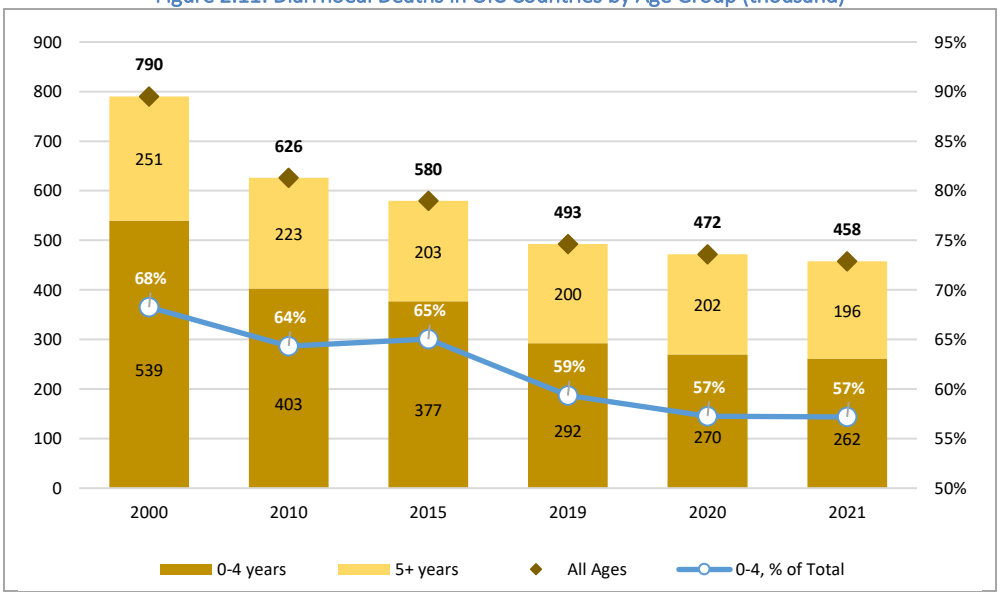
[8] Calculations are based on 45 member countries for which estimates were available, with the exception of Bahrain, Brunei Darussalam, Cameroon, Iraq, Libya, Maldives, Pakistan, Palestine, Somalia, Türkiye, Turkmenistan, and the United Arab Emirates.

Malnourished children, those with weakened immune systems, and individuals living with HIV are at the highest risk of life-threatening diarrhoea. Preventative measures such as ensuring safe drinking water, improving sanitation, and promoting handwashing with soap can significantly reduce the risk of the disease.

Estimates show that the number of deaths from diarrhoeal diseases has been steadily declining since 2000. At that time, it was as high as 2.3 million, more than half (52%) of which were children under the age of five. After two decades, in 2021, diarrhoeal diseases were responsible for killing 1.24 million people worldwide, and 424 thousand or 34% of them were children under the age of five. This reflects that diarrhoea is still one of the leading killers of children under five years old, claiming the lives of almost 1,200 young children each day despite the availability of simple treatment solutions.

In the OIC region, diarrhoeal deaths have also been on the decline, from 790 thousand in 2000 to 458 thousand in 2021. However, deaths under five years old remain significant. As of 2021, 57% of diarrhoeal deaths were children under-5, compared with 68% in 2000. This translates to over 700 young children dying each day or more than 260 thousand children a year (Figure 2.11).

Figure 2.11: Diarrhoeal Deaths in OIC Countries by Age Group (thousand)

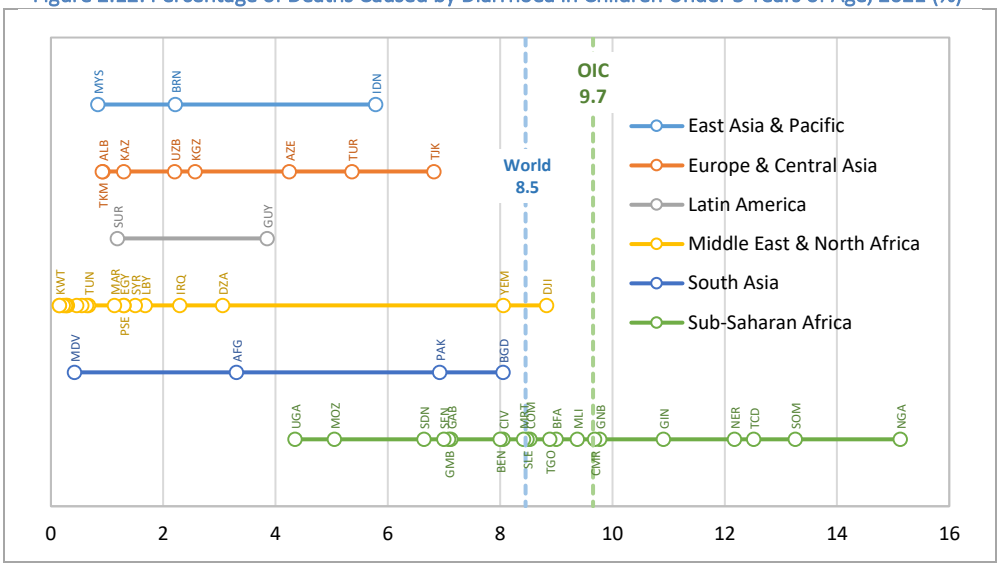


Source: SESRIC staff compilation based on data from WHO, Global Health Estimates 2021: Deaths by Cause, Age, Sex, by Country and by Region, 2000-2021. Geneva, World Health Organization; 2024.

Deaths caused by diarrhoeal disease among children under 5 years of age are highest in Sub-Saharan Africa and South Asia. As of 2021, Nigeria had the highest burden, alone accounting for more than a quarter (28.4%) of the worldwide deaths and almost half (46.0%) of the deaths in the OIC region. Adding Pakistan (11.1%), Niger (5.4%), Somalia (4.0%), Chad (3.8%), Bangladesh (3.1%), and Mali (3.0%), seven countries accounted for three-quarters (76.4%) of the under-5 deaths in the OIC region.

Looking from another perspective, it is observed that diarrhoeal deaths accounted for 8.5% of all deaths among children under the age of five worldwide in 2021. This share averaged 9.7% for the OIC region, driven by Sub-Saharan African countries. Indeed, apart from Djibouti, all of the OIC countries with a figure above the world average were in Sub-Saharan Africa. Diarrhoeal deaths accounted for as high as 15.1% of all under-5 deaths in Nigeria, followed by Somalia (13.3%), Chad (12.5%), Niger (12.2%), and Guinea (10.9%) (Figure 2.12).

Figure 2.12: Percentage of Deaths Caused by Diarrhoea in Children Under 5 Years of Age, 2021 (%)



Source: SESRIC staff compilation based on data from WHO, Global Health Estimates 2021: Deaths by Cause, Age, Sex, by Country and by Region, 2000-2021. Geneva, World Health Organization; 2024.
Note: See Annex A for the country codes.

Overall, considering that lack of access to WASH services is a leading factor behind diarrhoea cases and deaths, these figures indicate that access to adequate WASH services is still a key problem in a number of OIC countries, particularly in Sub-Saharan Africa. Therefore, OIC countries need to invest more in infrastructure to ensure greater access to WASH services in order to reduce the incidence of and deaths from diarrhoea, which is eventually a preventable communicable disease.

2.4.3. *Malaria*

Malaria is a life-threatening disease caused by parasites that are transmitted to people through the bites of infected mosquitoes. It is a preventable and curable disease. Increased malaria prevention and control measures are dramatically reducing the malaria burden in several developing countries. Nonetheless, recent malaria control efforts have faced many hurdles due to the significant COVID-related disruptions and other health system challenges, coupled with the overlapping impacts of conflicts and climate change.

According to the WHO's *World Malaria Report 2024* (WHO, 2024d), there were an estimated 263 million malaria cases globally in 2023 in 83 malaria endemic countries,[9] steadily increasing from 247 million in 2020. This number was also higher by 37 million than the 226 million in 2015, the baseline year of the *Global Technical Strategy for Malaria 2016–2030* (GTS). The GTS calls for a reduction in malaria case incidence and mortality rate of at least 40% by 2020, 75% by 2025, and 90% by 2030, from a 2015 baseline (see WHO, 2015). In the malaria epidemic OIC countries[10], the number of cases are estimated at 161 million in 2023, up about 28 million from 134 million in 2015, the second year into the OIC-SHPA. This indicates that about three-quarters (76%) of the increase in global cases over 2015-2023 originated from the OIC countries, reflected in a rise of their share in global cases from 59% to 61% over that period (Figure 2.13A).

Accounting for population growth, malaria case incidence (i.e. cases per 1,000 population at risk) reduced globally from 79 in 2000 to 58 in 2015. However, between 2015 and 2023, malaria incidence increased by 4.1% to 60.4, indicating that, despite the considerable progress since 2000, the ambitious GTS 2020 target for malaria case incidence, based on the 2015 baseline, was not achieved globally in 2023. In addition, with the current trajectory, it is estimated that global incidence rate will be more than four times the target level in 2025 and more than ten times the target level in 2030 (WHO, 2024d: 31). Similarly, case incidence in the OIC countries declined from 141.9 in 2000 to 107.5 in 2015, but it remained elevated in the following period, reaching 111.2 as of 2023, which was 3.5% above the 2015 level. Moreover, it continued to be well above the global average (Figure 2.13B).

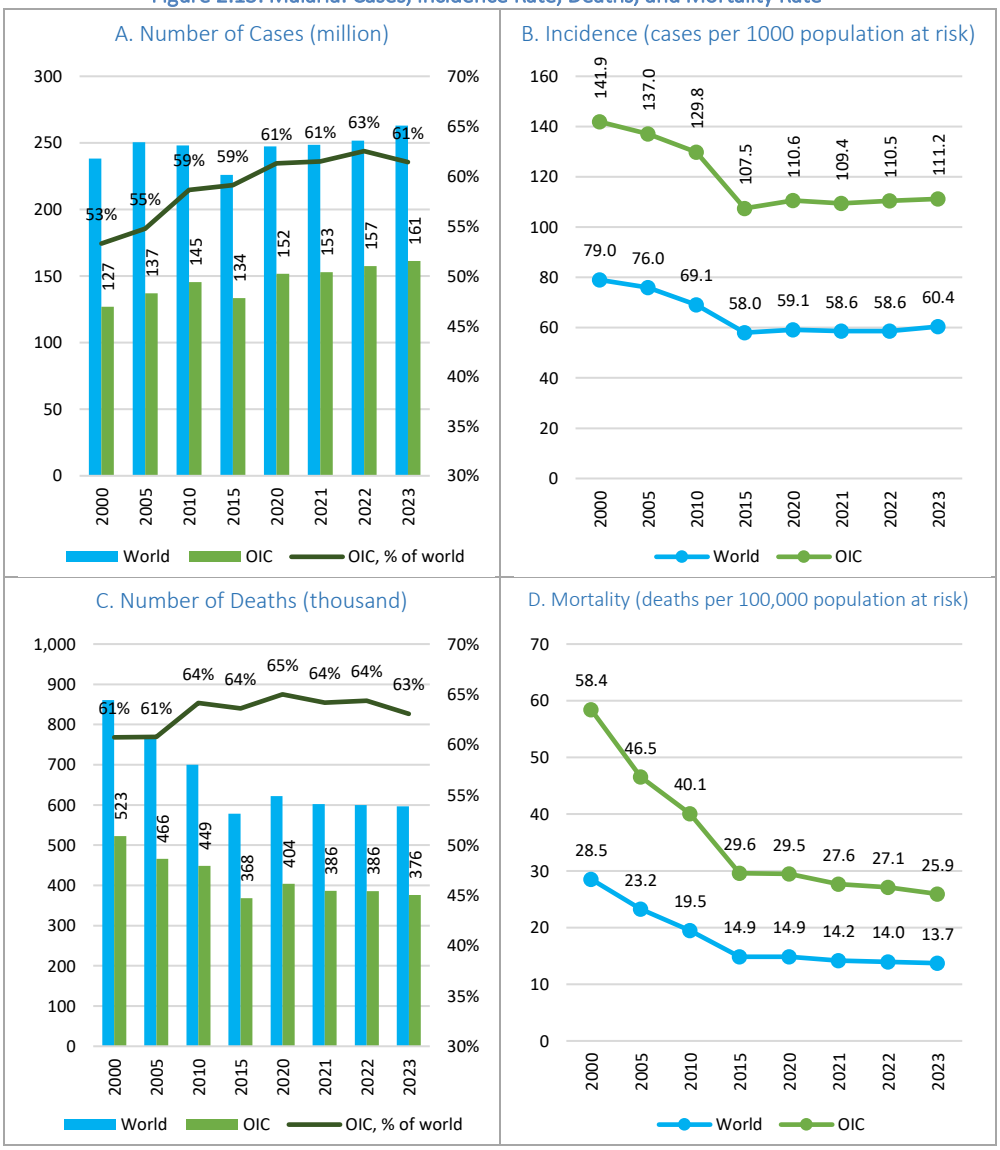
Globally, malaria deaths reduced steadily over the period 2000–2015, from 861 thousand in 2000 to 578 thousand in 2019. They increased to an estimated 622 thousand in 2020 but stabilised at about 600 thousand during 2021-2023. Reduced from 523 thousand in 2000 to as low as 368 thousand in 2015, malaria deaths in the OIC countries once again exceeded 400 thousand in 2000, before falling to 376 thousand in 2023. Thus, the OIC countries continued to account for approximately two-thirds of the global malaria deaths (Figure 2.13C).

Globally, the malaria mortality rate (i.e. deaths per 100 000 population at risk) declined from 28.5 in 2000 to 14.9 in 2015, but it then stagnated, falling only to 13.7 by 2023. In parallel, mortality also declined in the OIC countries, first sharply from 58.4 in 2000 to 29.6 in 2015, then slowly to 25.9 by 2023. Consequently, as in the case of incidence rate, the mortality rate also continued to be higher in the OIC countries compared with the global average (Figure 2.13D).

[9] In the WHO's *World Malaria Report 2024*, a country or area is considered endemic when it has reported at least one indigenous case since 2021. Countries that have achieved at least 3 consecutive years of zero indigenous cases are eligible to apply for a WHO certification of malaria-free status.

[10] As of 2023, 30 out of the 83 malaria endemic countries were OIC countries (see Figure 2.14). Of the other OIC countries, ten were certified malaria free by WHO (Brunei Darussalam – 1987, United Arab Emirates – 2007, Morocco – 2010, Turkmenistan – 2010, Maldives – 2015, Kyrgyzstan – 2016, Uzbekistan – 2018, Algeria – 2019, Azerbaijan – 2023, and Egypt – 2024). Egypt was the most recent country to achieve malaria free status, and to date, Türkiye has submitted her request for malaria free certification. There were also other nine countries where malaria never existed or disappeared without specific measures and where full WHO certification of malaria elimination is not needed (Kuwait – 1963, Albania – 2012, Bahrain – 2012, Jordan – 2012, Kazakhstan – 2012, Lebanon – 2012, Libya – 2012, Qatar – 2012, and Tunisia – 2012).

Figure 2.13: Malaria: Cases, Incidence Rate, Deaths, and Mortality Rate

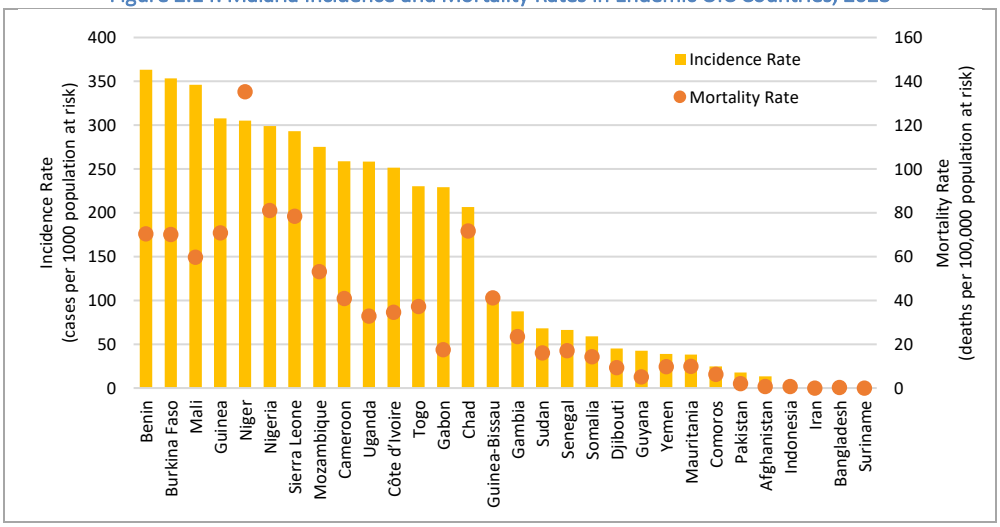


Source: SESRIC staff compilation based on data from WHO, *World Malaria Report 2024*, Annex tables.

Concerning the situation in individual OIC countries, 14 out of the 30 malaria-endemic countries accounted for 95% of total malaria cases in 2023, with Nigeria (42.2%) by far having the highest burden, followed by Uganda (7.8%), Mozambique (5.7%), Mali (5.1%), and Burkina Faso (5.0%). Similarly, the same fourteen countries accounted for 95.7% of malaria deaths in the group of endemic countries, with Nigeria alone suffering half (49.1%) the death toll, followed by Niger (9.4%), Mozambique (4.7%), Burkina Faso (4.3%), and Uganda (4.2%). Figure 2.14 shows that malaria incidence rate was highest in Benin at 363 cases per 1000 population at risk, closely followed by Burkina Faso at 353 and Mali at 346. The incidence rate was also around 300 in four other countries (Guinea, Niger, Nigeria, and Sierra Leone), but it was less than 5 in four others (Suriname, Bangladesh, Iran, and Indonesia). Regarding

malaria mortality rate, it was highest in Niger at 135 deaths per 100,000 population at risk, followed by Nigeria with a rate of 81 and Sierra Leone with a rate of 78. By comparison, the mortality rate was estimated at less than 5 in six countries (Iran, Suriname, Bangladesh, Afghanistan, Indonesia, and Pakistan).

Figure 2.14: Malaria Incidence and Mortality Rates in Endemic OIC Countries, 2023



Source: SESRIC staff compilation based on data from WHO, *World Malaria Report 2024*, Annex tables.

Antimalarial drugs and the use of insecticide-treated bed nets are very effective to combat malaria among children (see Section 3.5). In this regard, the OIC countries need to show further efforts to fight malaria by investing more into such drugs and bed nets. Both the MDGs and SDGs referred to malaria and set targets for countries to fight with malaria across the globe. The OIC-SHPA 2014-2023 also presents a roadmap for OIC countries in combatting against malaria.

2.4.4. Pneumonia

Pneumonia is a form of acute lower respiratory infection. It affects the lungs, which are made up of small sacs called alveoli. The alveoli are filled with air when a healthy person breathes, but when an individual has pneumonia, they are filled with pus and fluid, which makes breathing painful and limits oxygen intake. Pneumonia causes symptoms for 3-4 weeks, and while common symptoms of lower respiratory infections include cough, fever, chest pain, tachypnea and sputum production, patients with pneumonia may also exhibit non-respiratory symptoms such as confusion, headache, myalgia, abdominal pain, nausea, vomiting and diarrhoea. Numerous factors, including environmental contaminants and autoimmune diseases, as well as infection, may cause pneumonia (Dasaraju and Liu, 1996). Pneumonia can cause mild to life-threatening illness in people of all ages, though it is more common in very young children and elderly adults.

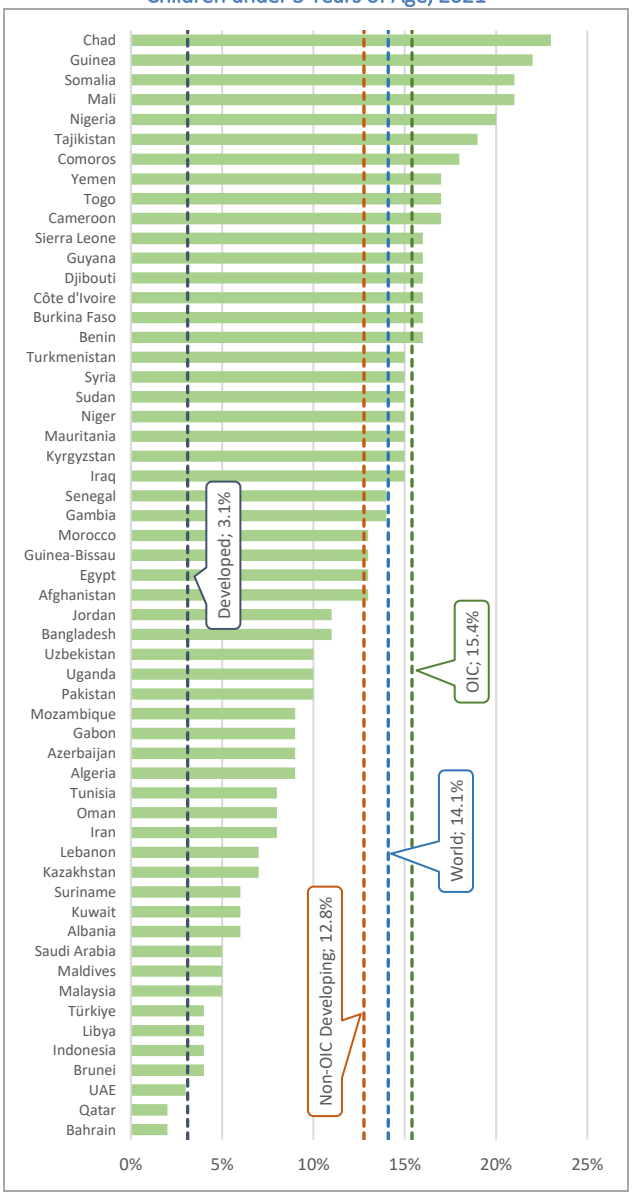
According to UNICEF (2024), pneumonia kills more children than any other infectious disease, claiming the lives of over 700,000 children under five every year, or around 2,000

every day. Almost all of these deaths are preventable. Globally, there are over 1,400 cases of pneumonia per 100,000 children, or 1 case per 71 children every year, with th

e greatest incidence occurring in South Asia (2,500 cases per 100,000 children) and West and Central Africa (1,620 cases per 100,000 children). Pneumonia can be prevented by immunisation, adequate nutrition and by addressing environmental factors. Children can be protected from pneumonia; it can be prevented with simple interventions, and treated with low-cost, low-tech medication and care.

It is estimated that, in 2021, pneumonia killed approximately 420 thousand children under five in OIC countries, which is almost 60% of the global toll. Nigeria was the country with the highest burden, alone accounting for more than one-fifth of all deaths of under-five children worldwide from pneumonia. Five more OIC countries (Pakistan, Chad, Mali, Niger, and Somalia) were among the 10 countries with the highest burden in the world. Figure 2.15 shows that, globally, pneumonia was responsible for an estimated 14.1% of all under-five deaths, though this ratio was higher in the group of OIC countries (15.4%). Considering individual OIC countries, it is observed that, on one hand, more than 1 in 5 under-five deaths was due to pneumonia in Chad, Guinea, Somalia, and Mali, while on the other hand, the proportion of under-five deaths caused by pneumonia was less than 5% in Bahrain, Qatar, the United Arab Emirates, Brunei Darussalam, Indonesia, Libya, and Türkiye, (Figure 2.15).

Figure 2.15: Percentage of Deaths Caused by Pneumonia in Children under 5 Years of Age, 2021



Source: SESRIC staff compilation based on data from UNICEF, Child Mortality Estimates [data.unicef.org] and UNICEF (2024).

2.4.5. Tuberculosis

Tuberculosis (TB) is an infectious bacterial disease caused by *Mycobacterium tuberculosis*, primarily affecting the lungs. It is transmitted from person to person through airborne droplets expelled by individuals with active pulmonary TB. Common symptoms include persistent coughing (sometimes with sputum or blood), chest pain, fatigue, weight loss, fever, and night sweats.

Ending the global TB epidemic by 2030 is among the health targets (Target 3.3) of the SDGs. In addition, the WHO's End TB Strategy outlines specific milestones for 2020 and 2025, and targets for 2030 and 2035, compared to 2015 levels. The 2025 milestones include a 75% reduction in TB-related deaths and a 50% reduction in TB incidence. Moreover, the OIC-SHPA, recognising TB as a priority, emphasised the need for coordinated surveillance, diagnosis, and treatment interventions across OIC countries, especially those with high TB burdens.

According to WHO (2022e), although TB is both preventable and curable, it is the world's leading cause of death from a single infectious agent, the leading killer of people with HIV, and a major cause of deaths related to antimicrobial resistance. WHO estimates for 2021[11] rank TB as the 10th leading cause of death globally, accounting for 2.0% of all deaths (WHO, 2024a).

WHO estimates show that the global number of new TB cases had declined slowly from a peak of 11.7 million in 2005–2006 to 10.1 million in 2020. However, this trend was disrupted during 2021–2023, largely due to the impact of the COVID-19 pandemic on health services, resulting in a rebound to 10.8 million cases by 2023. This reversal was driven primarily by increases in Indonesia, the Philippines, and Myanmar.

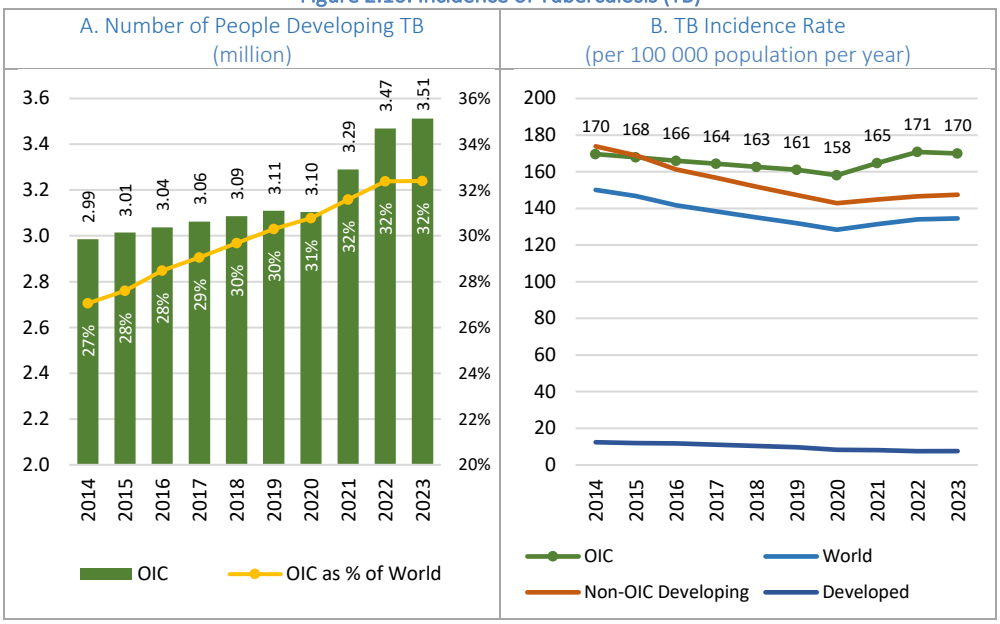
Most of the people who develop TB disease each year are in 30 high-TB-burden countries,[12] which accounted for 87% of the global total in 2023. Five countries accounted for 56% of the worldwide total: India (26%), Indonesia (10%), China (6.8%), Philippines (6.8%) and Pakistan (6.3%). OIC countries collectively accounted for more than 3.5 million TB cases—equivalent to 32% of the global total, up from 27% in 2014 (Figure 2.16A). This rising share signals the need for intensified, tailored interventions and cross-border collaboration among OIC countries to address persistent gaps in TB prevention, detection, and treatment.

In 2023, the OIC countries with the highest TB caseloads were: Indonesia (1,088,000; 31.0% of OIC total), Pakistan (686,000; 19.5%), Nigeria (499,000; 14.2%), Bangladesh (379,000; 10.8%), and Mozambique (121,000; 3.5%). These five countries alone accounted for approximately 79% of TB cases in the OIC region. Notably, all five are also among WHO's 30 high-TB-burden countries, underscoring the continued urgency for targeted national and regional action.

[11] This is the latest year for which estimates for all causes are currently available. See WHO (2024a).

[12] The global list of high-burden countries for TB to be used by WHO in the period 2021–2025 includes the following countries, **8** of which are **OIC Member States**: Angola, **Bangladesh**, Brazil, Central African Republic, China, Congo, Democratic People's Republic of Korea, Democratic Republic of the Congo, Ethiopia, **Gabon**, India, **Indonesia**, Kenya, Lesotho, Liberia, Mongolia, **Mozambique**, Myanmar, Namibia, **Nigeria**, **Pakistan**, Papua New Guinea, Philippines, **Sierra Leone**, South Africa, Thailand, **Uganda**, United Republic of Tanzania, Viet Nam, and Zambia (WHO, 2024e: 43-44).

Figure 2.16: Incidence of Tuberculosis (TB)



Source: SESRIC staff compilation based on data from WHO Global Health Observatory Database.

The TB incidence rate—defined as the number of people developing TB each year per 100,000 population—has seen only limited improvement globally and even less so across OIC countries. Globally, the incidence rate declined from 147 in 2015 to 128 in 2020, but this progress was reversed in the aftermath of the COVID-19 pandemic,[13] with the rate rising again to 135 in 2023 (Figure 2.16B).

The OIC region followed a similar trajectory, though with an even slower pace of progress. The average TB incidence rate across OIC countries declined from 168 in 2015 to 158 in 2020, before rising to 170 in 2023, surpassing the 2015 baseline. This translates into a net increase of 1.2% in the OIC region over the 2015–2023 period, in contrast to a global net reduction of 8.3%.

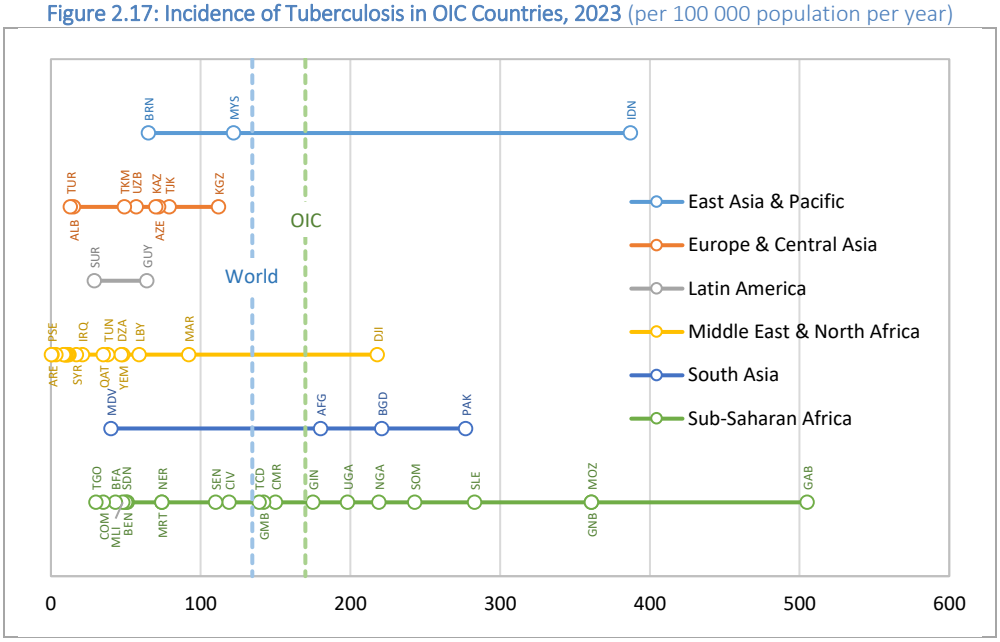
Notably, while TB incidence rates in non-OIC developing countries were historically much higher than those in the OIC region, the situation has shifted. Since 2016, the OIC average has consistently exceeded that of non-OIC developing countries, indicating a relative deterioration in comparative performance.

This trend underscores a key concern: the OIC region is not on track to meet the WHO End TB Strategy milestone of a 50% reduction in TB incidence by 2025. The growing gap between the current trajectory and global targets highlights systemic challenges in surveillance, case

[13] The sharp reversals of progress in 2021 in TB incidence (both in terms of absolute numbers and per 100 000 population) reflect the impact of disruptions to essential TB services during the COVID-19 pandemic. According to WHO (2024b), the continued rise reflects the ongoing after-effects of disruptions to TB services during the worst years of the pandemic (2020 and 2021). These persist because of the lag time between more people being infected with TB during disruptions to services and the development of TB disease.

detection, and access to care within several OIC member states. This also reflects limited progress under the OIC-SHPA in accelerating TB control at the regional level, despite the programme's prioritisation of communicable diseases and support for harmonised approaches to TB monitoring and treatment.

Figure 2.17: Incidence of Tuberculosis in OIC Countries, 2023 (per 100 000 population per year)



Source: SESRIC staff compilation based on data from WHO Global Health Observatory Database.
Note: See Annex A for the country codes.

At the country level, there is significant variation in TB incidence rates among OIC countries. As of 2023, Gabon recorded the highest incidence rate at 505 cases per 100,000 population, followed by Indonesia (387), Guinea-Bissau and Mozambique (both 361), and Sierra Leone (283) (Figure 2.17). These rates are substantially above the global average of 135, highlighting the disproportionate burden of TB in several OIC countries, particularly those in Sub-Saharan Africa and Southeast Asia.

In total, 16 OIC countries—primarily from Sub-Saharan Africa—had TB incidence rates above the global average in 2023, reflecting persistent structural and health system challenges in high-burden regions. On the other end of the spectrum, a small group of countries have achieved very low incidence rates. These include Palestine, the United Arab Emirates, Jordan, Saudi Arabia, Egypt, and Kuwait, all of which had fewer than 10 cases per 100,000 population, indicating successful TB control through strong surveillance, early detection, and effective treatment programs.

TB is a preventable and curable disease, with the WHO estimating that approximately 85% of individuals diagnosed with TB can be successfully cured through a standard 4–6 month regimen of anti-TB drugs (WHO, 2024e). Treatment success, however, is closely tied to timely diagnosis and uninterrupted access to care.

Globally, TB treatment coverage[14] reached 75% in 2023, marking a strong recovery from the pandemic-related decline. This represents a significant improvement from 58% in 2020 and surpasses the pre-pandemic level of 69% in 2019. A similar recovery trend was observed across the OIC region. Average treatment coverage in OIC countries fell from 61% in 2019 to 50% in 2020, reflecting disruptions in health services during the COVID-19 crisis. Encouragingly, this figure rebounded to 74% in 2023, nearly matching the global average.

Despite this progress, the region remains below the global treatment coverage target of 90% by 2027, as endorsed at the 2023 UN High-Level Meeting on TB. There are also wide disparities in performance among OIC countries. Among the eight high-TB-burden OIC countries, Mozambique, Sierra Leone, and Uganda achieved or surpassed the 90% treatment coverage target in 2023. In contrast, Gabon (53%) and Pakistan (69%) remained significantly below the global benchmark.

2.4.6. Polio

Polio, or poliomyelitis, is a disabling and life-threatening infectious disease caused by the *poliovirus*. The virus is transmitted through person-to-person contact, spread mainly through the faecal-oral route or, less frequently, by a common vehicle (e.g. contaminated water or food), and lives in an infected person's throat and intestines. About 1 out of 4 people with poliovirus infection will have flu-like symptoms that can include sore throat, fever, tiredness, nausea, headache, and stomach pain. A smaller proportion of people with poliovirus infection will develop other, more serious symptoms that affect the brain and spinal cord. Paralysis is the most severe symptom associated with poliovirus because it can lead to permanent disability and death. Between 2 and 10 out of 100 people who have paralysis from poliovirus infection die, because the virus affects the muscles that help them breathe (CDC, 2023).

Polio mainly affects children under 5 years of age. However, anyone of any age who is unvaccinated can contract the disease. There is no cure for paralytic polio and no specific treatment; it can only be prevented by multiple doses of the polio vaccine that protects children by preparing their bodies to fight the poliovirus. It is also very important to practice good hand hygiene and wash hands often with soap and water.

Poliomyelitis remains a key target for global eradication. Led by the Global Polio Eradication Initiative (GPEI), international efforts have achieved remarkable progress since the launch of the eradication campaign in 1988. According to GPEI (2025a), more than 20 million people have been spared paralysis, and over 3 billion children have been immunized against polio over the past three decades. As a result, wild poliovirus (WPV)[15] cases have declined by over

[14] Approximated as the annual number of people newly diagnosed with TB and officially reported as a TB case divided by the estimated number of people who developed TB (incident cases) in the same year, expressed as a percentage.

[15] The oral polio vaccine (OPV) contains attenuated (weakened) viruses that can replicate. On rare occasions, particularly in communities with low-quality sanitation, these may be transmitted from the vaccinated person to other people. In communities where lots of people have been vaccinated against polio, onward transmission is

99%, from an estimated 350,000 cases across 125 endemic countries in 1988 to just 6 reported cases in 2021.

Table 2.1: Reported Wild Polio Cases in the World (2015-2024)

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Pakistan	56	41	8	12	147	84	1	20	6	74
Afghanistan	20	26	14	21	29	56	4	2	6	25
Mozambique				1				8		
Malawi							1			
Nigeria	1	9		34						
Papua New Guinea				26						
Congo, DR			22	20						
Somalia				12						
Niger				10						
Indonesia				1						
Syria			74							
Lao PDR	8	3								
Madagascar	10									
Guinea	7									
Myanmar	2									
Ukraine	2									
Total (World)	**106**	**79**	**118**	**137**	**176**	**140**	**6**	**30**	**12**	**99**

Source: WHO Global Health Observatory Database and GPEI (2025).

Despite these historic gains, polio remains endemic in two OIC countries: Afghanistan and Pakistan. Alarmingly, the year 2024 saw a resurgence of WPV cases in both countries, with Pakistan reporting 74 cases, and Afghanistan 25, compared to only 6 cases per country in 2023 (Table 2.1). This resurgence underscores a critical epidemiological warning: the fight against polio is not over until the virus is eradicated everywhere.

The urgency of sustaining global eradication efforts was reaffirmed at the Seventy-eighth World Health Assembly (WHA), held in Geneva in May 2025. Member States reiterated their full commitment to achieving and maintaining a polio-free world and emphasized the importance of sustained momentum. Polio featured prominently in WHA discussions and side events. Notably, the first in-person meeting of the Polio Legacy Challenge—sponsored by Qatar, Saudi Arabia, and the United Arab Emirates—demonstrated strong regional solidarity and a shared vision to strengthen health systems and support polio eradication in Afghanistan (GPEI, 2025b). Continued political commitment, coordinated cross-border vaccination campaigns, and community-level engagement remain essential to overcome operational challenges, vaccine hesitancy, and other barriers—particularly in high-risk areas of Pakistan and Afghanistan.

limited, and the virus quickly dies out. In communities with low vaccine coverage, however, this weakened virus may continue to circulate, gradually accumulating mutations that enable it to cause paralysis once more. Polio arising from this cause is referred to as *circulating vaccine-derived polio* (cVDPV) in order to distinguish it from the natural or "wild" poliovirus (WPV). While cVDPVs are rare, they have been increasing in recent years due to low immunization rates within communities (Geddes, 2022; GPEI, n.a.).

2.5. Non-Communicable Diseases (NCDs)

Chronic NCDs are the leading cause of death and disability worldwide. They encompass a group of conditions that are not primarily caused by acute infections, tend to be long-lasting, and often require ongoing treatment and care. Major NCDs include cardiovascular diseases, cancers, chronic respiratory diseases, and diabetes. Many of these conditions are preventable through the reduction of common risk factors, such as tobacco use, alcohol consumption, physical inactivity, and unhealthy diets.

Within the OIC framework, the OIC-SHPA placed a strong emphasis on reducing exposure to NCD risk factors. The Programme promoted actions such as health education, the encouragement of healthier food choices, and collaboration with industry to enhance access to healthier options. It also underscored the importance of multi-sectoral approaches, engaging ministries of health, education, agriculture, and finance to address the broader social determinants of NCDs. Furthermore, the OIC-SHPA encouraged the development and implementation of national strategies to combat the increasing burden of cardiovascular diseases, diabetes, and cancer among Member States.

Beyond health impacts, NCDs pose substantial socio-economic challenges, threatening the sustainability of national healthcare budgets. Millions of dollars are spent annually on their treatment, often at the cost of other public services. A joint WHO–World Bank report revealed that, as of 2017, at least 1.4 billion people worldwide experienced financial hardship due to out-of-pocket health spending. This included 505 million people facing impoverishing health expenditures at the international poverty line of PPP$1.90 per day—70 million people newly "pushed into extreme poverty" and 435 million people "further pushed into extreme poverty"[16]—as well as 996 million people "incurring catastrophic health spending"[17] (WHO and World Bank, 2021).

These findings highlight a strong correlation between NCDs and poverty, particularly in low- and middle-income countries. In such settings, the vicious cycle of poverty and chronic illness perpetuates health inequities: as NCDs lead to higher out-of-pocket costs, families are forced to reduce spending on essential needs, thereby worsening both their health and economic conditions. Poor households are often least equipped to manage the long-term burden of chronic diseases, which further deepens inequality and social vulnerability.

In this context, effective NCD policies must rest on three interconnected pillars:

- Treatment and management of chronic diseases,
- Prevention through risk factor reduction, and
- Mitigation of the socio-economic impact, including stronger financial protection mechanisms for affected households.

[16] The poor spending any amount on health out-of-pocket.

[17] Population spending more than 10% of their total expenditures or income on health (SDG 3.8.2, 10% threshold)

Recognizing the scale of the challenge, the United Nations and global health organisations have prioritised NCDs in international development agendas. The SDGs include a specific target (SDG 3.4) to reduce by one-third premature mortality from non-communicable diseases through prevention and treatment by 2030. Achieving this target will require accelerated action in the OIC region, building on the foundations laid by the OIC-SHPA while expanding efforts to promote healthier lifestyles, improve access to care, and protect vulnerable populations from financial hardship.

2.5.1. *Major NCDs Causing the Most Deaths*

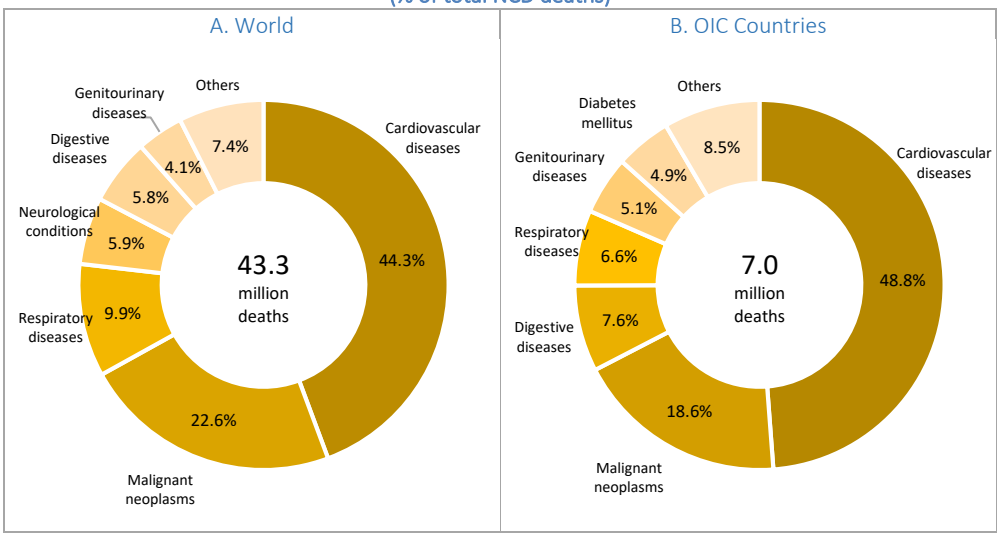
According to the latest WHO estimates (WHO, 2024a), NCDs kill more than 40 million people every year, equivalent to almost two-thirds (63.4%) of all deaths globally (see Figure 2.8 above). Cardiovascular diseases account for most NCD deaths, or 19.2 million people annually, followed by malignant neoplasms, i.e. cancers, (9.8 million), respiratory diseases (4.3 million), and neurological conditions (2.5 million). These four groups of diseases account for over 80% of all deaths caused by NCDs (Figure 2.18.A). In the OIC countries, NCDs are responsible for more than 7 million deaths a year, almost half (3.4 million) of which are from cardiovascular diseases, 1.3 million from cancers, 530 thousand from digestive diseases, 463 thousand from respiratory diseases, and 358 thousand from genitourinary diseases. These five groups of diseases account for 42.9% of all deaths and 87% of all NCD deaths in the OIC region (Figure 2.18.B).

Basic Facts

Cardiovascular diseases (CVDs) are caused by disorders of the heart and blood vessels, and include coronary heart disease (heart attacks), cerebrovascular disease (stroke), raised blood pressure (hypertension), peripheral artery disease, rheumatic heart disease, congenital heart disease and heart failure. The major causes of cardiovascular diseases are tobacco use, physical inactivity, an unhealthy diet, and excessive alcohol consumption. The genetic and environmental factors have some effects on cardiovascular diseases as well.

CVDs are the number one cause of death globally. In other words, more people die each year from CVDs than from any other health condition. According to the WHO, an estimated 19.2 million deaths were attributed to CVDs in 2021, accounting for 28.1% of all deaths worldwide and 44.3% of all deaths from NCDs. A similar pattern is observed in OIC countries, where an estimated 3.4 million deaths from CVDs in 2021 represented 24.2% of total deaths—nearly equal to the combined share of all communicable diseases excluding COVID-19 (27.2%)—and 48.8% of all NCD-related deaths.

Figure 2.18: Major NCDs Causing the Most Deaths in the World and in OIC Countries, 2021
(% of total NCD deaths)



Source: SESRIC staff compilation based on data from WHO, Global Health Estimates 2021: Deaths by Cause, Age, Sex, by Country and by Region, 2000-2021. Geneva, World Health Organization; 2024.

Cancer, according to the WHO, is a generic term for a large group of diseases that can affect any part of the body. Other terms used are malignant tumours and neoplasms. One defining feature of cancer is the rapid creation of abnormal cells that grow beyond their usual boundaries, and which can then invade adjoining parts of the body and spread to other organs; the latter process is referred to as metastasis. Widespread metastases are the major cause of death from cancer. Around one-third of deaths from cancer are due to tobacco use, high body mass index, alcohol consumption, low fruit and vegetable intake, and lack of physical activity (WHO, 2025).

Cancers are among the leading causes of morbidity and mortality worldwide. In 2021, there were an estimated 9.8 million cancer-related deaths globally, including 1.3 million in OIC countries. This means that approximately 1 in every 7 deaths worldwide and 1 in every 10 deaths in the OIC region was due to cancer. In terms of NCD mortality, cancers accounted for 22.6% of NCD deaths globally and 18.6% in OIC countries. Among all cancer types, trachea, bronchus, and lung cancers were the leading cause of cancer-related deaths, responsible for nearly 1.9 million deaths globally and 154 thousand deaths in OIC countries in 2021.

Digestive diseases are disorders of the digestive tract, made up of the oesophagus (food tube), stomach, large and small intestines, liver, pancreas, and the gallbladder. They were responsible for the death of about 2.5 million people in the world and more than half a million people in OIC countries in 2021. Proportionally, deaths from digestive diseases constituted 5.8% and 7.6% of NCD deaths in the world and in the OIC countries, respectively. The leading cause of death in this category is cirrhosis of the liver, accounting for more than half (53%) of worldwide deaths from all digestive diseases. By comparison, in OIC countries, liver cirrhosis caused 2 out of 3 deaths (67%) from digestive diseases. Hepatitis C and B as well as alcohol consumption are the leading causes of the cirrhosis of the liver.

Chronic respiratory diseases (CRD) are diseases of the airways and other structures of the lung. Some of the most common diseases include asthma, chronic obstructive pulmonary disease (COPD), and respiratory allergies. In addition to tobacco smoke, other risk factors such as air pollution, occupational chemicals and dusts, and frequent lower respiratory infections during childhood are among the leading causes of CRD. Hundreds of millions of people suffer every day from chronic respiratory diseases. Globally, approximately 4.3 million deaths—6.3% of total deaths and 9.9% of NCD deaths—were due to CRD in 2021. Deaths in the group of OIC countries amounted to 463 thousand and accounted for 3.3% of all deaths and 6.6% of NCD deaths in the group. Specifically, COPD accounted for 82% and 73% of deaths from CRD in the world and in OIC countries, respectively.

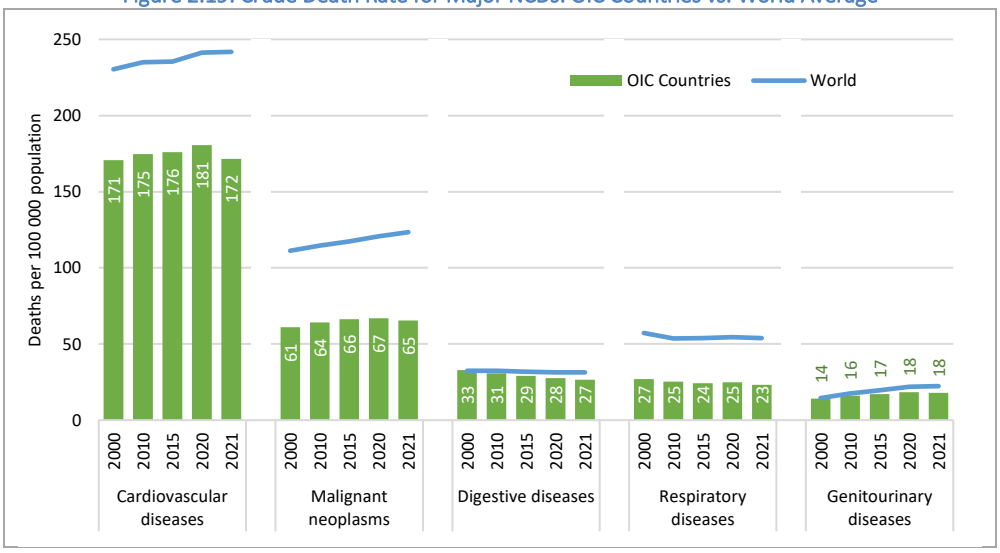
Diabetes is a chronic NCD that occurs when the pancreas fails to produce enough insulin or when the body cannot effectively use the insulin it produces. The causes of diabetes are multifaceted, but the global rise in its prevalence is largely driven by increasing rates of overweight and obesity, along with declining levels of physical activity. Between 2010 and 2021, the global number of deaths directly attributed to diabetes rose from 1.1 million to 1.6 million, marking a nearly 50% increase. During the same period, diabetes-related deaths in OIC countries increased from 247 thousand to 344 thousand. Although the OIC's share in global diabetes deaths remained relatively stable—around 21–22%—the crude number of deaths and the disease burden have grown substantially in the region. Diabetes accounted for 4.9% of all NCD deaths in OIC countries in 2021, up from 4.3% in 2010, compared to an increase from 3.1% to 3.7% globally.

Diabetes is also one of the major factors leading to kidney diseases, which are the main cause of deaths from *genitourinary diseases*—a category that includes disorders of the kidneys, urinary tract, and reproductive organs. In 2021, genitourinary diseases caused an estimated 1.8 million deaths globally, with kidney diseases accounting for 79% of these deaths. In OIC countries, there were approximately 358 thousand deaths, of which 85% were attributed to kidney diseases. Genitourinary diseases represented 4.1% of all NCD-related deaths worldwide, and a comparatively higher 5.1% in OIC countries, highlighting a notable burden in the region.

Mortality Rates

Figure 2.19 presents the crude death rate (CDR—deaths per 100 000 population) for the five major NCDs causing the most deaths in OIC countries in 2021. It allows for a temporal analysis of the average CDR for the group of OIC countries for the period from 2000 to 2021 as well as a comparative analysis with the global average. Briefly, it is observed that CDR for digestive diseases and respiratory diseases decreased over the period under consideration, indicating a lower likelihood of people dying from those diseases. In contrast, CDR for CVDs—despite a notable decline in 2021—cancers, and genitourinary diseases showed an increase, with more and more people dying from these diseases every day. Compared to the global average, the average CDR for OIC countries was lower in CVDs, cancers, and respiratory diseases, while in digestive diseases and genitourinary diseases, OIC countries had comparable rates to the global average.

Figure 2.19: Crude Death Rate for Major NCDs: OIC Countries vs. World Average



Source: SESRIC staff compilation based on data from WHO, Global Health Estimates 2021: Deaths by Cause, Age, Sex, by Country and by Region, 2000-2021. Geneva, World Health Organization; 2024.

The OIC countries, individually, showed diverse performances in CDRs for the five major NCDs over the past decade. Outstandingly, CDR increased—in absolute terms—in 10 countries[18] and decreased in 14 countries[19] for all of the aforementioned diseases between 2010 and 2021, with the former group requiring particular attention due to intensifying deaths from NCDs. In addition, Albania, although not in the former group, was the country with the largest increase in CDR for CVDs, from 363 deaths per 100,000 population in 2010 to 513 in 2021. As shown in Figure 2.20A, Maldives, Morocco, Syria, and Malaysia also recorded relatively large increases in CDR for CVDs, while Central Asian countries like Azerbaijan, Uzbekistan, Kazakhstan, and Kyrgyzstan as well as Guyana achieved the largest decreases. Similarly, Maldives and Kazakhstan recorded the largest increases in CDR for respiratory diseases, but at the same time, they were among the countries reducing CDR for cancers the most.

As of 2021, Albania maintained the highest CDR for CVDs in the OIC region—at 513 deaths per 100,000 population—followed by Uzbekistan, Kazakhstan, Morocco, and Indonesia, all with a rate above the world average of 242. On the other end of the spectrum, CDR for CVDs was as low as 41 in Qatar and in a range of 45–75 in the United Arab Emirates, Uganda, Mali, and Jordan. Similar disparities were also observed in other diseases: In malignant neoplasms, from a low of 21 deaths per 100,000 population in Qatar to a high of 156 in Albania; in digestive diseases, from 4 in the United Arab Emirates to 49 in Somalia; in respiratory diseases, from 2 in Kuwait to 52 in Maldives; and in genitourinary diseases, from 3 in Tajikistan to 38 in Somalia (Figure 2.20B).

[18] Djibouti, Iran, Kuwait, Lebanon, Libya, Malaysia, Morocco, Syria, Turkmenistan, and the United Arab Emirates.

[19] Azerbaijan, Benin, Chad, Gabon, Guinea, Guinea-Bissau, Jordan, Mali, Qatar, Senegal, Sierra Leone, Somalia, Tajikistan, and Uzbekistan.

Figure 2.20: Top Five OIC Countries by Crude Death Rate (CDR) for Major NCDs
(deaths per 100,000 population)

Source: SESRIC staff compilation based on data from WHO, Global Health Estimates 2021: Deaths by Cause, Age, Sex, by Country and by Region, 2000-2021. Geneva, World Health Organization; 2024.

Overall, the figures reveal that many OIC countries recorded progress in coping with some major NCDs over the period 2010-2021. Nevertheless, many others need to intensify their efforts in terms of prevention, detection, and treatment in order to further reduce the mortalities caused by such diseases.

2.5.2. *Prevention and Treatment*

Non-communicable diseases remain a major public health challenge across OIC countries, accounting for a growing share of the disease burden and mortality. In line with global trends, these diseases are increasingly driven by modifiable behavioural risk factors—including tobacco use, unhealthy diets, physical inactivity, and alcohol consumption—as well

as environmental and occupational exposures. The OIC-SHPA emphasized both the prevention and control of NCDs through integrated health system strengthening, risk reduction, early detection, and treatment. While some progress has been achieved, particularly in raising awareness and initiating multisectoral approaches, more comprehensive and sustained efforts are needed to scale up interventions and reduce the overall NCD burden in the region.

Most cardiovascular diseases can be prevented by addressing behavioural risk factors such as tobacco use, unhealthy diet, obesity, physical inactivity, and alcohol consumption. Effective prevention strategies must be complemented by the availability of appropriate medical devices, medicines, and treatment protocols. In this regard, OIC countries need to intensify their efforts to tackle the underlying risk factors for CVDs while also investing in the expansion and quality of cardiology services, including diagnostics, surgical interventions, and pharmaceutical treatments. Strengthening primary health care systems to support early identification and management of hypertension and other key CVD risk indicators remains critical.

Every cancer type requires a tailored treatment regimen that may involve one or more modalities, such as surgery, radiotherapy, and systemic therapy (e.g., chemotherapy, hormonal treatments, or targeted biological therapies). As mentioned above, approximately one-third of cancer deaths are linked to five leading behavioural and dietary risks: tobacco use, high body mass index, alcohol consumption, low fruit and vegetable intake, and physical inactivity. It is estimated that 30–50% of cancers can be prevented through reduction of such risk factors and application of proven prevention strategies (WHO, 2025). Additionally, early detection and timely access to quality treatment significantly improve survival outcomes. For OIC countries, eliminating risk factors and improving early diagnosis and care capacity are essential steps. Equally important is the timely availability and affordability of innovative technologies and cancer medicines. To meet these needs, national health systems must be strengthened with a view to improving cancer screening programs, pathology services, and oncology infrastructure, particularly in low-resource settings.

The primary risk factors for chronic respiratory diseases include tobacco smoking (including second-hand smoke), indoor and outdoor air pollution, allergens, and occupational exposures to chemicals and dusts. Although CRDs are not curable, advances in medical technology and pharmaceuticals have improved symptom management and patient quality of life. It is important for OIC countries to keep pace with such developments and ensure equitable access to relevant treatments and respiratory care services. In this context, OIC countries must adopt a dual approach—investing in CRD treatment while actively reducing risk exposure. The “Tobacco-Free OIC” initiative and the “Tobacco-Free OIC Capacity Building Programme” led by SESRIC are important regional efforts that support tobacco control and aim to reduce CRD-related mortality (see Section 2.6.2).

To reduce the growing burden of diabetes, OIC countries must intensify efforts to combat major contributing factors, notably obesity and physical inactivity. Particular attention should be paid to regulating sugar and other additives commonly used in the food industry, as well as promoting public health campaigns that encourage healthier dietary choices and

active lifestyles. Education and awareness campaigns—especially those targeting youth and underserved communities—can help prevent diabetes and delay its onset. Meanwhile, strengthening diabetes care systems, improving access to insulin and essential medications, and expanding screening for early diagnosis are all critical to limiting complications and improving outcomes.

In addition to diabetes, genitourinary diseases—particularly those affecting the kidneys—have emerged as a rising health concern in the OIC region. Notably, the upward trend in CDR from genitourinary diseases is signalling a need for urgent policy attention. This trend reflects gaps in early detection, management of contributing NCDs, and access to renal care services, including dialysis and transplantation. OIC countries should prioritize investments in preventive strategies and expand access to nephrology services and community-level screening programs to reverse this trajectory.

2.6. Risk Factors

Non-communicable diseases are closely linked to a set of common and largely preventable risk factors that contribute to their development and progression. These include behavioural factors such as tobacco use, unhealthy diet, physical inactivity, and alcohol consumption, as well as physiological factors like high blood pressure, elevated blood glucose, and obesity. In many OIC countries, changes in population structure—such as longer life expectancy and growing numbers of older adults—combined with rapid urbanisation and shifts toward sedentary lifestyles, have increased exposure to these risk factors. Addressing them is essential for reducing the growing burden of NCDs and preventing premature deaths. The OIC-SHPA emphasized the importance of multi-sectoral action and community-level efforts to tackle these risks and promote healthier living across the region.

2.6.1. Alcohol Consumption

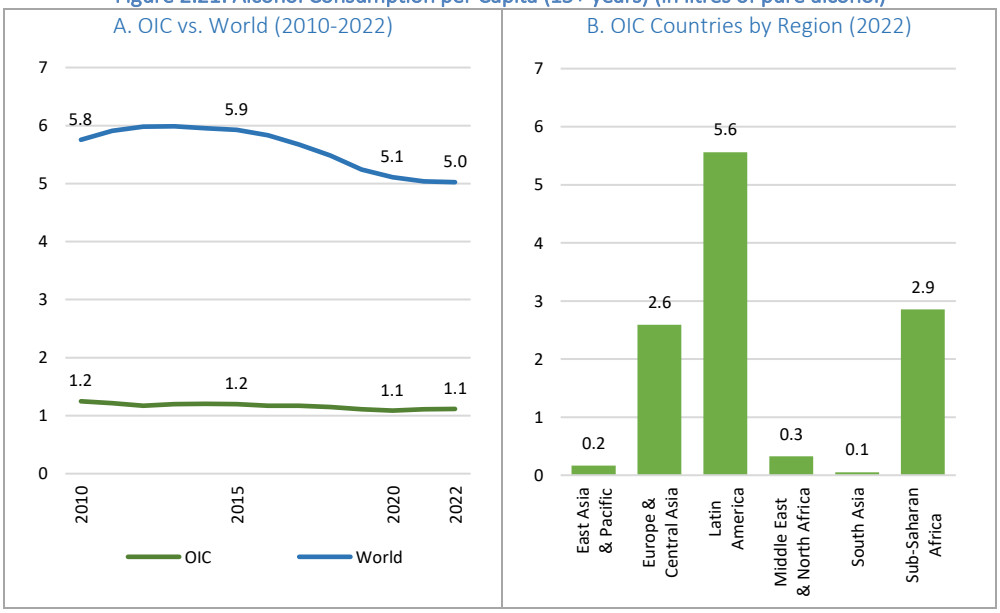
Drinking alcohol is associated with risks of developing NCDs such as liver diseases, heart diseases, and different types of cancers, as well as mental health and behavioural conditions such as depression, anxiety and alcohol use disorders. In 2022, alcohol consumption in the world, measured in litres of pure alcohol per adult (15 years of age or older), was 5.0 litres, down 12.7% from 5.8 litres in 2010. Average consumption in the OIC region has been much lower than the global average, and it also followed a declining trend over the past decade, falling from 1.25 litres in 2010 to 1.12 litres in 2022 (Figure 2.21A). Despite this low average, however, some OIC countries need to exert more efforts in that they have a relatively high average alcohol consumption per person. For instance, as of 2022, the regional average for OIC countries was as high as 5.6 litres in Latin America and 2.9 litres in Sub-Saharan Africa (Figure 2.21B).

According to the WHO estimates, globally, around 2.6 million deaths were caused by alcohol consumption in 2019—representing 4.7% of all deaths in that year—of which 2 million were among men and 0.6 million among women. Of these, 1.6 million deaths were from noncommunicable diseases, 700,000 deaths from injuries and 300,000 deaths from communicable diseases (WHO, 2024a). Of the total alcohol-attributable deaths in the world,

more than 247,000 (9.4%) occurred in OIC countries—66,000 among women and 181,000 among men.

Alcohol consumption causes death and disability relatively early in life, with the highest proportion (13%) of alcohol-attributable deaths from all deaths occurring within the younger age group (20–39 years) in 2019. Moreover, globally, an estimated 400 million people, or 7% of the world's population aged 15 years and older, live with alcohol use disorders, and an estimated 209 million (3.7% of the adult world population) live with alcohol dependence (WHO, 2024f). Beyond health consequences, use of alcohol also brings significant social and economic losses to individuals and society. In this context, governments all across the world need to fight against alcohol consumption.

Figure 2.21: Alcohol Consumption per Capita (15+ years) (in litres of pure alcohol)



Source: SESRIC staff compilation based on data from WHO, Global Health Observatory (GHO) Database.
Note: The figures comprise both the recorded and the unrecorded consumption.

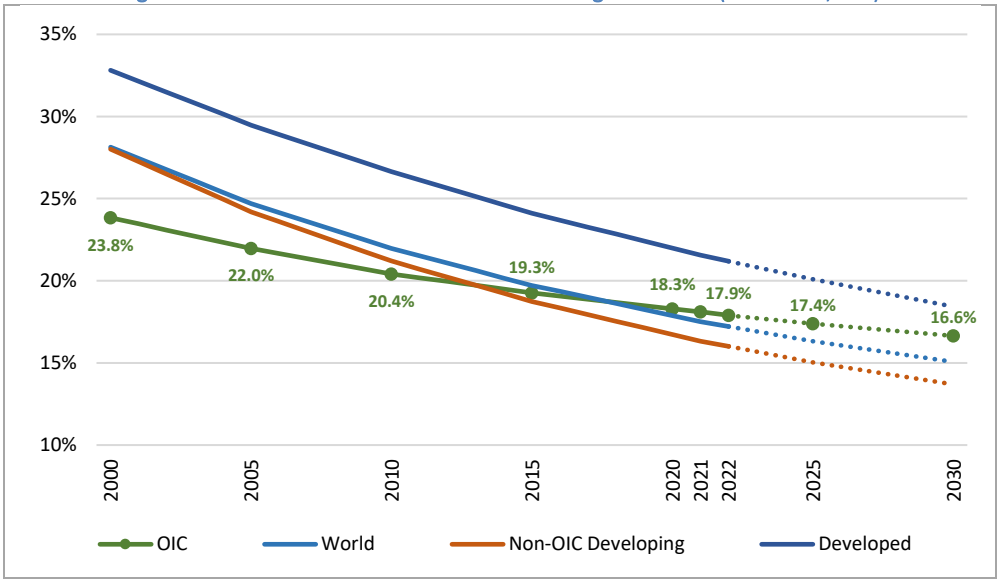
Countries with a high consumption level need to develop and implement effective solutions, with guidance from global frameworks. The WHO Global Strategy to Reduce the Harmful Use of Alcohol (WHO, 2010) and the WHO Global Alcohol Action Plan 2022–2030 (WHO, 2024g) are the most comprehensive international alcohol policy documents, endorsed by WHO Member States. The global strategy aims to give guidance for action at all levels; to set priority areas for global action; and to recommend a portfolio of policy options and measures that could be considered for implementation and adjusted as appropriate at the national level, taking into account national circumstances, such as religious and cultural contexts, national public health priorities, as well as resources, capacities and capabilities. Building on the 2010 global strategy, the global action plan provides a detailed description of proposed actions and measures for implementation by different stakeholders in order to reduce alcohol-related harm worldwide and specifies the global targets and indicators for monitoring progress with its implementation.

In addition to the abovementioned global initiatives, OIC countries, with the help of Islamic scholars, can convey the unique message of Islam to the society that Islam prohibits the use of alcohol. If the message is delivered widely and effectively to the society, this strategy can help many Muslims all across OIC countries to stop alcohol intake.

2.6.2. *Tobacco Use*

Tobacco use is a major contributor to illness and death from NCDs. According to WHO (2023), tobacco kills up to half of its users who do not quit. It is estimated that tobacco kills more than 8 million people each year. More than 7 million of those deaths are the result of direct tobacco use while an estimated 1.3 million are the result of non-smokers being exposed to second-hand smoke. Developing countries in general suffer the most from tobacco use. Nearly 80% of the world's 1.3 billion tobacco users live in low- and middle-income countries. Tobacco users who die prematurely deprive their families of income, raise the cost of health care, and hinder economic development.

Figure 2.22: Estimates of Current Tobacco Smoking Prevalence (both sexes, 15+)



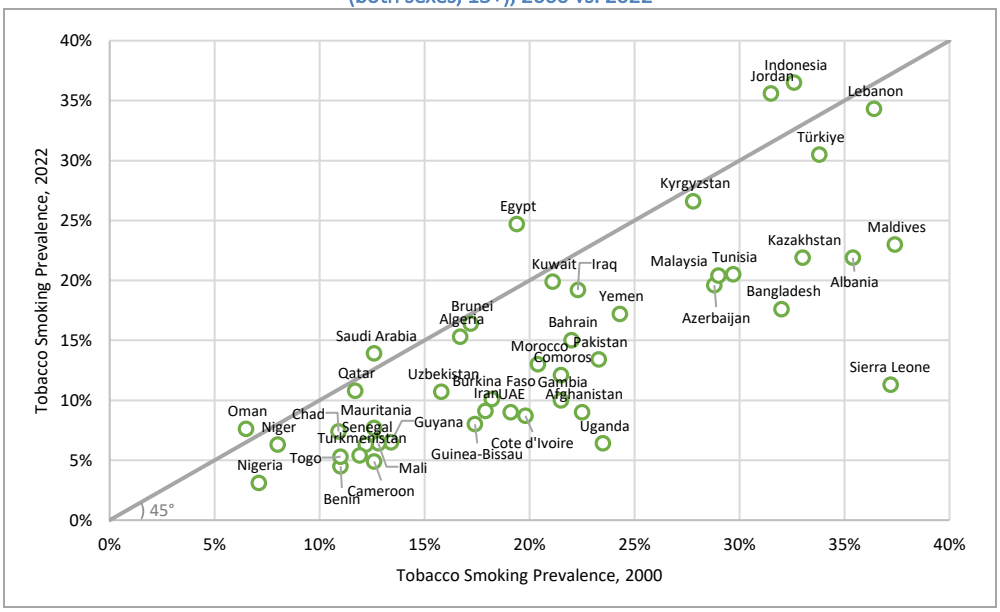
Source: SESRIC staff compilation based on data from WHO Global Health Observatory (GHO) Database.
Note: Country-group averages were approximated by population-weighting country-level age-standardized estimates. The OIC region excludes Djibouti, Gabon, Guinea, Libya, Mozambique, Palestine, Somalia, Sudan, Suriname, Syria, and Tajikistan due to unavailable data.

Figure 2.22 shows that, with the global efforts to reduce tobacco use, the prevalence of smoking has declined worldwide in the last two decades, and it is expected to further decline by 2030. Nevertheless, it is noteworthy that the decline achieved by OIC countries has been somewhat slower. They reduced tobacco smoking prevalence, on average, by 5.9 percentage points, from 23.8% in 2000 to 17.9% in 2022. Over the same period, the global average declined by 10.9 percentage points to 17.2%; the average for non-OIC developing countries by 12.0 percentage points to 16.0%; and the average for developed countries by 11.6 percentage points to 21.2%. Accordingly, while the OIC average was much lower than the averages of the other groups of countries in 2000, it has become higher than the average of

non-OIC developing countries as well as the global average. The wide gap with developed countries also narrowed. Under the current trends, the OIC average is expected to only slightly decline to 16.6% by 2030, further diverging from the global average.

Of the 46 OIC countries with available data, as shown in Figure 2.23, only five had an increase in tobacco smoking prevalence between 2000 and 2022: Egypt, Jordan, Indonesia, Saudi Arabia, and Oman. Having the second highest prevalence rate in 2000, Sierra Leone recorded the largest decrease (25.9 percentage points), followed by Uganda (17.1), Bangladesh and Maldives (each 14.0), and Afghanistan and Albania (each 13.5). As of 2022, Indonesia had the highest tobacco smoking prevalence (36.5%) among OIC countries, followed by Jordan (35.6%), Lebanon (34.3%), Türkiye (30.5%), and Kyrgyzstan (26.6%). On the other side of the spectrum was Nigeria, with a prevalence rate as low as 3.1%, followed by Benin (4.5%), Cameroon (4.9%), Togo (5.3%), and Turkmenistan (5.4%).

Figure 2.23: Estimates of Tobacco Smoking Prevalence in OIC Countries (both sexes, 15+), 2000 vs. 2022



Source: WHO Global Health Observatory (GHO) Database.
Note: Age-standardized rate. Data is not available for 11 countries: Djibouti, Gabon, Guinea, Libya, Mozambique, Palestine, Somalia, Sudan, Suriname, Syria, and Tajikistan.

Some effective ways to cope with tobacco use include raising tax on tobacco products, banning advertisements for tobacco products, and restricting areas to smoke in general. As a global effort to fight tobacco use, WHO Member States unanimously adopted the WHO Framework Convention on Tobacco Control (WHO FCTC) in 2003. In force since 2005, it has become one of the most widely embraced treaties in the history of the United Nations, currently with 183 Parties[20] covering more than 90% of the world's population. In 2007, the WHO introduced the MPOWER measures as a practical, cost-effective way to scale up

[20] Including 53 OIC Member States, with the exception of Indonesia, Morocco, Palestine, and Somalia, according to the information available on the United Nations Treaty Collection as of June 16, 2025.

implementation of the main demand reduction provisions of the WHO FCTC on the ground, and it has been monitoring MPOWER policies since then. The six MPOWER measures are:

- **M**onitor tobacco use and prevention policies;
- **P**rotect people from tobacco use;
- **O**ffer help to quit tobacco use;
- **W**arn about the dangers of tobacco;
- **E**nforce bans on tobacco advertising, promotion and sponsorship; and
- **R**aise taxes on tobacco.

The response of the OIC to tobacco use was also very effective and comprehensive. The process started in 2007 with the launch of "Tobacco Free OIC" initiative[21] by SESRIC in response to the spread of tobacco epidemic in OIC countries. It aims to foster an OIC-wide coordinated approach to curb and control the spread of tobacco epidemic. This initiative focuses on training and capacity building programs[22] to facilitate the development and implementation of sustainable national tobacco control strategies in OIC countries. In accordance with the decisions and resolutions of the First Islamic Conference of Health Ministers (2007), major objectives of the Tobacco Free OIC initiative can be listed as follows:

- to increase public awareness about controlling tobacco use by providing evidence-based knowledge and information, and by this way, to prevent children from starting tobacco use;
- to establish OIC networks and partnerships to exchange experiences and best practices of tobacco control strategies, initiatives, projects and programs; and
- to build the capacity of relevant organizations or institutions for better policy coordination in order to achieve the goal of Tobacco Free OIC.

The OIC-SHPA 2014-2023 also lists actions that need to be taken in relation with the fight against tobacco use under several thematic areas. To this end, both at the global and at the OIC level, there are initiatives and mechanisms to cope with tobacco use. In cooperation with relevant international organisations, OIC countries can effectively reduce tobacco use and can save many lives.

2.6.3. Insufficient Physical Activity

Physical inactivity, according to WHO (2024h), is one of the leading risk factors for NCD mortality. People who are insufficiently active have a 20% to 30% increased risk of death compared to people who are sufficiently active. In this respect, physical inactivity contributes not only to missed opportunities for people to have better health, but also to the increasing

[21] For further information, see What is "Tobacco Free OIC"? [https://www.sesric.org/tfo/introduction.php].

[22] Tobacco Free OIC Capacity Building Programme (TF-CaB) [https://www.sesric.org/cbp-tfo.php]

burden of morbidity and mortality that results from NCDs. Widespread physical inactivity is also a major economic burden to national health systems, and to the economy worldwide.

In contrast, regular physical activity provides significant benefits for health. It is proven to help prevent and manage NCDs such as heart disease, stroke, diabetes, and several cancers. It also helps prevent hypertension, maintain healthy body weight and can improve mental health, quality of life, and well-being. The WHO guidelines and recommendations (WHO, 2019 and 2020) provide details for different age groups and specific population groups on how much physical activity is needed for good health. By becoming more active throughout the day in relatively simple ways, such as walking, cycling, doing sports, or active recreation, people can easily achieve the recommended activity levels.

Lives are becoming increasingly sedentary, through the use of motorized transport and the increased use of technology—particularly screens—for work, education, and recreation. Granted that socioeconomic and cultural factors affect lifestyles of people, increased urbanisation, high-traffic density, low air quality, and lack of parks, sidewalks, and recreation facilities are all contributing to physical inactivity. The recent COVID-19 pandemic, due to the lockdowns and mobility restrictions it has brought along, has also negatively influenced the physical activity levels and sedentary behaviour, when they were already insufficient.

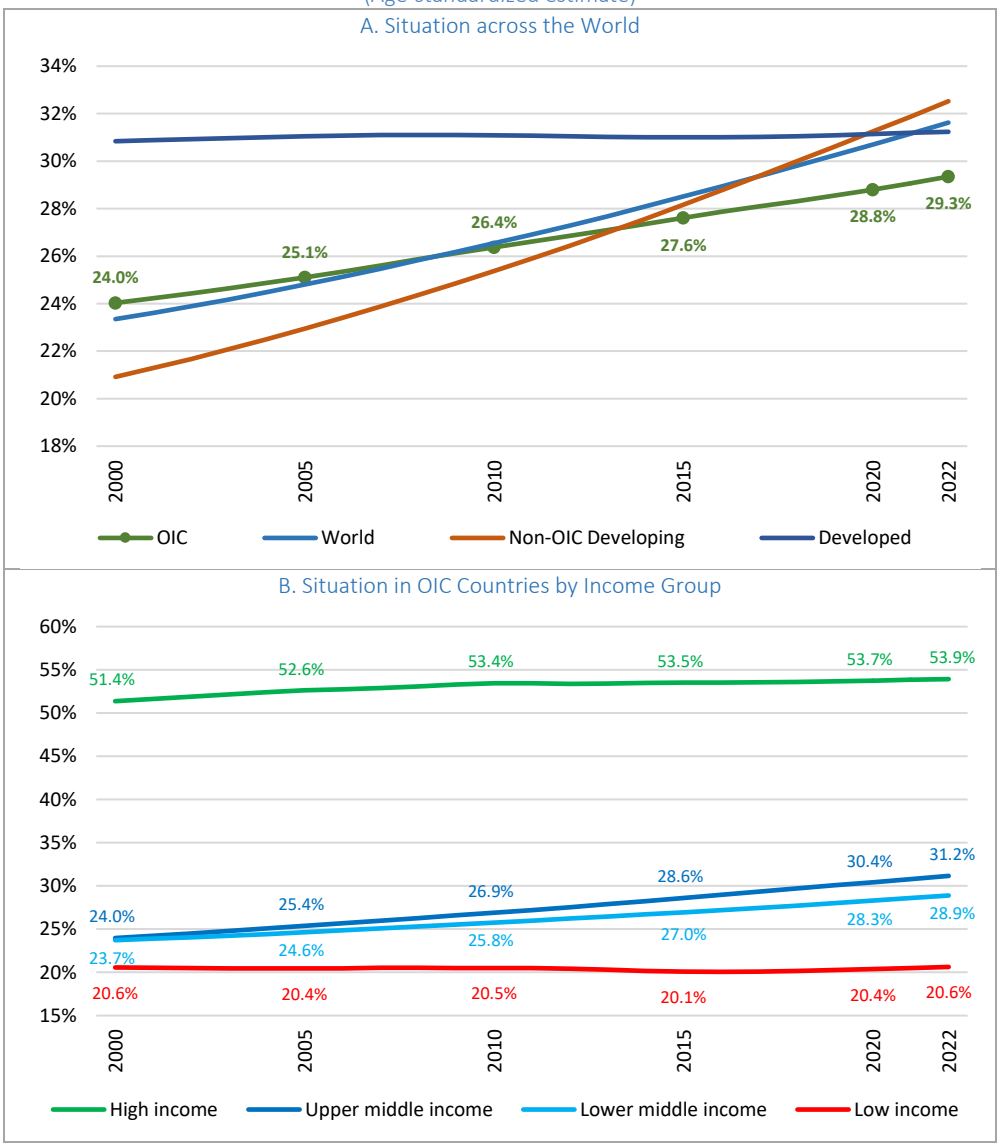
To increase physical activity worldwide, the WHO launched a new "Global Action Plan on Physical Activity 2018-2030" (GAPPA) in 2018, which outlines four policy actions areas and 20 specific policy recommendations and actions for Member States, international partners, and WHO (WHO, 2018). One year later, in 2019, the WHO launched the ACTIVE toolkit that provides more specific technical guidance on how to start and implement the 20 policy recommendations outlined in the global action plan. Meanwhile, in 2018, the World Health Assembly agreed on a global target to reduce physical inactivity by 15% by 2030 (against a 2010 baseline) and align with the SDGs. Nevertheless, a 2022 report by WHO, *Global status report on physical activity*, stated that "while some countries have started to implement different recommended GAPPA policy actions, overall global implementation since its adoption 5 years ago has been slow and uneven, resulting in little progress towards increasing population levels of physical activity" (WHO, 2022b).

Indeed, most recent data indicate that, globally, there was an increase of 5 percentage points in levels of insufficient physical activity[23] between the baseline year of 2010 (26%) and 2022 (31%). With this trend, global levels of physical inactivity are projected to rise to 35% by 2030. These data reveal the world is off track to meet the global target of a 15% relative reduction in physical inactivity by 2030 (WHO, 2024i).

An upward trend in the prevalence of insufficient physical activity is also observed in the OIC region, though at a slower pace as compared to the global average. Levels of physical inactivity in OIC countries averaged 29.3% in 2022, up 3 percentage points from the 2010 level of 26.4%. With this slow increase, the prevalence of insufficient physical activity has recently remained lower than the global averages (Figure 2.24A).

[23] Defined in adults 18 years and over as not meeting the WHO recommendations of at least 150 minutes of moderate- to vigorous intensity physical activity per week.

Figure 2.24: Prevalence of Insufficient Physical Activity among Adults Aged 18+ Years
(Age-standardized estimate)

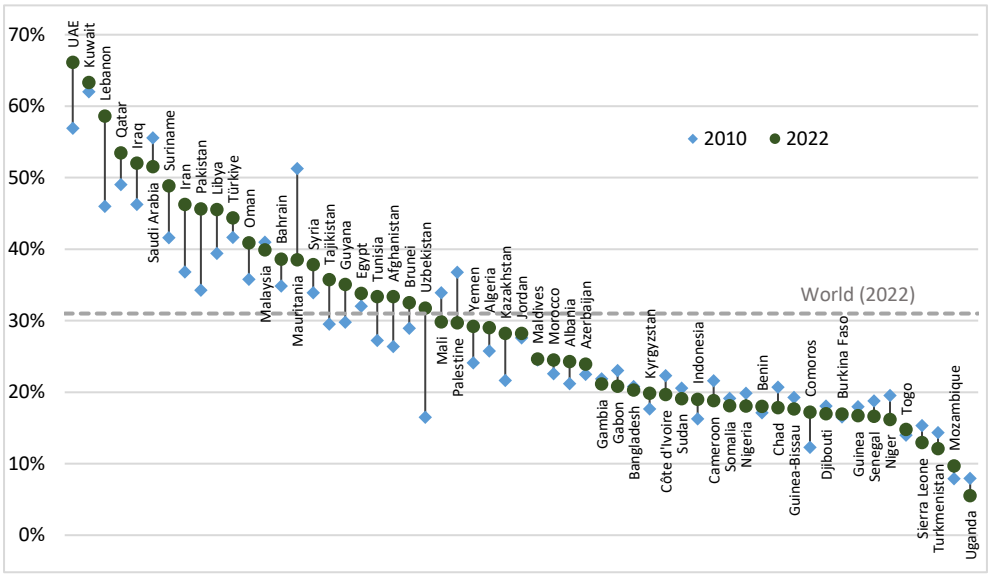


Source: SESRIC staff compilation based on data from WHO Global Health Observatory (GHO) Database.
Note: Country-group averages were approximated by population-weighting country-level age-standardized estimates.

Levels of physical inactivity in the OIC region differ between and within country-income groups, as measured using the World Bank income classification. Notably, levels of physical inactivity increase alongside rising income grouping, with higher (lower) incomes are associated with higher (lower) levels of physical inactivity. In 2022, levels of inactivity in high-income countries stood at 53.9% compared to upper-middle-income countries (31.2%), lower-middle-income countries (28.9%), and low-income countries (20.6%). However, while there was little increase in high- and low-income countries between 2010 and 2022—0.5 and 0.1 percentage points, respectively—middle-income-countries witnessed steeper increases:

4.3 percentage points in the upper-middle-income group and 3.1 in the lower-middle-income group, signalling that populations of countries in the middle-income group are becoming more inactive (Figure 2.24B).

Figure Prevalence of Insufficient Physical Activity among Adults Aged 18+ Years in OIC Countries: :2.25 vs. 2022 2010(Age-standardized estimate)



Source: SESRIC staff compilation based on data from WHO Global Health Observatory (GHO) Database

Between 2010 and 2022, the prevalence of insufficient physical activity decreased in 20 OIC countries, increased in 30, and remained stagnant (a change of less than ±1.0 percentage point) in 7 (Gambia, Bangladesh, Maldives, Burkina Faso, Jordan, Togo, and Benin) (Figure 2.25). The most significant reductions were registered in Mauritania (-12.8 percentage points) and Palestine (-7.1), both of which were lower-middle-income countries—significantly diverging from other countries of the group. Reductions in Mali, Saudi Arabia, and Niger were also notable (3–4 percentage points). On the other end of the spectrum, physical inactivity levels increased most in Uzbekistan (+15.3 percentage points), Lebanon (+12.6), Pakistan (+11.4), Iran (+9.5), and the United Arab Emirates (+9.2), all but the latter were middle-income countries.

As of 2022, the prevalence of insufficient physical activity in the OIC region was highest in the United Arab Emirates, where about two-thirds (66%) of adults were not meeting WHO-recommended levels of physical activity. The prevalence rate also exceeded 50% in Kuwait, Lebanon, Qatar, Iraq, and Saudi Arabia. In contrast, the lowest rate was registered in Uganda at only 5.6%, followed by Mozambique (9.7%), Turkmenistan (12.1%), Sierra Leone (13.0%), and Togo (14.8%). In addition, the rate was below the global average in 29 more OIC countries (Figure 2.25).

Countries and communities must take action to provide everyone with more opportunities to be active, in order to increase physical activity. To this end, the WHO Global Action Plan on Physical Activity provides policy recommendations for countries and communities to promote physical activity and ensure everyone has more opportunities to be regularly active.

Examples of these recommendations include policies that ensure access to walking, cycling and non-motorized transport; that increase physical activity opportunities in schools, workplaces, childcare centres and in healthcare service delivery; and that increase accessibility and availability of community sports and public open spaces (WHO, 2024j; WHO, 2018).

Overall, to promote, enable, and encourage physical activity, a collective effort is required, both national and local, across different sectors and disciplines to implement policies and solutions that are appropriate to a country's cultural and social environment. In this regard, policy makers in OIC countries need to make necessary arrangements to ensure more physically active lifestyles in order to have healthier generations and to reduce the pressure on social security systems.

2.6.4. Obesity

Overweight and obesity are defined as abnormal or excessive fat accumulation that may impair health. For adults, the WHO defines overweight and obesity by means of the body mass index (BMI)[24] as follows:

- Overweight is a BMI greater than or equal to 25.
- Obesity is a BMI greater than or equal to 30.

Obesity leads to adverse metabolic effects on blood pressure, cholesterol, triglycerides and insulin resistance. Risks of coronary heart disease, ischemic stroke and type 2 diabetes mellitus increase steadily with increasing BMI. A higher BMI also raises the risk of cancer of the breast, colon, prostate, endometrium, kidney and gallbladder. Mortality rates go up with increasing degrees of overweight, as measured by BMI.

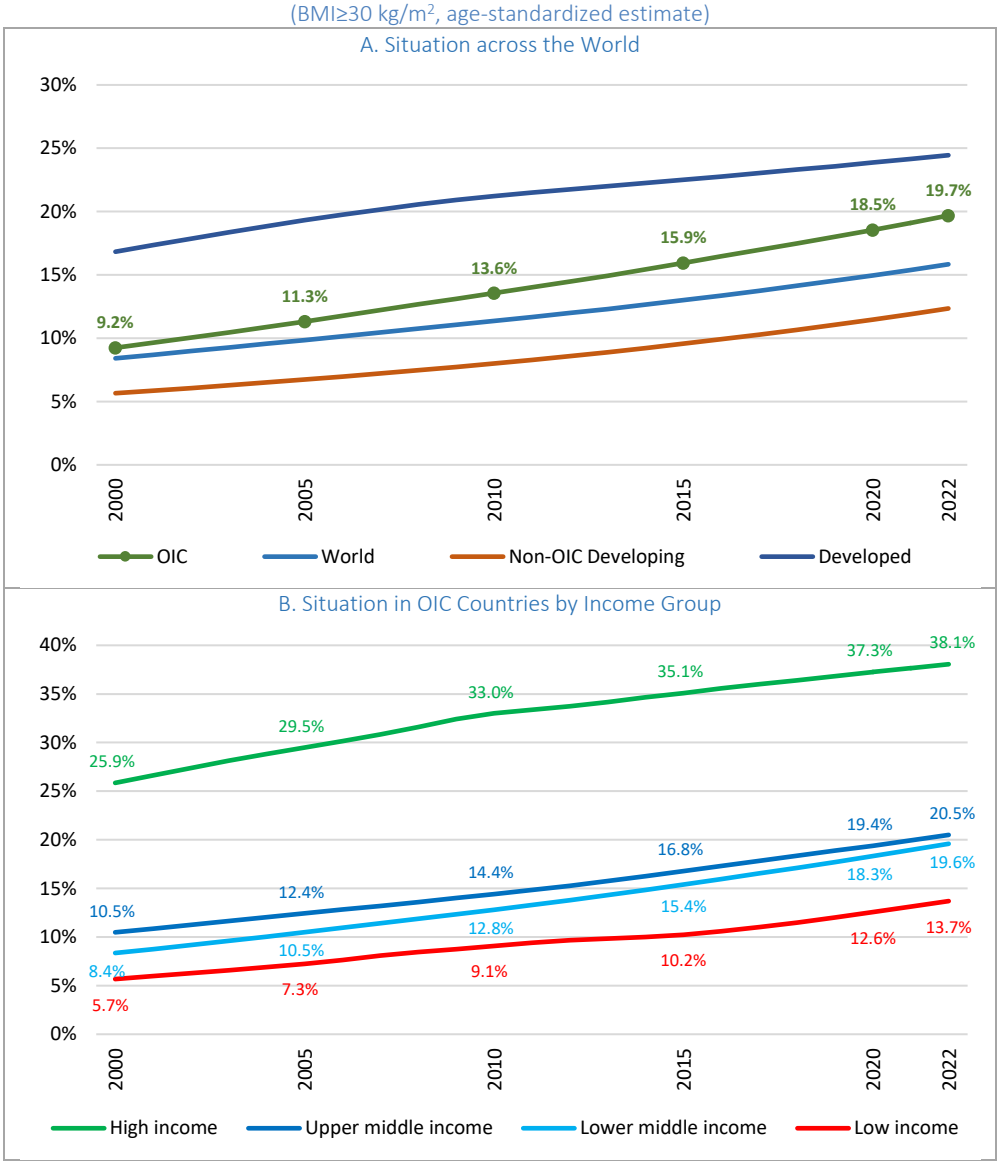
Beyond health consequences, obesity also brings significant economic losses to individuals and society. Estimates show that global obesity spending has accelerated in the past 2 years and reached nearly US$ 10 billion in 2022, up from just US$ 2.5 billion in 2020. Moreover, depending on the potential for obesity treatments to be extended in guidelines to patients with lower BMI, projections indicate that spending could increase to between US$ 17 billion and US$ 100 billion in 2027, with a base scenario of US$ 48 billion (IQVIA, 2023).

The latest available data shows that the prevalence of obesity has been increasing steadily both globally and in OIC countries. The global obesity rate for adult population (18+ years) rose from 8.4% in 2000 to 11.4% in 2010 and to 15.8% in 2022. In the OIC region, the increase was even more pronounced—from 9.2% in 2000 to 13.6% in 2010, and further to 19.7% in 2022—indicating a faster rise and persistently higher rates than the global average (Figure 2.26A). In absolute terms, the global number of obese individuals climbed from 329 million in 2000 to 537 million in 2010, and reached 895 million by 2022. In OIC countries, the obese population almost doubled between 2000 and 2010—from 61 million to 119 million—and then nearly doubled again to 235 million by 2022. Consequently, the OIC's share in the global obese population rose from 19% in 2000 to 22% in 2010, and further to 26% in 2022,

[24] Body mass index (BMI) is a simple index of weight-for-height that is commonly used to classify overweight and obesity in adults. It is defined as a person's weight in kilograms divided by the square of his height in meters (kg/m^2).

reflecting a disproportionate rise in obesity across the region. These trends indicate a growing public health challenge for OIC countries and highlight the need for intensified efforts to prevent and manage obesity.

Figure 2.26: Prevalence of Obesity among Adults Aged 18+ Years
(BMI≥30 kg/m^2, age-standardized estimate)

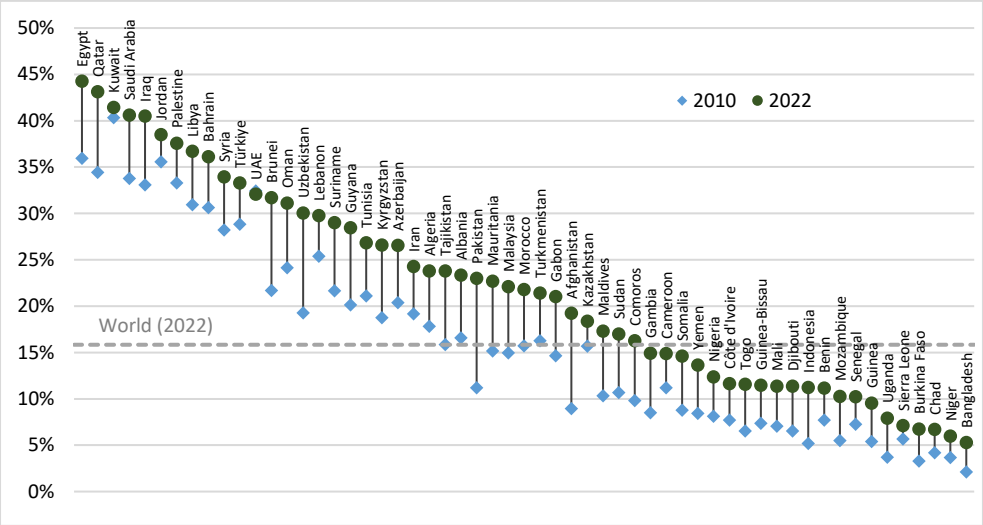


Source: SESRIC staff compilation based on data from WHO Global Health Observatory (GHO) Database.
Note: Country-group averages were approximated by population-weighting country-level age-standardized estimates.

Obesity tends to be more prevalent in higher-income settings, and this pattern is reflected in both global and OIC data. In 2022, the prevalence of obesity in high-income countries was approximately 2.7 times that in low-income countries globally. A similar disparity was observed within the OIC region, where the prevalence ranged from just 13.7% in low-income

OIC countries to as high as 38.1% in high-income ones—almost a 2.8-fold difference (Figure 2.26B). Importantly, all income groups in the OIC region have witnessed a continuous rise in obesity prevalence over time, indicating that the issue is not confined to wealthier nations alone but is increasingly affecting lower-income countries as well.

Figuru: 2.27 Prevalence of Obesity among Adults Aged 18+ Years in OIC Countries: 2010 vs.2022
(BMI≥30 kg/m^2, age-standardized estimate)



Source: SESRIC staff compilation based on data from WHO Global Health Observatory (GHO) Database

At the individual country level, obesity prevalence increased between 2010 and 2022 in nearly all OIC countries, with the sole exception of the United Arab Emirates, where the rate remained stable at around 32%. The most significant increases were observed in Pakistan, Uzbekistan, Afghanistan, and Brunei Darussalam, each recording a rise of 10 to 12 percentage points. As of 2022, the highest prevalence rates—ranging from 40% to 45%—were found in Egypt, Qatar, Kuwait, Saudi Arabia, and Iraq. In addition, 31 other OIC countries reported obesity rates above the global average. At the lower end of the spectrum, Bangladesh had the lowest prevalence at 5.3%, and six other countries—Niger, Chad, Burkina Faso, Sierra Leone, Uganda, and Guinea—had rates below 10% (Figure 2.27).

Obesity is largely preventable. At the individual level, it can be addressed by limiting the intake of fats and sugars, increasing the consumption of fruits, vegetables, legumes, whole grains and nuts, and engaging in regular physical activity. The food industry can also contribute meaningfully by reducing the fat, sugar, and salt content of processed foods, making healthy options more accessible and affordable, marketing responsibly—especially to children and adolescents—and supporting healthy behaviours in public and workplace environments. In this broader context, there is an opportunity for OIC countries to further strengthen national efforts by promoting healthy lifestyles through public awareness, multisectoral collaboration, and evidence-based policies that support nutritious diets and active living.

CHAPTER 3

Maternal, Newborn, and Child Health and Nutrition

Health is a fundamental pillar of human well-being. As defined by WHO, health does not only mean an absence of illness or disease, but it is a multidimensional concept that encompasses the state of physical, mental and social well-being of a person. While the right to health is universal, it holds particular significance for mothers and children, who are among the most vulnerable segments of the population and face heightened risks of illness and complications.

Maternal, newborn, and child health (MNCH) refers to the health of women during pregnancy, childbirth, and the postnatal period, as well as the health and development of infants and young children. This area is critically important for improving survival outcomes and laying the foundation for healthy lives.

Recognising its significance, maternal, newborn, and child health and nutrition was designated as one of the six thematic areas of cooperation in the OIC-SHPA. The Strategy emphasized the need for quality and accessible care throughout the continuum of maternal and child health—from antenatal services to postnatal care, nutrition, and early childhood development.

This chapter, prepared in line with the priorities set out in the OIC-SHPA, reviews key indicators and trends related to MNCH and nutrition across OIC Member States. It highlights the progress achieved during the implementation period of the Strategy, identifies remaining challenges, and offers insights to inform future actions in this vital area of public health.

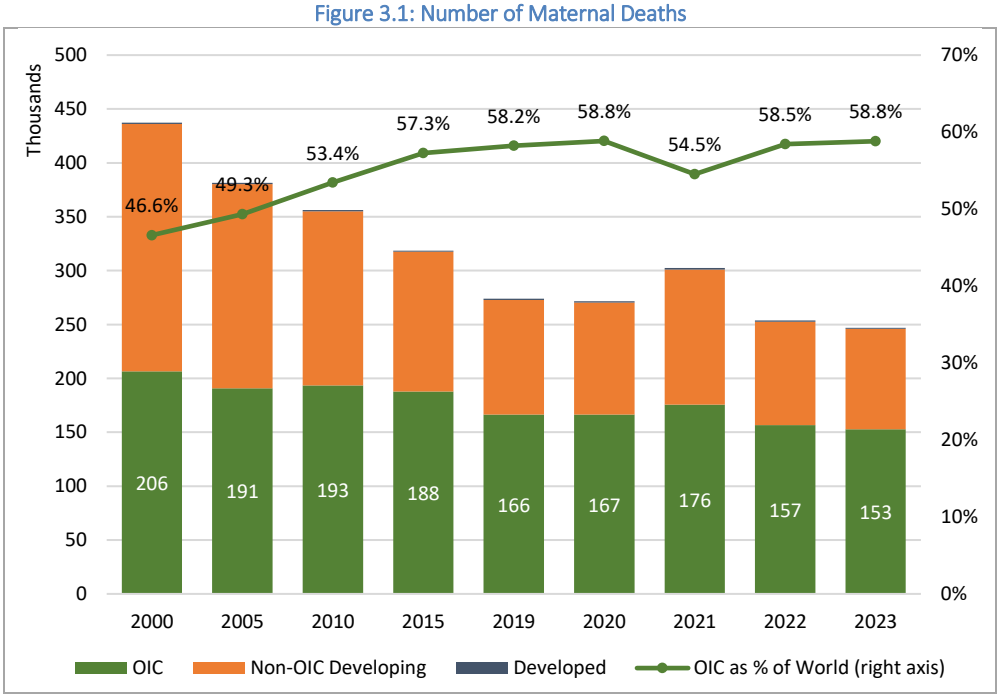
3.1. Maternal Mortality

Maternal mortality—defined as deaths due to complications from pregnancy or childbirth—remains a major public health concern, particularly in developing countries. According to the latest global estimates (WHO, 2025), the number of women and girls dying each year from pregnancy- and childbirth-related causes declined from approximately 443 thousand in 2000 to 260 thousand in 2023 (Figure 3.1). Despite this progress, an estimated 710 women still die every day, equivalent to one death every two minutes. A vast majority of these deaths—

94.6%—occur in developing regions, with Sub-Saharan Africa (71.9%) and South Asia (16.5%) accounting for the highest shares.

Among OIC countries, the total number of maternal deaths dropped from around 206 thousand in 2000 to 152 thousand in 2023. While this represents progress, it also means that, on average, approximately 420 women died each day in OIC countries in 2023 due to pregnancy or childbirth complications. Moreover, the share of global maternal deaths occurring in OIC countries rose from 46.6% in 2000 to 58.8% in 2023, reflecting a significantly slower reduction in maternal mortality in OIC countries (26%) compared to non-OIC developing countries (59%) during the same period. Maternal mortality in the OIC region is highly concentrated in a few countries. In 2023, Nigeria alone accounted for nearly half (49%) of all maternal deaths in the OIC region, followed by Pakistan (7%), Afghanistan (5%), Indonesia (4%), and Chad (4%).

Figure 3.1: Number of Maternal Deaths



Source: SESRIC staff compilation based on WHO (2025). Trends in maternal mortality estimates 2000 to 2023: estimates by WHO, UNICEF, UNFPA, World Bank Group and UNPD (MMEIG) - April 2025.

The global decline in the number of maternal deaths has been accompanied by a notable reduction in the maternal mortality ratio[25] (MMR), which fell by 40%, from 328 to 197 deaths per 100,000 live births between 2000 and 2023. However, recent findings by WHO and its partner agencies point to a marked slowdown in progress after 2016 (WHO, 2023). During the Millennium Development Goals (MDG) era (2000–2015), the global MMR dropped by 30.5%, corresponding to an average annual reduction rate (ARR) of 2.4%. In contrast, in the

[25] Number of maternal deaths during a given time period per 100,000 live births during the same time period.

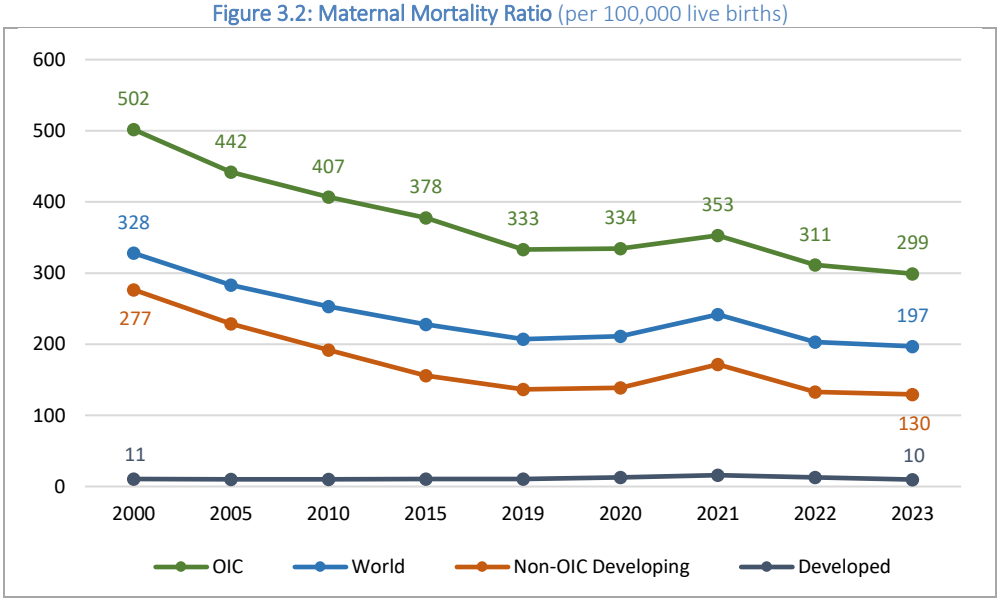
first eight years of the Sustainable Development Goals (SDG) era (2015–2023),[26] the decline slowed significantly to just 13.6%—an ARR of 1.8%—falling far short of the SDG target of reducing global MMR to fewer than 70 deaths per 100,000 live births by 2030.

The OIC region followed a somewhat different pattern than the global trend. Between 2000 and 2023, the MMR in OIC countries declined by 40%—same as the global rate—from 502 to 299 deaths per 100,000 live births, corresponding to an average ARR of 2.2%. During the MDG era, the decline in the OIC region was at 24.7%, with an ARR of 1.9%. However, during the subsequent SDG era—a period that aligns closely with the implementation of the OIC-SHPA—the pace of decline accelerated, with a higher ARR of 2.9%. This improvement contrasts with trends in other developing countries, where the ARR slowed from 3.8% in 2000–2015 to 2.3% in 2015–2023, and globally, where the ARR dropped from 2.4% to 1.8% over the same periods. Thus, OIC countries not only outperformed other developing countries during the SHPA period but also reversed their earlier trend of lagging progress.

While challenges remain, especially in high-burden countries, the period under OIC-SHPA coincided with a relatively faster decline in maternal mortality ratio in OIC countries compared to other developing regions.

Nevertheless, despite these gains, progress remains insufficient. As of 2023, the average MMR in OIC countries is still nearly four times higher than the SDG target and remains well above the averages observed in other country groupings (Figure 3.2).

Figure 3.2: Maternal Mortality Ratio (per 100,000 live births)

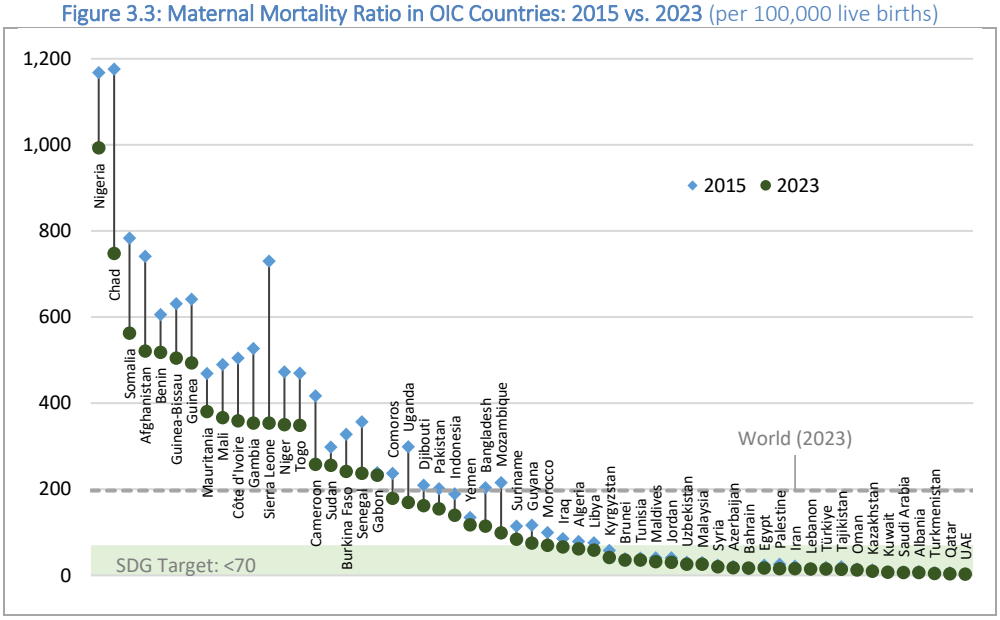


Source: SESRIC staff compilation based on WHO (2025). Trends in maternal mortality estimates 2000 to 2023: estimates by WHO, UNICEF, UNFPA, World Bank Group and UNPD (MMEIG) - April 2025.

[26] Both MDGs and SDGs targeted reducing the MMR: **MDG Target 5.A:** Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio. **SDG Target 3.1:** By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births.

Significant inequalities in maternal survival persist across OIC countries, with low- and lower-middle-income countries experiencing substantially higher MMRs[27] (Figure 3.3). As of 2023, Nigeria (993 maternal deaths per 100,000 live births) and Chad (748) recorded the highest MMRs globally, underscoring the severe burden in these settings. In contrast, the lowest MMRs within the OIC region were observed in the United Arab Emirates, Qatar, and Turkmenistan, each reporting five or fewer maternal deaths per 100,000 live births.

Figure 3.3: Maternal Mortality Ratio in OIC Countries: 2015 vs. 2023 (per 100,000 live births)



Source: SESRIC staff compilation based on WHO (2025). Trends in maternal mortality estimates 2000 to 2023: estimates by WHO, UNICEF, UNFPA, World Bank Group and UNPD (MMEIG) - April 2025.

Encouragingly, the number of OIC countries achieving the SDG target of fewer than 70 maternal deaths per 100,000 live births rose from 24 in 2015 to 27 in 2023, with Iraq, Algeria, and Libya newly joining this group after successfully lowering their MMRs below the target threshold. Progress was also evident in high-burden OIC countries, most of which registered notable reductions in MMR between 2015 and 2023. These include Chad (from 1,176 to 748), Sierra Leone (from 730 to 354), Somalia (from 784 to 563), Afghanistan (from 741 to 521), and Nigeria (from 1,168 to 993).

While these improvements are encouraging, continued and accelerated efforts are essential for these countries to remain on track toward meeting the SDG 2030 target. Sustained investments in maternal health systems, skilled care, and broader social determinants will be key to maintaining downward momentum in maternal mortality.

[27] For the purpose of categorization, MMR is considered to be **very low** if it is less than 20, **low** if it is less than 100, **moderate** if it is 100–299, **high** if it is 300–499, **very high** if it is 500–999 and **extremely high** if it is equal to or higher than 1000 maternal deaths per 100 000 live births (WHO, 2023).

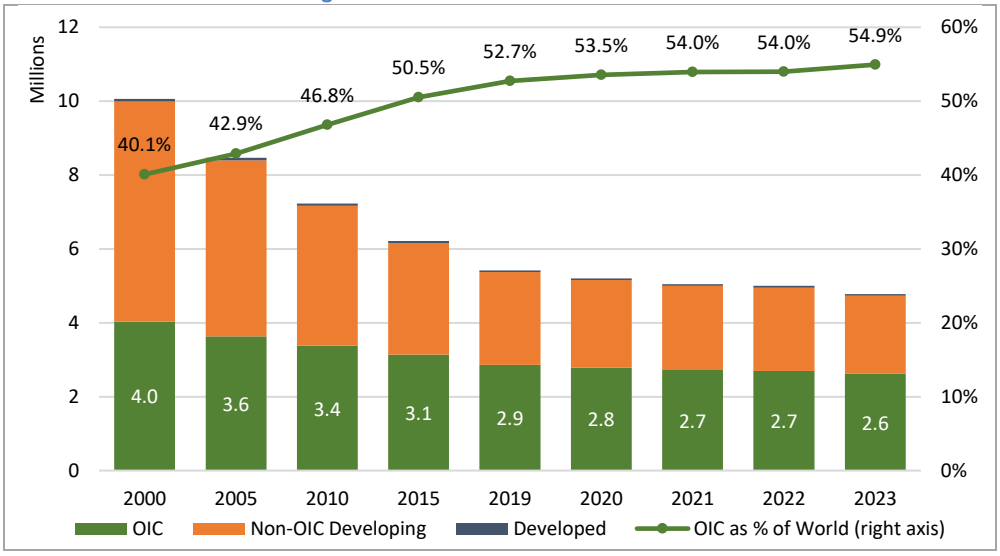
3.2. Child Mortality

Child mortality rate is one of the most important indicators of child health, reflecting not only the direct outcomes of healthcare delivery but also broader socio-economic conditions within a country. Reducing child mortality was a core objective of Goal 4 of the UN MDGs, which aimed to reduce the under-five mortality rate by two-thirds between 1990 and 2015. In 2015, the international community adopted a new development framework—the SDGs—which includes a renewed focus on child survival. The proposed SDG target for child mortality (Target 3.2) aims to end, by 2030, preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 deaths per 1,000 live births and under-5 mortality to at least as low as 25 deaths per 1,000 live births. Similarly, under the SHPA framework, OIC countries committed to strengthening child health systems, scaling up evidence-based interventions, and improving access to essential services in order to reduce mortality rates and promote child survival across the OIC region. The inclusion of such targets and commitments in the international development agenda clearly underscores the vital importance of early childhood as the foundation for a healthy life.

3.2.1. Under-Five Mortality

A child born today has a significantly better chance of surviving to age five and beyond than in previous decades. Globally, the number of under-five deaths declined from 10.1 million in 2000 to 6.2 million in 2015, and further to 4.8 million in 2023 (Figure 3.4). This means that nearly 13,100 children under age five died every day in 2023, down from 27,600 in 2000 and 17,000 in 2015. Despite this substantial progress, under-five deaths remain overwhelmingly concentrated in developing countries, which account for more than 99% of the global total.

Figure 3.4: Number of Under-Five Deaths

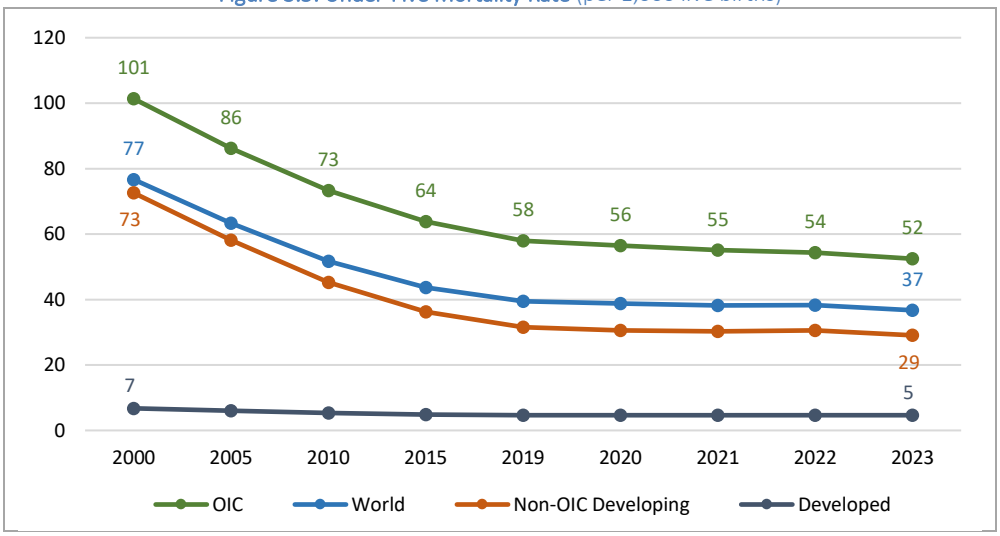


Source: SESRIC staff compilation based on UNICEF and UN Inter-agency Group for Child Mortality Estimation (UN IGME) - March 2025 [https://data.unicef.org].

As a major component of the developing world, OIC countries accounted for a growing share of global under-five deaths: from 40.1% in 2000 to 50.5% in 2015, and 54.9% in 2023. This rising share reflects a slower pace of reduction in under-five mortality in OIC countries compared to other developing regions. Under-five deaths in OIC countries declined from 4.0 million in 2000 to 3.1 million in 2015 and further to 2.6 million in 2023. This translates to an average of 7,200 under-five deaths per day in OIC countries in 2023—down from 11,000 in 2000 and 8,600 in 2015, yet still unacceptably high.

With the reduction in under-five deaths, the under-five mortality rate[28] (U5MR) has also declined across the world (Figure 3.5). However, similar to the trend observed in maternal mortality, the rate of progress in reducing under-five mortality has slowed in recent years, both globally and in OIC countries. During the MDG era (2000–2015), the global U5MR declined by 43%, corresponding to an average annual reduction rate (ARR) of 3.7%. However, the pace slowed during the SDG era (2015–2023), with a more modest 16% decline and an ARR of 2.2%. Over the full period from 2000 to 2023, the global decline in under-five mortality stood at 52%—from 77 to 37 deaths per 1000 live births—with an average 3.2% decline per year.

Figure 3.5: Under-Five Mortality Rate (per 1,000 live births)



Source: SESRIC staff compilation based on UNICEF and UN Inter-agency Group for Child Mortality Estimation (UN IGME) - March 2025 [https://data.unicef.org].

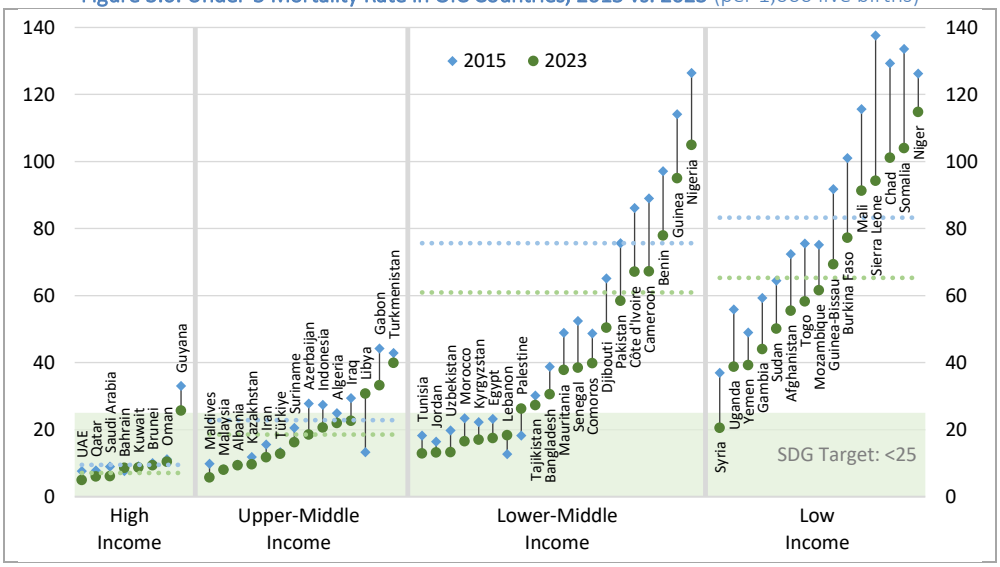
In the OIC region, this deceleration was also evident. Between 2000 and 2015, under-five mortality declined by 37%, corresponding to an ARR of 3.0%. During the 2015–2023 period, which overlaps with the implementation of the OIC-SHPA, the decline slowed to 18%, with an ARR of 2.4%. Over the full period, under-five mortality in OIC countries fell by 48%, with an ARR of 2.8%—slower than the global average and significantly below the performance of

[28] The under-five mortality rate refers to the probability a newborn would die before reaching exactly 5 years of age, expressed per 1,000 live births.

other developing countries, which recorded a 60% reduction between 2000 and 2023 (ARR: 3.9%), including a particularly strong performance during the MDG era (ARR: 4.5%).

These figures highlight both the progress made and the persistent disparities that remain. While millions of child lives have been saved, the slowing pace of decline—particularly during the OIC-SHPA implementation period—underscores the need for renewed and targeted efforts to strengthen child health systems, scale up high-impact interventions, and close the gap with global targets, especially in high-burden OIC countries.

Figure 3.6: Under-5 Mortality Rate in OIC Countries, 2015 vs. 2023 (per 1,000 live births)



Source: SESRIC staff compilation based on UNICEF and UN Inter-agency Group for Child Mortality Estimation (UN IGME) - March 2025 [https://data.unicef.org].
Note: The dotted horizontal lines represent the averages for the respective income-group.

An analysis of U5MR across OIC countries reveals a general trend of improvement between 2015 and 2023, with U5MR decreasing in all countries except four (Figure 3.6). The only increases were observed in Libya (from 13.3 to 30.8), Palestine (from 18.3 to 26.3), Lebanon (from 12.7 to 18.3), and Bahrain, where the already low rate rose slightly from 7.7 to 8.6. Overall, countries with the highest U5MRs remain concentrated among low- and lower-middle-income OIC members, reflecting underlying disparities in access to health services, nutrition, and socio-economic development.

The most notable reductions in U5MR were recorded in high-burden countries such as Sierra Leone (from 138 to 94), Somalia (from 134 to 104), Chad (from 129 to 101), Mali (from 116 to 91), and Burkina Faso (from 101 to 77), demonstrating commendable progress despite persistent challenges. As of 2023, the countries with the highest U5MRs in the OIC region were Niger (115), Nigeria (105), Somalia (104), Chad (101), and Guinea (95). In total, 25 OIC countries reported U5MRs above the global average of 37, signalling the need for intensified efforts in those countries.

Conversely, several OIC countries have already achieved or surpassed the SDG Target 3.2 of reducing U5MR to fewer than 25 deaths per 1,000 live births. The number of such countries

increased from 24 in 2015 to 26 in 2023, with Syria, Iraq, Azerbaijan, and Indonesia newly joining the group. However, this progress was offset by the removal of Libya and Palestine from the list due to reversals in mortality trends.

At the lower end of the spectrum, the lowest U5MRs as of 2023 were observed in the United Arab Emirates (5.0), Maldives (5.7), Qatar (6.0), Saudi Arabia (6.2), and Kuwait (8.1), alongside five additional OIC countries with U5MRs below 10 deaths per 1,000 live births. These countries serve as regional examples of strong child health outcomes, supported by high-quality health systems and broad social investment.

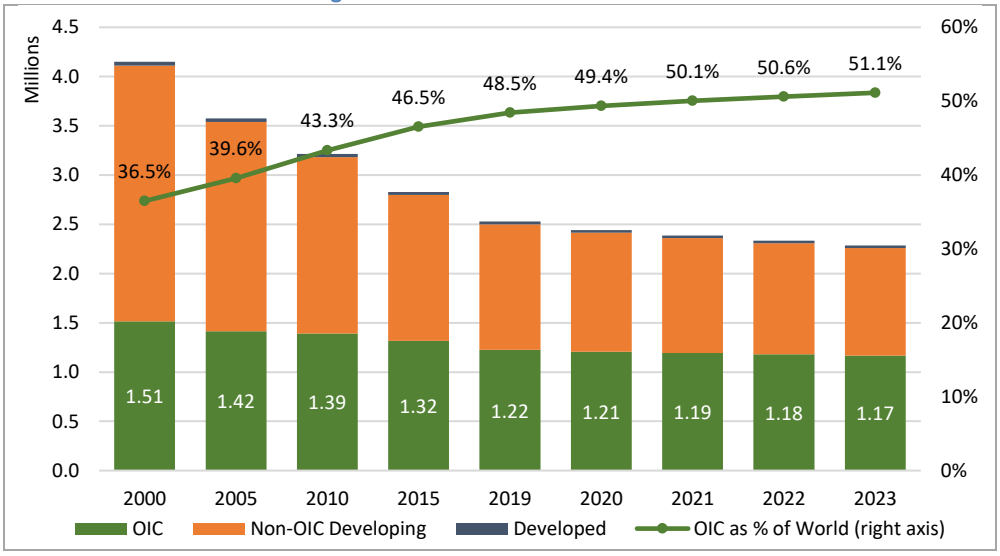
3.2.2. *Neonatal Mortality*

The first 28 days of life—the neonatal period—is the most vulnerable phase in a child's survival journey. During this critical window, newborns face the highest risk of dying (UNICEF, 2025), primarily due to complications during birth, prematurity, and infections. Most neonatal deaths are preventable with timely access to quality maternal care, safe delivery practices, and effective neonatal services.

Over the past two decades, the world has made substantial progress in reducing neonatal mortality (Figure 3.7). In 2000, an estimated 4.2 million children died within their first month of life, equivalent to approximately 11,400 neonatal deaths per day. These deaths accounted for 41.2% of all under-five deaths globally that year.

By 2023, the number of neonatal deaths had declined by 45%, reaching 2.3 million—or about 6,300 deaths per day. Despite this important progress, the proportion of under-five deaths occurring in the neonatal period increased to 47.8% in 2023. This trend highlights the fact that neonatal mortality has declined more slowly than overall under-five mortality, reinforcing the need for greater focus on interventions in the earliest stages of life.

Figure 3.7: Number of Neonatal Deaths

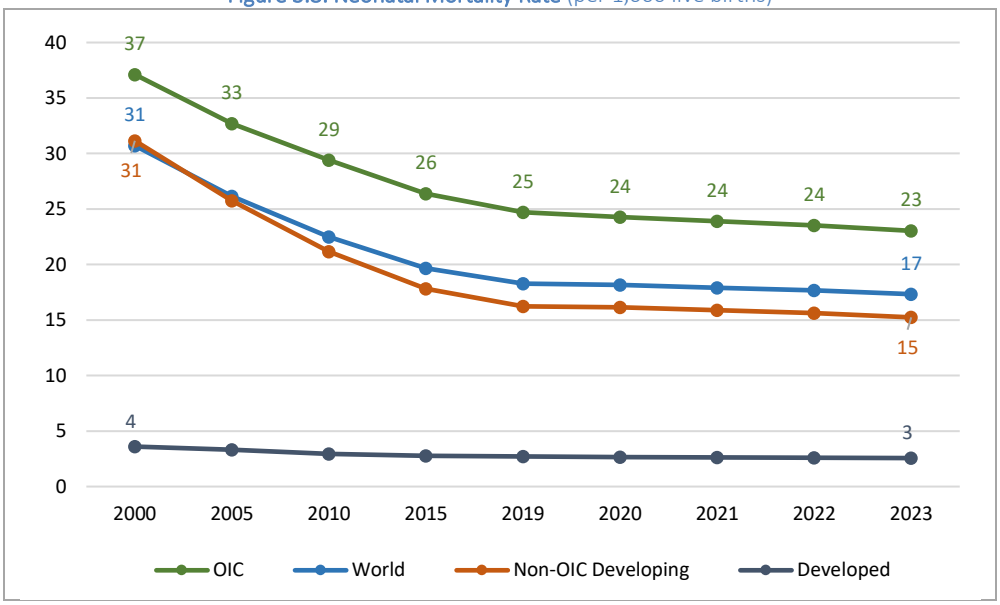


Source: SESRIC staff compilation based on UNICEF and UN Inter-agency Group for Child Mortality Estimation (UN IGME) - March 2025 [https://data.unicef.org].

Neonatal deaths remain overwhelmingly concentrated in developing countries, which accounted for approximately 99% of global neonatal deaths in 2023 (Figure 3.7). As with under-five mortality, OIC countries have seen their share of global neonatal deaths increase steadily—from 36.5% in 2000 to 46.5% in 2015, and further to 51.1% in 2023. This trend reflects a slower pace of reduction in neonatal mortality in OIC countries compared to non-OIC developing countries.

The number of neonatal deaths in OIC countries declined from approximately 1.5 million in 2000 to 1.3 million in 2015 and nearly 1.2 million in 2023. While this represents meaningful progress, it still implies that, on average, around 3,200 newborns died every day in OIC countries in 2023. Moreover, the share of under-five deaths occurring during the neonatal period has increased within the OIC region, as well—from 37.5% in 2000 to 41.9% in 2015, and 44.5% in 2023. Although this proportion remains slightly lower than the global average (47.8%), the rising trend highlights the growing significance of neonatal mortality in overall child survival outcomes.

Figure 3.8: Neonatal Mortality Rate (per 1,000 live births)



Source: SESRIC staff compilation based on UNICEF and UN Inter-agency Group for Child Mortality Estimation (UN IGME) - March 2025 [https://data.unicef.org].

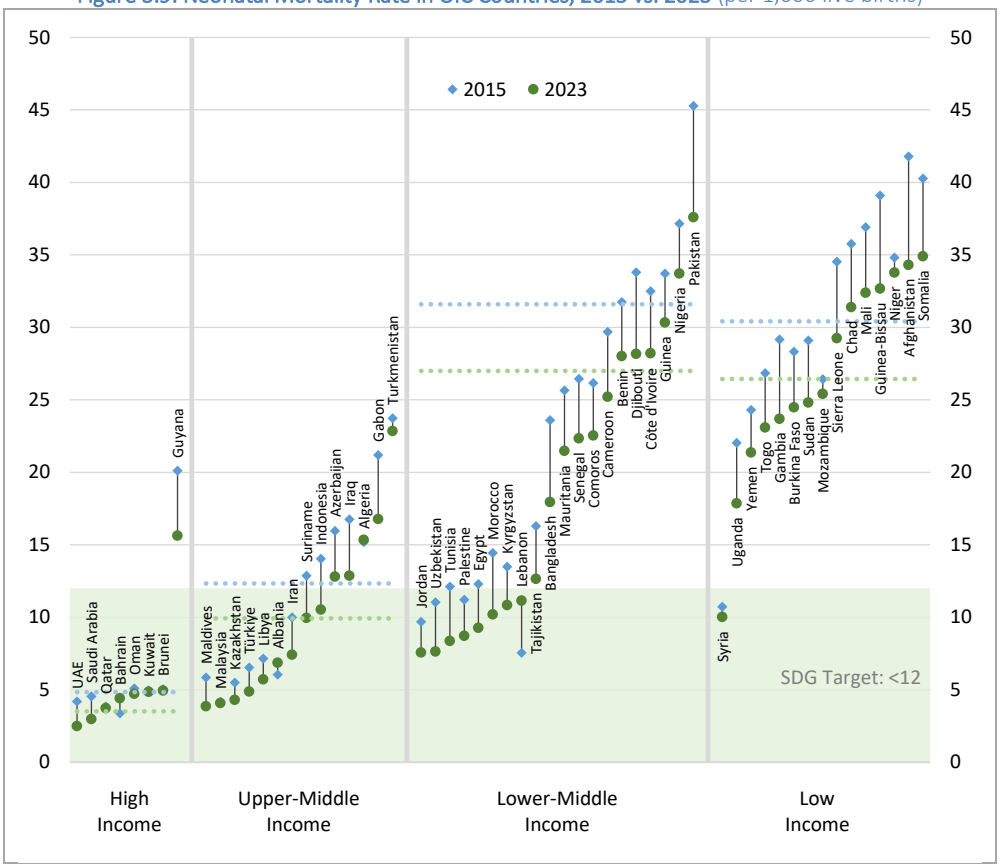
With the reduction in neonatal deaths worldwide, the global neonatal mortality rate[29] (NMR) declined by 44%, from 31 deaths per 1,000 live births in 2000 to 17 in 2023, corresponding to an average ARR of 2.5%. However, similar to the patterns seen in maternal and under-five mortality, the pace of progress slowed in recent years. During the 2000–2015 period, the global NMR fell by 36%, with a relatively strong ARR of 2.9%. In contrast, the rate of decline

[29] The neonatal mortality rate refers to the probability a newborn would die during the first 28 days of life, expressed per 1,000 live births.

weakened to 12% during 2015–2023, with the ARR dropping to 1.6%—highlighting the need for renewed focus in the SDG period.

In OIC countries, the NMR declined by 38%, from 37 to 23 deaths per 1,000 live births over the 2000–2023 period, which corresponds to an ARR of 2.1%. The OIC region also experienced a slowdown in progress during the SDG era coinciding with the OIC-SHPA: the ARR dropped from 2.3% in 2000–2015 to 1.7% in 2015–2023. Overall, despite progress, OIC countries continue to exhibit significantly higher neonatal mortality rates than the global average (Figure 3.8), pointing to enduring gaps in maternal and neonatal care coverage, quality, and equity—particularly in low-resource settings.

Figure 3.9: Neonatal Mortality Rate in OIC Countries, 2015 vs. 2023 (per 1,000 live births)



Source: SESRIC staff compilation based on UNICEF and UN Inter-agency Group for Child Mortality Estimation (UN IGME) - March 2025 [https://data.unicef.org].
Note: The dotted horizontal lines represent the averages for the respective income-group.

A review of neonatal mortality trends across OIC countries between 2015 and 2023 reveals steady overall progress, although outcomes remain highly unequal across income groups. As with other child health indicators, higher NMRs are concentrated in low- and lower-middle income countries, underscoring persistent disparities in the quality and accessibility of maternal and newborn care.

Encouragingly, NMR declined in nearly all OIC countries during this period, with the most notable reductions observed in Pakistan (from 45.3 to 37.6), Afghanistan (from 41.8 to 34.3), Guinea-Bissau (from 39.1 to 32.7), Bangladesh (from 23.6 to 17.9), and Djibouti (from 33.8 to 28.2)—all of which remain high-burden but have shown measurable improvement. Nevertheless, four countries saw increases in NMR between 2015 and 2023: Lebanon, where the rate rose notably from 7.5 to 11.1; Bahrain (from 3.4 to 4.4) and Albania (from 6.0 to 6.9), which experienced a minor increase while still maintaining a low level; and Algeria, where NMR inched up slightly from 15.2 to 15.3.

The number of OIC countries meeting the SDG target for neonatal mortality rose from 19 in 2015 to 25 in 2023, with six new entrants marking progress across diverse sub regions.

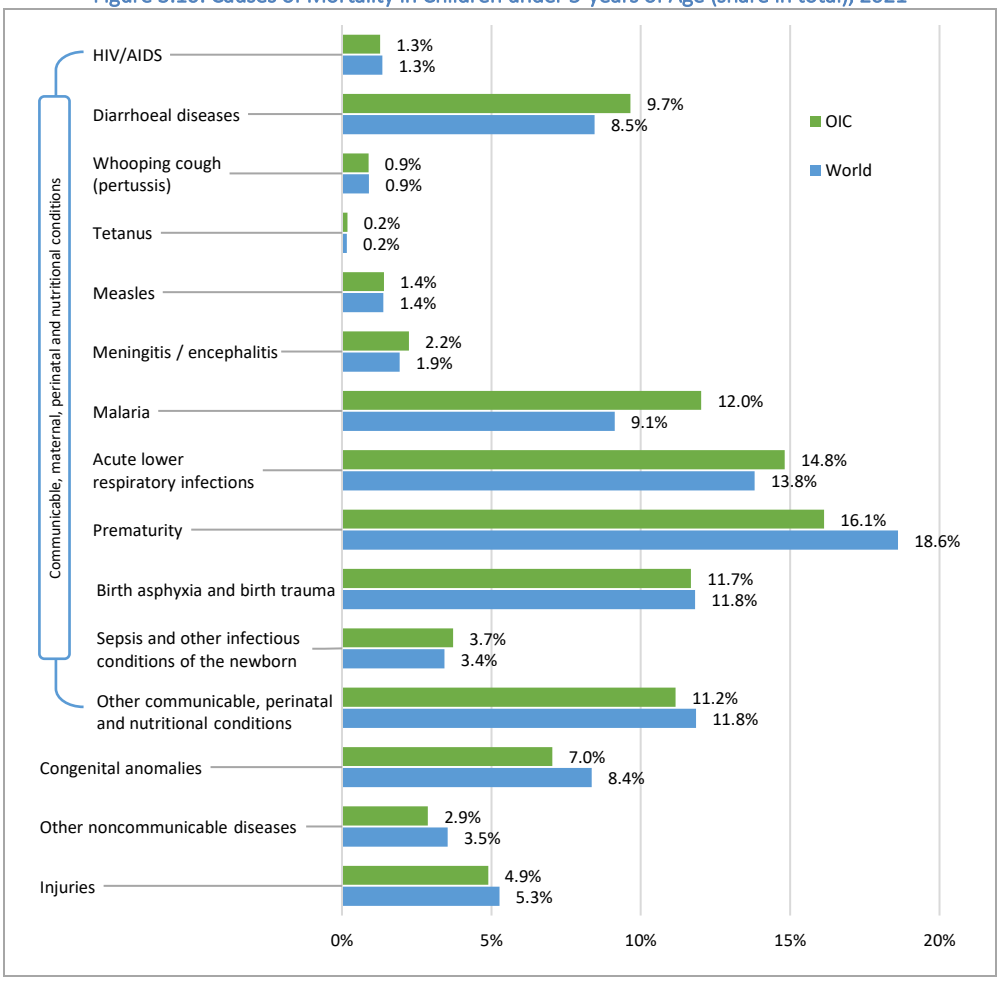
The number of OIC countries that achieved the SDG Target 3.2 of reducing neonatal mortality to below 12 deaths per 1,000 live births increased from 19 in 2015 to 25 in 2023. New entrants into this category include Kyrgyzstan, Indonesia, Morocco, Suriname, Egypt, and Tunisia, reflecting expanded progress across multiple sub regions. As of 2023, the highest NMRs in the OIC region were recorded in Pakistan (37.6), Somalia (34.9), Afghanistan (34.3), Niger (33.8), and Nigeria (33.7)—all well above the global average of 17. In total, 26 OIC countries reported NMRs above the global average, underscoring the need for intensified neonatal care efforts in these contexts. At the other end of the spectrum, 11 OIC countries had NMRs below 5 deaths per 1,000 live births in 2023. The lowest rates were recorded in the United Arab Emirates (2.5), Saudi Arabia (3.0), Qatar (3.7), Maldives (3.9), and Malaysia (4.1).

3.3. Major Causes of Child Mortality

Efforts to reduce childhood mortality are most effective when informed by accurate and timely information about the causes of death. This knowledge is essential to prioritise health interventions, guide the design and implementation of targeted programmes, and monitor progress against national and international child survival goals.

According to the latest available data from 2021, child deaths under the age of five continue to be driven primarily by communicable and preventable diseases. Unlike adult mortality, which is dominated by non-communicable causes, about 83% of global under-five deaths and 85% of those in OIC countries were caused by communicable conditions (Figure 3.10). These are largely treatable or preventable through well-established, cost-effective interventions such as vaccination, antenatal care, nutrition support, and skilled birth attendance.

Figure 3.10: Causes of Mortality in Children under 5-years of Age (share in total), 2021



Source: SESRIC staff compilation based on data from WHO, Global Health Estimates 2021: Deaths by Cause, Age, Sex, by Country and by Region, 2000-2021. Geneva, World Health Organization; 2024.

Importantly, the distribution of causes of under-five deaths is broadly aligned between OIC countries and global averages, with modest differences in proportions but some variation in rankings. This reflects the fact that over 99% of all under-five deaths occur in developing countries, meaning the global average is already heavily shaped by the experience of these countries (see Figure 3.4 above).

In 2021, the leading causes of under-five mortality worldwide were: Prematurity (18.6%), acute lower respiratory infections (13.8%), birth asphyxia and trauma (11.8%), and malaria (9.1%). Together, these four conditions accounted for 53.4% of global under-five deaths. In the OIC region, the top causes were the same but differed slightly in order: Prematurity (16.1%), acute lower respiratory infections (14.8%), malaria (12.0%), and birth asphyxia and trauma (11.7%). These four causes also made up more than half (54.7%) of under-five deaths in OIC countries in 2021.

While the overall picture is similar, the higher burden of malaria in the OIC region—which ranks third compared to fourth globally—warrants particular attention. This reflects the continued prevalence of malaria in several OIC countries, particularly in Sub-Saharan Africa, and points to the importance of sustained investments in malaria control and prevention alongside broader child survival strategies (see section 2.4.3 and 3.5).

These findings reinforce the need for a comprehensive, context-sensitive approach to child health, especially in low-income and high-burden settings. Interventions aimed at improving maternal and neonatal care, strengthening immunisation coverage, preventing and treating infections, and expanding access to basic health services will remain central to achieving further reductions in under-five mortality across OIC countries.

3.4. Maternal, New-born and Child Health Care Services

Health experts are of the view that the majority of maternal and child deaths are preventable and interventions like antenatal care, skilled attendance during birth, immunisation, and early care seeking for pneumonia, diarrhoea and malaria are critical for the survival and well-being of mothers and children. This section examines the performance of OIC countries in terms of the coverage of some of these selected interventions.

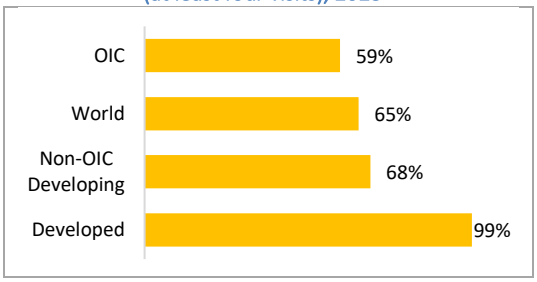
3.4.1. Antenatal Care

Antenatal care (ANC) and counselling is the entry point to the formal health care system and provides a solid base to monitor and improve the health of mother and baby by identifying and preventing/controlling antenatal complications at the earliest stage (WHO, 2010). Regular contact with healthcare professionals during pregnancy ensures that women receive essential services that safeguard their own health and that of their unborn child.

In recognition of its importance, the WHO updated its recommendations from a minimum of four antenatal care visits to a minimum of eight contacts.[30] This update was made to further reduce perinatal mortality and enhance women's overall experience of care (WHO, 2016). However, international data reporting still largely reflects the earlier benchmark of four visits, due to ongoing data limitations at country level (UNICEF, 2024a).

As of 2023, the global average coverage for at least four antenatal care visits

Figure 3.11: Antenatal Care Coverage (at least four visits), 2023*

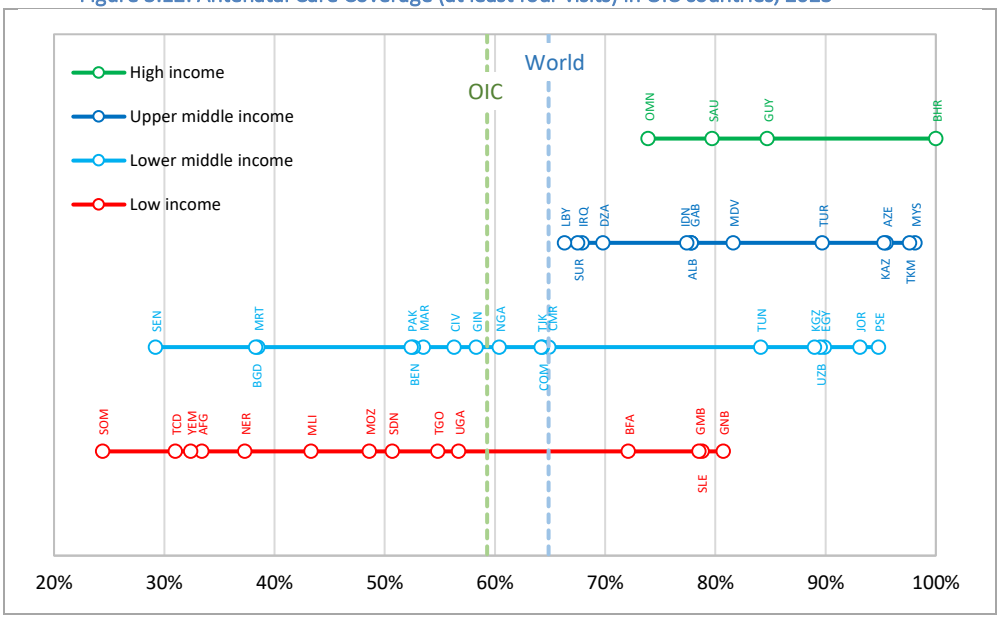


Source: SESRIC staff compilation based on data from UNICEF, Maternal and Newborn Health Coverage Database, November 2024 [data.unicef.org].
* Based on the most recent data available between 2013 and 2023. Country group averages are weighted average using the number of total births among women age 15-49 as the weight.

[30] The WHO, in its guideline on antenatal care (WHO, 2016), stated that "the GDG (Guideline Development Group) prefers the word 'contact' to 'visit', as it implies an active connection between a pregnant woman and a health-care provider that is not implicit with the word 'visit'."

stood at 65%. Among OIC countries, the average was lower at 59%, compared with 68% in non-OIC developing countries, and 99% in developed countries (Figure 3.11). These disparities reflect both systemic health access challenges and inequalities in resource allocation, particularly among low-income countries.

Figure 3.12: Antenatal Care Coverage (at least four visits) in OIC countries, 2023*



Source: UNICEF, Maternal and Newborn Health Coverage Database, November 2024 [data.unicef.org].
* Data for the most recent year available between 2013 and 2023. See Annex A for the country codes and Annex B for the classification by income.

Coverage rates vary widely across the OIC region. In high-performing countries, nearly universal coverage has been achieved—for example, Bahrain (100%), Malaysia (98.1%), Turkmenistan (97.6%), Azerbaijan (95.5%), and Kazakhstan (95.3%). In contrast, several low-income and conflict-affected countries reported alarmingly low rates, including Somalia (24.4%), Senegal (29.2%), Chad (31.0%), Yemen (32.4%), and Afghanistan (33.4%) (Figure 3.12).

Overall, the data suggest that many OIC countries—particularly those with lower income levels—are falling short of ensuring adequate ANC coverage, even by the earlier four-visit threshold. This reinforces the need to strengthen primary health care systems, reduce geographic and financial barriers, and invest in community-based outreach to reach underserved populations.

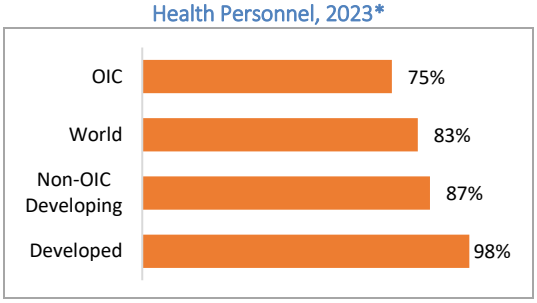
3.4.2. Births Attended by Skilled Health Personnel

Skilled care during childbirth is critical for the health and survival of both the mother and the newborn. Trained health personnel—such as doctors, nurses, and midwives—not only ensure safe delivery in normal cases, but are also equipped to recognize early warning signs and manage or refer cases of obstetric complications such as haemorrhage or sepsis, which are among the leading causes of maternal deaths worldwide (UNICEF, 2024b). In recognition

of its vital role in improving maternal outcomes, the proportion of births attended by skilled health personnel has been adopted as SDG Indicator 3.1.2, under Target 3.1, which calls for reducing the global maternal mortality ratio.

According to the latest estimates, 83% of births globally were attended by skilled health professionals in 2023, leaving approximately 22 million births unassisted by trained personnel. The global figure masks large disparities: developed countries have achieved near-universal coverage (98%), while in developing countries, where nearly all unattended births occur (99.4%), coverage remains much more variable.

Figure 3.13: Percentage of Births Delivered by a Skilled Health Personnel, 2023*

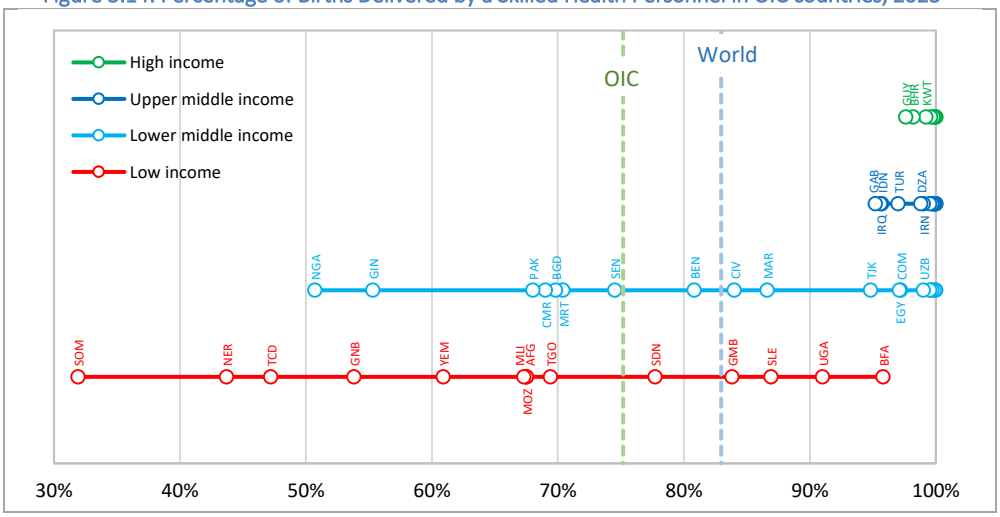


Source: SESRIC staff compilation based on data from UNICEF, Maternal and Newborn Health Coverage Database, November 2024 [data.unicef.org].
*Based on the most recent data available between 2013 and 2023. Country group averages are weighted average using the number of total births among women age 15-49 as the weight.

Among OIC countries, the average coverage stood at 75% in 2023, significantly lower than the average of 87% in other developing countries (Figure 3.13). This gap reflects ongoing challenges related to health workforce shortages, geographical and financial barriers, and the broader fragility of health systems in some OIC countries.

Coverage rates vary markedly across the OIC region (Figure 3.14). In 30 OIC countries, more than 95% of births were attended by skilled health personnel, including all high-income and upper-middle income members, seven lower-middle income countries, and notably, one low-income country—Burkina Faso.

Figure 3.14: Percentage of Births Delivered by a Skilled Health Personnel in OIC countries, 2023*



Source: UNICEF, Maternal and Newborn Health Coverage Database, November 2024 [data.unicef.org].
* Data for the most recent year available between 2013 and 2023. See Annex A for the country codes and Annex B for the classification by income.

In contrast, in the remaining low-income OIC countries, coverage was much lower, with rates ranging from just 32% in Somalia to 91% in Uganda. The situation remains particularly concerning in Somalia, Niger, and Chad, where 50-to-70% of all deliveries occur without the presence of any skilled health provider.

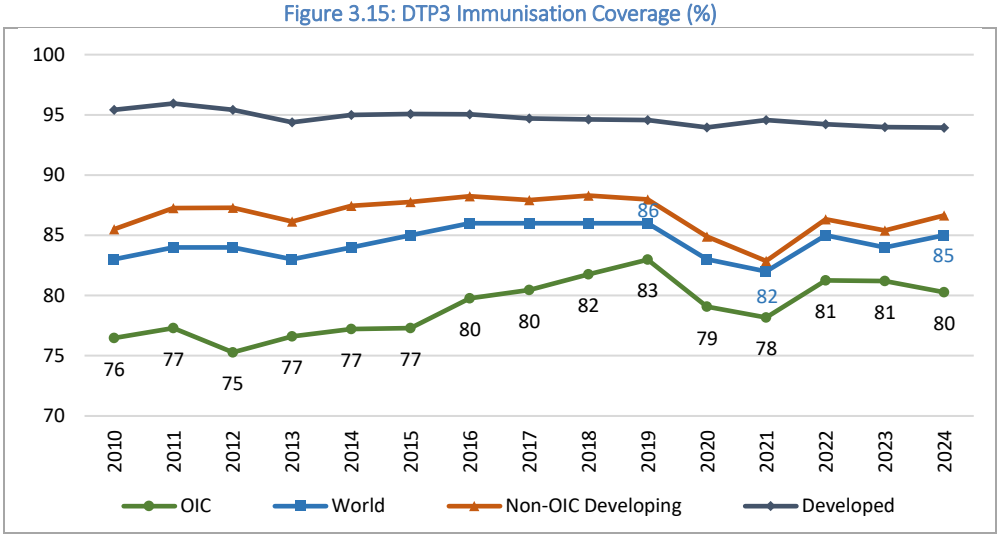
The above situation requires expanding access to skilled birth attendance, especially in fragile and under-resourced settings. Doing so requires investments in health workforce development, emergency obstetric care infrastructure, and targeted outreach to rural and underserved populations.

3.4.3. Immunisation

Childhood immunisation is widely regarded as one of the most effective and cost-efficient public health interventions for preventing infectious diseases that disproportionately affect young children. Vaccines offer protection against a range of potentially fatal conditions, including measles, meningitis, diphtheria, tetanus, pertussis (whooping cough), yellow fever, polio, and hepatitis B. Over the years, sustained global efforts—ranging from improving vaccine supply chains to enhancing the training of health workers—have enabled millions of children to be immunized, thereby preventing countless deaths and disabilities.

The third dose of the diphtheria-tetanus-pertussis (DTP3) vaccine is commonly used as a benchmark indicator for assessing the strength and reach of a country's routine immunisation system (UNICEF, 2024b). As of 2024, global DTP3 coverage reached 85%, marking a modest recovery from the pandemic-induced low of 82% in 2021, but still slightly short of the pre-pandemic level of 86% (Figure 3.15). A total of 109 countries experienced lower coverage in 2024 than in 2019, with 51 of them recording a drop of at least 5 percentage points. An estimated 20 million children worldwide were either unvaccinated or under-vaccinated in 2024. This setback reflects ongoing disruptions to health systems caused by conflict, disease outbreaks, insufficient investment in immunisation infrastructure, and vaccine shortages.

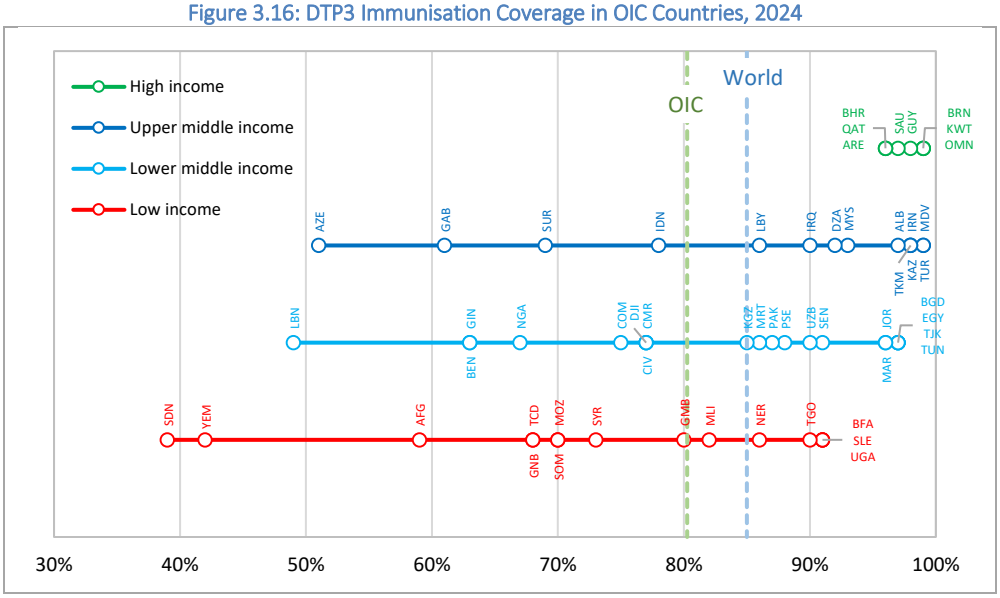
Figure 3.15: DTP3 Immunisation Coverage (%)



Source: SESRIC staff compilation based on data from UNICEF [data.unicef.org].

In the OIC region, the average DTP3 coverage reached 80% in 2024, up slightly from 78% in 2021, yet still below the pre-pandemic average of 83% in 2019, and lower than the global average (Figure 3.15). Between 2019 and 2024, 31 OIC countries experienced a decline in DTP3 coverage, with eight countries— Sudan, Lebanon, Azerbaijan, Yemen, Mozambique, Palestine, Guinea-Bissau, and Kyrgyzstan —seeing drops of 10 percentage points or more. In contrast, 20 OIC countries recorded improvements over the same period, most notably Chad, Libya, Somalia, Cameroon, and Guinea, which each registered gains of 10 percentage points or more.

Figure 3.16: DTP3 Immunisation Coverage in OIC Countries, 2024



Source: UNICEF [data.unicef.org].
Note: See Annex A for the country codes and Annex B for the classification by income.

As of 2024, 29 OIC countries had achieved a DTP3 coverage of 90% or above (Figure 3.16), thereby meeting the 2030 target of the Immunization Agenda 2030—90% global coverage for DTP3, MCV2, PCV3, and HPVc (WHO, 2021). This is one country more than in 2019. The new entrants to the 90% league were Algeria, Iraq, Jordan, and Togo, while Kyrgyzstan, Palestine, and Sudan fell below the target.

At the other end of the spectrum, three countries—Sudan, Yemen, and Lebanon—had DTP3 coverage below 50%, while 19 others fell between 50% and the global average, underscoring persistent gaps in immunisation equity and access.

Overall, in 2024, an estimated 9.5 million children in OIC countries were un- or under-vaccinated, representing nearly half of the global total. Strikingly, two-thirds of these children were concentrated in only six countries—Nigeria, Indonesia, Sudan, Pakistan, Yemen, and Afghanistan—reflecting both large population sizes and persistent structural challenges in vaccine delivery.

3.5. Prevention and Control of Infectious Diseases

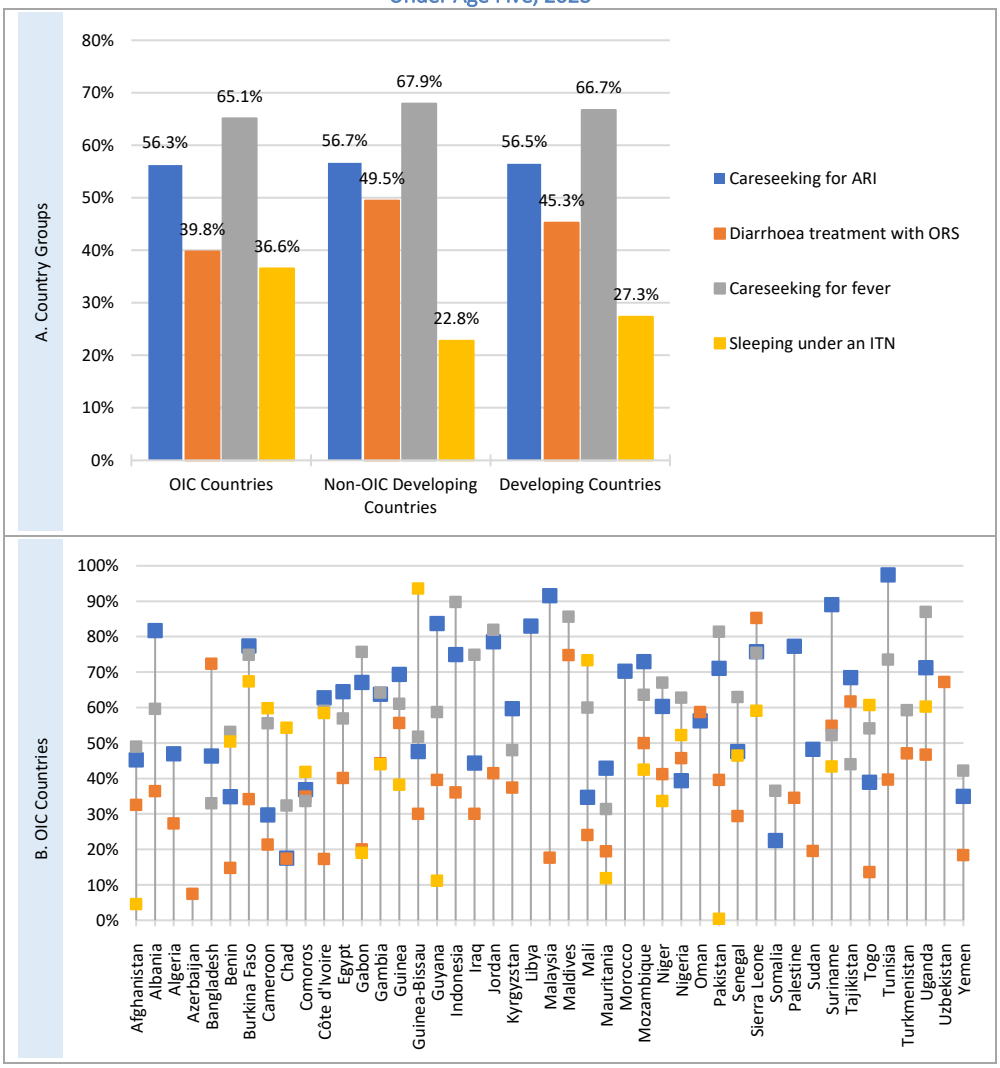
Infectious diseases remain among the leading causes of death in children under five, despite being largely preventable and treatable. According to 2021 data, three major infectious diseases—acute lower respiratory infections (primarily pneumonia), malaria, and diarrhoea—together accounted for 31.4% of all under-five deaths globally. In the OIC region, the burden was even higher, at 36.5% of total under-five mortality (see Figure 3.10). These diseases disproportionately affect children in low-resource settings and could be addressed effectively through simple, affordable, and proven interventions such as timely care-seeking, immunisation, access to oral rehydration therapy, and use of insecticide-treated nets (ITNs).

Pneumonia remains a leading infectious killer of children, and reducing mortality from acute respiratory infections (ARIs) has proven difficult in many OIC countries due to a combination of incomplete immunisation coverage, malnutrition, delayed care-seeking, and limited access to appropriate treatment. Early care-seeking from a qualified health provider significantly reduces pneumonia-related mortality. However, only 56–57% of children with ARI symptoms in developing countries are taken to a healthcare provider—a rate that holds true for the OIC region as well (Figure 3.17A).

Within the OIC, disparities are stark. In Sub-Saharan Africa, where pneumonia-related mortality is highest, only 48% of children with symptoms are brought for care. In countries like Chad, Somalia, Cameroon, Mali, Benin, and Yemen, care-seeking rates fall to 35% or less. In contrast, six OIC countries—Tunisia, Malaysia, Suriname, Guyana, Libya, and Albania—report ARI care-seeking rates above 80% (Figure 3.17B). These disparities point to an urgent need for targeted efforts in the high-burden countries, particularly those in Sub-Saharan Africa.

Diarrhoea is another major cause of under-five mortality, responsible for 8.5% of global and 9.7% of OIC child deaths. The condition can be effectively treated using oral rehydration salts (ORS), yet only 45.3% of children with diarrhoea globally receive ORS, and the figure drops to 39.8% in the OIC region (Figure 3.17A). ORS usage reaches as high as 85% in Sierra Leone and above 70% in Maldives and Bangladesh. However, it remains alarmingly low in several other member countries—less than 20% in Azerbaijan, Togo, Benin, Côte d'Ivoire, Chad, Malaysia, Yemen, Mauritania, and Sudan—highlighting serious gaps in the availability, awareness, or promotion of this life-saving intervention (Figure 3.17B).

Figure 3.17: Measures against Infectious Diseases: Average Coverage Rate in Children Under Age Five, 2023*



Source: SESRIC staff compilation based on data from UNICEF, Child Health Coverage Database, November 2024.

Note: Country data is for the latest year available from 2013-2023. **Careseeking for ARI:** Percentage of children under age 5 with acute respiratory infection symptoms whom advice or treatment was sought from a health facility or provider. **Diarrhoea treatment with ORS:** Percentage of children under age 5 who had diarrhoea in the two weeks preceding the survey and were given oral rehydration salts (ORS packets or pre-packaged ORS fluids). **Careseeking for fever:** Percentage of children under age 5 with fever for whom advice or treatment was sought. **Sleeping under an ITN:** Percentage of children under age 5 who slept under an insecticide-treated mosquito net the night prior to the survey.

Globally, malaria accounts for approximately 9% of under-five deaths, while in the OIC region, the share is even higher at 12%. The most effective preventive measure—sleeping under insecticide-treated mosquito nets (ITNs)—remains underutilized. While 27.3% of children under five in developing countries sleep under ITNs, the average in OIC countries is modestly better at 36.6% (Figure 3.17A). Still, coverage remains extremely low in Pakistan

and Afghanistan (less than 5%), both of which are among the malaria-endemic countries, though with relatively low incidence rates (see Figure 2.14 above). By contrast, Guinea-Bissau boasts the highest coverage (94%), followed by Mali (73%), Burkina Faso (67%), and Togo, Uganda, Cameroon, Sierra Leone, and Côte d'Ivoire (all around 60%). The wide variation underscores the importance of maintaining supply chains and awareness campaigns, especially in lower-performing countries.

Fever is often a primary symptom of infectious diseases like pneumonia and malaria. Timely care-seeking for febrile children is crucial. In 2023, 65.1% of children with fever in OIC countries were taken to a health provider, compared to 67.9% in non-OIC developing countries (Figure 3.17A), indicating a comparable but still inadequate rate.

Eleven OIC countries—including Indonesia, Uganda, Maldives, Jordan, Pakistan, Gabon, Sierra Leone, Iraq, Burkina Faso, Tunisia, and Niger—reported care-seeking rates above two-thirds, reflecting relatively strong health-seeking behaviour. However, Mauritania, Chad, Bangladesh, Comoros, and Somalia lagged significantly, with rates between 31% and 37% (Figure 3.17B), suggesting systemic barriers such as limited health infrastructure, financial constraints, or cultural factors.

Overall, the latest available data show that the prevention and control of infectious diseases among children in OIC countries remain a major public health challenge. The persistently low coverage of essential, life-saving interventions—such as timely care for pneumonia and fever, use of ORS for diarrhoea, and ITN protection against malaria—reflects critical gaps in health service delivery, accessibility, and awareness. To accelerate progress and reduce preventable child deaths, it is essential for OIC countries, particularly those with the highest burden, to scale up integrated, community-based interventions and strengthen health systems to ensure equitable access to care for all children.

3.6. Nutrition

Proper child nutrition is one of the most powerful tools for raising a healthy, resilient, and productive generation. Adequate nutrition in early childhood improves survival rates and supports physical growth, cognitive development, school readiness, and long-term health outcomes. Conversely, malnutrition not only heightens the risk of death from common illnesses such as diarrhoea, pneumonia, and malaria, but also leads to irreversible conditions such as stunted growth, which is closely linked to diminished cognitive capacity and reduced educational and economic attainment later in life.

UNICEF assesses the nutritional status of children under five through standardised measurements of height and weight, producing three main indicators of child malnutrition: stunting (low height-for-age), wasting (low weight-for-height), and overweight (high weight-for-height).[31] These indicators are essential for tracking progress toward international

[31] **Stunting** refers to a child who is too short for his or her age. **Wasting** refers to a child who is too thin for his or her height. **Overweight** refers to a child who is too heavy for his or her height. It should be noted that some children can suffer from more than one form of malnutrition – such as stunting and overweight or stunting and wasting.

development goals, especially SDG Target 2.2, which aims to "end all forms of malnutrition by 2030."

This section provides an overview of the current state of child malnutrition in OIC countries, highlighting trends, disparities, and areas of concern, while also noting progress made under global frameworks and the OIC-SHPA.

3.6.1. Incidence of Malnutrition

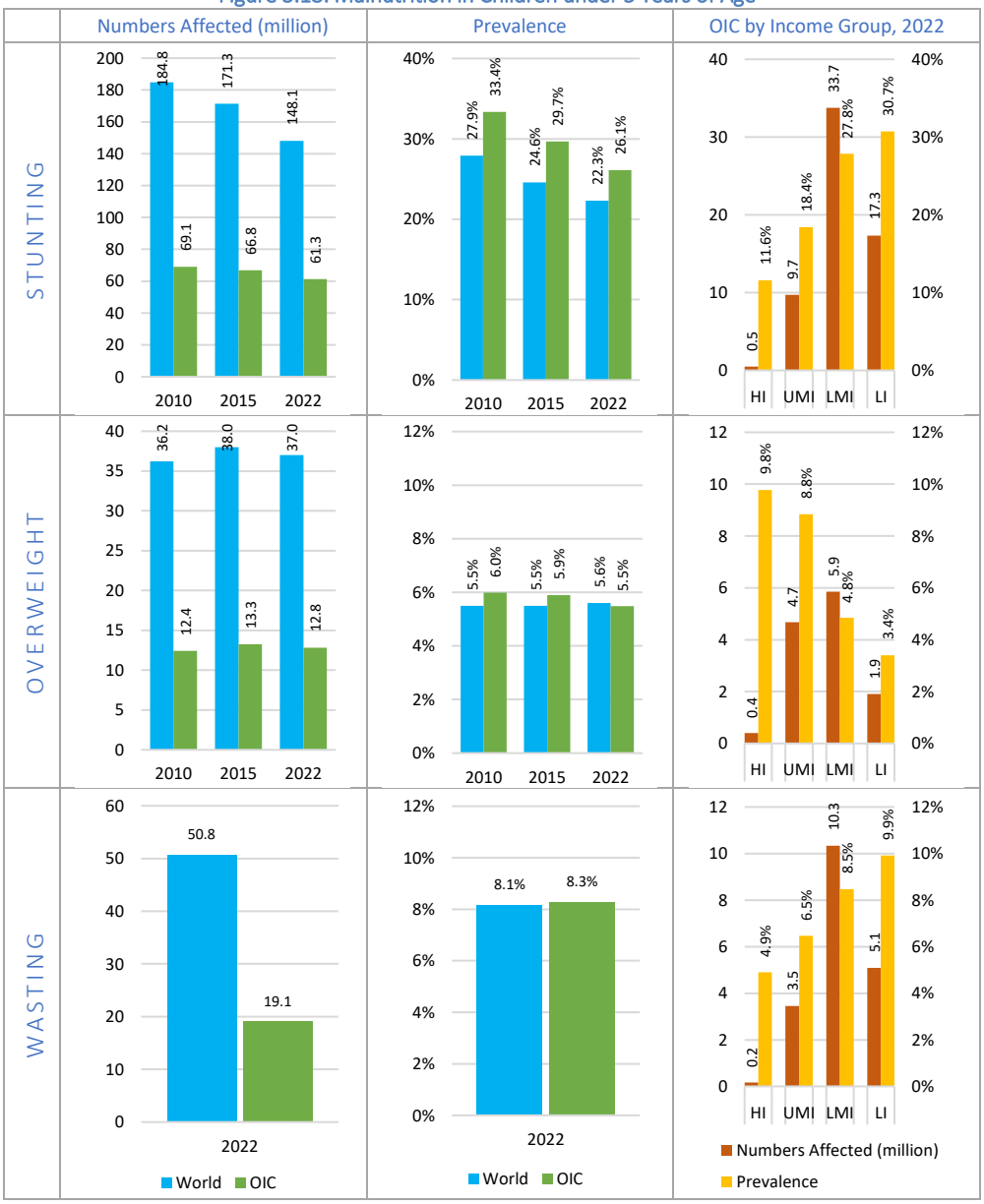
Stunting, or low height-for-age, is the most common form of chronic undernutrition in children under five. According to the 2023 edition of the UNICEF-WHO-World Bank Group Joint Malnutrition Estimates (JME), globally, the number of stunted children under five declined from 184.8 million in 2010 to 171.3 million in 2015 and further to 148.1 million in 2022, reflecting a 20% decrease between 2010 and 2022. In the OIC region, the decline was more modest—from 69.1 million to 66.8 million between 2010 and 2015, and then to 61.3 million in 2022, translating to an 11.3% overall reduction over the same period (Figure 3.18). Despite this improvement, the OIC countries' share of global stunting cases increased from 37.4% in 2010 to 39.0% in 2015, and further to 41.4% in 2022. This trend indicates that, in terms of the number of stunted children, the pace of progress in the OIC region has lagged behind that of other parts of the world during the period under consideration.

In terms of prevalence, the global stunting rate declined from 27.9% in 2010 to 24.6% in 2015, and further to 22.3% in 2022—a reduction of 5.6 percentage points over 12 years. In contrast, OIC countries saw a decrease from 33.4% to 29.7% between 2010 and 2015, and to 26.1% in 2022, marking an overall decline of 7.3 percentage points. While this reduction is noteworthy and even slightly steeper than the global average in relative terms, the OIC region's prevalence remains above the world average—26.1% vs. 22.3% in 2022. However, the gap between OIC and global stunting rates has narrowed steadily: from 5.5 percentage points in 2010, to 5.1 points in 2015, and further to 3.8 points in 2022.

An income-based breakdown of stunting trends in the OIC region reveals both progress and persistent disparities. Between 2015 and 2022, the total number of stunted children in OIC countries declined by 5.5 million, with two-thirds of this reduction (3.7 million) occurring in lower-middle income countries. Despite this progress, this group remained home to 33.7 million stunted children in 2022—55% of the OIC total.

Low-income OIC countries, meanwhile, accounted for the second largest share of the stunted population, with 17.3 million children, or 28% of the regional total in 2022. This group also had the highest stunting prevalence, though it declined from 35.0% in 2015 to 30.7% in 2022. In comparison, prevalence in lower-middle income countries fell from 32.4% to 27.8%, while high-income countries showed a slight increase, from 11.3% to 11.6%, and no change in absolute numbers. These trends underscore the critical importance of focusing on lower-middle and low-income OIC countries, which collectively account for over 80% of stunted children in the region.

Figure 3.18: Malnutrition in Children under 5 Years of Age



Source: SESRIC staff compilation based on data from UNICEF/WHO/World Bank Joint Child Malnutrition Estimates Database (May 2023), available at UNICEF [data.unicef.org].

Note: OIC regional estimates exclude the United Arab Emirates for 'Stunting', and Bahrain and the United Arab Emirates for 'Overweight', due to data unavailability. 'Wasting' estimates are for the latest year with available data between 2013 and 2022 for 127 countries, of which 50 are OIC countries (excluding Bahrain, Brunei Darussalam, Lebanon, Qatar, Saudi Arabia, Somalia, Syria, and the United Arab Emirates). HI: High-income countries, UMI: Upper-middle income countries, LMI: Lower-middle income countries, and LI: Low-income countries.

Childhood overweight—defined as excessive weight for height—has emerged as a growing global concern, even in low- and middle-income countries. Estimates show that the global

number of overweight children under five increased slightly from 36.2 million in 2010 to 38 million in 2015, before declining to 37 million in 2022. In the OIC region, the number of overweight children rose from 12.4 million in 2010 to 13.3 million in 2015, but then declined to 12.8 million in 2022, marking an overall increase of 0.4 million between 2010 and 2022, and a modest decrease of 0.5 million since 2015 (Figure 3.18). Throughout this timeframe, the OIC's share of the global total remained relatively stable, at around 34–35%.

In terms of prevalence, the global average remained almost unchanged—5.5% in both 2010 and 2015, rising only slightly to 5.6% in 2022. By comparison, the OIC region recorded a decline, from 6.0% in 2010 to 5.9% in 2015, and further to 5.5% in 2022—effectively closing the gap with the global average. This shift suggests that while the total number of overweight children in OIC countries remains substantial, some improvement has occurred in controlling the rate of increase.

While the overall prevalence of overweight in OIC countries has slightly decreased and now aligns with the global average, the burden remains significant, particularly in upper-middle and high-income OIC countries.

An analysis by income group provides further insights. Between 2015 and 2022, the total number of overweight children declined in high- and upper-middle income OIC countries, with upper-middle income countries registering the largest drop—from 5.37 million to 4.67 million. Overweight prevalence in this group also declined significantly, from 9.6% to 8.8%. In contrast, lower-middle and low-income OIC countries experienced small increases in the absolute number of overweight children: +0.11 million and +0.18 million, respectively. Prevalence in these groups remained relatively low but stable, with minor decreases of 0.1 percentage points to 4.8% in the lower-middle-income and 3.4% in low-income group. Notably, high-income OIC countries maintained the highest prevalence rate in both years—9.8% in 2015 and 2022—despite a slight decline in the number of affected children.

Wasting—defined as low weight-for-height—is a life-threatening form of acute malnutrition that significantly increases the risk of mortality among children under five. It is often the result of recent illness, food insecurity, or inadequate infant and young child feeding practices, and is highly sensitive to short-term shocks, such as conflict, displacement, or economic crises.

As of 2022, an estimated 50.8 million children globally—or 8.1% of all children under five—were affected by wasting (Figure 3.18). Of these, 19.1 million (37.5%) lived in OIC countries, while 31.6 million (62.3%) were in other developing countries. Developed countries accounted for a negligible share (0.1%), highlighting the strong link between wasting and systemic vulnerabilities in low-resource settings.

The average wasting prevalence in the OIC region stood at 8.3%, slightly above the global average (8.1%), but below the 8.7% observed in non-OIC developing countries. This overall figure masks considerable variation across income groups and countries. In lower-middle income OIC countries, which accounted for over half (54.2%) of the OIC's wasted children, 8.5% of under-five children were affected. In low-income countries, the prevalence was even higher at 9.9%, and this group represented 26.7% of all wasted children in the OIC.

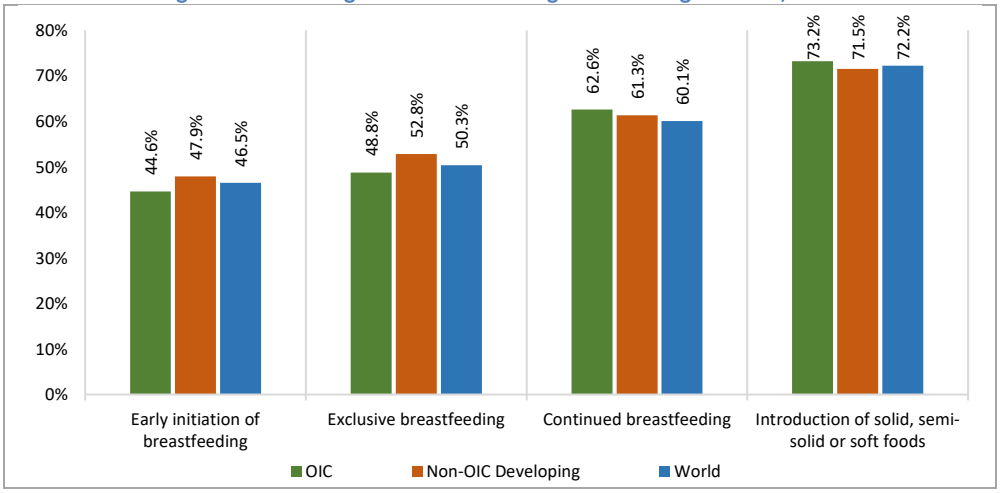
Wasting is particularly severe in several OIC countries. Latest available data show that prevalence exceeded 15%—a critical threshold defined by WHO—in Burkina Faso, Bangladesh, Yemen, Sudan, and Senegal, while more than 10% of children were affected in Mauritania, Guinea-Bissau, Niger, Mali, Djibouti, Indonesia, and Libya.[32] These figures reflect serious nutritional emergencies that require urgent attention and scale-up of therapeutic feeding programmes, alongside efforts to improve access to safe food, clean water, and basic health services.

3.6.2. Feeding Practices[33]

Proper infant and young child feeding during the first two years of life is fundamental to child survival, health, and development. International guidelines from UNICEF and the WHO recommend:

- Early initiation of breastfeeding (within the first hour of birth),
- Exclusive breastfeeding for the first six months,
- Continued breastfeeding up to two years and beyond, and
- The introduction of safe, age-appropriate complementary foods beginning at six months.

Figure 3.19: Coverage of Infant and Young Child Feeding Practices, 2022



Source: SESRIC staff compilation based on data from UNICEF Global databases on Infant and Young Child Feeding, October 2023 [data.unicef.org].

Note: Country data for the most recent year available between 2012 and 2022. **Early initiation of breastfeeding:** Percentage of children born in the last 2 years who were put to the breast within one hour of birth. **Exclusive breastfeeding:** Percentage of infants 0–5 months of age who are fed exclusively with breast milk. **Introduction of solid, semi-solid or soft foods:** Percentage of infants 6–8 months of age who consumed solid, semisolid or soft foods during the previous day. **Continued breastfeeding:** Percentage of children 12–23 months of age who were fed breast milk during the previous day.

[32] The WHO, in its classification of the public health severity of malnutrition based on the prevalence of wasting, outlines the following thresholds: <5%: acceptable, 5–9%: poor, 10–14%: serious, ≥15%: critical (WHO, 2000: 40).

[33] Statistics under this subheading relate only to low- and middle-income developing countries, as data for developed and high-income developing countries are only available in few cases.

Evidence shows that implementing these practices could significantly reduce neonatal morbidity and mortality (Kebede et al., 2025), making them one of the most cost-effective interventions for improving early childhood outcomes. Despite their proven benefits, however, these optimal feeding practices remain underutilized in many parts of the world (Figure 3.19). According to the latest data, less than half of infants globally were breastfed within one hour of birth, while just over half (50.3%) were exclusively breastfed during the first five months of life. Performance in the OIC region was slightly below that of non-OIC developing countries for both early initiation and exclusive breastfeeding. In 2022, 44.6% of infants in OIC countries were breastfed within one hour of birth, compared to 47.9% in non-OIC developing countries. Similarly, 48.8% of infants in OIC countries were exclusively breastfed during the first five months of life, slightly below the 52.8% observed in non-OIC developing countries.

In contrast, OIC countries performed marginally better in continued breastfeeding and complementary feeding practices. The average rate of continued breastfeeding at age two was 62.6% in OIC countries, compared to 61.3% in non-OIC developing countries. Likewise, the introduction of solid, semi-solid, or soft foods at 6–8 months was reported for 73.2% of infants in the OIC region, compared with 71.5% in non-OIC developing countries.

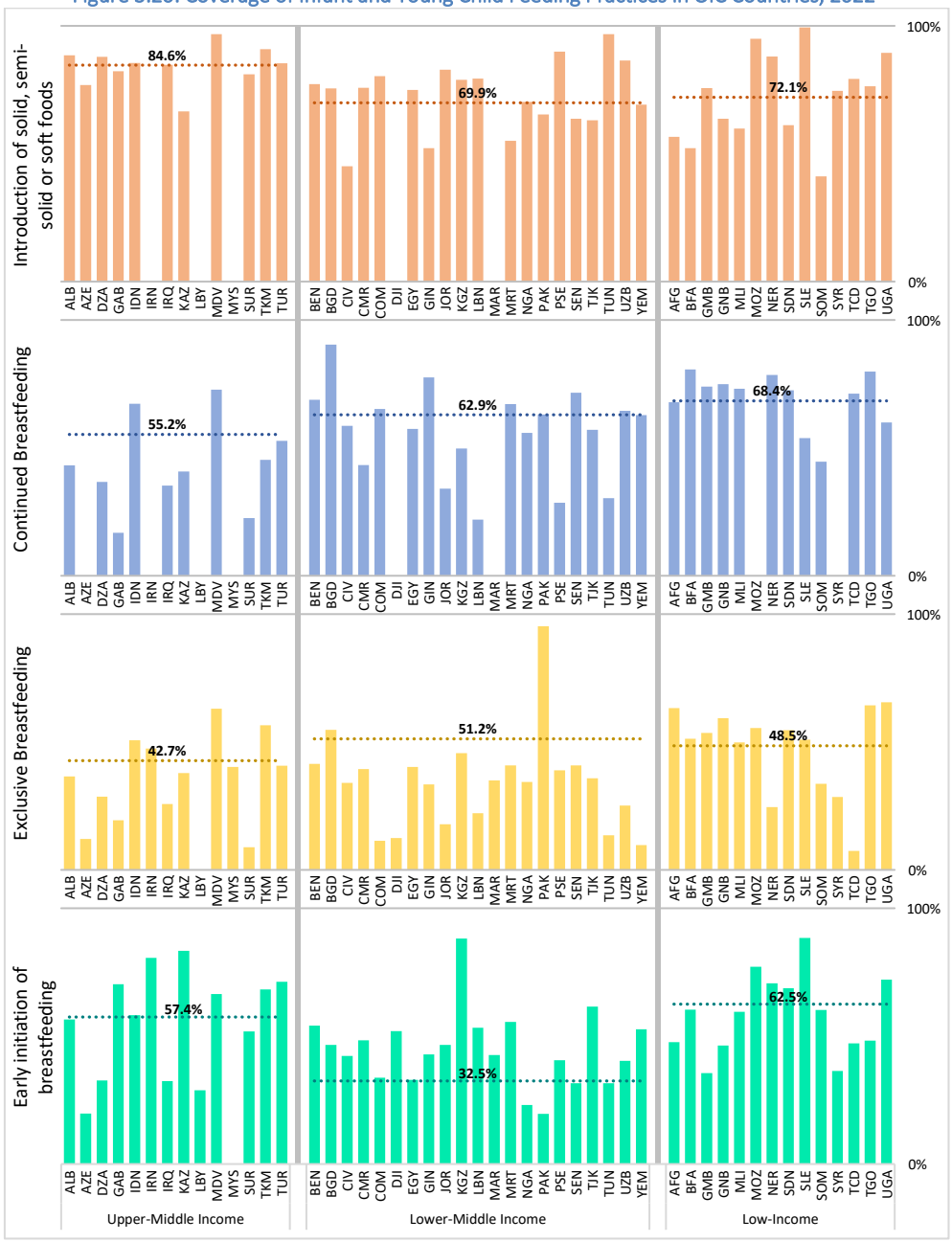
Feeding practices vary widely across OIC countries and income groups (Figure 3.20). The percentage of infants breastfed within one hour of birth ranged from just 19.6% in Pakistan to 88.4% in Sierra Leone. Interestingly, low-income countries had the highest average rate (62.5%), followed by upper-middle-income countries (57.4%), while lower-middle-income countries lagged behind (32.5%)—suggesting systemic gaps in delivery practices and maternal counselling in the latter group.

For exclusive breastfeeding, the differences between income groups were less pronounced. The highest average was observed in lower-middle-income countries (51.2%), followed by low-income countries (48.5%), and upper-middle-income countries (42.7%). Still, individual country performances varied greatly—rates were below 10% in Chad, Suriname, and Yemen, and above 60% in Pakistan, Uganda, Togo, Afghanistan, and Maldives.

Continued breastfeeding at age two also revealed substantial disparities. On average, 68.4% of children in low-income countries benefited from this practice, compared with 62.9% in lower-middle-income countries and just 55.2% in upper-middle-income countries. At the country level, fewer than 30% of children continued breastfeeding to age two in Gabon, Lebanon, Suriname, and Palestine, while the rate was about 80–90% in Bangladesh, Burkina Faso, and Togo.

In contrast to breastfeeding indicators, the introduction of complementary foods showed relatively strong and consistent coverage across the region. At least three in four children received complementary feeding in 30 out of 47 OIC countries with data. Upper-middle-income countries performed the best with an average of 84.6%, followed by low-income (72.1%) and lower-middle-income countries (69.9%). However, coverage was below 50% in Somalia and Côte d'Ivoire, indicating the need for targeted outreach.

Figure 3.20: Coverage of Infant and Young Child Feeding Practices in OIC Countries, 2022



Source: SESRIC staff compilation based on data from UNICEF Global databases on Infant and Young Child Feeding, October 2023 [data.unicef.org].
Note: Data for the most recent year available between 2012 and 2022. The dotted horizontal lines represent the income-group averages. See Annex A for the country codes and Annex B for the classification by income.

While OIC countries show promising performance in the timely introduction of complementary foods, significant gaps remain in early and exclusive breastfeeding practices,

especially in lower-middle-income countries. Greater investments in maternal health education, postnatal counselling, and supportive hospital delivery environments are essential to improve adherence to global feeding recommendations. Enhancing these practices is not only critical to reducing malnutrition and mortality, but also foundational to building healthier communities across the OIC region.

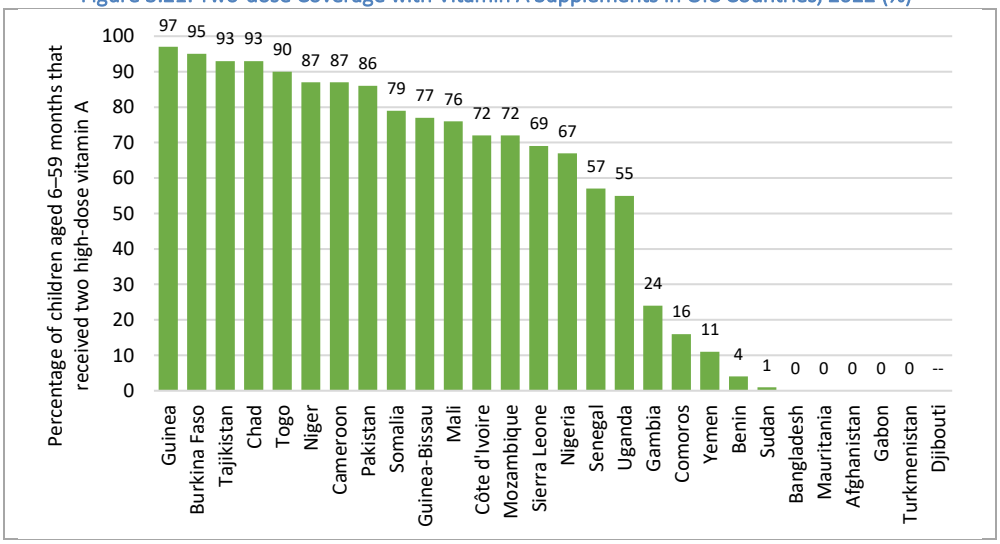
3.7. Micronutrient Deficiencies

Micronutrient deficiencies like deficiencies of vitamin A, iron, iodine, zinc and folic acid are very common among women and children in low-income developing countries, including some OIC countries. While efforts to improve the nutritional status of children through breastfeeding and complementary feeding are crucial, interventions like supplementation are regarded as a fast-track approach to improve the intake of vital micronutrients among women and children. This section presents a brief overview of efforts exerted by OIC countries to improve the micronutrient deficiencies among children.

3.7.1. Vitamin A Supplementation

Vitamin A deficiency remains a widespread public health concern, particularly in regions such as Africa and South-East Asia, where the burden of undernutrition is high. According to WHO (2011), it is not only the leading cause of preventable childhood blindness but also a key contributor to increased vulnerability to infections, disease severity, and mortality. Periodic, high-dose vitamin A supplementation (VAS) has long been recognised as a low-cost and effective intervention, shown to reduce all-cause mortality by 12 to 24% in children, making it a critical component of child survival strategies, especially in settings where dietary intake is inadequate (UNICEF, 2023a).

Figure 3.21: Two-dose Coverage with Vitamin A Supplements in OIC Countries, 2022 (%)



Source: UNICEF, Vitamin A supplementation coverage 2000-2022 for "current" priority country list, September 2023.

Note: The figure covers only the OIC countries identified as "priority" for current national VAS programming.

Of the 64 countries currently identified as 'priority' settings for national-level VAS programmes,[34] 54 had two-dose coverage estimates available for 2022. Based on this data, approximately 59% of children aged 6 to 59 months globally received the recommended two high-dose supplements in 2022. The coverage rates for OIC and non-OIC countries were broadly similar, standing at 57% and 62%, respectively, indicating comparable levels of implementation.

However, coverage varied considerably across the OIC region (Figure 3.21). While five OIC countries achieved coverage rates at 90% or above, successfully reaching the vast majority of their targeted child populations, five others failed to reach any children at all. This stark contrast underscores the uneven capacity and prioritisation of vitamin A programmes across the region. It is also important to highlight that vitamin A supplementation efforts were severely disrupted with the onset of the COVID-19 pandemic, with many countries experiencing setbacks due to constrained service delivery, mobility restrictions, and supply chain disruptions.

Moving forward, re-establishing and strengthening routine VAS delivery—especially through integrated child health days or community outreach platforms—will be essential for restoring and sustaining coverage in the post-pandemic period. For many OIC countries, particularly those with high child mortality and undernutrition rates, scaling up VAS remains a critical, lifesaving opportunity.

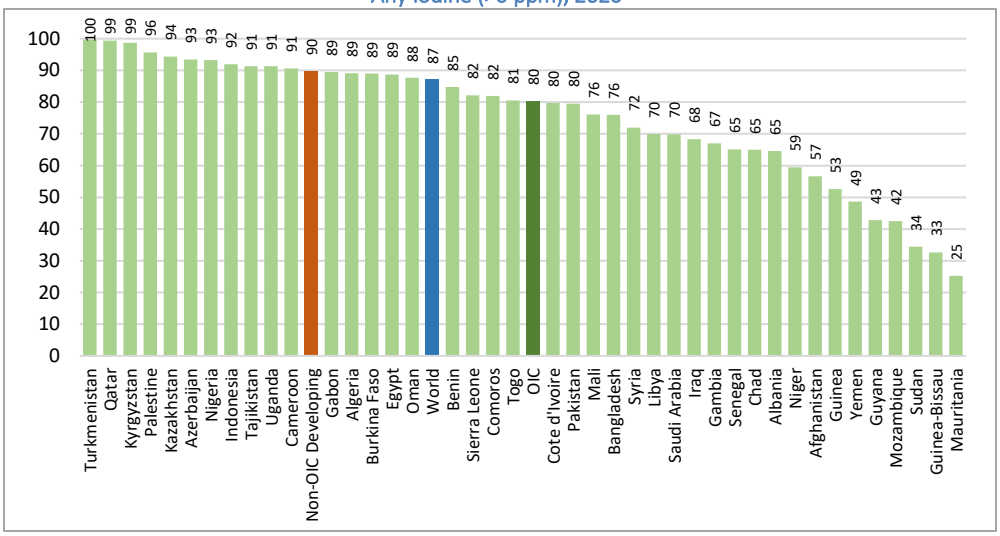
3.7.2. Iodized Salt Consumption[35]

The consumption of adequately iodized salt is a widely endorsed and cost-effective public health intervention for the prevention and control of iodine deficiency disorders (IDDs). Iodine is essential for healthy brain development, particularly during pregnancy and early childhood. Insufficient maternal iodine intake can lead to serious outcomes such as cretinism, a form of severe mental impairment, and is associated with poor cognitive development, reduced school performance, and lower productivity in adulthood (UNICEF, 2023b).

To address this challenge at scale, universal salt iodization has become the primary global strategy to improve iodine intake across entire populations. According to the latest available estimates, 87% of households globally consumed salt containing some level of iodine (defined as >0 parts per million, ppm) in 2020. In comparison, the average coverage across OIC countries stood at 80%, which, although significant, was still lower than the 90% average observed in non-OIC developing countries (Figure 3.22).

[34] The current UNICEF Global VAS Coverage Database 2000–2022 includes 64 countries identified as "priority" for current national VAS programming. Of those countries, 28 are OIC countries, shown on Figure 3.21. The priority country list for 2000-2017 included 82 countries but the list has been reduced to 64 since the 2018 reporting year. Countries requiring only sub-national programmes are not included among priority countries or in the database.
[35] Statistics under this subheading relate only to developing countries, as data for developed countries are not available.

Figure 3.22: Iodized Salt Consumption: Percentage of Households Consuming Salt with Any Iodine (>0 ppm), 2020



Source: UNICEF Global Database on Iodized Salt, December 2022 [data.unicef.org].
Note: Data for the latest year available between 2010 and 2020, with the exception of Burkina Faso (2021).

There is considerable variation in coverage among OIC countries. Of the 41 countries with available data, 11 had iodized salt coverage exceeding 90%, indicating near-universal protection from iodine deficiency. However, in six OIC countries, less than half of all households had access to iodized salt, leaving large segments of the population vulnerable to the long-term effects of iodine deficiency.

3.7.3. Iron Deficiency Anaemia

Iron deficiency remains one of the most widespread and persistent forms of malnutrition globally, affecting both developing and developed countries. However, it is especially prevalent among children and women in low-income settings, where diets are often poor in bioavailable iron and health systems struggle to deliver effective supplementation and prevention programmes. Among its many consequences, iron deficiency is the leading cause of anaemia, which can have serious repercussions for both maternal and child health. In children, it impairs physical growth, weakens immune function, and delays cognitive development. During pregnancy, it contributes to complications during childbirth and increases the risk of maternal and neonatal mortality (UNICEF, 2004).

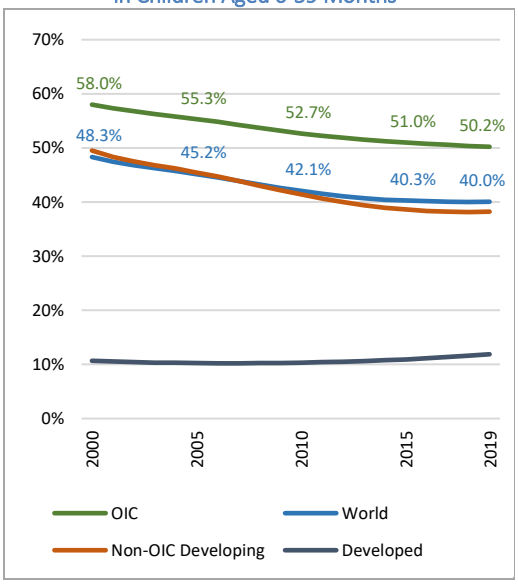
Prevalence of Anaemia in Children

As of 2019, an estimated 40.0% of children aged 6–59 months globally were affected by anaemia, reflecting a gradual decline from 48.3% in 2000. However, the burden remains concentrated in developing regions. OIC countries reported a significantly higher prevalence of 50.2%, down from 58.0% in 2000, marking a 7.8 percentage point reduction over the period. In comparison, non-OIC developing countries reduced anaemia prevalence from 49.5% to 38.2%, achieving a larger decline of 11.3 percentage points, while developed countries maintained consistently low levels, with a prevalence of just 11.9% in 2019.

These figures indicate that while progress has been made, OIC countries have lagged behind in reducing childhood anaemia and continue to bear a disproportionately high share of the global burden. Indeed, while OIC countries were home to 33.2% of anaemic children in 2000, this share rose steadily to 41.4% by 2019. In absolute terms, this translates to an estimated 110.5 million anaemic children under five living in OIC countries as of 2019.

Strikingly, nearly half of these children live in just four OIC countries: Nigeria, with 20.8% of the total, Pakistan (13.3%), Indonesia (8.3%), and Bangladesh (5.6%). These figures point to a concentrated burden in high-population countries, where interventions targeting child nutrition, maternal health, and iron supplementation can yield significant impact at scale.

Figure 3.23: Prevalence of Anaemia in Children Aged 6-59 Months



Source: SESRIC staff compilation based on data from WHO Global Health Observatory Database.
Note: Regional averages excludes Palestine and Türkiye due to unavailable data.

Anaemia prevalence among children varies widely across OIC regions, with Sub-Saharan Africa and South Asia facing the most severe burdens (Figure 3.24). In Sub-Saharan Africa, the situation is most alarming. All countries in the region had anaemia rates exceeding 50%, underscoring the region's urgent need for intervention. Alarmingly, over half of the countries reported prevalence rates above 65%, with Mali (79.0%), Burkina Faso (76.6%), and Guinea (73.8%) among the highest.

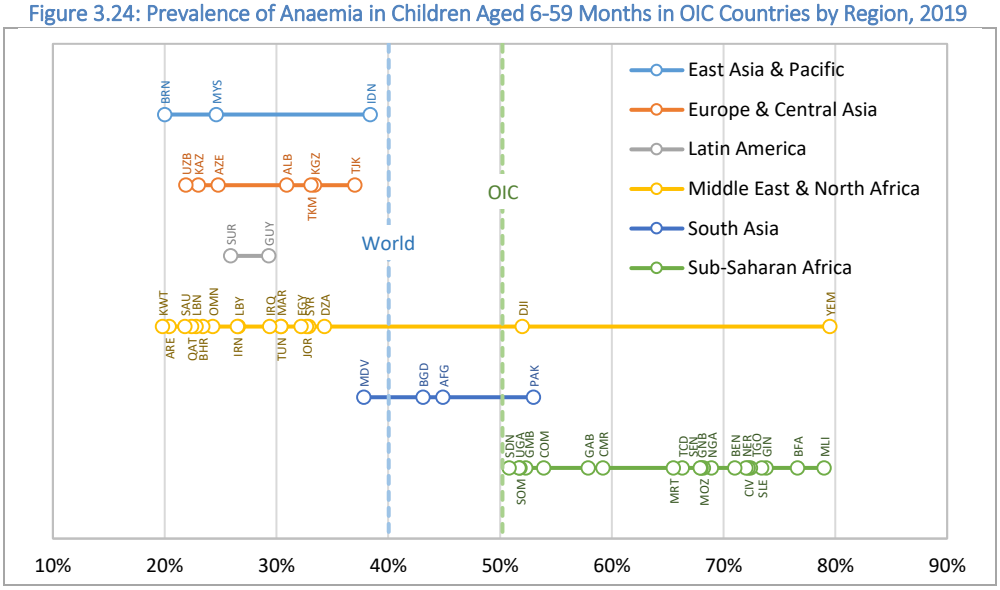
In South Asia, the average burden was similarly high, led by Pakistan, where 53% of children were anaemic. Afghanistan (44.9%) and Bangladesh (43.1%) also reported high prevalence, while Maldives recorded a lower—though still concerning—rate of 37.8%.

In contrast to the high burdens observed in Sub-Saharan Africa and South Asia, anaemia prevalence in children under five was relatively moderate across OIC countries in other regions. With the exception of Yemen (79.5%) and Djibouti (52.0%), all other OIC countries in the Middle East and North Africa, Europe and Central Asia, East Asia and the Pacific, and Latin America reported prevalence rates below the global average, generally falling within a range of 20% to 40%. These figures suggest a more manageable situation in these regions, though continued efforts are still needed to further reduce anaemia to optimal levels.

Concerning anaemia in women, the situation is more worrying. While progress was observed worldwide during the 2000s, this positive trend has reversed in recent years. According to the latest estimates, the global prevalence of anaemia in women of reproductive age (15-49) decreased from 29.4% in 2000 to 27.6% between 2010 and 2012, but has since increased

steadily to 30.7% in 2023, with particular contribution from developing countries. Notably, the trend in developed countries has also reversed, with anaemia prevalence continuously rising from 11.1% in 2004–2005 to 15.4% in 2023—an increase of more than four percentage points.

Figure 3.24: Prevalence of Anaemia in Children Aged 6-59 Months in OIC Countries by Region, 2019



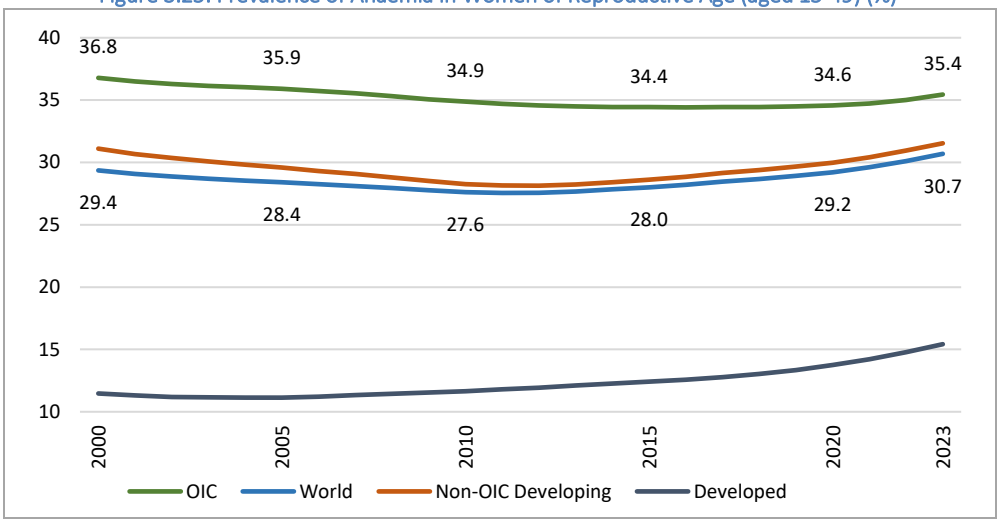
Source: SESRIC staff compilation based on data from WHO Global Health Observatory Database.
Note: The dotted vertical line represent the regional average. See Annex A for the country codes.

The situation in OIC countries reflects a similar pattern, though the reversal occurred slightly later. The average anaemia prevalence among women in OIC countries declined from 36.8% in 2000 to a low of 34.4% between 2014 and 2018, but has since begun to rise, reaching 35.4% in 2023. While still below the peak observed at the start of the century, the recent uptick raises concern given the growing female population. In absolute terms, the number of anaemic women in OIC countries persistently increased from 119.9 million in 2000 to 183.9 million in 2023—an increase of about 64 million. Over this period, the OIC's share of the global burden of anaemia among women rose from 26% to more than 30%, indicating that progress in the region has not kept pace with global trends.

Within the OIC, anaemia prevalence among women varies substantially by region, with Sub-Saharan Africa, South Asia, and the Middle East and North Africa carrying the bulk of the burden. As of 2023, these three regions together accounted for approximately 80% of all anaemic women in the OIC, reflecting a combination of high prevalence and large population size.

Sub-Saharan Africa remains the most affected region. While the prevalence rate gradually decreased from 49.3% in 2000 to 40.8% in 2023, the number of anaemic women in this region increased from 36.5 million to 59.3 million over the same period, making up 32.2% of the total anaemic women in OIC countries.

Figure 3.25: Prevalence of Anaemia in Women of Reproductive Age (aged 15-49) (%)



Source: SESRIC staff compilation based on data from WHO Global Health Observatory Database.

In contrast with Sub-Saharan Africa, anaemia prevalence among women in South Asia continued to rise steadily, reaching 42.8% in 2023—the highest among all OIC regions. In addition, the number of anaemic women almost doubled, increasing from 26.2 million in 2000 to 51.1 million in 2023, or 27.8% of the OIC total.

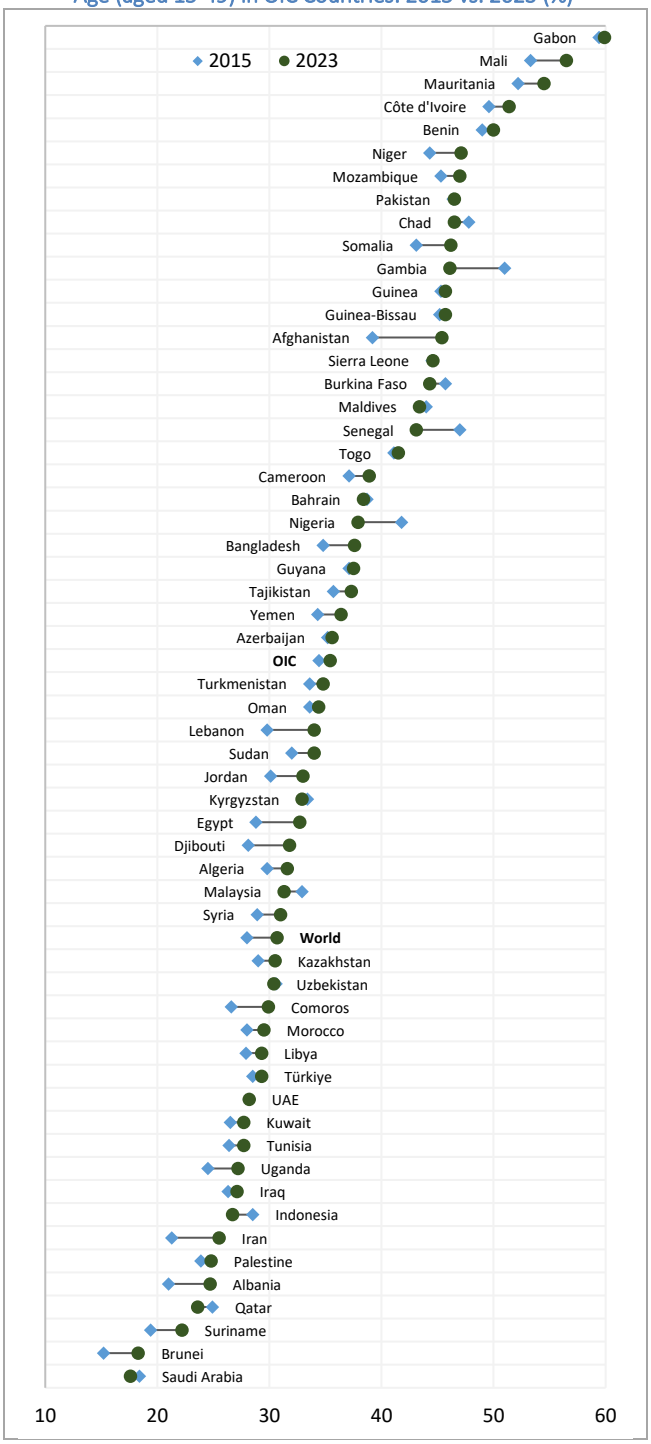
The MENA region exhibited a somewhat different trajectory. While prevalence initially declined from 30.4% in 2000 to 26.7% around 2013–2015, it has since increased again, reaching 29.4% in 2023. However, the number of anaemic women rose more steadily over the period—from 23.9 million to 37.0 million, driven by population growth. This region accounted for 20.1% of all anaemic women in OIC countries in 2023.

In the other regions, the situation is somewhat more stable. In Europe and Central Asia, anaemia prevalence declined from 35.8% in 2000 to 29.8% in 2018–2019 before slightly rising to 30.8% in 2023. Similarly, in East Asia and the Pacific, prevalence stabilized at 27.2% in recent years (2021–2023) after gradually falling from 31.8% in 2000. In Latin America, where the number of OIC countries is limited, anaemia prevalence declined from 39.1% in 2000 to 29.5% in 2013, followed by slight increases in the subsequent years, reaching 31.0% in 2023.

Within the OIC region, significant variations are also observed by country in both prevalence rates and the number of affected women. The overall picture points to slow and uneven progress, with worrying reversals in many countries.

Between 2015 and 2023, anaemia prevalence increased in 41 OIC countries, declined in 13, and remained stable in 3 (United Arab Emirates, Sierra Leone, and Pakistan—with negligible change of 0.1 percentage points or less) (Figure 3.26). These trends indicate that while some countries have made measurable gains, the majority have seen stagnation or setbacks—often driven by conflict, economic instability, and disruptions to nutrition and health services.

Figure 3.26: Prevalence of Anaemia in Women of Reproductive Age (aged 15-49) in OIC Countries: 2015 vs. 2023 (%)



Source: SESRIC staff compilation based on data from WHO Global Health Observatory Database.

The most pronounced rise was observed in Afghanistan, where the prevalence jumped by 6.2 percentage points, from 39.2% to 45.4%. Other countries with notable increases include Iran and Lebanon (each by 4.2 points, reaching 25.5% and 34.0%, respectively), Egypt (up 3.9 points, from 28.8% to 32.7%), and Albania (up 3.7 points, from 21.0% to 24.7%).

Conversely, the most significant improvement was in The Gambia, where the prevalence dropped by 4.9 percentage points, from 51.0% to 46.1%. Nigeria and Senegal each reduced their prevalence by 3.9 points, reaching 37.9% and 43.1%, respectively. Smaller but positive declines were also recorded in Indonesia (down 1.8 points, to 26.7%) and Burkina Faso (down 1.4 points, to 44.3%).

As of 2023, 19 OIC countries recorded anaemia prevalence rates below the global average of 30.7%, with the lowest rates in Saudi Arabia (17.6%) and Brunei Darussalam (18.3%), showing that progress is possible with sustained intervention and investment. In contrast, anaemia levels exceeded the 50% threshold—classified by WHO as a severe public health problem—in five OIC countries: Gabon (59.9%),

Mali (56.5%), Mauritania (54.5%), Côte d'Ivoire (51.4%), and Benin (50.0%). Notably, all five are located in Sub-Saharan Africa, reaffirming the region's status as the most severely affected within the OIC.

In terms of number, the burden of anaemia among women of reproductive age in the OIC region remains highly concentrated in a handful of populous countries. The five countries with the highest number of anaemic women in 2023—Pakistan (28.2 million), Nigeria (20.6 million), Indonesia (19.4 million), Bangladesh (18.4 million), and Egypt (9.4 million)—together accounted for more than half (52.2%) of all anaemic women across the OIC region. This concentration underscores the importance of prioritising large-scale interventions in these countries to accelerate overall regional progress.

CHAPTER 4

Medicines, Vaccines, and Medical Technologies

Medicines, vaccines, and medical technologies play a fundamental role in building resilient health systems and ensuring the well-being of populations. As key components of healthcare delivery, they are essential not only for treating and preventing disease, but also for strengthening the capacity of health systems to respond to emerging health threats. A well-functioning pharmaceutical sector, underpinned by sustainable financing, research, and regulatory frameworks, is indispensable for ensuring access to safe, effective, and affordable medical products. Likewise, medical devices—ranging from simple tools to complex diagnostic and therapeutic equipment—are critical to the prevention, diagnosis, and management of a wide array of health conditions. Recognising this, the WHO has placed improved access to quality-assured medical technologies among its strategic global priorities.

The OIC Strategic Health Programme of Action (OIC-SHPA) places strong emphasis on medicines, vaccines, and medical technologies as strategic levers for health system strengthening. Its approach encourages effective use of health data, reinforces quality assurance and regulatory oversight, and promotes cooperation among member states and international partners. It also underscores the importance of investing in education and R&D infrastructure, building local production capacity, and fostering innovation to enhance health outcomes.

In alignment with the OIC-SHPA, this chapter examines the current state of medicines, vaccines, and medical technologies in OIC countries. It reviews trends in production, availability, trade, and regulatory capacity, drawing on the most recent data and highlighting progress achieved over the course of the Strategy. At the same time, it identifies persistent gaps and structural challenges that continue to hinder equitable access. The chapter concludes with forward-looking policy recommendations to guide OIC countries in shaping a more self-reliant, innovative, and inclusive health ecosystem beyond the current SHPA framework.

4.1. Medicines

Pharmaceuticals have long been central to human development, playing a transformative role in reducing morbidity and mortality, improving quality of life, and shortening hospital stays. Thanks to ongoing innovation in the pharmaceutical sector, thousands of medications are now available to prevent, treat, or manage diseases that were once fatal. As a result, the pharmaceutical industry has become an indispensable pillar of modern health systems and a critical enabler of sustainable development.

Beyond its health impact, the pharmaceutical sector holds strategic economic significance. It is among the fastest-growing global industries, contributing to employment creation, research and innovation, and foreign exchange earnings in many countries. Yet, the benefits of this progress remain unequally distributed. A persistent and deeply concerning reality is that millions of people—primarily in low- and middle-income countries—continue to suffer or die each year due to lack of access to affordable, safe, and effective medicines.

> "*Medicines account for 20–60% of health spending in developing countries, with up to 90% of the population purchasing medicines through out-of-pocket payments, making medicines the largest family expenditure item after food. This means medicines are unaffordable for large sections of the global population and a major burden on government budgets.*" (WHO, 2024).

Many OIC countries face significant pharmaceutical challenges, including limited or no domestic manufacturing capacity, high dependency on imports, and weak supply chain infrastructure. In several countries, the local pharmaceutical industry meets only a small portion of national demand, resulting in vulnerabilities during emergencies and economic shocks.

This section explores the current state of medicines across OIC countries by examining global and regional market trends, medicine use patterns, the availability of essential medicines, and pharmaceutical trade dynamics. The aim is to assess progress, identify persistent gaps, and highlight policy-relevant insights to guide improvements in pharmaceutical access and equity.

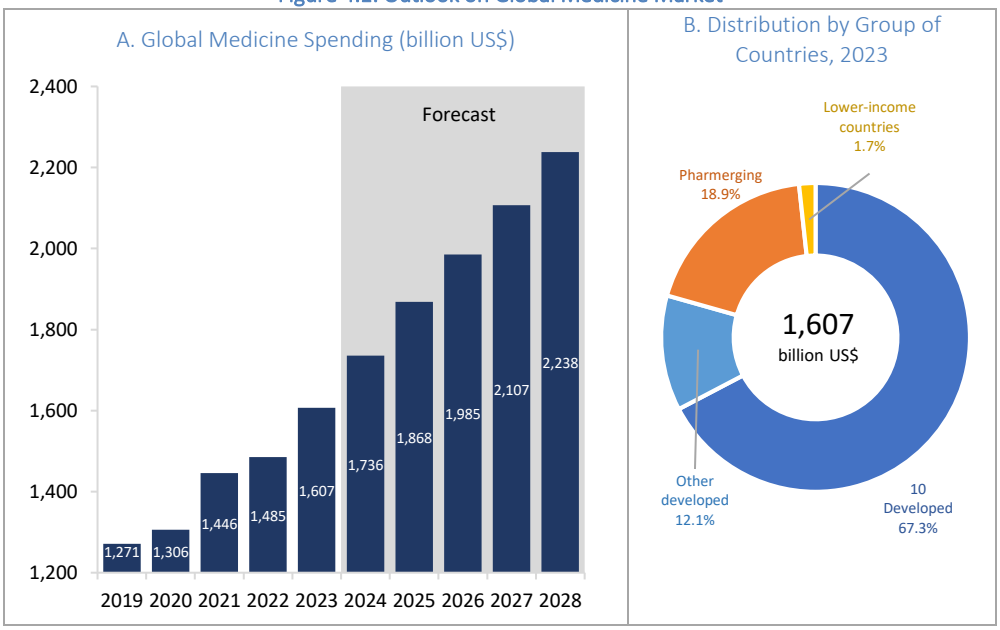
4.1.1. Global Medicine Market

The global medicine sector has shown rapid growth over the years and has emerged as one of the fastest-growing sectors in the world. According to IQVIA (2024), global spending on medicines slowed in 2022 following a significant rebound in 2021 as markets recovered from the COVID-19 pandemic; however, a notable increase was observed again in 2023. Figure 4.1A shows that global spending on medicines, using invoice price levels, slightly increased from US$ 1,446 billion in 2021 to US$ 1,485 billion in 2022, corresponding to an increase of 2.7%. In 2023, it jumped by 8.2% to US$ 1,607 billion. Growth[36] in the global medicine

[36] Compound annual growth rate (CAGR) at constant US$

market, which was 7.3% during the 2019–2023 period, is expected to remain in the range of 6–9% through 2028, with the total market size exceeding US$ 2.2 trillion. Medicine spending in North America, Eastern and Western Europe, Latin America, and the Africa & Middle East region—where many OIC countries are located—is expected to grow by more than 30% over the five years leading up to 2028. This growth reflects a combination of rising demand due to population growth and a transition toward higher-cost pharmaceutical products.

Figure 4.1: Outlook on Global Medicine Market



Source: IQVIA (2024).

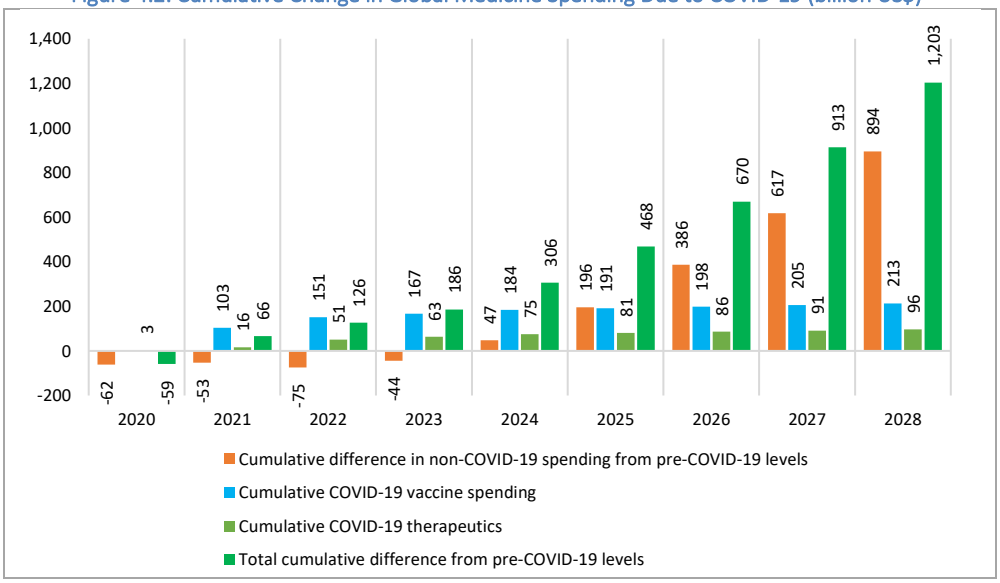
Note: This outlook is excluding the separate impact of spending on COVID-19 vaccines and therapeutics that are modelled separately (Figure 4.2). Developed markets is a term related to World Bank Income bands and includes high-income and upper-middle-income countries. The 10 developed countries are the 10 largest high-income countries (U.S., Japan, Germany, France, Italy, Spain, UK, Canada, Australia, and South Korea). Pharmerging includes countries with per capita GDP in purchasing power parity (PPP) <$30,000/year and forecasted 5-year aggregate pharma sales growth >$1bn (absolute or rounded) in at least two forecasts. These countries are Argentina, **Bangladesh**, Brazil, Chile, China, Colombia, **Egypt**, India, **Indonesia**, Mexico, **Pakistan**, Philippines, South Africa, Thailand, and Vietnam. Lower-income countries includes lower-middle and low-income countries, with the exception of Pharmerging markets.

According to IQVIA (2024), the global medicine market is highly concentrated in developed countries (Figure 4.1B). The 10 largest high-income countries accounted for about two-thirds (67.3%) of global spending on medicines in 2023, while this share rose to 79.4% when including all developed countries. The 14 ‘pharmerging’ countries—four of which are OIC members—spent approximately US$ 304 billion on medicines in 2023, representing 18.9% of global spending. The spending volume in these countries is expected to grow at a compound annual growth rate (CAGR) of 10–13% through 2028, a rate higher than that of all other country groups. In contrast, lower-income countries, which include most OIC members, accounted for only 1.7% of global medicine spending in 2023.

The COVID-19 pandemic has entered a new phase in which vaccines and therapeutics are now widely available, but COVID-19-related spending continues to accumulate globally

(Figure 4.2). Cumulative global spending related to COVID-19—including vaccines, therapeutics, and disruptions—was estimated at US$ 186 billion as of 2023 and is projected to exceed US$ 1.2 trillion by 2028 (IQVIA, 2024). The phased rollout of vaccines and booster shots contributed US$ 167 billion in incremental global spending in 2023, and this is expected to rise to US$ 213 billion by 2028. Cumulative spending on COVID-19 vaccines and therapeutics alone is projected to total US$ 309 billion over the 2020–2028 period.

Figure 4.2: Cumulative Change in Global Medicine Spending Due to COVID-19 (billion US$)



Source: IQVIA (2024).

At the same time, the cumulative reduction in spending compared to the pre-pandemic outlook—due to disruptions caused by COVID-19—reached US$ 44 billion by 2023. However, from 2024 onwards, global medicine spending began to rebound sharply, turning positive in 2024 and projected to continue increasing rapidly through 2028. This trend reflects a strong post-pandemic recovery and growing expenditures in the global pharmaceutical market.

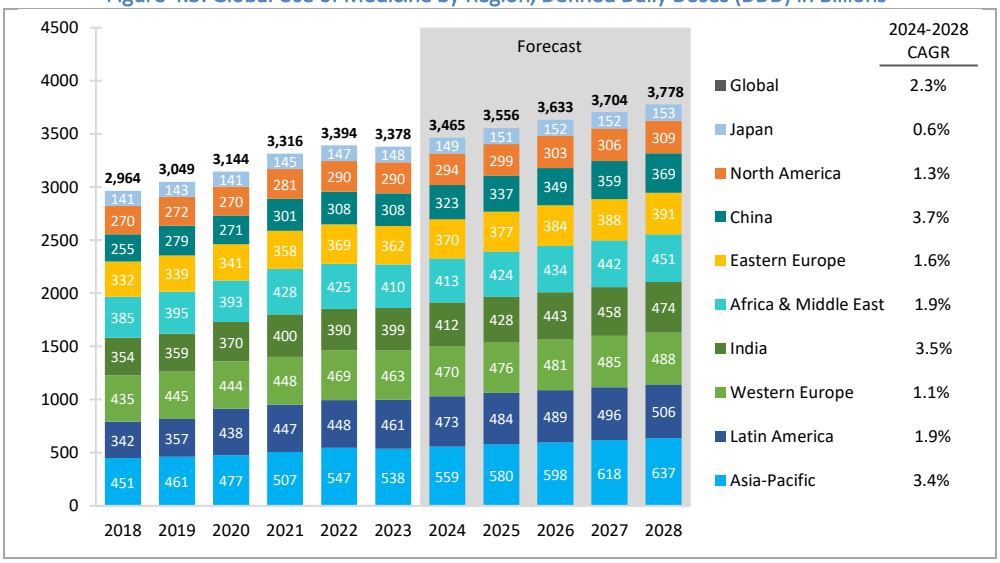
4.1.2. Medicine Use

The global use of medicines has been steadily increasing over the past decade; however, this upward trend is expected to decelerate across all regions in the coming years. According to the IQVIA report (2024), global medicine consumption grew by 14% between 2019 and 2023—equivalent to a CAGR of 2.6%—primarily due to improved access to medicines across various regions. Looking ahead, this growth is projected to slow to a CAGR of 2.3% through 2028, with China, India, and the broader Asia Pacific region expected to exceed the global average in volume growth (Figure 4.3). Lower-income countries have continued to face limited access to medicines over the past five years—a challenge that is expected to persist in the near future.

Following a sharp post-pandemic rebound in 2021, when global medicine use rose by 5.5% to reach 3,316 billion defined daily doses (DDD), growth slowed to 2.4% in 2022 (3,394 billion

DDD) and then declined slightly by 0.5% in 2023 (3,378 billion DDD), indicating an emerging global slowdown. The Africa and Middle East region—which includes a large number of OIC countries—mirrored this global pattern. The region experienced an 8.9% increase in medicine use in 2021, but this was followed by a marginal 0.7% decline in 2022 and a more notable 3.5% drop in 2023. Over the next five years, total medicine use in the region is projected to increase modestly at an average annual rate of 1.9% (Figure 4.3).

Figure 4.3: Global Use of Medicine by Region, Defined Daily Doses (DDD) in Billions



Source: IQVIA (2024).
Note: The Asia-Pacific region does not include China, India, and Japan that are reported separately.

However, when adjusted for population, medicine use in the Africa and Middle East region reveals a more concerning picture. All projected volume increases are attributed to population growth, rather than rising per capita use. With approximately 200 DDD per capita in 2023, the region continues to lag behind all other global regions in per capita medicine consumption. In fact, the region's per capita usage declined by 1% annually between 2019 and 2023 and is expected to decline slightly further—by 0.2% per year—through 2028.

The disparities are also apparent across income levels. High-income countries, such as Japan and those in Western Europe, consistently record more than twice the per capita medicine use of lower-income regions (IQVIA, 2024). This trend underscores the persistent inequality in medicine access and utilisation across countries at different stages of development.

4.1.3. Availability of Essential Medicines

Like many other developing regions, OIC countries face a wide range of socio-economic challenges, including the development of efficient and effective health care systems. Within these systems, persistent issues such as inadequate infrastructure and shortages of qualified medical personnel are widespread. Among the most critical challenges, however, is the limited availability and accessibility of essential medicines.

The importance of ensuring access to affordable essential medicines has long been recognised globally. Both the Millennium Development Goals (MDGs, Target 8.E) and the Sustainable Development Goals (SDGs, Target 3.8) emphasise the need for improved access in developing countries. Nonetheless, access remains inadequate in many low- and middle-income countries, including those in the OIC group.

Data from the 2015 and 2023 WHO Country Capacity Surveys, which assess the availability of medicines for noncommunicable diseases (NCDs), reveal both progress and persistent disparities. Table 4.1 summarises the percentage of countries reporting the general availability of 11 key NCD medicines in primary care facilities within the public sector. Globally, aspirin, thiazide diuretics, and metformin were among the most widely available medicines in 2015, reported by 80%, 80%, and 75% of countries, respectively. In 2023, while availability increased for all medicines, aspirin remained the most widely available (90%), followed by metformin (89%) and thiazide diuretics (88%). At the lower end of the spectrum, steroid inhalers, statins, and sulphonylurea(s) showed the least availability in both 2021 and 2023.

Encouragingly, OIC countries collectively reported improved availability of all NCD medicines in question between the two survey years, except for thiazide diuretics. The most significant gains were observed in statins (+25 percentage points), calcium channel blockers (+16), and steroid inhalers (+14). As of 2023, the most widely available NCD medicines across OIC countries were aspirin (88%), metformin (82%), and calcium channel blockers (79%), while several essential medicines remained less accessible, particularly sulphonylurea(s) (59%), steroid inhalers (61%), and statins (63%).

Moreover, general availability in the OIC region remained below the global average in all 11 medicines, with shortfalls of 17 percentage points for sulphonylurea(s), 15 points for bronchodilators, and 13 points for insulin, statins, and thiazide diuretics. These gaps point to continued inequities in access to newer or costlier medicines, particularly in lower-income OIC countries.

Still, significant disparities persist within the OIC group, particularly between income groups. All high-income OIC countries reported full availability of all 11 essential NCD medicines in 2023 and with few exceptions in 2015. In contrast, low-income OIC countries—where availability was already limited in 2015—saw stagnations or insufficient increases in 2023 to narrow the gap: Availability of bronchodilators (40%), sulphonylurea(s) (33%), and thiazide diuretics (53%) remained unchanged, while notable increases were recorded in the availability of calcium channel blockers (by 40 percentage point to 60%), angiotensin-converting enzyme (ACE) inhibitors (by 33 points to 53%), and beta blockers (by 33 points to 60%). Alarmingly, as of 2023, only 27% of these countries reported general availability of statins, and just 33% had access to steroid inhalers and sulphonylurea(s), highlighting severe inequities in access. This shows that, while the OIC averages in 2023 indicate progress, considerable work is needed to bridge intra-group inequalities and close the gap with higher-performing regions.

Table 4.1: Percentage of Countries with Medicines Generally Available

		Groups of Countries				OIC Countries by Income Group			
		OIC	World	Non-OIC Developing	Developed	High income	Upper middle income	Lower middle income	Low income
Angiotensin-Converting Enzyme (ACE) Inhibitors	2015	63%	72%	67%	97%	88%	79%	74%	20%
	2023	75%	84%	85%	95%	100%	93%	68%	53%
	Change	▲13%	▲12%	▲18%	▼3%	▲13%	▲14%	▼5%	▲33%
Aspirin	2015	80%	80%	74%	97%	100%	86%	74%	73%
	2023	88%	90%	91%	92%	100%	93%	79%	87%
	Change	▲7%	▲10%	▲17%	▼5%	■0%	▲7%	▲5%	▲13%
Beta Blockers	2015	64%	71%	65%	97%	100%	86%	63%	27%
	2023	75%	81%	80%	95%	100%	93%	63%	60%
	Change	▲11%	▲10%	▲14%	▼3%	■0%	▲7%	■0%	▲33%
Bronchodilators	2015	63%	70%	66%	92%	100%	79%	53%	40%
	2023	66%	81%	84%	95%	100%	86%	58%	40%
	Change	▲4%	▲11%	▲18%	▲3%	■0%	▲7%	▲5%	■0%
Calcium Channel Blockers	2015	63%	69%	62%	97%	88%	79%	74%	20%
	2023	79%	84%	84%	95%	100%	93%	74%	60%
	Change	▲16%	▲15%	▲21%	▼3%	▲13%	▲14%	■0%	▲40%
Insulin	2015	55%	66%	61%	95%	100%	71%	47%	27%
	2023	64%	78%	79%	95%	100%	86%	47%	47%
	Change	▲9%	▲12%	▲17%	■0%	■0%	▲14%	■0%	▲20%
Metformin	2015	70%	75%	70%	95%	100%	86%	68%	40%
	2023	82%	89%	90%	95%	100%	93%	84%	60%
	Change	▲13%	▲14%	▲20%	■0%	■0%	▲7%	▲16%	▲20%
Statins	2015	38%	57%	53%	97%	100%	64%	11%	13%
	2023	63%	75%	75%	95%	100%	93%	53%	27%
	Change	▲25%	▲18%	▲21%	▼3%	■0%	▲29%	▲42%	▲13%
Steroid Inhalers	2015	46%	54%	45%	92%	88%	57%	47%	13%
	2023	61%	72%	71%	92%	100%	93%	42%	33%
	Change	▲14%	▲18%	▲26%	■0%	▲13%	▲36%	▼5%	▲20%
Sulphonyl urea(s)	2015	55%	63%	58%	89%	100%	64%	47%	33%
	2023	59%	76%	79%	92%	100%	79%	47%	33%
	Change	▲4%	▲12%	▲21%	▲3%	■0%	▲14%	■0%	■0%
Thiazide Diuretics	2015	79%	80%	74%	97%	100%	86%	84%	53%
	2023	75%	88%	92%	95%	100%	86%	74%	53%
	Change	▼4%	▲8%	▲18%	▼3%	■0%	■0%	▼11%	■0%

Source: SESRIC staff compilation based on data from WHO Global Health Observatory, Noncommunicable diseases: National capacity.
Note: "Generally available" was defined as being available in 50% or more pharmacies in primary care facilities of the public health sector.

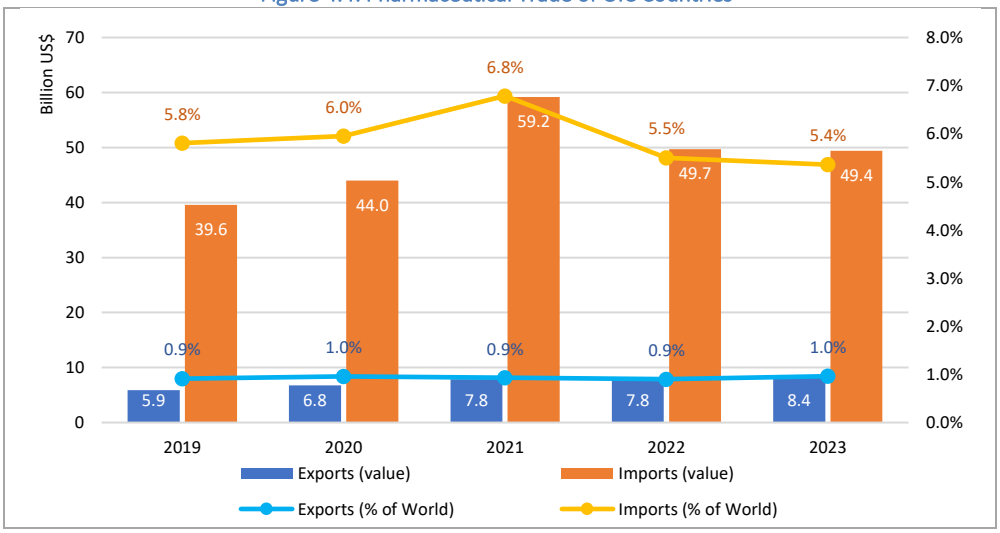
Essential medicines are indispensable to the safe and effective prevention and treatment of diseases. Yet, as these findings demonstrate, equitable and timely access remains elusive in many low- and middle-income OIC countries. This limited availability in the public sector often stems from insufficient public financing and inefficiencies in procurement and distribution systems. The COVID-19 pandemic further exacerbated these issues, disrupting global supply chains and intensifying existing access barriers, particularly in low-income settings.

While some progress has been made under the framework of the OIC-SHPA, serious challenges persist. These include inadequate public sector investment in medicine procurement, inconsistent supply chains, limited affordability, and poor storage conditions. Moving forward, OIC countries must prioritise the strengthening of national medicines supply systems and ensure the continuous availability of affordable essential medicines through improved public financing, more efficient procurement processes, and stronger regulatory oversight.

4.1.4. Pharmaceutical Trade

Global pharmaceutical trade has followed an upward trend over the 2019–2023 period, particularly during the three years following the onset of the COVID-19 pandemic. After recording a sharp annual growth rate of 19.7% in 2021, global pharmaceutical trade[37] growth slowed to 3.7% in 2022 and remained virtually stagnant in 2023, with total trade value reaching approximately US$ 930 billion. However, similar to pharmaceutical production, global pharmaceutical trade is highly concentrated in developed countries, which accounted for nearly 90% of global exports and absorbed about three-quarters of global imports during this five-year period. As a group, developed countries are net exporters of pharmaceutical products, while developing countries remain net importers.

Figure 4.4: Pharmaceutical Trade of OIC Countries



Source: SESRIC staff compilation based on data from UN COMTRADE Database, supplemented by estimates from WTO STATS.
Note: Pharmaceutical products are those classified under Division 54 "Medicinal and pharmaceutical products" of the Standard International Trade Classification (SITC).

Being part of the broader group of developing economies, OIC countries are also net importers of pharmaceuticals, with a very low share in global pharmaceutical trade. As illustrated in Figure 4.4, the pharmaceutical exports of OIC countries followed an upward trajectory, growing from US$ 5.9 billion in 2019 to US$ 8.4 billion in 2023. Still, as a group,

[37] Average of global exports and imports.

OIC countries accounted for only about 1% of total global pharmaceutical exports throughout the period.

Due to limited production capacity and technological constraints, many OIC countries are unable to meet domestic pharmaceutical demand through local production and must rely heavily on imports. The pharmaceutical imports of OIC countries rose from US$ 39.6 billion in 2019 to US$ 49.4 billion in 2023. The most substantial increase occurred in 2021, with imports surging by 34.7%, nearly double the global average. This spike raised the OIC's share of global pharmaceutical imports from 6.0% in 2020 to 6.8% in 2021. However, the share declined in the following years, falling to 5.5% in 2022 and 5.4% in 2023, along with decreases in import values.

OIC pharmaceutical exports remain highly concentrated, with 10 OIC countries accounting for over 90% of the group's total exports in 2023 (Table 4.2). Türkiye was the leading OIC exporter, with exports worth over US$ 2.2 billion, representing 26.9% of the group total. Together with the United Arab Emirates, the two countries made up nearly half (49.6%) of total OIC pharmaceutical exports.

Table 4.2: OIC Top-10 Pharmaceutical Exporters and Importers, 2023

Exports				Imports			
Rank	Country	Million US$	Share in Total OIC	Rank	Country	Million US$	Share in Total OIC
1	Türkiye	2,249	26.9%	1	Saudi Arabia	8,171	16.5%
2	UAE	1,901	22.7%	2	UAE	6,231	12.6%
3	Jordan	776	9.3%	3	Türkiye	5,428	11.0%
4	Indonesia	678	8.1%	4	Egypt	3,920	7.9%
5	Malaysia	640	7.7%	5	Malaysia	2,478	5.0%
6	Saudi Arabia	593	7.1%	6	Kazakhstan	1,965	4.0%
7	Egypt	355	4.2%	7	Kuwait	1,905	3.9%
8	Pakistan	308	3.7%	8	Algeria	1,749	3.5%
9	Morocco	171	2.0%	9	Iran	1,662	3.4%
10	Iran	136	1.6%	10	Indonesia	1,652	3.3%
	Total	**7,807**	**93.4%**		**Total**	**35,161**	**71.1%**

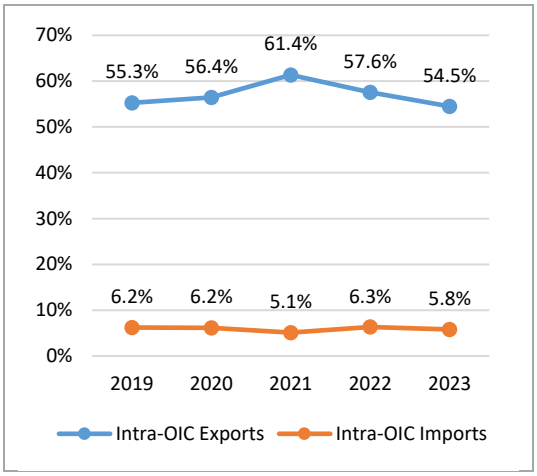
Source: SESRIC staff compilation based on data from UN COMTRADE Database, supplemented by estimates from WTO STATS.
Note: Pharmaceutical products are those classified under Division 54 "Medicinal and pharmaceutical products" of the Standard International Trade Classification (SITC).

A similar, though less pronounced, concentration is observed in imports. In 2023, the top 10 importers accounted for 71.1% of total OIC pharmaceutical imports (Table 4.2). Saudi Arabia was the top importer, with US$ 8.2 billion, representing 16.5% of the OIC total. The top five importers—Saudi Arabia, the United Arab Emirates, Türkiye, Egypt, and Malaysia—collectively accounted for more than half (53.1%) of the group's imports.

Trade within the OIC group itself presents a mixed picture. While intra-OIC exports of pharmaceuticals have been relatively strong—comprising 54.5% of the group's total pharmaceutical exports in 2023—intra-OIC imports have been on a slight decline, falling from 6.2% in 2019 to 5.8% in 2023 (Figure 4.5). Such low figures indicates great reliance on non-OIC countries to meet domestic pharmaceutical needs, particularly intensified during the pandemic years.

In line with the OIC-SHPA, these trends highlight the urgency of enhancing intra-OIC cooperation in the pharmaceutical sector. This includes facilitating trade in essential medicines, vaccines, medical devices, and diagnostics, creating incentives for local manufacturing, and establishing preferential trade agreements to increase market access within the OIC region. Strengthening pharmaceutical trade and supply chains will be key to ensuring equitable access to essential health products and improving health security across member countries.

Figure 4.5: Intra-OIC Trade in Pharmaceutical Products



Source: SESRIC staff compilation based on data from UN COMTRADE Database.
Note: Pharmaceutical products are those classified under Division 54 "Medicinal and pharmaceutical products" of the Standard International Trade Classification (SITC).

4.2. Vaccines

Over the past two decades, significant progress has been made in expanding access to vaccines worldwide. New vaccines have been developed, introduced into immunisation programmes, and distributed more widely across countries and regions. Although the global vaccine industry continues to be dominated by a small number of multinational corporations, vaccine manufacturers based in emerging economies—particularly in China, India, and a few other countries—have increasingly gained prominence. These companies are now major players in the global vaccine supply chain and have begun to export vaccines to international markets.

Historically, the vaccine sector was shaped by government price controls and a relatively mature portfolio of products relying on a narrow range of technologies. These features tended to limit private investment and slowed the pace of innovation. In recent years, however, the development and approval of new-generation vaccines—targeting both established and emerging diseases—have transformed the industry. The pricing environment has also evolved, allowing for more robust investment in research, innovation, and diversified production platforms.

The COVID-19 pandemic marked a major turning point for the vaccine landscape. While it exposed vulnerabilities in global supply chains and strained immunisation programmes worldwide, it also catalysed unprecedented collaboration, technological advancement, and rapid vaccine development. Yet the impact of the pandemic was not uniform. Many low- and middle-income countries, including numerous OIC countries, faced delays in vaccine access and struggled with logistical challenges related to procurement, storage, and distribution.

In this context, the OIC-SHPA placed particular emphasis on strengthening vaccine-related capacities across member countries. It underscored the need to boost local vaccine

production, promote regional cooperation, and implement policies that ensure the availability, quality, and affordability of vaccines. These efforts are not only critical for routine immunisation, but also for pandemic preparedness and equitable access to future vaccines.

4.2.1. Production and Supply

Vaccine development and manufacturing remains a complex and high-risk endeavour, largely due to technological challenges, high barriers to entry, and limited market incentives. The combination of long development timelines, high R&D costs, and uncertain returns continues to limit private sector investment and impedes rapid scale-up in response to changing global needs. As a result, global vaccine supply has historically struggled to meet sudden surges in demand.

According to the *WHO Global Vaccine Market Report 2024* (WHO, 2025), the global vaccine manufacturing landscape is expanding, with 116 manufacturers supplying 88 vaccines to 207 countries in 2023. Despite this expansion, the supply remains highly concentrated: just 10 manufacturers account for 73% of global vaccine doses and 85% of the market value.[38] Moreover, for many individual vaccines, only two or three suppliers dominate the global market. Geographically, vaccine manufacturing is largely confined to a few regions—particularly China, India, the European Union, Indonesia, Japan, and the United States—which reinforces the market's structural concentration.

This concentration raises concerns about market resilience and equitable access, especially for regions without strong domestic production capacity. Nonetheless, there are encouraging developments, including increased participation by manufacturers from additional countries, investment in newer vaccines, the international expansion of manufacturers from large countries such as Brazil, China, India, and Russia, enhanced regulatory support through WHO's prequalification programme, and strategic procurement mechanisms by the Pan American Health Organization (PAHO) and the United Nations Children's Fund (UNICEF).

In 2023, the global vaccine market reached an estimated 7 billion doses, valued at US$ 77 billion. However, this marked a sharp drop from 2022, with a decrease of US$ 47 billion and 6 billion doses, mainly due to declining demand for COVID-19 vaccines. Vaccines accounted for approximately 5% of total global pharmaceutical revenues in 2023.

The urgency of the COVID-19 pandemic accelerated vaccine R&D and distribution at an unprecedented scale. By the end of 2022, 50 COVID-19 vaccines had been approved, with another 242 candidates under development and 821 trials underway across 80 countries (Basta & Moodie, 2022). As of 2025, four COVID-19 vaccines remain on WHO's Emergency Use Listing.[39] Several OIC countries actively contributed to this global effort. Vaccine

[38] There was no manufacturer from the OIC countries among the top 10 manufacturers in 2023, according to the WHO Report.

[39] The list is available at https://extranet.who.int/prequal/vaccines/covid-19-vaccines-who-emergency-use-listing

candidates developed in Indonesia, Iran, Kazakhstan, and Türkiye received national regulatory approval and were authorised for domestic use. Additionally, Kyrgyzstan approved a vaccine developed in Kazakhstan (see Table 4.3).

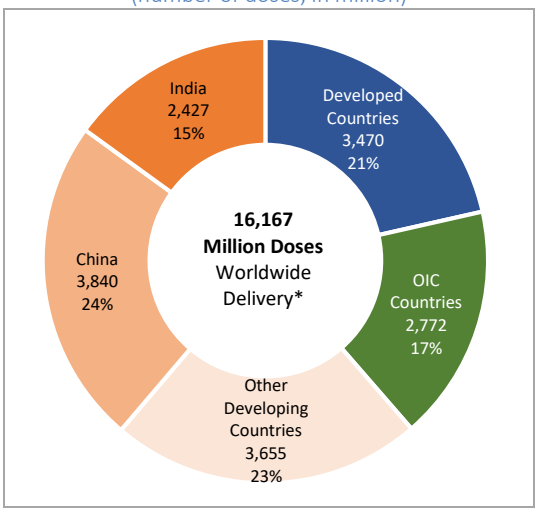
Table 4.3: COVID-19 Vaccines and Candidates Developed by OIC Countries

Country	Institution	Vaccine Name	Phase	Approving Countries
Egypt	National Research Centre Egypt	Covi Vax	1	-
Egypt	Eva Pharma	EgyVax	1	-
Indonesia	PT Bio Farma	IndoVac	Approved	Indonesia
Indonesia	PT Bio Farma	SARS-CoV-2 Protein Subunit Recombinant Vaccine	3	-
Indonesia	Airlangga University	UNAIR Inactivated COVID-19 Vaccine	3	-
Iran	Shifa Pharmed Industrial Co	COVIran Barekat	Approved	Iran
Iran	Razi Vaccine and Serum Research Inst.	Razi Cov Pars	Approved	Iran
Iran	Organization of Defensive Innovation and Research	FAKHRAVAC (MIVAC)	Approved	Iran
Iran	Bagheiat-allah University of Medical Sciences	Noora vaccine	Approved	Iran
Iran	Osve Pharmaceutical Company	OSVID-19	1	-
Iran	ReNAP Co.	COReNAPCIN	1	-
Kazakhstan	Research Institute for Biological Safety Problems (RIBSB)	QazVac	Approved	Kazakhstan, Kyrgyzstan
Kazakhstan	Research Institute for Biological Safety Problems (RIBSB)	QazCoVac-P	2	-
Saudi Arabia	Imam Abdulrahman Bin Faisal University	Almansour-001	1	-
Türkiye	Erciyes University and Health Institutes of Turkey	ERUCOV-VAC (TURKOVAC)	Approved	Türkiye
Türkiye	The Scientific and Technological Research Council of Türkiye (TUBITAK)	SARS-CoV-2 VLP Vaccine	2	-
Türkiye	The Scientific and Technological Research Council of Türkiye (TUBITAK)	SARS-CoV-2 VLP Vaccine Alpha Variant	2	-
Türkiye	Kocak Farma	Koçak-19 Inaktif Adjuvanlı COVID-19 Vaccine	1	-
Türkiye	The Scientific and Technological Research Council of Türkiye (TUBITAK)	Adjuvanted Inactivated Vaccine	1	-
Türkiye	Ankara City Hospital Bilkent	CoVacHGMix	1	-
Uganda	MRC/UVRI and LSHTM Uganda Research Unit	LNP-nCOV saRNA-02 Vaccine	1	-

Source: COVID-19 Vaccine Tracker. https://covid19.trackvaccines.org/trials-vaccines-by-country/, Last Updated on 2 December 2022; UNICEF, COVID-19 Market Dashboard, https://www.unicef.org/supply/covid-19-market-dashboard, as of 21 June 2023.

The COVID-19 vaccines distributed in 2021 came from 19 manufacturers, 10 (52%) of which had no other marketed vaccine, and which collectively supplied 15% of the volume of COVID-19 vaccines (WHO, 2023b). These included two manufacturers from the OIC countries: Shifa Pharmed from Iran and Julphar from the United Arab Emirates. According to UNICEF's COVID-19 Market Dashboard, by mid-2023, global COVID-19 vaccine supply agreements had

Figure 4.6: COVID-19 Vaccines Delivered Worldwide
(number of doses, in million)



Source: SESRIC staff compilation based on data from UNICEF, COVID-19 Market Dashboard [22 June 2023]
* Includes about 2.5 million doses as humanitarian buffer.

reached 17.2 billion doses, covering 54 manufacturers. Ten of these manufacturers accounted for around 90% of the total secured doses. The total number of doses delivered globally reached 16.2 billion—roughly twice the size of the global population. OIC countries received approximately 2.8 billion doses—about 17% of the global total—while China and India, which not only have the largest population in the world but also are major vaccine producers, had a share of 24% and 15%, respectively (Figure 4.6).

Deliveries to OIC countries were usually made via the COVAX Facility[40] (37%) and bilateral/multilateral agreements (31%), with procurement structures varying by income level. Low-income countries relied almost entirely on pool-procuring, through COVAX (78%) and the African Vaccine Acquisition Trust (AVAT) (11%), and also received donations (9%), whereas high-income countries predominantly resorted to self-procurement through bilateral contracts.

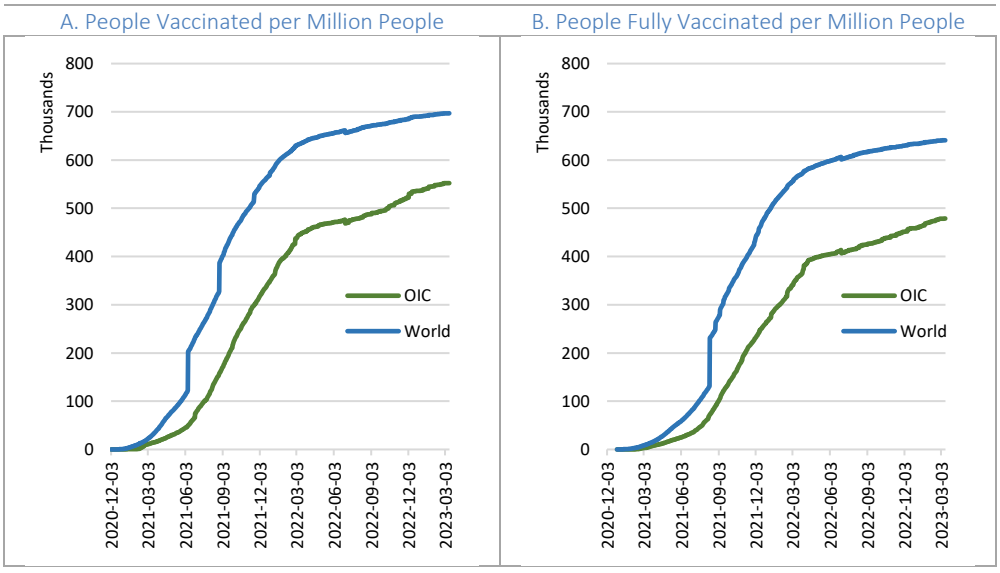
Data from the SESRIC COVID-19 Pandemic Database for OIC Member Countries[41] show that, as of 13 March 2023, there were 676.6 million confirmed cases of COVID-19 globally, of which 8.8% (59.5 million) were in OIC countries. The number of deaths reached 6.9 million worldwide and 745 thousand (10.8%) in OIC countries. In line with global efforts for vaccination, about 5.6 billion people were vaccinated (at least one dose) and 5.1 billion fully vaccinated (more than one dose). The corresponding numbers for the OIC countries were 1.1 billion and 959 million, accounting for 19.9% and 18.7% of the world total, respectively.

Granting that the OIC countries have a low share in global cases and deaths compared to their share in world population, they have lagged behind the global average in vaccination rate with respect to population size (Figure 4.7). As of 13 March 2023, people vaccinated per million people averaged worldwide at 696,970 (69.7%) and people fully vaccinated per million people at 640,908 (64.1%), which were higher than the respective averages for OIC

[40] COVID-19 Vaccines Global Access, abbreviated as COVAX, was a worldwide initiative co-led by Gavi, the Coalition for Epidemic Preparedness Innovations (CEPI), and the WHO, alongside key delivery partner UNICEF. Its aim was to accelerate the development and manufacture of COVID-19 vaccines, and to guarantee fair and equitable access for every country in the world through a global risk-sharing mechanism for pooled procurement. More information is available on the Gavi website at https://www.gavi.org/covax-facility.

[41] The Database provided statistics and visualised data on confirmed cases, deaths, and people vaccinated / fully vaccinated in OIC countries. It is accessible at https://www.sesric.org/sesric_covid_19.php

Figure 4.7: Vaccination against COVID-19: the OIC vs World



Source: SESRIC COVID-19 Pandemic Database for OIC Member Countries, accessed from https://www.sesric.org/sesric_covid_19.php

countries: 552,117 (55.2%) and 478,774 (47.9%). These data show that the group of OIC countries as well as the world, on average, fell short of the WHO target to vaccinate 70% of the population of all countries by mid-2022.[42] Among OIC countries, Qatar and the United Arab Emirates fully vaccinated their population, while Brunei Darussalam, Bahrain, Malaysia, Bangladesh, Kuwait, Maldives, and Saudi Arabia achieved a coverage rate of 70% or above. At the other side of the spectrum, the proportion of the population fully vaccinated remained below 10% in Yemen and Senegal, and below 20% in 11 additional countries: Syria, Cameroon, Gabon, Mali, Algeria, Burkina Faso, Gambia, Togo, Iraq, Libya, and Guinea-Bissau. This indicates a slower and delayed vaccination rollout typically in low and middle-income countries.

It is worth noting that, through its vaccine prequalification programme, the WHO has been providing regulatory assistance to countries procuring vaccines through United Nations agencies. As of May 2025, about 58 types of vaccines with 276 presentations from 52 manufacturers in 22 countries were included in the WHO List of Prequalified Vaccines.[43] Concerning OIC countries, 10 types of vaccine from one manufacturer in Indonesia appeared on the list.

[42] The WHO set a target to vaccinate 10% of every country, economy and territory by the end of September 2021, 40% by the end-2021 and 70% by mid-2022 (WHO, 2021).

[43] Vaccines found to meet the WHO-recommended standards and operational specifications and therefore included in the list are — subject to the terms of the prequalification procedure — acceptable, in principle, for procurement by UN agencies. More information on vaccine prequalification and the list of prequalified vaccines are available on the WHO website: https://extranet.who.int/pqweb/vaccines

Table 4.4: OIC National Regulatory Authorities (NRAs) Operating at Maturity Level 3 (ML3) and Maturity Level 4 (ML4) as Benchmarked against WHO Global Benchmarking Tool (GBT)

Country	Regulatory authority	Maturity Level (ML)	Scope of products	Year of announcement
Egypt	Egyptian Drug Authority (EDA)	ML3	Medicines Vaccines (producing)	2024 (medicines) 2022 (vaccines)
Indonesia	National Agency of Drug and Food Control (BADAN POM)	ML3	Vaccines (producing)	2019
Nigeria	National Agency for Food and Drug Administration and Control (NAFDAC)	ML3	Medicines Vaccines (non producing)	2022
Saudi Arabia	Saudi Food and Drug Authority (SFDA)	ML4	Medicines Vaccines (producing)	2023
Senegal	Agence sénégalaise de Réglementation Pharmaceutique	ML3	Medicines Vaccines (non producing)	2024
Türkiye	Turkish Medicines and Medical Devices Agency (TİTCK)	ML3	Medicines Vaccines (producing)	2023

Source: WHO, available at https://www.who.int/publications/m/item/list-of-nras-operating-at-ml3-and-ml4
Note: As of December 2024. ML3 means "stable, well-functioning and integrated regulatory systems" and ML4, the highest level, means "regulatory systems operating at advanced level of performance and continuous improvement".

Besides, as part of global efforts to strengthen regulatory oversight and ensure the safety and efficacy of vaccines and other medical products, the WHO uses the Global Benchmarking Tool (GBT) to assess the performance of national regulatory authorities (NRAs). According to the latest WHO update (December 2024), 18 countries have achieved Maturity Level 3 (ML3) or Maturity Level 4 (ML4) status. Among them are six OIC countries, marking a significant regulatory advancement in the region. Five of these countries—Egypt, Indonesia, Nigeria, Senegal, and Türkiye—have reached ML3, indicating stable, well-functioning, and integrated regulatory systems. Notably, Saudi Arabia has attained ML4, the highest maturity level, signifying a regulatory system operating at an advanced level of performance and continuous improvement (Table 4.4). These achievements represent key milestones in enhancing vaccine production governance and improving access to quality-assured health products in the OIC region.

4.2.2. *Trade*

Trade in vaccines for human use[44] has increased significantly worldwide in recent years, with an exceptional surge in 2021 due to the rollout of COVID-19 vaccines. Between 2015 and 2020, global vaccine trade[45] grew at a compound annual growth rate (CAGR) of 5.6%. However, in 2021, it skyrocketed by 272% to reach US$ 122.4 billion. This surge was followed by a sharp decline, with the global trade value dropping to US$ 55 billion in 2024—equivalent to a CAGR of -23.4% over the 2021–2024 period.

[44] As classified under the Harmonized System (HS): "Vaccines for human medicine" with the code 300241 in the 2022 HS revision, corresponding to 300220 in the previous 2012 and 2017 revisions.

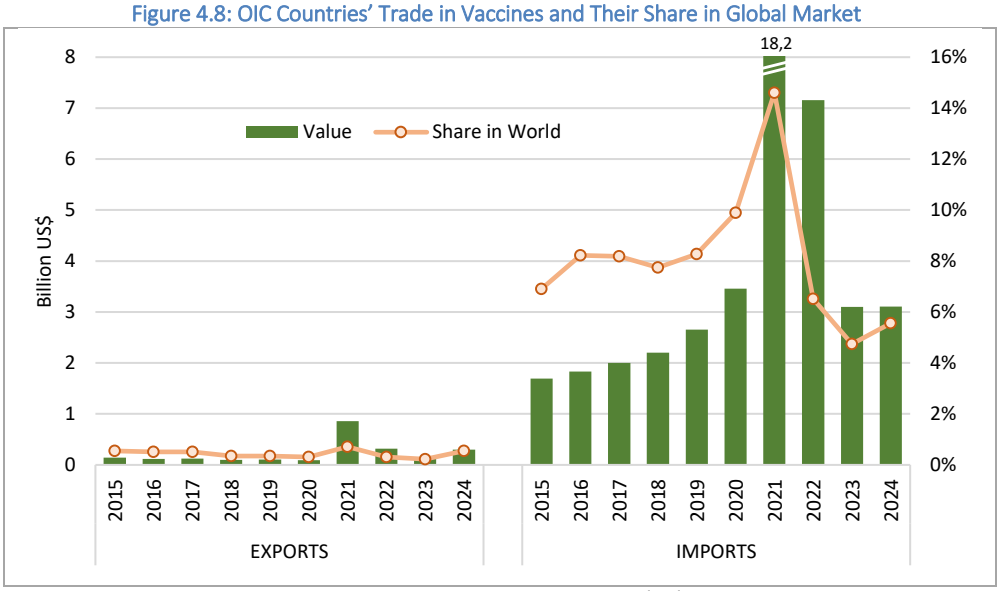
[45] Average of global exports and global imports.

OIC countries followed a similar trajectory (Figure 4.8). Reflecting their limited domestic production capacity, OIC countries are heavily reliant on imports to meet their vaccine needs. Their vaccine imports increased at a robust CAGR of 15.3% during 2015–2020, followed by an extraordinary 426% jump in 2021, reaching US$ 18.2 billion. This surge was driven by Indonesia, Pakistan, Türkiye, the United Arab Emirates, Bangladesh, and Saudi Arabia, each of which recorded increases of US$ 1-3 billion. However, from that peak, imports fell sharply, down to US$ 3.1 billion by 2024 (CAGR: -44.5%). Correspondingly, their global share in vaccine imports rose steadily from 6.9% in 2015 to a peak of 14.6% in 2021, before declining to 5.6% by 2024.

Although vaccine exports from OIC countries remain extremely low compared to imports, they also recorded a remarkable 816% increase in 2021, reaching US$ 857.6 million, up from just US$ 93.6 million in 2020. This spike was driven primarily by the United Arab Emirates, whose exports surged from US$ 25.7 million in 2020 to US$ 650.2 million in 2021, owing to its role in COVID-19 vaccine production. However, this growth was not sustained: total vaccine exports of OIC countries declined to US$ 144.9 million in 2023, before rebounding to US$ 297.4 million in 2024. Despite these fluctuations, the OIC's share of global vaccine exports remained below 1% throughout the entire period from 2015 to 2024.

In 2024, only 15 OIC countries reported vaccine exports. The leading exporter was Indonesia, with US$ 182 million, followed by Jordan and Türkiye. Other exporters included Saudi Arabia, the United Arab Emirates, and Bangladesh, while countries like Côte d'Ivoire, Senegal, Togo, and Bahrain recorded minimal exports between US$ 1,000–5,000.

Figure 4.8: OIC Countries' Trade in Vaccines and Their Share in Global Market



Source: SESRIC staff compilation based on data from ITC Trade Map [17/07/2025].
Note: Vaccines, here, refer to "Vaccines for human medicine" with the code 300241 in the 2022 revision of the Harmonized System (HS), corresponding to 300220 in the previous 2012 and 2017 revisions. Partner-reported mirror data were used for countries with missing data.

On the import side, all OIC countries reported vaccine imports in 2024. The top five importers were Saudi Arabia (US$ 502 million), Türkiye (US$ 293 million), Nigeria (US$ 238 million), Indonesia (US$ 183 million), and Bangladesh (US$ 141 million). Notably, Indonesia, the largest vaccine exporter among OIC members in 2024, also ranked among the largest importers.

Despite temporary gains during the pandemic, these figures underscore the persistent dependence of OIC countries on external vaccine sources. The limited number of producers, low export volumes, and high reliance on imports reflect structural weaknesses in domestic vaccine production and distribution capabilities. As emphasised in the OIC-SHPA, there is an urgent need to strengthen local production capacity, promote intra-OIC trade in vaccines, and facilitate regulatory cooperation. Scaling up vaccine research, development, and manufacturing within the OIC region is vital for health sovereignty, timely emergency responses, and ensuring affordable and equitable access to vaccines for all populations.

4.3. Medical Technologies

Health technologies—particularly those related to medical devices—are essential components of health systems, supporting prevention, diagnosis, treatment, and rehabilitation. The World Health Assembly resolution WHA60.26 defines health technologies as the application of organized knowledge and skills in the form of devices, procedures, and systems developed to solve a health problem and improve quality of life. Among these, medical devices represent a significant share, as many common and critical medical procedures would not be possible without them.

According to the WHO, a medical device can be defined as any instrument, apparatus, implement, machine, appliance, implant, reagent for in vitro use, software, material, or other similar or related article, intended by the manufacturer to be used, alone or in combination, for a medical purpose. Currently, the global medical device market comprises an estimated 2 million different kinds of medical devices, categorised into more than 7,000 generic devices groups (WHO, n.d.).

The COVID-19 pandemic significantly influenced the medical device market. In 2020, the decline in elective surgeries and reduced demand for non-urgent procedures hindered overall market growth. At the same time, the urgent need for in vitro diagnostic testing and COVID-19-related treatments created a surge in demand for relevant devices and equipment. For example, the early months of the pandemic saw increased use of rescue inhalers—typically used for asthma—in intensive care units, leading to a substantial shift in demand within the respiratory device segment (IQVIA, 2023). In 2021, the resumption of delayed elective surgeries led to a rebound in the demand for medical devices.

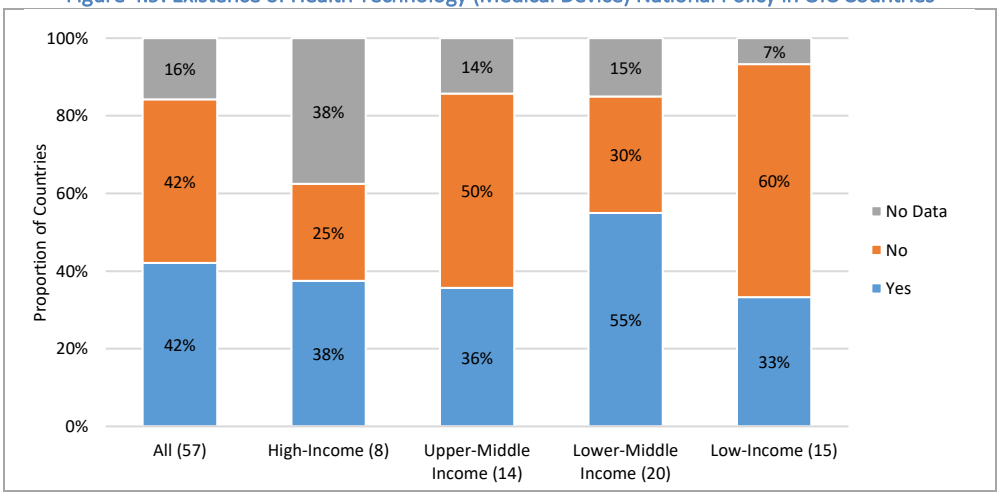
This section presents key insights into the status of medical technologies in OIC countries, focusing on areas such as medical device policies, national essential lists, inventories, and nomenclature systems, drawing on data from the WHO's *Global Atlas of Medical Devices 2022* (WHO, 2022k).

4.3.1. National Policy on Health Technology

Having a national policy on health technology, particularly medical devices, is essential to ensuring that resources are effectively allocated in line with population health needs. The World Health Assembly, through resolution WHA60.29, recognized the importance of such policies and called on Member States "to formulate, as appropriate, national strategies and plans for the establishment of systems for the assessment, planning, procurement, and management of health technologies, in particular medical devices, in collaboration with personnel involved in health-technology assessment and biomedical engineering."

According to the most recent data, 42% of OIC countries have adopted a national policy on health technologies, while another 42% have not. For the remaining 16%—including Bahrain, Djibouti, Iran, Kuwait, Palestine, Syria, Turkmenistan, the United Arab Emirates, and Uzbekistan—data are not available.

Figure 4.9: Existence of Health Technology (Medical Device) National Policy in OIC Countries



Source: SESRIC staff compilation based on data from WHO, *Global Atlas of Medical Devices 2022*.
Note: See Annex B for the classification by income.

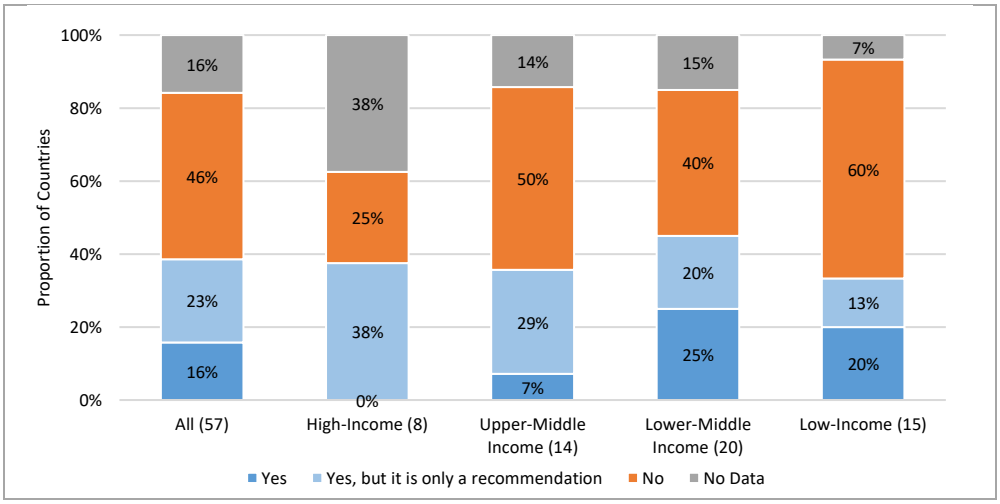
A breakdown by income group reveals notable differences (Figure 4.9). More than half (55%) of lower-middle-income countries have a national policy in place. This is followed by 38% of high-income countries, while only 33% of low-income countries have reported having such a policy. These figures highlight the uneven development of health technology governance across the OIC, underlining the need for increased institutional capacity and policy support, particularly in higher-need contexts.

4.3.2. National Lists of Medical Devices

The availability of a national list of approved medical devices—including in-vitro diagnostics (IVDs)—for procurement or reimbursement is an important indicator under WHO's Strategic Objective 11, which calls for improved access to safe and effective health care products and technologies. Such lists guide policy-makers in prioritizing essential technologies, ensuring alignment with health system needs, and facilitating resource allocation.

Available data show that nearly half (46%) of OIC countries do not have a national list of approved priority or essential medical devices. In contrast, only 16% of countries—namely Bangladesh, Benin, Chad, Jordan, Kyrgyzstan, Mali, Sierra Leone, Tajikistan, and Türkiye—have an official national list for procurement or reimbursement. Additionally, 23% of OIC countries have a national list that exists only as a recommendation, without binding enforcement or routine application.

Figure 4.10: Existence of National List of Approved Priority/Essential Medical Devices for Procurement or Reimbursement in OIC Countries



Source: SESRIC staff compilation based on data from WHO, *Global Atlas of Medical Devices 2022*.
Note: See Annex B for the classification by income.

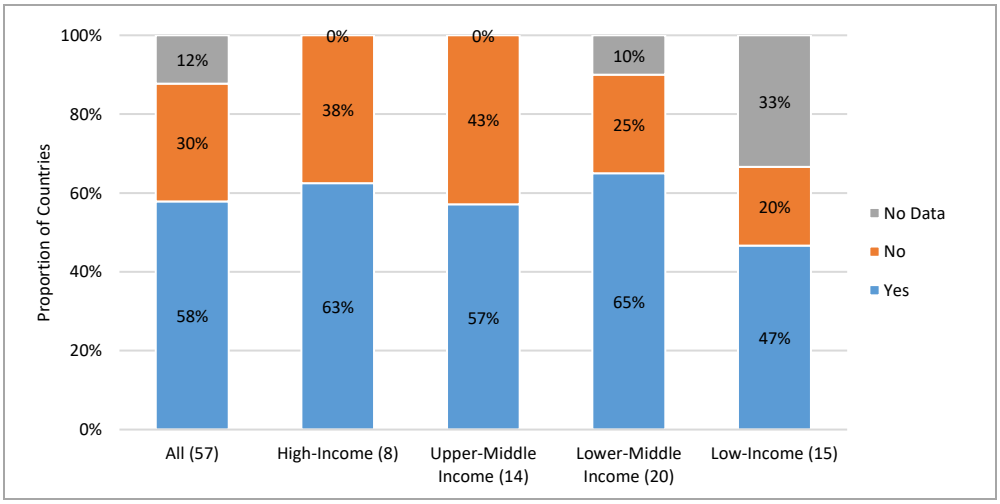
An income-level breakdown reveals an interesting trend: lower-income countries are more likely to have national lists in place, while higher-income countries tend to have lists used only for guidance. Notably, none of the high-income OIC countries has a formal national list for procurement or reimbursement, although 38% have one in a recommendatory capacity. By comparison, 25% of lower-middle-income and 20% of low-income countries have adopted national lists, with an additional 20% and 13%, respectively, maintaining such lists as recommendations (Figure 4.10).

This variation suggests differing approaches to governance and procurement practices among OIC countries, and highlights the need to strengthen regulatory mechanisms and promote the systematic use of medical device lists—particularly to support efficient and equitable procurement in resource-constrained settings.

4.3.3. National Health Technology Assessment Unit

Health Technology Assessment (HTA) plays a vital role in supporting evidence-based decision-making in health systems by promoting the adoption of high-value technologies while limiting the use of those with uncertain or limited benefits. It ensures that health interventions are appropriate, effective, safe, and economically sound. The importance of HTA in advancing universal health coverage was recognized through Resolution WHA67.23, adopted by the World Health Assembly in 2014 (WHO, 2017).

Figure 4.11: Existence of Designated Unit/Department for Health Technology Assessment (HTA) in OIC Countries



Source: SESRIC staff compilation based on data from WHO, *Global Atlas of Medical Devices 2022*.
Note: See Annex B for the classification by income.

According to the most recent available data, 58% of OIC countries—33 out of 57—reported having a national-level unit responsible for HTA. In contrast, 30% of the countries indicated the absence of such a unit, while information was not available for the remaining 12%, including Guinea, Guinea-Bissau, Niger, Palestine, Togo, Uganda, and Yemen. By income group, HTA units are more prevalent among high- and middle-income countries. Nearly two-thirds of high-income countries (63%) and upper-middle-income countries (65%) reported the existence of an HTA unit. Among low-income countries, 47% indicated that such a unit exists; however, the high proportion of missing data—33% in this group—limits a full understanding of the actual situation (Figure 4.11).

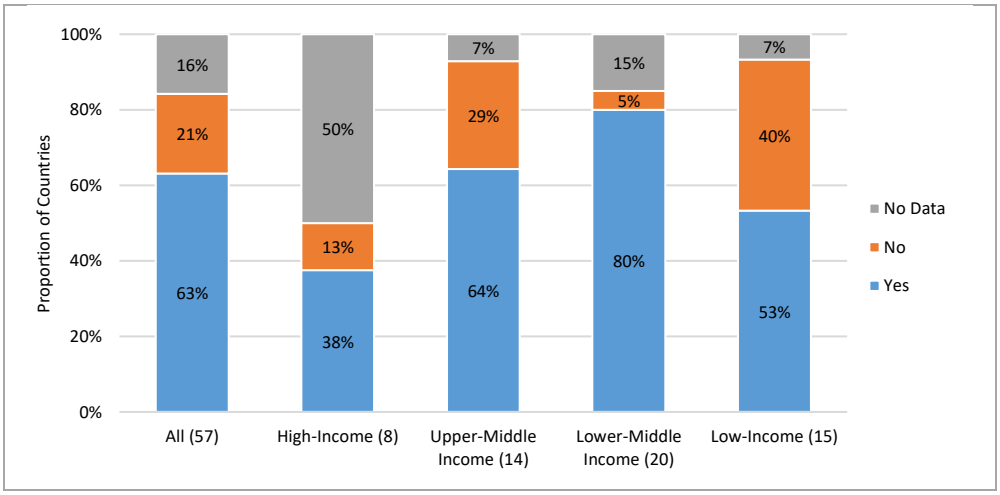
It is also important to note that not all HTA units assess medical devices. Of the 33 OIC countries with an HTA unit, only 13 include the assessment of medical devices in their scope. These countries consist of Saudi Arabia among high-income countries; Azerbaijan, Indonesia, Iran, Kazakhstan, Malaysia, and Türkiye among upper-middle-income countries; Benin, Jordan, Kyrgyzstan, Nigeria, and Tunisia among lower-middle-income countries; and Somalia among low-income countries. This underlines a critical gap in the comprehensive evaluation of health technologies, particularly in the area of medical devices. Expanding the capacity and scope of HTA systems in OIC countries remains essential to strengthen the evidence base for technology-related decisions and improve health system efficiency.

4.3.4. National Regulatory Authority

Regulating medical devices is essential for minimising health risks and ensuring that patients have access to high-quality, safe, and effective technologies, while restricting the use of unsafe or ineffective products. Recognising this, the 67th World Health Assembly in 2014 adopted Resolution WHA67.20 on strengthening regulatory systems for medical products. The resolution underscores the importance of regulatory frameworks not only for

pharmaceuticals but also for medical devices, as part of broader efforts to improve public health outcomes and expand access to safe, effective, and quality-assured health products (WHO, 2017a).

Figure 4.12: Presence of National Authority Responsible for Regulating Medical Devices in OIC Countries



Source: SESRIC staff compilation based on data from WHO, *Global Atlas of Medical Devices 2022*.
Note: See Annex B for the classification by income.

According to the most recent available data, at least 63% of OIC countries have a designated national regulatory authority (NRA) responsible for implementing and enforcing regulations specific to medical devices. Conversely, 21% of the OIC countries report not having such an authority, while no information is available for the remaining 16%. Countries with missing data include Bahrain, Brunei Darussalam, Djibouti, Kuwait, Mauritania, Palestine, Syria, Turkmenistan, and the United Arab Emirates.

When examined by income group, the presence of NRAs varies significantly. Although data are unavailable for half of the high-income OIC countries, 38% have confirmed the existence of a medical device regulatory authority. This figure rises to 64% among upper-middle-income countries and peaks at 80% for lower-middle-income countries. In the low-income group, just over half (53%) have an NRA responsible for regulating medical devices (Figure 4.12). These findings point to a clear imbalance in regulatory preparedness across income groups, suggesting that more concerted efforts are needed to align national regulatory frameworks with the increasing demands of modern healthcare technologies—particularly in countries where oversight is either weak or absent.

4.3.5. Medical Device Nomenclature System

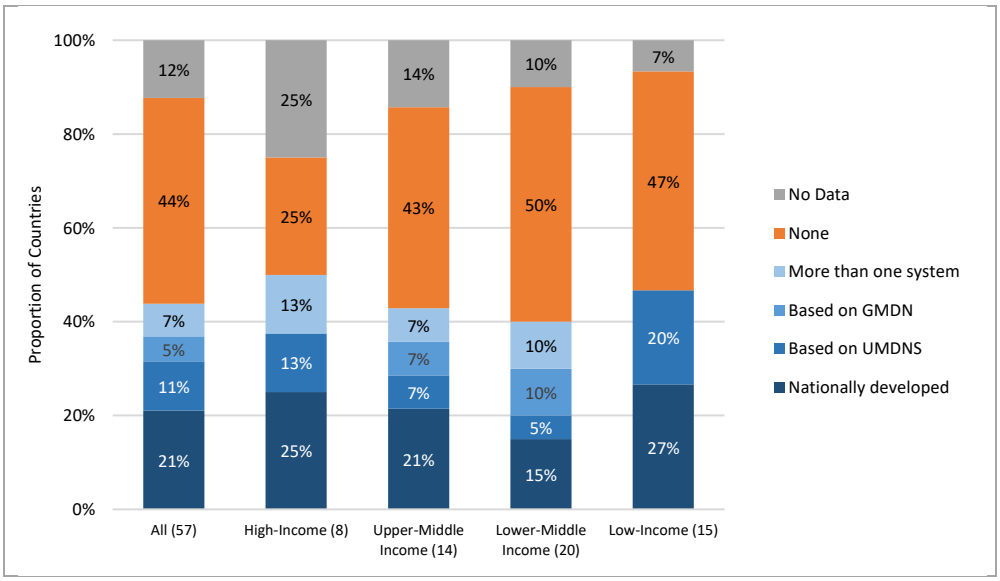
A nomenclature system for medical devices is essential for the standardised classification and identification of all medical devices and related health products. These coding systems support regulatory processes, procurement, inventory management, and data exchange. The WHO is working toward the establishment of a unified nomenclature system that can be adopted globally. However, many countries continue to rely on their own national

systems. Currently, the two most widely used nomenclature systems for medical devices are the Global Medical Device Nomenclature (GMDN) and the Universal Medical Device Nomenclature System (UMDNS) (WHO, 2017a).

According to the latest available data, 44% of OIC countries officially use at least one type of medical device nomenclature system, while another 44% do not. Information is not available for the remaining 12%, which includes Djibouti, Iran, Kuwait, Palestine, Syria, Turkmenistan, and the United Arab Emirates. Among those with a nomenclature system, 21% use nationally developed systems, 11% use UMDNS, 5% use GMDN, and 7% use more than one system (Figure 4.13).

The adoption of nomenclature systems shows relatively minor variation across income groups. About 40% of lower-middle-income countries, and 50% of high-income countries, have an official nomenclature system in place. Nationally developed systems are common across all income groups and are especially prevalent in both high- and low-income countries, where nearly one-quarter use such systems. UMDNS has a broader presence in low-income countries—used by 20%—while GMDN is found only in middle-income countries, with adoption rates between 7% and 10%. Additionally, 13% of high-income countries and 7–10% of middle-income countries report using more than one system.

Figure 4.13: Presence and Type of Official Nomenclature System for Medical Devices in OIC Countries



Source: SESRIC staff compilation based on data from WHO, *Global Atlas of Medical Devices 2022*.
Note: GMDN: Global Medical Devices Nomenclature System; UMDNS: Universal Medical Devices Nomenclature System. See Annex B for the classification by income.

Although the diversity in nomenclature practices reflects a degree of adaptability among OIC countries, the lack of harmonisation presents barriers to efficient regulation, procurement, and international cooperation. Greater alignment with global standards would facilitate cross-border trade and ensure more effective integration of medical technologies into national health systems.

4.3.6. *Availability of Medical Equipment*

Medical equipment plays a critical role in the diagnosis and treatment of diseases and is a cornerstone of effective health systems. This section assesses the availability of selected high-cost medical technologies—such as imaging and radiotherapy equipment—using their density (units per million population) as an indicator of access to specialized care. These technologies are not only expensive but also require appropriate infrastructure, installation, and highly trained personnel, making their provision more challenging in resource-limited settings.

Table 4.5 presents data on the availability of key high-cost medical equipment in OIC countries, including the number of countries with available data and the share of the OIC population they represent. Data coverage varies by equipment type. For medical imaging devices, data are available for 32 to 42 countries, covering roughly 50–56% of the total OIC population. In contrast, data for radiotherapy equipment are much more complete, available for 51 countries representing 97% of the population.

Among the listed technologies, mammography (MAM) units, computerized tomography (CT) scanners, and magnetic resonance imaging (MRI) devices are the most widely available across OIC countries. In contrast, positron emission tomography (PET) scanners are the least accessible, with an average density of just 0.18 units per million people. Gamma cameras and nuclear medicine (GC&NM) equipment and radiotherapy (RT) devices also remain scarce, each with fewer than one unit per million population across the group.

Table 4.5: Availability of Selected Medical Imaging and Radiotherapy Equipment in OIC Countries

Coverage		Type of Medical Equipment	Density per million population*	Proportion of countries**	
Number of Countries with Data	OIC Population Represented			With at least 1 unit of medical equipment per million population	Without any unit of medical equipment
41	56%	Magnetic Resonance Imaging	1.41	44%	15%
42	56%	Computerized Tomography Scanner	2.35	64%	5%
32	50%	Positron Emission Tomography Scanner	0.18	6%	69%
34	52%	Gamma Camera or Nuclear Medicine	0.42	15%	35%
40	55%	Mammograph	29.60	90%	10%
51	97%	Radiotherapy	0.70	41%	18%

Source: SESRIC staff compilation based on WHO, *Global Atlas of Medical Devices 2022*.
* The density was calculated considering total population of the countries with available data on medical equipment. In the case of the mammography units, the denominator comprises women between 50 to 69 years old, i.e. density is per 1,000,000 females aged from 50-69 old.
** Proportions are indicated from respondent countries only.

On average, nearly 90% of countries have at least one mammography unit per million population, 64% have at least one CT scanner, 44% have at least one MRI unit, and 41% have at least one RT device. However, PET scanners are available at this density level in only 6% of countries, reflecting severe limitations in access to this advanced diagnostic tool. Additionally, while CT scanners are generally more widespread, they are still entirely

unavailable in about 5% of OIC countries. By contrast, nearly 70% of countries lack a PET scanner altogether.

These disparities in equipment availability point to systemic challenges in ensuring equitable access to advanced diagnostic and treatment technologies. Closing these gaps requires sustained investment not only in procurement but also in the necessary infrastructure, human resource development, and maintenance systems.

CHAPTER 5

Emergency Risk Management for Health

Recognising the significant threat posed by public health emergencies—whether at national or international levels—the OIC-SHPA identified emergency risk management for health as a key area of strategic focus. In particular, it calls for strengthening capacities to prevent, prepare for, and respond to health emergencies, including pandemics, epidemics, natural disasters, and other humanitarian crises.

The strategy outlines a comprehensive set of actions aimed at enhancing national and regional readiness. These include developing risk reduction policies, investing in emergency preparedness, and supporting capacity building and knowledge sharing among Member States. The OIC-SHPA further emphasises the importance of mobilising partnerships and financial resources to improve emergency health response systems. At the operational level, it highlights critical measures such as strengthening laboratory capacities for early detection of disease outbreaks, establishing regional early warning and response mechanisms to prevent cross-border transmission, ensuring adequate logistical support to affected countries, and delivering timely emergency health services.

The relevance of these actions has been underscored in recent years by a series of major outbreaks and crises—including Ebola, cholera, the COVID-19 pandemic, and a growing number of climate- and conflict-related emergencies. These events have not only tested the resilience of health systems but have also demonstrated the need for coordinated, system-wide preparedness across all hazard types.

Against this backdrop, this chapter first reviews the global landscape of emergency health risks and evaluates the COVID-19 response and preparedness across OIC countries. It then assesses the capacity and readiness of OIC health systems through selected indicators and argues for strengthening emergency preparedness at both national and regional levels. Finally, the chapter discusses the role of innovation and digital technologies in enhancing emergency risk management and underscores the importance of building resilient, adaptive health systems capable of responding effectively to future emergencies.

5.1. Emergency Situations across the World

Despite global advancements in human development, emergency situations are becoming increasingly frequent, complex, and prolonged (UNICEF, n.d.). These emergencies can arise from a diverse range of events or conditions, posing significant threats to the health and well-being of large populations. Broadly, emergencies fall into two main categories: those triggered by natural events, such as floods, landslides, earthquakes, and those caused by human actions, including armed conflicts, social and institutional fragility, and the use of biological, radiological, or nuclear agents.

As urbanisation continues to accelerate globally, exposure and vulnerability to natural hazards have risen, reflecting not only population density in hazard-prone areas but also the impact of environmental degradation and climate change. Today, there are increasing concerns that climate change amplifies the frequency, intensity, and unpredictability of extreme weather events and other environmental disruptions, exacerbating existing vulnerabilities and placing additional strain on health systems. Secondary effects of these natural hazards, such as poor sanitation due to flooding, further contribute to public health crises by creating conditions for the emergence or transmission of infectious diseases (WHO, 2024). By comparison, human-induced emergencies, particularly armed conflicts, directly undermine health systems by disrupting services and devastating infrastructure. Consequently, regardless of the type, all emergencies directly or indirectly affect human health.

Public health emergencies of national and international concern may include infectious disease outbreaks, chemical or radiation exposure, and disasters resulting in humanitarian crises. Increasingly, countries are experiencing multiple, overlapping hazards—such as conflict, displacement, and pandemics—which compound the impact and require complex, multi-sectoral responses.

Several disease outbreaks have gained global attention in recent years, including COVID-19, cholera, and Mpox. Cholera, despite long-standing progress, has resurged: in 2021, 35 countries reported cholera cases, but this number rose to 44 in 2022. Between January and December 2024, 33 countries across five WHO regions reported cholera outbreaks, with nearly 805,000 cases and 5,805 reported deaths (WHO, 2025a). Of these, 16 were OIC countries, including Lebanon and Syria, which were non-endemic countries that reported cholera cases in 2022 for the first time in 9 and 20 years, respectively (WHO EMRO, 2022). OIC countries accounted for approximately 80% of global cholera cases and 58% of related deaths. This is largely due to conflict and extreme climate-related disasters such as floods, cyclones, and droughts, which reduce access to clean drinking water and contribute to poor sanitary conditions—key factors in the spread of cholera.

The Mpox virus outbreak, declared a public health emergency of international concern in 2024, also had implications for the OIC region. From January 2022 through March 2025, 137,892 Mpox cases were reported across 132 countries (WHO, 2025b), with heightened community transmission risks in some OIC countries in Sub-Saharan Africa.

In addition to disease outbreaks, natural disasters remain another major source of health emergencies. Their frequency, severity, and impact have increased significantly, placing millions of people worldwide in precarious humanitarian conditions, driven by direct and indirect exposure to risks, destruction of livelihoods and vital infrastructure, and disruption in the provision of essential services.

A comparative analysis between two ten-year periods (2005–2014 and 2015–2024) illustrates the growing frequency and impact of natural disasters (Table 5.1). Between 2005 and 2014, over 3,600 natural disasters were recorded globally, nearly 800 of which occurred in OIC countries, representing 22% of global events. These disasters affected over 1.7 billion people worldwide, caused more than 764,000 deaths, and resulted in over US$ 2.0 trillion in economic losses. In OIC countries, more than 190 million people were affected (11% of the global total), over 130,000 lives were lost, and economic losses surpassed US$ 80 billion.

Between 2015 and 2024, natural disasters rose by 7%, totalling more than 3,800 incidents globally. Of these, over 900 occurred in OIC countries, representing 24% of global disasters. Although the number of people affected globally declined to 1.6 billion, the number affected in OIC countries rose to about 400 million, more than doubling their share to 25%. While global disaster-related mortality dropped by 58% to approximately 320,000 deaths, the decline in OIC countries was just 12%, and their share of global disaster-related fatalities also more than doubled to 36%. Economic damages also intensified, exceeding US$ 2.2 trillion globally and US$ 113 billion in OIC countries—representing a 10% increase globally and a much higher 40% increase in the OIC region compared to the previous decade, underscoring the region's rising vulnerability.

A recent example of natural disasters includes the twin earthquakes that struck southern Türkiye and northern Syria on 6 February 2023, compounding an already severe humanitarian crisis in Syria and resulting in one of the deadliest natural disasters of modern times.

Table 5.1: Natural Disaster Occurrence and Impacts, 2005-2014 vs 2014-2024

Period	Region	No. of Occurrences	No. of Affected People (Million)	No. of Deaths	Damage (Billion US$)
2005-2014	World	3,641	1,757	764,846	2,003
	OIC	794	193	132,651	81
	Share of OIC	22%	11%	17%	4%
2015-2024	World	3,848	1,625	321,732	2,212
	OIC	921	399	116,536	113
	Share of OIC	24%	25%	36%	5%

Source: SESRIC staff compilation based on data from EM-DAT, CRED Database. Retrieved May 7, 2025 from https://data.humdata.org/dataset/emdat-country-profiles

In addition to natural disasters, conflict and fragility continue to drive emergencies across the globe. Armed conflicts not only strain health systems by overburdening staff and disrupting services but also displace populations, thereby exacerbating humanitarian and health crises. A substantial proportion of global armed conflicts occur in OIC countries. Between 2015 and 2023, more than 30 conflicts were recorded annually in OIC countries. In

2023, these accounted for 58% of global conflicts.[46] As of July 2024, 14 of the 21 conflict-affected countries and 4 of the 18 countries facing institutional and social fragility—both categories identified by the IMF—were OIC members (see Table 5.2).

Table 5.2: List of Fragile and Conflict-Affected States

Conflict	Institutional and Social Fragility
Afghanistan	Burundi
Burkina Faso	**Chad**
Cameroon	**Comoros**
Central African Republic	Republic of Congo
Democratic Republic of the Congo	Eritrea
Ethiopia	**Guinea-Bissau**
Haiti	Kiribati
Iraq	Kosovo
Lebanon	**Libya**
Mali	Marshall Islands
Mozambique	Federated States of Micronesia
Myanmar	Papua New Guinea
Niger	São Tomé and Príncipe
Nigeria	Solomon Islands
Palestine	Timor-Leste
Somalia	Tuvalu
South Sudan	República Bolivariana de Venezuela
Sudan	Zimbabwe
Syrian Arab Republic	
Ukraine	
Republic of Yemen	

Source: IMF, FY25 List of Fragile and Conflict-Affected States. https://www.imf.org/en/Topics/fragile-and-conflict-affected-states
Note: OIC countries are in bold. As of July 9, 2024.

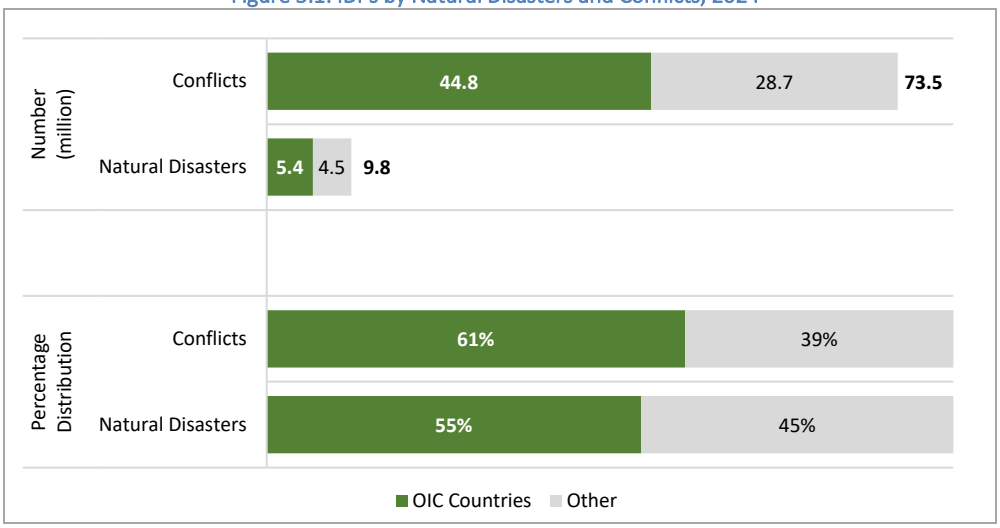
Conflicts have led to significant displacement worldwide. As of 2024, the number of Internally Displaced Persons (IDPs) exceeded that of refugees: the global refugee population reached 43.4 million (UNHCR, 2024) whereas the number of IDPs stood at 83.3 million (IDMC, 2024). Of these IDPs, 9.8 million people were displaced due to natural disasters, and 73.5 million due to conflict. Critically, over half of both conflict- and disaster-induced IDPs—61% and 55%, respectively—were located in OIC countries (Figure 5.1). This concentration highlights a critical need for targeted humanitarian and health interventions, particularly the provision of emergency medical services.

Although both refugees and IDPs require emergency support, including health services, differences in their legal status, security conditions, poverty levels, and access to international assistance render IDPs more vulnerable and their needs less prioritised. For instance, conflict-induced IDPs are often at a greater risk of security threats compared to refugees, primarily due to the unstable conditions within conflict-affected countries. Internal displacement creates emergency situations, as IDPs frequently require urgent assistance such as food, shelter, and healthcare. Moreover, IDP camps can become hotspots for the

[46] According to the UCDP/PRIO Armed Conflict Dataset (Davies et al., 2024) accessed on April 01, 2025.

spread of communicable diseases. Repeated or prolonged displacement further compounds these challenges by obstructing access to health services and disrupting ongoing medical treatments.

Figure 5.1: IDPs by Natural Disasters and Conflicts, 2024



Source: SESRIC staff compilation based on data from Internal Displacement Monitoring Centre. Global Internal Displacement Database. IDMC (2024). Retrieved June 10, 2025 from https://www.internal-displacement.org/database/displacement-data/

The brutal occupation in Gaza has led to a catastrophic emergency, severely limiting access to relief supplies and health services. Health infrastructure is operating under extreme strain, and medical supplies are rapidly depleting. The latest Integrated Food Security Phase Classification (IPC, 2025) assessment concludes that "About 1.94 million people across the Gaza Strip are experiencing high levels of acute food insecurity classified in IPC Phase 3 or above (crisis or worse) between 1 April and 10 May 2025, including nearly 244,000 people facing catastrophic food insecurity (IPC Phase 5)".

Collectively, these developments demonstrate the increasing severity and complexity of health emergencies in the OIC region. They underscore the need for urgent, coordinated efforts to build more resilient health systems, strengthen early warning mechanisms, and ensure equitable access to emergency health services. These priorities are firmly embedded in the OIC-SHPA, which emphasises the importance of preparedness, response, and risk reduction capacities. As the OIC moves toward a post-SHPA agenda, sustaining momentum and reinforcing these areas through evidence-based strategies and cross-sectoral collaboration—including with relevant UN agencies and international partners—will be essential to mitigate future risks and safeguard public health.

5.2. COVID-19 Preparedness and Response

Limited preparedness and uneven response capacity formed the background against which the COVID-19 pandemic unfolded across the OIC region. As of June 2020, only two OIC countries—Malaysia and the United Arab Emirates—had attained level-5 COVID-19 prevention and response capacity, representing just 4% of OIC members. Nine countries

(16%) reached level 4, indicating that a meagre 20% of OIC countries demonstrated a high readiness capacity to prevent and respond to the pandemic. By comparison, 44% (25 OIC countries) were categorised at level 3, demonstrating the lack of effective risk management capacities, and 37% (21 countries) at levels 1 or 2, indicating weak and inefficient prevention and response systems (Table 5.3). Consequently, many member countries faced difficulties curbing virus transmission and scaling up emergency response efforts.

Table 5.3: COVID-19 Preparedness and Response Status for OIC Countries, as of 9 June 2020

Response Category	Country Preparedness Capacity				
	Level 5	Level 4	Level 3	Level 2	Level 1
5: Community transmission		Algeria Iran Türkiye	Bangladesh Cameroon Côte d'Ivoire Mali Niger Nigeria Guinea Indonesia Qatar Senegal Sierra Leone Sudan Tunisia	Benin Burkina Faso Chad Gabon Guinea-Bissau Syrian Arab Republic Togo	Comoros
4: >=10 cases	Malaysia United Arab Emirates	Bahrain Brunei Darussalam Egypt Kuwait Oman Saudi Arabia	Albania Azerbaijan Guyana Jordan Kazakhstan Lebanon Maldives Morocco Mozambique Suriname Uganda	Afghanistan Djibouti Gambia Iraq Kyrgyzstan Libya Mauritania Palestinian Pakistan Somalia Tajikistan Uzbekistan Yemen	
3: <10 cases					
2: High risk of imported case			Turkmenistan		
1: Preparedness					

Source: WHO, Updated country preparedness and response status for COVID-19 as of 9 June 2020. Accessed from https://www.who.int/publications/i/item/updated-country-preparedness-and-response-status-for-covid-19-as-of-9-june-2020

The COVID-19 pandemic underscored the importance of international collaboration and scientific innovation in addressing public health emergencies. Global efforts to detect, analyse, and sequence the genomic composition of SARS-CoV-2 were pivotal in informing public health actions and advancing vaccine development. The open dissemination of this genetic information enabled rapid research breakthroughs, facilitating the swift development and deployment of vaccines across the globe. OIC countries with existing R&D

and innovation infrastructure benefited from this collaborative momentum, with several initiating domestic vaccine development programmes. As highlighted in the previous chapter, seven COVID-19 vaccine candidates were approved by national regulatory authorities in OIC countries—an important milestone demonstrating the region's growing capacity to contribute to global public health goods.

Despite this progress, the potential for deeper intra-OIC collaboration remained underutilised. Most vaccine approvals remained confined to their respective countries, and therefore, vaccine procurement and deployment in the OIC region were usually made via the COVAX Facility and bilateral arrangements. This outcome revealed a missed opportunity to activate a unified OIC-led mechanism for scaling up vaccine production and procurement. Notably, the OIC, at its very first session of the Islamic Conference of Health Ministers (ICHM), held in Malaysia in June 2007, had already identified the need to enhance vaccine manufacturing and regulatory capacities to "promote collective self-reliance in vaccine production (SRVP) and supply" within the OIC Member States.[47] The intervening years offered a window for implementing these initiatives; however, despite the institutional foresight in recognising the salience of vaccine self-reliance, limited progress meant that during COVID-19, the region lacked the coordinated infrastructure needed to ensure rapid and equitable vaccine access across member countries.

Looking ahead, the experience of COVID-19 should revitalise commitment to operationalising the SRVP. A more structured and collaborative approach to vaccine manufacturing and regulatory harmonisation would not only support future pandemic responses but also contribute to broader health system resilience. Accelerating efforts in this area is vital for improving pandemic preparedness and promoting greater self-reliance within the OIC region.

In the early stages of the pandemic, several OIC institutions mobilised support. The OIC Islamic Solidarity Fund (ISF) disbursed urgent financial assistance in May 2020 to Bangladesh, Afghanistan, and Djibouti. This aid aimed to strengthen the capacity of health ministries in OIC Least Developed Countries (LDCs) by providing essential medical protection, coronavirus detection kits, laboratory supplies, and treatment equipment. Also in May 2020, the IsDB launched its Strategic Preparedness and Response Programme (SPRP), which focused on prevention, diagnosis, treatment, and secure supply chains for COVID-19-related medical equipment. The SPRP also supported the creation of the IsDB Vaccine Access Facility (IVAC), which provided financial assistance for vaccine procurement, development, manufacturing, and delivery. Through IVAC, the Bank helped establish new vaccination centres in several member countries (IsDB, 2022).

[47] The First Session of the ICHM adopted a resolution on "Self Reliance Program on Vaccine Production" and, in the declaration of the conference, called upon Member States to "promote collective self-reliance in vaccine production (SRVP) and supply through strengthening National Regulatory Authorities and improving capacity for vaccine production and distribution in the OIC Member States." For more information: https://www.oic-oci.org/page/?p_id=206&p_ref=65&lan=en

Such interventions were critical in strengthening member countries' COVID-19 emergency response efforts. However, given the fact that rapid, timely actions are key determinants of any emergency response intervention, setting up an institutional emergency response guideline could increase the OIC's or its financing institutions' rapid responsiveness to health emergencies, especially those with epidemic and pandemic potentials. Given that many OIC countries are LDCs with limited financial capacity to mobilise rapid emergency response plans, there is a clear need for the rapid disbursement of financial response packages in the event of regional or international public health emergencies.

The initial financial assistance packages in response to COVID-19 from OIC institutions were disbursed in late May 2020, five months after the detection of the first cases in OIC countries and two months after the WHO declared the COVID-19 outbreak as a pandemic, highlighting delays in institutional responsiveness. For instance, countries like Benin utilised SPRP support to strengthen infrastructure by building prefabricated laboratories and procuring ambulances. Had funding been available earlier, these actions could have had a more immediate impact on transmission control.

National-level emergency responses often required reallocation of existing health infrastructure and personnel to COVID-19 care. This strain was particularly pronounced in OIC countries, many of which already faced low health workforce density, as analysed in Chapter 1. The limited number of doctors, nurses, and midwives significantly constrained the ability of health systems to scale up services during the crisis. Moreover, in many countries, health systems initially struggled to meet testing, diagnosis, and treatment needs due to the novelty of the virus. However, the development of test kits, tracing protocols, and treatment guidelines contributed to eventual containment efforts (SESRIC, 2020: 20).

At the global level, the WHO established the Intergovernmental Negotiating Body (INB) in December 2021 to draft an international instrument, under the WHO Constitution, to strengthen pandemic prevention, preparedness and response. By April 2025, the INB presented the draft WHO Pandemic Agreement, which was adopted by consensus in May at the 78th World Health Assembly. The agreement proposes comprehensive mechanisms for:

- setting up pathogen access and benefit sharing system;
- taking concrete measures on pandemic prevention, including through a One Health approach;
- building geographically diverse research and development capacities;
- facilitating the transfer of technology and related knowledge, skills and expertise for the production of pandemic-related health products;
- mobilizing a skilled, trained and multidisciplinary national and global health emergency workforce;
- setting up a coordinating financial mechanism;
- taking concrete measures to strengthen preparedness, readiness and health system functions and resilience; and
- establishing a global supply chain and logistics network (WHO, 2025c).

As this agreement has been developed in cognizant of the shortcomings of pervious international guidelines and frameworks that guide national and international health emergency detection, prevention, and response and in line with the lessons learned from the COVID-19 pandemic, the OIC and its member states should closely monitor and be acquainted with its details in earnest. This can facilitate the strengthening of national health systems and capacities through early acquisition of resources set forth for the implementation of the agreement. Eventually, it can also help align OIC health systems with global preparedness frameworks and ensure more effective emergency responses in the future.

5.3. Assessment of Health System Capacity

A continuous and systematic collection, analysis, and interpretation of health-related data is essential to detect outbreaks before they escalate, cost lives, and become difficult to control. Strengthening surveillance and preparedness capacities enables countries to respond more effectively to emergencies, safeguarding populations and ensuring the continuity of essential services.

In evaluating the current state of emergency readiness among OIC countries, this section draws on three widely recognised assessment tools: (1) the WHO's SCORE for Health Data Technical Package, which provides insight into countries' public health surveillance capacities; (2) the International Health Regulations (IHR) State Party Annual Reporting (SPAR) tool, which measures national core capacities in health security; and (3) the Global Health Security (GHS) Index, which benchmarks national capacities to prevent, detect, and respond to pandemics. Together, these tools offer a comprehensive view of institutional readiness and system-level resilience across OIC countries.

5.3.1. Capacity to Surveil Public Health Threats: SCORE

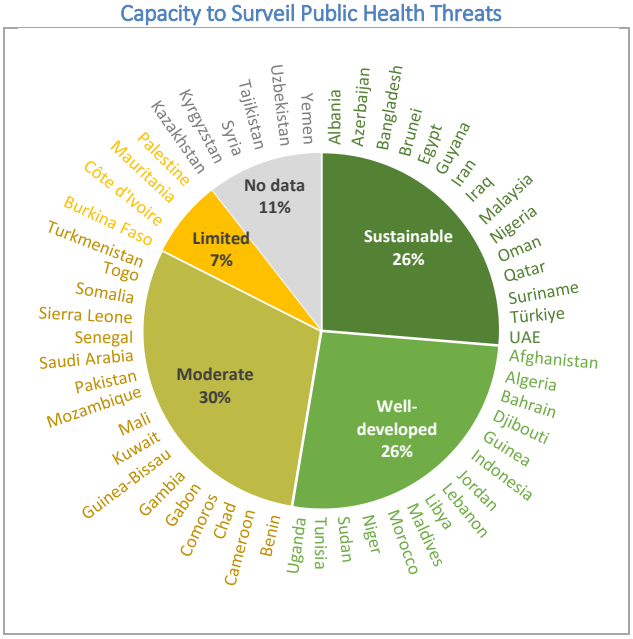
Developed by the WHO and its partners, the SCORE for Health Data Technical Package supports Member States in strengthening national health data systems to monitor progress toward health-related SDGs, the Triple Billion targets, and other national health priorities. It provides decision-makers with a structured framework to (1) focus investments on priority interventions ("best buys")—proven to be effective, feasible, affordable, scalable, and sustainable; (2) access recommended/best practice actions, tools and standards; and (3) identify critical gaps and needs and allow for continuous monitoring, based on a set of simple, standardized, verifiable core indicators (WHO, 2021d).

The SCORE package is the first framework to integrate all components of an optimal health information system. It is based on five key interventions, represented by the acronym SCORE:

- **S**urvey population and health risks
- **C**ount births, deaths, and causes of death
- **O**ptimize health service data
- **R**eview progress and performance
- **E**nable data use for policy and action

Regarding "surveillance of public health threats" element[48] of the capacity to "survey population and health risks", according to the *SCORE Global Report on Health Data Systems and Capacity 2020*, about two-thirds (68%) of countries worldwide had either *well-developed* or *sustainable* capacity to detect public health threats (WHO, 2021c). In comparison, only 52% of OIC countries fell within these two categories: 26% were categorised as having *sustainable* public health threat surveillance capacities—the highest performance level—placing them ahead of 73% of countries globally. Another 26% of OIC countries demonstrated *well-developed* surveillance systems. However, 30% were assessed as having *moderate* capacity, and 7% fell into the *limited* capacity category (Figure 5.2). This places a substantial share of OIC countries below global standards, underscoring disparities in public health data systems and surveillance capabilities and the need for prioritising investment in health information infrastructure, especially in countries with lower scores.

Figure 5.2: Distribution of OIC Countries by Capacity to Surveil Public Health Threats



Source: WHO, SCORE for Health Data Technical Package. Retrieved on March 27, 2025 from https://www.who.int/data/data-collection-tools/score

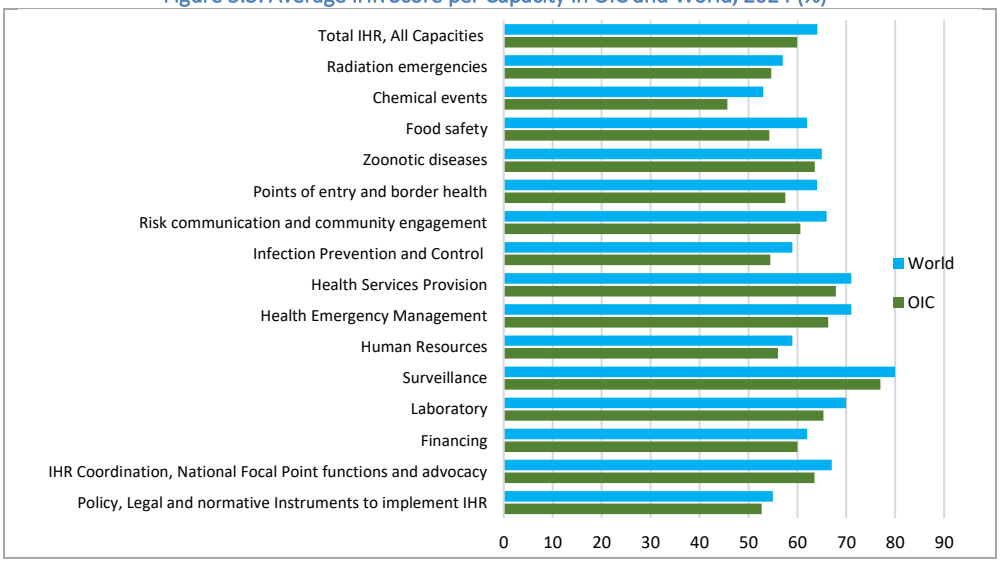
5.3.2. *Health Capacities: International Health Regulations (IHR)*

International Health Regulations (IHR 2005) are a set of legal instruments designed to ensure and improve the capacity of all signatories or States Parties to prevent, detect, assess, notify, and respond to public health risks and acute events. Countries report progress via the IHR SPAR tool, which includes 35 indicators across 15 capacity domains, such as laboratory systems, surveillance, health emergency management, infection prevention and control, and financing.[49] Each category is scored out of a 100% on a five-level scale with 20 points interval, with 0-20% being the lowest and 81-100% the highest.

[48] Two of the SPAR core capacities were used as tracers to measure the surveillance element as part of the SCORE assessment. These two core capacities are 1) IHR coordination and national IHR focal point functions and, 2) surveillance (WHO, 2021d) (See Section 5.3.2).

[49] Each of these capacity domains are assigned one to three indicators to measure the status of each capacity. The indicators are further broken down into attributes, which further define the indicator at each level (WHO, 2025d).

Figure 5.3: Average IHR Score per Capacity in OIC and World, 2024 (%)



Source: SESRIC staff compilation based on data from WHO e-SPAR.

According to the latest data, the global average score across all 15 IHR indicators stood at 64%, while the average for OIC countries was slightly lower at 60% (Figure 5.3). Nonetheless, 23 OIC countries scored above the global average, with the United Arab Emirates, Kuwait, Saudi Arabia, Bahrain, and Egypt each achieving scores of 90% or higher, indicating strong national capacity in health emergency preparedness. By contrast, significant gaps remain at the lower end of the spectrum. The Gambia (27%) and Mauritania (29%) recorded the lowest average IHR scores among OIC countries, while nine others—Libya, Guyana, Burkina Faso, Chad, Togo, Yemen, Afghanistan, Somalia, and Djibouti—scored below 40%, highlighting persistent weaknesses in key preparedness capacities that warrant urgent attention.

When examining individual IHR capacities, both globally and across OIC countries, a similar pattern emerges, although the OIC average was somewhat lower than the global average in all categories. The strongest average capacities at the global level were recorded in Surveillance (80%), Health Emergency Management (71%), and Health Service Provision (71%). OIC countries reflected this trend, scoring relatively higher in Surveillance (77%), Health Service Provision (68%), and Health Emergency Management (66%), though still slightly below the global levels.

However, notable weaknesses remain in both global and OIC contexts. The most pronounced capacity gaps at the global level were found in Chemical Events (53%), Legal Frameworks for IHR implementation (55%), and Radiation Emergencies (57%). OIC countries recorded their weakest average capacities in Chemical Events (46%), Legal Frameworks (53%), Food Safety (54%), and Infection Prevention and Control (54%). Notably, the largest differences between OIC and global averages were seen in Food Safety (8 percentage points lower), Chemical Events (7 points), and Points of Entry and Border Health (6 points), revealing critical gaps that require urgent investment and targeted policy action to strengthen regional emergency preparedness across these domains.

The disparities highlighted by the IHR SPAR results demonstrate that many OIC countries remain insufficiently equipped to prevent or respond effectively to public health threats. There are still inherent gaps in critical areas, reinforcing the importance of Thematic Area 1 (Health Systems Strengthening) and Thematic Area 2 (Disease Prevention and Control) of the OIC-SHPA.

5.3.3. Preparedness for Epidemics and Pandemics: Global Health Security Index

The Global Health Security (GHS) Index is an assessment and benchmarking of health security and related capabilities across 195 countries. The Index aims to accelerate the building of global capacity to prevent, detect, and respond to epidemics and pandemics. The two editions of the GHS Index were published in 2019 and 2021 and developed in partnership among the Nuclear Threat Initiative and the Johns Hopkins Center for Health Security at the Bloomberg School of Public Health, working with Economist Impact.

The GHS Index assesses countries' health capacities and capabilities based on six categories:

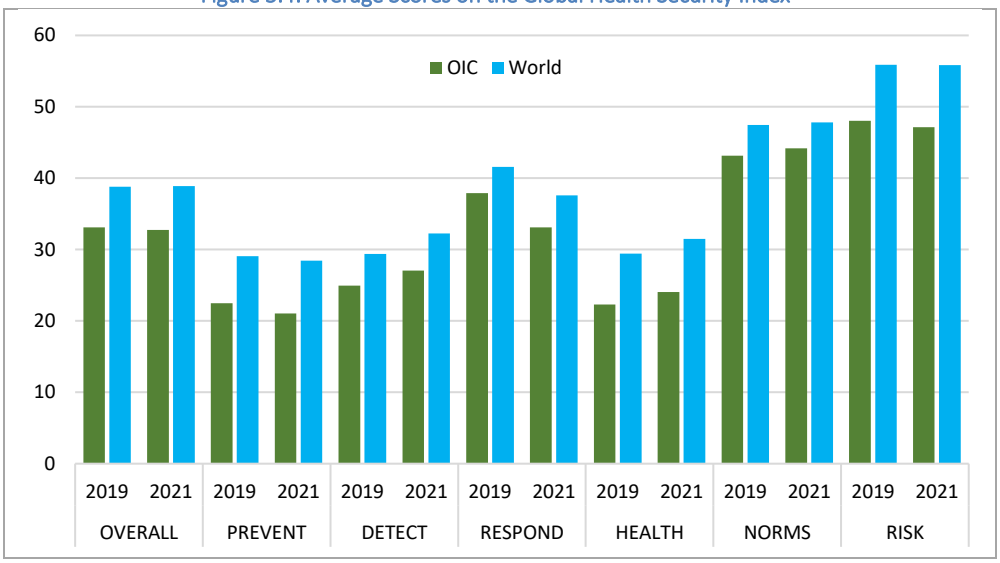
- PREVENT: Prevention of the emergence or release of pathogens
- DETECT: Early detection and reporting for epidemics of potential international concern
- RESPOND: Rapid response to and mitigation of the spread of an epidemic
- HEALTH: Sufficient and robust health system to treat the sick and protect health workers
- NORMS: Commitments to improving national capacity, financing plans to address gaps, and adhering to global norms
- RISK: Overall risk environment and country vulnerability to biological threats

The overall score (0–100) for each country is a weighted sum of the six categories. Each category is scored on a scale of 0 to 100, in which 100 represents the most favourable health security conditions and zero represents the least favourable conditions. The GHS Index scoring system includes five tiers with groupings of scores of 0–20; 20.1–40; 40.1–60; 60.1–80, and 80.1–100.

Figure 5.4 below shows the scores for each of the categories and the overall score in 2019 and 2021, the years for which data on the index is currently available, for the OIC region in comparison with the global score. The scores for 2019 provides insight into the state of pandemic preparedness before COVID-19 spread across the world, while the 2021 data provide crucial information on the progress made following lessons learnt from the COVID-19 pandemic.

According to the GHS Index scores for 2019 and 2021, the global average health security score improved only marginally—from 38.8 to 38.9—during the COVID-19 pandemic. In contrast, the OIC average declined slightly from 33.1 to 32.8, highlighting stagnation in health security improvements across the region. This divergence points to persistent challenges faced by many OIC countries in strengthening institutional resilience and preparedness.

Figure 5.4: Average Scores on the Global Health Security Index



Source: SESRIC staff compilation based on data from the Global Health Security Index retrieved on April 18, 2025 from https://ghsindex.org/.

No country in the world was classified within the top-tier category of the Index in neither 2019 nor 2021, underscoring the global nature of health security gaps. In both years, the United States, Australia, and Finland emerged as the top-ranked countries, with scores of 76.2, 73.2, and 72.0 in 2019 and slight decreases to 75.9, 71.1, and 70.9 respectively in 2021. Within the OIC group, the top performers in 2019 were Malaysia (55.1), Türkiye (49.8), and Indonesia (49.2). By 2021, all three countries retained their leadership within the region, with Malaysia increasing its score to 56.4, Indonesia to 50.4, and Türkiye to 50. However, it is noteworthy that no OIC country was classified within the top two tiers of the GHS Index, which include countries scoring above 60 points, reflecting the considerable distance that remains to achieve robust and comprehensive health security readiness.

Despite the gaps in the overall score between countries, it is important to note that during the COVID-19 pandemic, countries showed agility in developing and strengthening response capacities that might not be factored in the GHS Index. Regardless, the Index revels inherent shortcomings across all indicators for pandemic preparedness and containment as manifested in the scale and severity of COVID-19 and its impacts.

Indeed, between 2019 and 2021, only 41% of OIC countries recorded improvements in their overall GHS Index scores—slightly below the global share of 47%. The most significant gains within the OIC were observed in Brunei Darussalam, which recorded a 10.5-point increase, followed by Qatar (3.6 points), Guinea-Bissau (2.1), Libya (2.0), and Gabon (1.9).

While overall health security scores remained low across all regions, a closer look at the six core categories of the GHS Index reveals further disparities. In both 2019 and 2021, OIC countries recorded lower average scores than the global averages in every category. Moreover, the gap between global and OIC scores widened in 2021 in five out of the six categories, highlighting limited progress in closing preparedness gaps. The only exception

was in the Norms and Commitments category, which reflects countries' adherence to international frameworks, financing commitments, and regulatory standards. Here, the OIC region slightly narrowed the gap, suggesting modest improvements in aligning with global health security norms. The following analysis provides a breakdown of category-level performance and identifies critical areas requiring attention.

In the domain of Prevention, which measures capacities to avert the emergence or release of pathogens, both global and OIC averages declined. The global score dropped 0.7 points from 29.1 to 28.4, while the OIC average fell 1.4 points from 22.5 to 21.1, remaining well below the global level. The gap indicates ongoing weaknesses in biosafety, immunisation, and integrated surveillance systems.

In terms of Detection and Reporting, there was global progress of 2.9 points from 29.4 to 32.3, and the OIC score also improved by 2.1 points from 25.0 to 27.1, reflecting enhanced surveillance and laboratory capacities. Still, the gap with global averages persisted, calling for greater investments in real-time reporting and early warning systems.

Performance in Response and Mitigation declined globally by 4.0 points from 41.6 to 37.6, with the OIC region following suit, dropping 4.8 points from 37.9 to 33.1. This weakening highlights vulnerabilities in crisis coordination, emergency logistics, and healthcare surge capacity.

Health systems remained a critical area of concern: the global score rose slightly from 29.4 to 31.5, whereas the OIC average improved from 22.3 to just 24.1, with the gap widening from 7.1 points to 7.4 points. These figures underscore structural challenges in medical countermeasure deployment, hospital readiness, and protection of frontline workers, many of which were exposed during the pandemic.

In terms of Norms and Commitments, both the global (+0.4 points from 47.4 to 47.8) and OIC (+1.1 points from 43.1 to 44.2) scores saw modest improvement. Notably, this was the only category where the gap between OIC countries and the global average narrowed between 2019 and 2021, suggesting incremental progress in aligning with international frameworks and commitments. Despite this improvement, the gap still remains, underscoring the need for continued efforts to strengthen compliance with international health security norms across the OIC region.

Lastly, the Risk Environment, which includes socio-political stability and public trust in health authorities, was the highest-scoring domain for both groups. While the global average declined by 0.1 points to 55.8, the OIC score fell 0.9 points to 47.1, pointing to growing fragility in public governance and health system confidence.

Overall, these findings reinforce the broader assessment that health security systems across the OIC remain underperforming compared to global benchmarks. In light of the OIC-SHPA, strategic investment and comprehensive policy action are needed to close these gaps—particularly in prevention, response, and system resilience—so that OIC countries are better equipped to manage future public health emergencies. Specifically, addressing these systemic gaps will require not only targeted investments in infrastructure and workforce development, but also improved governance, coordination, and compliance with

international norms. Looking ahead, aligning national capacity-building efforts with the WHO Pandemic Agreement presents an opportunity for OIC countries to advance both regional resilience and global health security.

5.4. Strengthening National and Regional Capacities for Health Emergency Preparedness

As recent global health crises have demonstrated, building strong national and regional systems for emergency preparedness is no longer optional. It is a strategic imperative for safeguarding public health, accelerating recovery, and ensuring sustainable development in the face of future pandemics and disasters.

Establishing robust emergency health management systems is a critical component of safeguarding national health and security. Such systems significantly influence the depth, duration, and intensity of public health threats. Efficient mechanisms that enable countries to prepare for, detect, respond to, and contain health emergencies are essential determinants of human development. Their importance is prominently reflected in the Sustainable Development Goals, particularly SDG 3, which calls for good health and well-being for all. Specific targets within this goal—including 3.b on supporting research and development of vaccines and medicines for both communicable and non-communicable diseases, 3.c on strengthening the health workforce, and 3.d on building national capacities for early warning, risk reduction, and emergency response—further reinforce the global imperative for health emergency management.

Aligned with this international consensus, the OIC also recognises the urgency of developing resilient systems to prevent and control disease outbreaks. The relevance of the OIC-SHPA's emphasis on emergency preparedness—articulated as early as 2013—was brought into sharp focus by the COVID-19 pandemic. The SHPA's warning that communicable disease outbreaks could rapidly cross borders and overwhelm countries lacking adequate infrastructure, capacity, and public awareness proved prescient in light of the global disruption that unfolded just a few years later. As noted in the SHPA:

> *"Prevention and control of communicable diseases is a global challenge and joint responsibility in today's interconnected world... Communicable diseases threaten populations across national boundaries and regional divides, and any outbreak in one part of the world could rapidly spread to other regions within no time and lead to significant loss of lives while having a negative impact on the economies of the countries. Particularly in OIC countries, where there is not adequate infrastructure, human capacity and awareness of prevention in place, any late action can be big with consequences" (OIC-SHPA, p.30).*

Given that the precise timing and nature of disease outbreaks cannot be predicted, and considering the vulnerabilities that persist in many health systems, there is an urgent need to strengthen preparedness, build rapid response capacities, and ensure systems can recover quickly from health emergencies. These investments are not only essential for protecting

populations but also for ensuring sustainable development and resilience in the face of future global health threats.

5.5. Harnessing Technology for Pandemic Preparedness

Strengthening health system capacities encompasses activities that enhance any or all of the core service functions such as human resources for health; health finance; health governance; health information; medical products, vaccines and technologies; and service delivery. In this context, it is important to highlight that digital health technologies and informatics have emerged as strategic enablers of resilient and responsive health systems, particularly in the context of public health emergencies.

The COVID-19 pandemic highlighted the transformative potential of technology in every stage of emergency health management—from surveillance and detection to diagnosis, treatment, communication, and containment. It also revealed the uneven distribution of technological capacities across countries. For OIC countries, this necessitates a dual-pronged approach. High-income members should prioritise investments in advanced digital health infrastructure, innovation, and cutting-edge technologies such as real-time data analytics and next-generation diagnostics. Meanwhile, lower-income members, most of which are struggling with building overall basic technological infrastructure, must focus on foundational capacity-building in health information systems and laboratory infrastructure, ensuring that no country is left behind in emergency preparedness.

Harnessing technology for emergency health management is at the forefront of the discussion on public health emergencies and health security. Technological innovation can significantly enhance preparedness by accelerating the identification and control of emerging diseases. For instance, bioinformatics-based technologies provide breakthroughs in rapid drug discoveries by identifying existing therapeutic agents, diagnosis, and rapid genome sequencing, which exponentially increase the vaccine development and helps in monitoring of mutation and detection of new variants of viruses (Asadzadeh et al., 2020). Likewise, electronic health records and integrated disease surveillance systems can support real-time data analysis, improving the early detection of outbreaks and enabling swift, data-driven public health responses.

In the domain of laboratory science, technologies such as genomic sequencing are increasingly being used in the investigation and acute management of diseases that could constitute public health emergencies, including most infectious diseases (WHO, 2022). In recognition of the importance of the use of technology and innovation in rapid identification of the genetic composition of diseases with epidemic and pandemic potential, the WHO has coordinated the development of the 10-year Global Genomic Surveillance Strategy for Pathogens with Pandemic and Epidemic Potential (2022-2032). The goal of the strategy is to strengthen and scale-up genomic surveillance of pathogens with pandemic and epidemic potential for quality, timely, and appropriate public health actions within local to global surveillance systems (WHO, 2022). The strategy strives to ensure that by 2032, all WHO Member States have, or have access to, timely genomic sequencing for pathogens with pandemic and epidemic potential.

Another critical area is the biopharmaceutical manufacturing sector. Strengthening capabilities in the development and local production of biologics—including vaccines and therapeutics—can significantly improve the timeliness and sufficiency of emergency responses. Expanding regional manufacturing hubs and investing in technology transfer and regulatory harmonisation will be vital for enabling OIC countries to become more self-reliant in times of crisis.

Box 5.1: Leveraging Digital Technologies: Experiences from the COVID-19 Response

During the COVID-19 pandemic, several OIC countries successfully deployed digital tools to strengthen disease surveillance, facilitate contact tracing, and maintain access to essential health services.

Digital contact-tracing applications were widely adopted in high-income OIC countries, enhancing public health authorities' ability to monitor outbreaks and respond swiftly. For example, the United Arab Emirates launched *Alhosn*, Saudi Arabia introduced *Tabaud*, Bahrain developed *BeAware*, and Jordan deployed *Aman*. Indonesia's *PeduliLindungi* app served a similar purpose. These mobile applications significantly improved the scalability and efficiency of contact-tracing compared to traditional methods, allowing for rapid notifications and real-time identification of hotspot areas, and thus, assisting public health official's efforts to reduce COVID-19 transmission rates.

Similarly, in Türkiye, the Ministry of Health launched the *Hayat Eve Sığar* (HES) ("Life Fits into Home") mobile application in early 2020 as a central component of its digital COVID-19 response strategy. The app served as a personal health monitoring and contact tracing tool, enabling users to generate unique HES codes that were required for entry into public spaces such as airports, shopping malls, workplaces, and public transportation. These codes were linked to real-time health data and COVID-19 test results, helping to identify individuals who had tested positive or had been in close contact with confirmed cases. The application also featured interactive maps showing COVID-19 risk levels across neighbourhoods, vaccination status tracking, and access to test appointments. By integrating health information with mobility monitoring, the HES app played a key role in Türkiye's efforts to reduce transmission, support early detection, and facilitate safer public interactions.

Telemedicine and virtual consultation services also gained traction during the pandemic. Countries such as Nigeria and Uganda introduced remote health services to ensure continuity of care while minimising exposure risk for patients and health workers. These innovations helped reduce overcrowding in health facilities and contributed to infection control efforts.

Lastly, the use of electronic health record (EHR) systems enabled timely access to real-time case data, supporting data-driven decisions on restrictions and public health measures. These systems enhanced transparency and empowered authorities to communicate effectively with the public, helping to curb transmission through evidence-based policy implementation.

Source: Websites of national health authorities and or the ministries of health.

Moreover, communication technologies play a central role in emergency response. Digital platforms are essential tools for disseminating timely health information, countering misinformation, promoting public compliance with health guidelines, and enabling community feedback. However, the growing influence of these platforms also poses challenges. The spread of misinformation has proven capable of undermining public trust, fuelling vaccine hesitancy, and weakening collective compliance. Managing the digital information landscape, therefore, must be a core part of emergency preparedness. This

includes strengthening risk communication strategies and enhancing digital literacy to ensure that the public has access to credible, actionable health information during crises.

In addition to enhancing data collection and communication, many OIC countries adopted a variety of digital health solutions during the COVID-19 pandemic. These included contact tracing applications, telemedicine services, and mobile apps to disseminate health information and monitor risk levels. These examples demonstrate the potential of digital tools to improve surveillance, service delivery, and public engagement during health emergencies (see Box 5.1)

CHAPTER 6

Information, Research, Education, and Advocacy

Access to accurate health information, investment in health education and research, and culturally responsive public health advocacy are fundamental pillars of a strong health system. These elements not only strengthen individual knowledge and system-wide resilience but also enable informed decision-making at all levels—from households and communities to institutions and policy circles.

The OIC-SHPA recognised the transformative role of information, research, education, and advocacy in improving health outcomes across OIC countries. The SHPA specifically highlighted the need to expand access to health education, improve health literacy, build research capacity, promote rational use of medicines, and foster community engagement. These priorities were embedded across multiple thematic areas—from strengthening health systems to controlling communicable diseases—and served as both enablers and outcomes of broader health sector reforms.

This chapter explores key developments and challenges across five interlinked domains: health education and literacy, scientific research and innovation, rational use of medicines, social and cultural dynamics of health service utilisation, and public health awareness. It draws on the implementation experience of the SHPA, provides comparative data across countries and regions, and highlights best practices while identifying persistent shortcomings. Taken together, these areas represent critical leverage points for advancing health equity, system preparedness, and population well-being across the OIC region—both as part of the SHPA's legacy and in setting the agenda for the next strategic cycle.

6.1. Health Education, Literacy, and Workforce Development

The OIC-SHPA recognised the pivotal role of education in addressing communicable and non-communicable diseases, building resilient health systems, and strengthening the health workforce. While the SHPA advocated for expanding health education infrastructure and improving the quality of training across member countries, persistent gaps remain. Many OIC countries still suffer from inadequate health workforce capacity, low health literacy levels, and insufficient integration of health education into national development agendas.

Health education is a vital pillar of any functional health system. It not only contributes to improved population health outcomes but also strengthens social resilience, economic development, and individual empowerment. A well-informed population is more likely to

engage in health-promoting behaviours, adhere to treatments, and contribute to early detection and prevention efforts. Closely linked to this is the concept of health literacy—the capacity of individuals to obtain, understand, and apply health information in ways that promote and maintain good health. Health education and literacy, therefore, work in tandem to empower people and communities to make informed choices and actively participate in managing their health. Indeed, scientific literature consistently shows that low health literacy is strongly associated with poorer health outcomes, higher hospitalisation rates, and lower use of preventive services (Nutbeam, 2000; Kickbusch et al., 2013; Meherali et al., 2020).

From a systems perspective, health education also underpins the development of a skilled and sustainable health workforce, which remains a key challenge across OIC countries. As detailed in Chapter 1, the average density of doctors, nurses, and midwives in the OIC region is 30.6 per 10,000 population—significantly below the WHO-recommended threshold of 44.5 required to achieve the health-related targets of the SDGs. This shortfall, particularly acute in Sub-Saharan African member countries, limits the capacity of OIC health systems to meet current demand and respond to future health emergencies (see Chapter 5). It is noteworthy to highlight here that the Sub-Saharan region faces the heaviest disease burden from preventable causes (see Chapter 2).

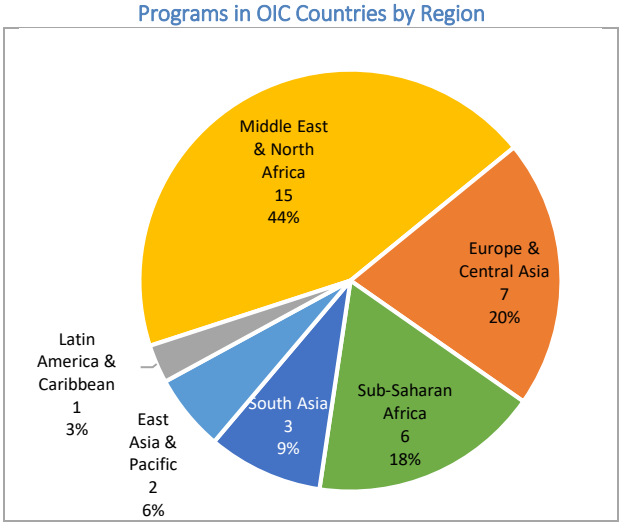
The underlying causes of workforce shortages are manifold. Inadequate investment in health education, limited infrastructure, and insufficient numbers of medical training institutions are major bottlenecks. For instance, Africa, which hosts a large number of OIC countries, accounts for only 11% of the world's medical schools (Brimmo et al., 2022). Moreover, many qualified personnel migrate to higher-income countries or urban centres, creating internal and external "brain drain" that further depletes human resource pools in underserved regions. In the external context, this means, essentially, that wealthy countries are benefitting from the funds poor countries are investing in training health workers. This migration also extends to educators, compounding the challenge of expanding and improving health education capacity.

Looking specifically at health education institutions across the OIC region, it is evident that substantial progress is needed. With one of the youngest populations globally, the OIC region must scale up access to medical and allied health education. But quantity alone is insufficient: educational institutions must be supported with laboratories, modern learning technologies, simulation facilities, and qualified instructors to deliver competency-based learning, suggesting that quality of health education is as critical as its availability.

Educational institutions must be equipped not only with physical infrastructure, such as laboratories and teaching hospitals, but also with updated curricula that address the evolving needs of the health sector. Accreditation bodies play a key role in this regard, ensuring that medical and allied health institutions meet national or international standards. Available data show that 34 of the 57 OIC countries have national organisations that recognise or accredit medical schools or programmes. Most of these are concentrated in the Middle East & North Africa and Europe & Central Asia regions, while Sub-Saharan Africa and parts of Asia remain underrepresented (Figure 6.1 and Annex C). Expanding accreditation coverage and

harmonising standards across the OIC region would be a valuable step toward improving the consistency and quality of health education.

Figure 6.1: Distribution of Organisations that Recognise/Accredit Medical Schools or Medical Education Programs in OIC Countries by Region



Source: SESRIC staff compilation based on data extracted from Foundation for Advancement of International Medical Education and Research, as of April 4, 2025. https://www.faimer.org/dora/

The COVID-19 pandemic had a profound impact on health education systems—like other education systems—disrupting medical training worldwide due to lockdowns, travel restrictions, and the shift to remote learning. In many countries, particularly low- and middle-income countries with limited digital infrastructure, the transition to virtual instruction was fraught with challenges—poor internet connectivity, limited access to learning devices, and a lack of preparedness among educators and students alike. These problems have had a major impact on the efficacy of virtual medical training for students in these countries (TMS Collaborative, 2021). Survey-based studies, such as Dost et al. (2020), highlight students' dissatisfaction with online medical education during the pandemic due to limited interaction, family distractions, poor internet connectivity, inconvenient timing of tutorials, anxiety, and lack of suitable learning space. Still, virtual teaching has become more common in the post-pandemic era, offering opportunities to expand access, especially during future emergencies. OIC countries should invest in hybrid teaching models and train instructors to deliver effective online education to ensure continuity and resilience in health education.

Beyond pre-service education, continuous professional development (CPD) is crucial to maintaining a motivated and capable health workforce. Structured CPD opportunities help health professionals keep pace with evolving medical practices and technologies while improving service quality and retention. Incentivising CPD and offering clear career progression pathways—especially in underserved areas—can reduce workforce erosion and ensure long-term sustainability of human resources for health.

At the same time, expanding the role of community-based and mid-level health workers offers a pragmatic solution to workforce shortages in many OIC countries. These cadres—such as nurses, midwives, and health technicians—are often deeply rooted in communities and can deliver a wide range of essential services, including health education, maternal care, immunisation, and first-line treatment. Integrating them formally into health systems and providing adequate training and supervision can significantly enhance both coverage and equity in service delivery in low-resource settings.

Women's empowerment can also play a critical role in health workforce development. Women constitute a significant portion of the health workforce, especially in caregiving and frontline roles. However, they remain underrepresented in leadership positions and often face structural challenges such as unsafe working environments, mobility restrictions, and pay disparities. Addressing these issues through inclusive policies in education, recruitment, and workplace practices, as outlined in the OIC Plan of Action for the Advancement of Women (OPAAW), is essential for promoting both fairness and the overall effectiveness of health systems.

As emphasised in the SHPA, building a competent, well-distributed health workforce is critical not only for service delivery but also for health system resilience and emergency preparedness. Achieving this goal requires not only increasing the number of trained personnel, but also improving the relevance, quality, and accessibility of medical education. Health education should be viewed as an integrated process that connects knowledge acquisition, skills development, professional ethics, and responsiveness to population health needs. Looking ahead, the post-SHPA agenda should prioritise investments in health education systems that are inclusive, adaptable, and forward-looking—capable of producing a resilient workforce and empowering individuals with the literacy and skills needed to navigate current and future health challenges.

6.2. Advancing Health Research for Evidence-Based Policy and Innovation

Robust and inclusive health research is fundamental to evidence-based policy-making, innovation in healthcare delivery, and improved population health outcomes. The OIC-SHPA recognised the importance of health research as a driver for both national and regional progress. From scientific discovery and clinical practice to public health strategies and digital transformation, a well-supported research ecosystem ensures that health systems can respond to evolving challenges and leverage technological developments. This section analyses the contribution of OIC countries to global scientific output in health-related fields, and assesses their engagement in emerging research frontiers, particularly the integration of artificial intelligence (AI) into life-science research.

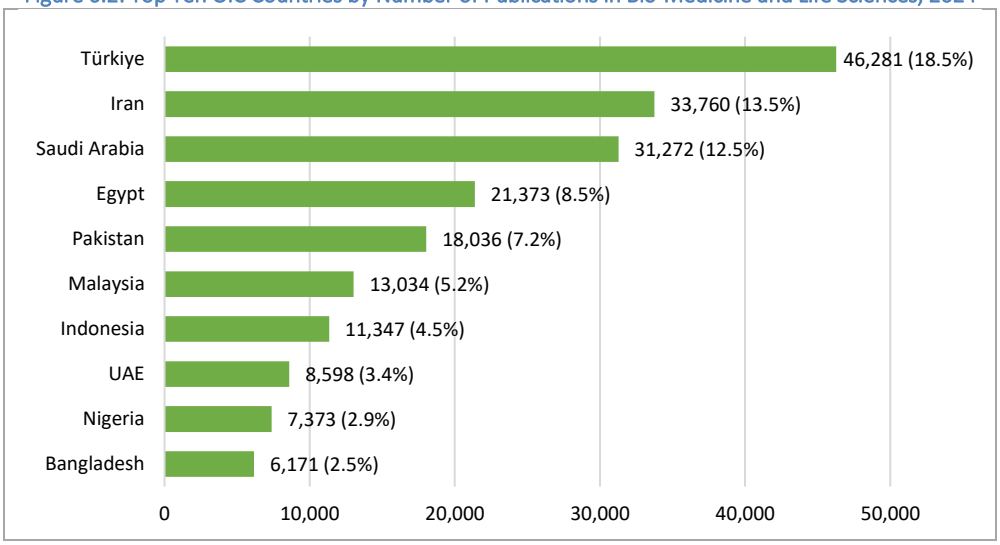
6.2.1. Trends in Scientific Publications in Life Sciences and Biomedicine

Cutting-edge research in health significantly influences the quality and accessibility of health services by shaping diagnostics, treatment protocols, and the adoption of innovative technologies. To assess the research contributions of OIC countries, this section examines data on scientific publications in life sciences and biomedicine for the years 2015 and 2024.

Globally, the number of scientific publications in these fields[50] rose from 1.66 million in 2015 to 2.54 million in 2024—an increase of 54%. During the same period, OIC countries recorded a remarkable 149% increase in their scientific output, from 100,374 to 250,101 publications. As a result, the OIC's share of global life sciences and biomedicine publications rose significantly—from 6.1% in 2015 to 9.8% in 2024.

This impressive growth reflects a success story for the OIC region. It demonstrates the impact of expanding access to post-secondary education, increasing enrolment in STEM fields, and supporting research and development initiatives at the national and regional levels. While global output also expanded considerably, the rate of growth in the OIC's contribution far outpaced the global average, underscoring the region's growing relevance in the global research landscape.

Figure 6.2: Top Ten OIC Countries by Number of Publications in Bio-Medicine and Life Sciences, 2024



Source: SESRIC staff compilation based on data from Clarivate's Web of Science database.
Note: The percentage figures in parentheses indicate the share in OIC total.

Despite this progress, research output remains uneven across the region. In 2024, Türkiye led OIC countries with over 46,000 publications, while the ten lowest-contributing countries collectively produced just 650 publications. The top five contributors—Türkiye, Iran, Saudi Arabia, Egypt, and Pakistan—accounted for 60.3% of total OIC publications in these fields. In total, the top 10 OIC countries generated 78.9% of the group's life science and biomedical output, underscoring the concentration of research activity in a limited number of countries (Figure 6.2).

This imbalance highlights the need for enhanced collaboration and research capacity-building, particularly among lower-performing countries. Strengthening intra-OIC research

[50] Including articles, dissertations, thesis, books, reports and clinical trials covered by Web of Science Core Collection, Medline, ProQuest Dissertation & Thesis Citation Index, KCI-Korean Journal Database, and SciELO Citation Indices—accessed from Clarivate's Web of Science database.

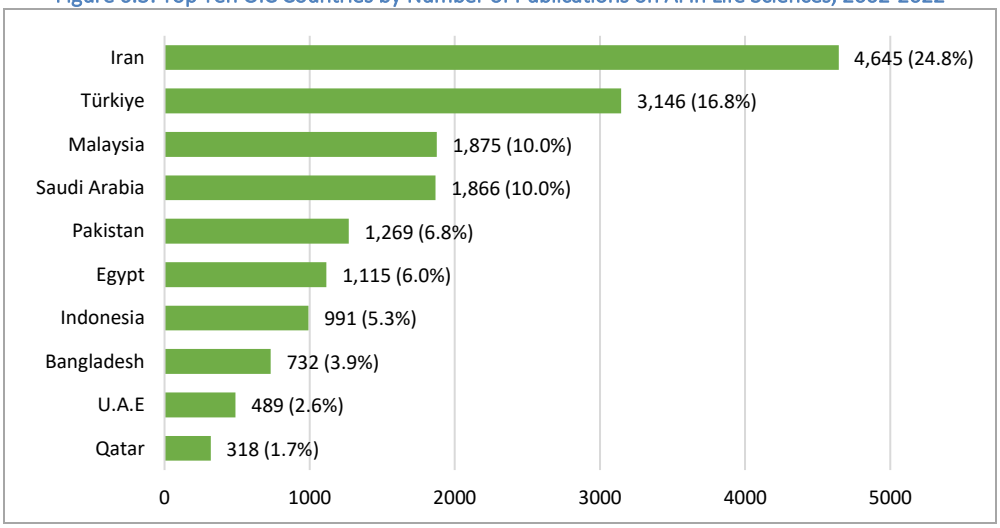
partnerships and infrastructure is essential to ensure that health systems across the region benefit more equitably from scientific advancements in life sciences and biomedicine.

6.2.2. *Leveraging Artificial Intelligence in Life-Science Research*

Scientific discovery through research is a laborious process. Research in life sciences contributes significantly to human health and overall well-being by improving diagnosis, developing new treatment methods, enabling drug discovery, and advancing innovative diagnostic tools. In the field of medicine, there is an increasing use of AI-powered tools for analysing and interpreting large research databases, including laboratory findings and clinical trial data (Beam et al., 2023). In other branches, such as biology, AI tools can enhance the analysis of biological images, such as microscopic scans of tissue samples. These tools offer great potential for saving time and reducing costs associated with traditional data analysis methods, while also improving the quality of research outcomes.

However, two major challenges continue to hinder widespread adoption: the geographic concentration of AI research in a few countries, and the lack of technical expertise among life scientists to utilise these tools effectively. A recent global study on the geography of AI in life sciences revealed that nearly half of all related publications between 2002 and 2022 originated from the United States and China (Schmallenbach et al., 2024).

Figure 6.3: Top Ten OIC Countries by Number of Publications on AI in Life Sciences, 2002-2022



Source: Schmallenbach et al. (2024).
Note: Data for Chad, Comoros, Djibouti, Guinea Bissau, Guyana, Mauritania, Turkmenistan, and Suriname are not available in the data set. The percentage figures in parentheses indicate the share in OIC total.

The OIC region remains underrepresented in this domain. Of the 397,967 global studies in AI-powered life-science research, OIC countries contributed fewer than 19,000—roughly 5% of the total. Furthermore, 88% of these came from just 10 OIC countries (Figure 6.3), while the remaining 12% (about 2,300 studies) was spread across all other participating member countries. This sharp imbalance underscores the urgent need to enhance digital research capacity within the OIC, particularly in view of the growing role of AI in global health systems.

The implications are significant. Since AI systems learn from the data they are trained on, regions not contributing to AI model development risk being excluded from the benefits—leading to reduced relevance, effectiveness, and even biased outcomes when applied in underrepresented contexts. Additionally, developing and deploying AI-based tools requires expertise in programming, machine learning, and computational modelling—skills often lacking in countries with limited digital infrastructure and research capacity.

The growing importance of AI in life sciences and healthcare presents both a challenge and an opportunity for the OIC region. As global health research increasingly integrates digital technologies, it becomes critical for OIC countries to build stronger foundations for AI-related research and application. This includes not only expanding the technical capacities of researchers but also investing in data infrastructure, fostering interdisciplinary collaboration, and establishing supportive regulatory and ethical frameworks. As preparations for a successor to the OIC-SHPA move forward, this momentum provides a timely opportunity to embed health technologies and artificial intelligence as a strategic area of focus—ensuring that OIC countries are well positioned to participate in, and benefit from, the next frontier of global health innovation.

6.3. Rational Use of Medicines and Adverse Drug Reactions

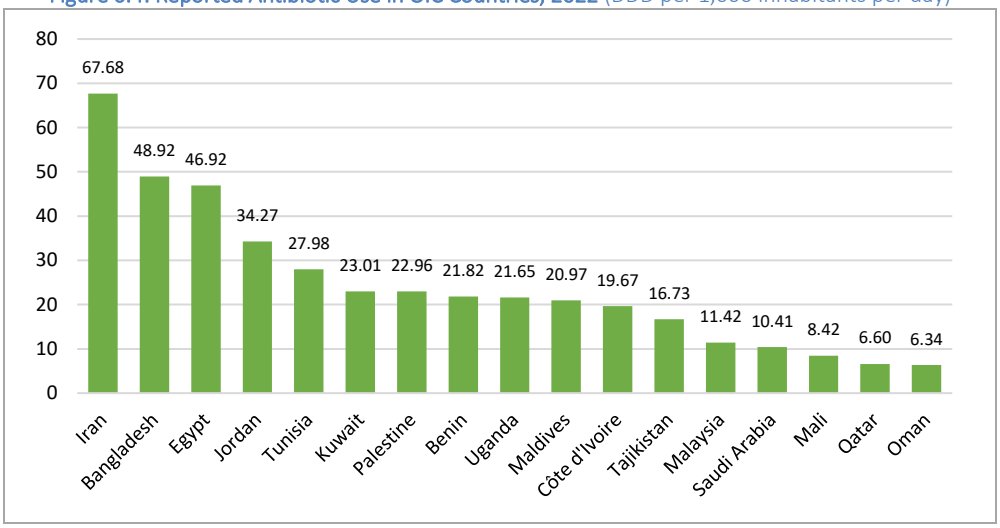
The rational use of medicines is fundamental to the effectiveness, safety, and cost-efficiency of health systems. According to the WHO, medicine use is considered rational when patients receive medications appropriate to their clinical needs, in the correct dosage, for an adequate duration, and at the lowest cost to them and their communities. Conversely, irrational use occurs when one or more of these conditions are not met. This can take the form of polypharmacy (use of too many medicines per patient), overuse of antibiotics and injections, inappropriate self-medication, and failure to adhere to clinical guidelines (WHO, 2002).

Irrational medicine use is a widespread concern, especially in low- and middle-income countries (LMICs), including many OIC countries. Such practices not only compromise patient safety but also lead to significant economic costs. Globally, it is estimated that medication-related harm affects one in three patients in medical care settings, with nearly a quarter of preventable adverse events considered severe or potentially life-threatening (Hodkinson et al., 2020). In LMICs, unsafe care is associated with mortality rates as high as 4% among hospitalised patients (Slawomirski & Klazinga, 2020). Recognising the scale of this problem, the WHO adopted a resolution on “Global Action on Patient Safety” in 2019.

A particularly critical concern is the misuse of antibiotics, which accelerates the development of antimicrobial resistance (AMR)—a growing concern on the global agenda (see Box 6.1). AMR happens when bacteria, viruses, parasites, and fungi develop resistance against medicines that were previously able to cure them. The global rise in antibiotic resistance poses a significant threat by diminishing the efficacy of common antibiotics against widespread bacterial infections. The 2022 *Global Antimicrobial Resistance and Use Surveillance System (GLASS)* report highlights alarming resistance rates among prevalent bacterial pathogens, underscoring the urgent need for action (see WHO, 2022).

As of the end of 2023, 90 countries, territories, and areas were enrolled in GLASS-Antimicrobial Use (AMU), with 63 reporting AMU data for 2022. From the OIC region, 33 countries had joined the GLASS-AMU system, of which 20 provided antimicrobial use data. Reported antibiotic consumption was measured using the defined daily dose (DDD) per 1,000 inhabitants per day, a standard indicator for comparing AMU. The global median stood at 18.31 DDD, based on data from 60 countries. In contrast, the median among 17 reporting OIC countries was 18% higher, at 21.65 DDD, pointing to relatively elevated levels of antibiotic use in the region (see Figure 6.4).

Figure 6.4: Reported Antibiotic Use in OIC Countries, 2022 (DDD per 1,000 inhabitants per day)



Source: WHO, GLASS-AMU dataset.

Among OIC countries, the highest antibiotic consumption levels were recorded in Iran (67.68 DDD), Bangladesh (48.92), and Egypt (46.92). Other countries with notable usage included Jordan (34.27), Tunisia (27.98), and Kuwait (23.01). On the lower end of the spectrum were countries such as Mali (8.42), Qatar (6.60), and Oman (6.34). These variations highlight important differences in prescribing behaviours, public awareness, regulatory enforcement, and access to healthcare across the region.

While antimicrobial use alone does not directly equate to resistance levels, high consumption trends—especially in the absence of effective stewardship—can accelerate the development and spread of AMR. These patterns of use must therefore be understood in light of their potential consequences. It is estimated that bacterial AMR was associated with 4.95 million deaths globally in 2019, including direct responsibility for 1.27 million (Antimicrobial Resistance Collaborators, 2022). Western Sub-Saharan Africa—home to many OIC countries—recorded the highest all-age death burden, with 27.3 deaths per 100,000 attributable to AMR and 114.8 deaths per 100,000 associated with AMR. The World Bank projects that, if adequate measures aren't taken to contain the AMR threat, the economic burden of AMR could result in GDP losses between US$ 1 trillion and US$ 3.4 trillion per year by 2030, disproportionately affecting low- and middle-income countries (Jonas et al., 2017).

These trends highlight the pressing need for global and regional efforts to curb inappropriate antimicrobial use and reduce the burden of AMR.

Box 6.1: Coordinated Global Action to Address Antimicrobial Resistance

To address antimicrobial resistance (AMR) globally, countries adopted the Global Action Plan on Antimicrobial Resistance (GAP-AMR) during the 2015 World Health Assembly and committed to the development and implementation of multisectoral national action plans with a One Health approach to tackle AMR. The goal of GAP-AMR is "to ensure, for as long as possible, continuity of successful treatment and prevention of infectious diseases with effective and safe medicines that are quality-assured, used in a responsible way, and accessible to all who need them". The Plan outlines five objectives:

- to improve awareness and understanding of antimicrobial resistance through effective communication, education and training;
- to strengthen the knowledge and evidence base through surveillance and research;
- to reduce the incidence of infection through effective sanitation, hygiene and infection prevention measures;
- to optimize the use of antimicrobial medicines in human and animal health; and
- to develop the economic case for sustainable investment that takes account of the needs of all countries and to increase investment in new medicines, diagnostic tools, vaccines and other interventions.

Surveillance is an essential tool to inform policies and infection prevention and control responses. Importantly, it is the cornerstone for assessing the spread of AMR and to inform and monitor the impact of local, national and global strategies. On 22 October 2015, WHO launched the Global Antimicrobial Resistance and Use Surveillance System (GLASS), the first global collaborative effort to standardize AMR surveillance. Endorsed by the Sixty-eighth World Health Assembly in resolution WHA68.7, GLASS was created to support the second objective of the GAP-AMR initiative to "strengthen knowledge through surveillance and research", and to continue filling knowledge gaps, with the aim to inform strategies at all levels.

High-level meetings have also provided important opportunities for countries to make ambitious commitments and agree on targets. So far, four Global High-level Ministerial Conferences on AMR have been held; in the Netherlands in 2014 and 2019, in Oman in 2022, and in Saudi Arabia in 2024. In addition, the UN General Assembly has twice convened a High-Level Meeting on AMR, first during its 71st session (UNGA 71) in September 2016 and second during its 79th session (UNGA 79) September 2024. At the second meeting, UN Member States, through a political declaration, committed to new targets and practical steps to address this global threat for humans, animals, plants, and the environment.

Source: WHO (n.d.), WHO (2015), WHO (2023), and WOAH (n.d)

Irrational use also extends to the overuse of injections—even where oral medication would suffice—and to unsafe injection practices, which heighten the risk of transmitting bloodborne infections such as hepatitis B, hepatitis C, and HIV/AIDS. Furthermore, although evidence-based medicine has gained ground, the use of clinical and diagnostic guidelines remains suboptimal in many health systems.

The WHO has proposed 12 core interventions to promote the rational use of medicines, including the establishment of a national coordination body for medicine-use policies, the development of essential medicine lists, problem-based pharmacotherapy training, and independent public education on medicine use (see Table 6.2). While some progress has

been made, implementation remains uneven—particularly in LMICs, where health insurance coverage is limited, and infrastructure is insufficient to enforce prescribing norms or guide patient behaviour.

Table 6.2: Interventions to Promote Rational Use of Medicines

- Establishment of a multidisciplinary national body to coordinate policies on medicine use
- Use of clinical guidelines
- Development and use of national essential medicines list
- Establishment of drug and therapeutics committees in districts and hospitals
- Inclusion of problem-based pharmacotherapy training in undergraduate curricula
- Continuing in-service medical education as a licensure requirement
- Supervision, audit and feedback
- Use of independent information on medicines
- Public education about medicines
- Avoidance of perverse financial incentives
- Use of appropriate and enforced regulation
- Sufficient government expenditure to ensure availability of medicines and staff

Source: WHO, Promoting rational use of medicines. [Online] [Accessed on 9 July 2025] from https://www.who.int/activities/promoting-rational-use-of-medicines

In many high- and middle-income countries, health insurance agencies play a pivotal role in promoting rational medicine use by reimbursing only prescriptions that align with essential medicine lists or clinical guidelines. In contrast, low-income countries lack the institutional and financial capacity to implement such oversight mechanisms, creating a major challenge for governments, donors, and the international community.

Public perceptions and behaviours further compound the problem. Misconceptions—such as the belief that two medicines are better than one, higher doses are more effective, or injections work faster than pills—are widespread (Abbott and Dukes, 2009). In some settings, patients may also mix prescribed medicines with traditional remedies without informing their healthcare providers, raising the risk of adverse drug interactions.

In this context, public education and patient empowerment are crucial. Unfortunately, medicine-use education often remains marginal in national drug policies, and access to accurate, comprehensible information—such as patient leaflets—is limited in many OIC countries (Management Sciences for Health, 2012; WHO, 2006). As a result, patients may lack the knowledge needed to use their medicines correctly, increasing the risk of non-adherence and adverse reactions.

Healthcare professionals have an essential role in promoting rational medicine use. Through counselling, patient education, and collaboration with independent information centres, they can guide patients toward safe, evidence-based practices. This is especially important in underserved communities, where unregulated vendors often supply medications without oversight. In such environments, strengthening community health education and regulation is essential to improving outcomes and minimising harm.

In line with the OIC-SHPA and global health policy frameworks, member states should reinforce institutional mechanisms to ensure the rational use of medicines. This includes investing in pharmaceutical governance, public education, professional training, and surveillance systems. Promoting responsible prescribing, combating AMR, and reducing

medication-related harm are essential not only for protecting patients, but also for safeguarding health system sustainability and resilience.

6.4. Social and Cultural Dimensions in Health Service Utilisation

It is now widely recognised that health outcomes are not determined solely by access to medical care, but are deeply influenced by broader social and cultural determinants. As emphasised in the OIC-SHPA, understanding and addressing these factors is critical for improving public health outcomes, particularly in diverse and resource-constrained contexts. The SHPA called for member countries to integrate culturally appropriate health education and behaviour change initiatives into national health strategies, especially those targeting maternal and child health, immunisation, and communicable disease prevention.

Health behaviours and health-seeking patterns are often shaped by cultural and religious beliefs, social norms, family structures, and traditional practices. In many communities, particularly in lower-income and rural areas, traditional and spiritual explanations for illness coexist with biomedical models. These beliefs can influence how individuals interpret symptoms, seek care, adhere to treatments, and respond to public health interventions. In some contexts, diseases are perceived as supernatural or spiritual afflictions, leading individuals to prioritise traditional or religious healing methods over formal medical treatment.

Cultural beliefs and norms also influence treatment compliance. The extent to which individuals perceive healthcare services as respectful of their values and beliefs significantly affects their willingness to engage with them. In some societies, decisions related to health are made collectively, with older family members or male heads of household playing a decisive role. This can complicate interactions between individual patient and health provider and hinder timely care-seeking, particularly for women and children. Social stigma related to certain conditions—such as mental illness, HIV/AIDS, or infertility—may further discourage individuals from accessing care.

The increasing social and ethnic diversity within and across countries presents both challenges and opportunities for healthcare systems. Culturally competent health systems are better equipped to bridge these divides and deliver responsive services. Cultural competence involves training health professionals to be aware of and respectful toward patients' cultural backgrounds, as well as institutional policies that reduce linguistic, informational, and administrative barriers to care (Betancourt et al., 2002; Stubbe, 2020).

In some cases, social norms and belief systems have hindered the implementation of public health interventions. For example, religious or political opposition in certain member countries has, at times, delayed or obstructed vaccination campaigns. In response to such challenges, the OIC General Secretariat, in collaboration with the International Islamic Fiqh Academy (IIFA), issued landmark statements in 2009 and 2013 supporting polio immunisation (IIFA, 2009; IIFA, 2013). These declarations drew on Qur'anic teachings to emphasise the collective duty to protect children and prevent disease, successfully

mobilising support from religious leaders and communities and contributing to increased vaccine uptake in several affected countries.

Box 6.2: Good Practices in Culturally Responsive Health Interventions

Culturally responsive approaches have proven critical in promoting acceptance of health services and improving outcomes in diverse settings. Especially in contexts where social norms, traditions, and religious beliefs shape health-seeking behaviour, successful health interventions often depend on meaningful community engagement and cultural sensitivity. The following examples from OIC countries demonstrate how integrating cultural understanding into public health strategies can lead to better health behaviours and service uptake:

- **Indonesia**: The Government of Indonesia has worked closely with religious leaders to improve health awareness and service uptake, particularly in the areas of maternal and child health. The Ministry of Health partnered with religious authorities to incorporate key public health messages—such as the importance of antenatal care, immunisation, and family planning—into Friday sermons, religious education, and community outreach. Notably, the Life Skills Education (LSE) programme launched in 2019 with UNICEF support aimed to empower youth through modules on reproductive health, gender equality, and personal development in alignment with local religious and cultural values. Additionally, the Government collaborated with UNFPA and Muslim religious leaders to increase awareness of family planning and reproductive health, especially in rural areas where religious institutions often play a central role in shaping public opinion (UNICEF, 2019; UNFPA Indonesia, 2021).
- **Niger**: The Agadez region saw thousands of children in Quranic schools immunised when local faith figures partnered with UNICEF and health authorities to support vaccination days, reaching over 4,700 children in 157 schools — and even prompting sanitation improvements (Nabazaga, 2025).
- **Nigeria**: In northern states where polio vaccine hesitancy persisted due to misinformation, health officials collaborated with traditional chiefs and Islamic scholars to build trust and dispel myths. "*In Nigeria, achieving success in public health interventions demands trust, community engagement and culturally tailored strategies, and the northern traditional and religious leaders have been at the forefront of the effort to drive successful implementations of vaccination campaigns and health education initiatives for disease prevention measures.*" (WHO Africa, 2024).
- **Pakistan**: In December 2023, Pakistan's federal government convened a National Ulema Conference to address persistent polio under-immunisation and resistance to vaccination. Over 100 leading Islamic scholars from various schools of thought unanimously endorsed polio vaccination as permissible in Islam, condemned misinformation (including anti-vaccine narratives), and declared it a religious duty to immunise children. The declaration urged imams to leverage Friday sermons and local mosques to counter vaccine hesitancy, especially in remote and rural areas. While initially focused on polio, these trusted religious figures expanded outreach during the COVID-19 pandemic and more recently included mpox prevention in their messaging (End Polio Pakistan, 2023; Saeed, 2024).

This cooperation between government, health authorities, and religious and community leadership provides compelling examples of culturally informed public health advocacy and grassroots engagement across OIC countries. These examples also illustrate the potential of culturally informed approaches in enhancing public health outcomes. When paired with adequate resources, capacity building, and local engagement, such interventions can bridge the gap between health systems and communities.

More recently, the IIFA issued official statements during the COVID-19 pandemic endorsing the use of newly developed vaccines. In early 2021, the Academy emphasised the permissibility of COVID-19 vaccines from a Shariah perspective and urged citizens to receive them in order to protect public health (IIFA, 2021a; IIFA, 2021b). These interventions again demonstrated the important role of culturally and religiously grounded messaging in addressing public hesitancy and promoting uptake of essential health services.

While no other similarly well-documented examples have emerged in recent years, the persistence of vaccine hesitancy and misinformation in some settings underscores the ongoing importance of engaging trusted religious and community leaders. There remains a clear need for similar endorsements—not only for polio but also for routine immunisation, maternal and reproductive health, and emerging public health priorities—to ensure greater acceptance and equitable health coverage across all OIC countries.

Consistent with the principles promoted under the SHPA, several OIC countries made efforts to align health communication with local values, religious norms, and community structures (see Box 6.2). At the same time, many cultural practices across OIC countries offer valuable contributions to health. Community-based care networks, dietary traditions, respect for elders, and an emphasis on hygiene can be leveraged to strengthen health promotion and care delivery. Differentiating between harmful and beneficial traditional practices—and supporting communities in making informed choices—is essential. This underscores the critical role of public health awareness and education campaigns, which must be designed with cultural relevance and local ownership in mind.

6.5. Public Health Awareness

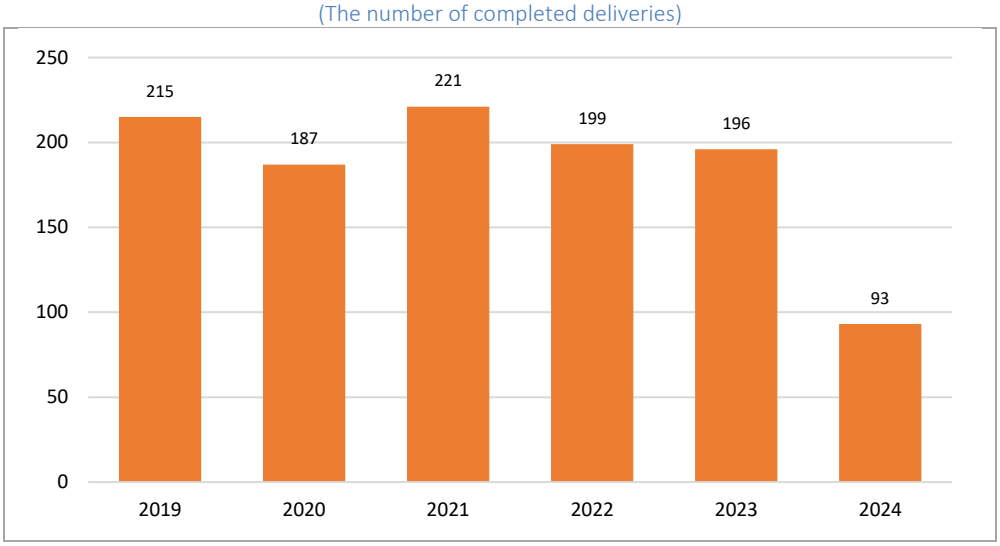
As discussed in the previous section on social and cultural issues, health behaviours and service uptake are strongly influenced by local beliefs, norms, and trust in health systems. This makes public health awareness a vital enabler for improving population health outcomes across diverse OIC contexts.

Public health is the science of protecting and improving the health of families and communities through promoting healthy lifestyles, conducting research for disease and injury prevention, and detecting and controlling infectious diseases. Unlike clinical professionals who treat individuals, public health professionals aim to protect entire populations—whether a local neighbourhood or a whole region—by preventing problems before they occur. Their work is essential to reducing health disparities, expanding access to care, and ensuring that all communities can live healthier lives.

Health education delivered through public health campaigns plays a vital role in raising awareness, promoting wellbeing, and encouraging preventive health behaviours such as immunisation, hygiene practices, and nutrition. These campaigns help ensure that people receive the right information at the right time, especially in areas where routine health services may be limited. Public health campaigns have been shown to reduce the spread of communicable diseases, improve uptake of vaccine interventions, and shape healthier

lifestyle choices. For instance, awareness campaigns played an instrumental role in curbing COVID-19 transmission in many countries.

Figure 6.5: Annual Public Health Campaign Deliveries in OIC Countries, 2019-2024
(The number of completed deliveries)



Source: SESRIC staff compilation based on data from Health Campaign Effectiveness Coalition, accessed June 16, 2025, from: https://campaigneffectiveness.org/campaign-data/.

Data from the Health Campaign Effectiveness Coalition's Intelligence Hub shows that OIC countries conducted a total of 1,111 campaign deliveries between 2019 and 2024 across a range of public health issues. Campaigns peaked in 2021, with 221 deliveries, while the lowest number occurred in 2024 (93) (Figure 6.1). Countries like Nigeria, Pakistan, Cameroon, and Benin were among the most active, highlighting their efforts to reach vulnerable populations and meet their disease control objectives. Reflecting national and global priorities, the targeted disease varied across the years, epidemiological situations, and national health targets on priority disease areas such as Vaccine Preventable Diseases (VPDs) and Neglected Tropical Diseases (NTDs). The most commonly targeted diseases included polio, soil-transmitted helminth infections (STH), measles-containing vaccines (MCVs), schisto, malaria, and nutritional deficiencies. These campaigns align closely with the objectives of the OIC-SHPA, particularly its thematic areas on disease prevention, community engagement, and communicable disease control.

Digital health literacy—the ability to seek, understand, and apply health information through digital platforms—has become an increasingly important determinant of public health. The spread of social media, mobile apps, and other digital tools enables public health officials to reach remote and underserved communities, while also personalising messaging for targeted populations. Digital platforms are especially effective for promoting vaccination, sharing disease prevention strategies, or encouraging healthier behaviours. As internet access grows across OIC countries, the demand for accurate, evidence-based health information has risen. However, concerns about misinformation, especially in online environments, underscore the importance of regulatory safeguards and public education on how to assess the credibility of health content.

Information and communication technologies (ICT) also offer structural solutions to the many challenges faced by health systems in low-resource settings. These include underfunded infrastructure, inefficient service delivery, and poor coordination between stakeholders. In such contexts, ICT tools—ranging from electronic medical records to remote consultations—can improve service quality, optimise resource use, and expand healthcare access. When embedded in the broader health system and supported by sound governance, these technologies become essential instruments of public health reform.

The COVID-19 pandemic further demonstrated the value of digital health tools in facilitating disease surveillance, contact tracing, and emergency response coordination. As detailed in Chapter 5, ICT supported real-time data sharing between healthcare providers, researchers, and policymakers, enabling better-informed decisions and faster public communication (Garcia et al., 2020). These experiences highlight the importance of integrating digital tools into broader public health strategies.

This chapter has demonstrated that public health awareness is not a stand-alone function but a central driver of health system effectiveness. The previous sections showed that health education and literacy (6.1) empower individuals and communities to make informed decisions; that health research and innovation (6.2) generate the evidence needed for accurate awareness campaigns; that rational use of medicine (6.3) requires not only regulation but also informed and engaged patients; and that social and cultural dynamics (6.4) directly influence the effectiveness of public health messaging. Awareness—whether through campaigns, education, or digital outreach—serves as the connective tissue linking health system inputs to population-level outcomes. For OIC countries, investing in inclusive, culturally sensitive, and technology-enabled public health awareness efforts will continue to be essential to meeting both national health targets and shared global commitments.

CHAPTER 7

Concluding Remarks and Policy Recommendations

Health remains a foundational pillar of human development, shaping socio-economic progress and resilience in the face of emerging global challenges. Over the past decade, the OIC Strategic Health Programme of Action (OIC-SHPA) 2014–2023 has served as the primary framework for fostering cooperation among OIC Member States to improve health outcomes. Designed as a comprehensive, multi-faceted initiative, the SHPA identified six strategic areas: health system strengthening; disease prevention and control; maternal, newborn, and child health and nutrition; medicines, vaccines, and medical technologies; emergency health preparedness; and information, research, education, and advocacy.

The OIC comprises 57 Member States with diverse demographic, epidemiological, and socio-economic contexts, which is clearly reflected in health sector performance. For instance, in 2022, per capita health spending ranged from just US$ 15 in Somalia to US$ 2,315 in the United Arab Emirates. Life expectancy in 2023 reached 82.9 years in the United Arab Emirates and exceeded 80 years in several other high-income Gulf countries, while it remained as low as 54.5 years in Nigeria and 55.1 years in Chad—among the lowest globally. Maternal mortality showed a similar divide: while Nigeria (993 deaths per 100,000 live births) and Chad (748) had the highest ratios worldwide, 27 OIC countries had already achieved the SDG target of fewer than 70 deaths per 100,000 live births, and in the United Arab Emirates, Qatar, and Turkmenistan, maternal deaths were five or fewer. Under-five mortality varied from 115 deaths per 1,000 live births in Niger to just 5 in the United Arab Emirates, with ten OIC countries reaching fewer than 10 deaths per 1,000 live births. Such wide gaps—particularly in Sub-Saharan Africa and parts of South Asia—highlight the need for more targeted and equity-focused interventions.

Between 2015 and 2023, progress was made in several areas of health, yet OIC countries overall continued to lag behind other country groups. For instance, life expectancy improved to almost 69 years after the COVID-19 setback, still more than 4 years below the global average. Maternal mortality declined from 378 to 299 deaths per 100,000 live births, and under-five mortality dropped from 64 to 52 deaths per 1,000 live births, although both remained significantly above global averages of 197 and 37, respectively. Nutrition outcomes improved: stunting among children under five fell from 29.7% in 2015 to 26.1% in 2022, remaining above the global average, and overweight prevalence declined from 5.9% to 5.5%, now below the global average. Availability of essential non-communicable disease medicines

improved in many Member States between 2015 and 2023, indicating gradual progress in access to treatment. These achievements were driven by a combination of national efforts, cooperation among OIC Member States, contributions from OIC institutions, and collaboration with international organisations such as WHO, UNICEF, and development partners.

Persistent challenges, however, hinder sustained progress. Health systems in many low-income OIC countries remain underfunded and fragmented, with per capita health spending averaging only US$ 171 in the OIC region compared to US$ 400 in non-OIC developing countries and US$ 1,237 globally. Workforce shortages and uneven distribution of health professionals constrain service delivery, especially in rural areas. Progress in controlling infectious diseases has been limited: while HIV prevalence remained stable, the number of people living with HIV increased; malaria and tuberculosis incidence rose in recent years; and wild poliovirus remains endemic in Afghanistan and Pakistan with reported case resurgences. Pharmaceutical self-reliance remains low, with OIC countries accounting for only 1% of global pharmaceutical exports, leading to heavy reliance on imports. Preparedness for health emergencies and disaster response capacities proved insufficient, as demonstrated by the disproportionate impact of COVID-19 and other outbreaks.

The SHPA implementation period coincided with several high-impact health emergencies—including COVID-19—which exposed systemic vulnerabilities but also revealed opportunities for deeper cooperation. The experience underscored the need for a more resilient, inclusive, and innovation-driven approach to health. This report provides a timely, data-driven, and comprehensive evaluation of health in OIC countries during the SHPA period. By highlighting achievements, persistent gaps, and regional disparities, it lays the groundwork for shaping a renewed health cooperation agenda for the post-SHPA decade. Future strategies must build on lessons learned, focus on closing equity gaps both within the OIC and against global benchmarks, and strengthen collective action in areas such as pharmaceutical production, workforce development, and emergency preparedness.

Sustainable progress will require stronger political commitment, increased investment in health systems, and enhanced intra-OIC collaboration—complemented by global partnerships. SESRIC, leveraging its mandate in statistics, research, and training, will continue to support this transformation by providing reliable data, facilitating knowledge exchange, and coordinating capacity-building efforts in collaboration with Member States, the OIC General Secretariat, and other partners.

The following chapter-wise recommendations build upon this overall evaluation, offering targeted policy directions to address persistent and emerging health challenges across the OIC region.

Health System Strengthening

Strengthening health systems in OIC countries remains a foundational priority for achieving universal health coverage and improving population health outcomes. The evidence presented underscores persistent structural challenges in health financing, human resources, and infrastructure across the region.

One of the most pressing issues is the continued reliance on out-of-pocket payments, which disproportionately affects low-income populations and hinders equitable access to health services. The limited role of risk-pooling mechanisms such as social health insurance further compounds financial barriers. To address this, OIC countries need to undertake targeted reforms to enhance public financing for health, diversify funding sources, and expand coverage through prepayment and insurance-based models. There is also scope for increasing domestic investment in health by leveraging existing fiscal space and ensuring more efficient, transparent, and accountable use of resources. Enhanced intra-OIC cooperation and partnerships with international agencies—such as WHO, UNICEF, and the World Bank—can offer technical and financial support in designing and scaling sustainable health financing models.

In parallel, the chronic shortage of health workers poses a serious constraint on service delivery and system resilience. With health worker density in many OIC countries falling below global thresholds, strategic workforce planning is needed to train, retain, and equitably deploy skilled personnel. This includes not only increasing the number of physicians, nurses, and midwives, but also developing multidisciplinary teams capable of meeting evolving health needs. Policies should support expanded training capacity, cross-border cooperation, and mutual recognition of health qualifications. Incentives to encourage deployment in underserved areas, as well as stronger engagement of community-based health workers, particularly for maternal and neonatal care, are essential.

Hospital infrastructure—particularly the availability of beds and intensive care units—also requires significant strengthening. The COVID-19 pandemic revealed the limitations of current capacities and highlighted the need for greater investment in surge readiness and critical care.

Going forward, the post-SHPA agenda for OIC countries must build on these insights by prioritising financial protection, equitable workforce development, and system-wide resilience. A more coordinated and strategic approach at both national and OIC-wide levels will be key to ensuring that health systems can meet current demands while preparing for future challenges.

Disease Prevention and Control

Disease prevention and control remain at the core of effective public health systems and are among the primary focus areas of the OIC-SHPA. Despite some notable progress achieved during the implementation period, the OIC region continues to face a substantial burden from both communicable and non-communicable diseases, with wide disparities across and within countries. The COVID-19 pandemic significantly disrupted disease prevention services and reversed some of the earlier gains, particularly in mortality outcomes, immunisation coverage, and infectious disease control. As of the latest available data, life expectancy and adult survival rates have not yet returned to pre-pandemic levels in many OIC countries, underscoring the need for greater investment in resilient and equitable health systems.

Moving forward, OIC countries should prioritise investment in primary healthcare systems and public health infrastructure to improve early detection, prevention, and management of

disease outbreaks and chronic conditions. Preventing the rise of non-communicable diseases—now the leading cause of death in the region—requires robust national policies that address common modifiable risk factors, such as tobacco use, unhealthy diets, insufficient physical activity, and obesity. A whole-of-society and whole-of-government approach is necessary to address the structural and behavioural drivers of NCDs, supported by strong political commitment and sustained resource allocation.

Strengthening disease surveillance systems, public health data infrastructure, and national health information systems is vital to ensuring timely responses to epidemics and to guiding evidence-based policymaking. In this regard, stronger regional coordination mechanisms are also needed to support early warning systems, joint response protocols, and cross-border health risk management. Efforts to ensure access to preventive and diagnostic services must be complemented by broader strategies to improve the availability and affordability of quality-assured medicines, diagnostics, and vaccines, as further elaborated in Chapter 4.

Intra-OIC cooperation can play an important role in bridging the capacity gaps across the region. Mechanisms and platforms for knowledge-sharing and experience exchange—such as the *OIC Health Portal*—offer cost-effective means for disseminating best practices, especially in prevention and disease control. Similarly, building the capacity of health policymakers, experts, and civil society actors is integral to the success of any national or regional disease strategy. In this context, SESRIC's training and capacity-building programmes in the domain of health offer valuable support by matching the needs and capacities of Member States and fostering structured cooperation among them.

Finally, more attention must be directed to the Sub-Saharan African OIC Member States, which continue to bear the highest burden of disease while facing persistent challenges in service delivery, financing, and workforce capacity. Dedicated regional efforts—such as the *OIC Plan of Action for Cooperation with African Member States (OIC-Africa Programme)*—are essential to mobilise targeted political support, technical expertise, and financial resources to address these systemic gaps. In this context, the Islamic Development Bank (IsDB) has played a crucial role in supporting health sector investments, especially in fragile and low-income countries, and stands as a key partner in scaling up interventions for disease prevention and control. Going forward, its support could be further enhanced by aligning future programming with national disease strategies and regional cooperation priorities, including through concessional financing, technical assistance, and co-financing arrangements with other partners. Strengthening collaboration with international organisations such as WHO, UNICEF, the Global Fund, and Gavi remains equally critical to ensure that no OIC country—especially the most vulnerable—is left behind in the effort to achieve universal health coverage and resilient health systems.

Maternal, Newborn, and Child Health and Nutrition

The OIC-SHPA implementation period witnessed notable progress in maternal, newborn, and child health and nutrition across many Member States. However, this progress has been uneven and insufficient, particularly in low-income and Sub-Saharan African OIC countries, where maternal and child mortality rates remain high, and undernutrition continues to pose a severe public health challenge. While the overall decline in mortality indicators and

improvements in nutritional outcomes are encouraging, large coverage gaps and deep-rooted disparities persist—both among OIC countries and in comparison with global averages and internationally agreed targets.

To reduce preventable deaths and improve child and maternal well-being, OIC countries must accelerate investments in a set of proven, equity-focused, and multisectoral interventions. Expanding access to antenatal and postnatal care, ensuring skilled attendance at birth, and strengthening emergency obstetric and neonatal care remain essential. Strengthening the referral linkages between communities and hospitals and improving the supply chain for essential medicines and equipment can save lives at both ends of the care continuum. Greater efforts should also be made to support and scale up home-based maternal and newborn care models, especially those involving trained community health workers.

Immunisation services remain one of the most cost-effective strategies to reduce child mortality. To improve and sustain high coverage, countries should develop innovative, community-based strategies; invest in outreach to underserved populations; and fight misinformation and taboos through political, religious, and community leaders. Operationalizing mechanisms such as the *OIC Pooled Vaccine Procurement* platform would improve timely access to affordable, high-quality vaccines across the region.

Addressing maternal and child malnutrition must also be a strategic priority. Countries should scale up targeted nutrition programmes to reduce stunting, wasting, and micronutrient deficiencies. Interventions should focus on women of reproductive age, starting before conception and continuing through pregnancy and the first two years of life. Expanding food fortification, iron and folic acid supplementation, and vitamin A delivery are especially critical in high-burden settings. Efforts to prevent childhood overweight and obesity must also be reinforced through school-based interventions, front-of-pack nutrition labelling, restrictions on marketing of unhealthy foods, and fiscal policies such as taxation of sugar-sweetened beverages.

Infant and young child feeding practices, particularly exclusive and continued breastfeeding, require renewed national commitment. Governments should ensure that all mothers have access to skilled support and enabling environments to initiate and sustain the WHO/UNICEF-recommended feeding practices—namely, early initiation of breastfeeding, exclusive breastfeeding for the first six months, continued breastfeeding up to two years or beyond, and timely introduction of safe, nutritious complementary foods. Legislation protecting the rights of working women to breastfeed—aligned with ILO standards—should also be enacted and enforced across Member States.

In addition, greater investment in data systems, surveillance, and operational research is required to guide policy decisions and improve targeting. Building human resources for health—especially female health professionals—should be prioritised to increase the reach and cultural appropriateness of services. Academic and clinical research on locally relevant causes of maternal and child malnutrition-related disorders must also be promoted through public-private and academic partnerships.

Looking ahead, OIC countries should take greater advantage of multilateral initiatives and mobilise financial and technical support from development partners, including the IsDB, which has played an important role in financing infrastructure and maternal and child health programs in several Member States. There is scope for expanding this engagement further through innovative financing instruments, joint programming, and co-investment with other international donors.

Finally, the sustainability and effectiveness of maternal, newborn, and child health strategies will also benefit from stronger cooperation and mutual learning among OIC countries. Initiatives already highlighted in Chapter 2—such as the OIC Health Portal, SESRIC's training and capacity building programmes, and the OIC-Africa Programme—can also play a pivotal role in addressing maternal and child health challenges across the OIC region. These mechanisms offer valuable opportunities to replicate low-cost, high-impact practices, enhance workforce capacity, and support the most vulnerable countries through targeted, needs-based cooperation.

In the post-SHPA period, strategic focus should be placed on integrating maternal, newborn, and child health and nutrition into broader universal health coverage efforts, backed by sufficient domestic financing, enhanced accountability, and multisectoral coordination. Achieving meaningful progress will require bold, sustained action and renewed political commitment to protect the health and future of the next generation.

Medicines, Vaccines, and Medical Technologies

Access to essential medicines, vaccines, and medical technologies remains a critical determinant of health equity across OIC countries. While recent years have seen important advancements globally—spurred in part by the COVID-19 pandemic—many OIC countries continue to face persistent structural challenges in availability, affordability, local production, and regulatory oversight. As shown throughout this chapter, pharmaceutical production and trade remain highly concentrated in a few countries, while access to essential NCD medicines is limited in many low-income OIC countries. Similarly, the vaccine sector continues to depend on a small number of global producers, and despite temporary surges in imports and exports during the pandemic, OIC countries collectively account for a very small share of the global vaccine trade. Access to high-cost medical equipment and health technologies also remains uneven, with notable deficits in national policy frameworks, regulatory authorities, procurement systems, and health technology assessment capacity.

Looking ahead, strengthening access to safe, affordable, and quality-assured medicines, vaccines, and medical devices should remain a central pillar of the post-SHPA health agenda. Achieving this goal will require coordinated national and collective action across several key domains:

At the national level, OIC countries should invest in expanding and modernising pharmaceutical production by improving access to skilled human resources and research infrastructure. Education systems must be empowered to produce well-trained scientists, pharmacists, biologists, engineers, and lab technicians. Targeted incentives—such as

scholarships, tax exemptions, and subsidized land for facilities—can also encourage local manufacturing. To address brain drain, governments should create pathways for skilled diaspora professionals to return and contribute to national capacity building.

Equally important is investment in R&D. Governments and the private sector should increase funding for pharmaceutical innovation and collaborate with academic and research institutions. Incentivizing R&D through grants, intellectual property support, and public-private partnerships will be crucial in developing resilient and competitive industries. At the same time, local manufacturers should be supported to produce quality-assured, affordable essential medicines and medical products through access to low-cost inputs, simplified procurement systems, and technical guidance aligned with international quality standards.

At the intra-OIC level, collaboration is key. OIC countries should enhance regional cooperation to harmonize regulatory systems, facilitate pooled procurement, and share regulatory expertise and best practices. Student exchange and training programmes—particularly from least developed member countries to those with stronger pharmaceutical sectors—can help close capacity gaps and build a skilled workforce. Joint R&D initiatives and regional manufacturing hubs could also help reduce costs and improve supply security across the region.

Internationally, OIC countries should continue to work closely with global agencies such as WHO, UNICEF, the World Bank, and Gavi to access technical support, financing, and procurement platforms. Further engagement with the WHO Prequalification Programme and the Global Benchmarking Tool (GBT) process can help member countries strengthen their national regulatory authorities, with the aim of increasing the number of OIC countries achieving Maturity Level 3 or 4.

Finally, strengthening medical technology governance is essential. OIC countries should prioritise the development and implementation of comprehensive national policies on health technology and procurement. National lists of priority medical devices, use of standardized nomenclature systems, and functional health technology assessment units are key building blocks to guide evidence-based decision-making and ensure efficient allocation of limited resources. Addressing gaps in the availability of high-cost medical equipment—particularly diagnostic imaging and radiotherapy—should also be a priority, especially in low-resource settings.

As OIC countries prepare for the next health cooperation agenda beyond the OIC-SHPA, building self-reliance in pharmaceutical production, improving access to essential medical products, and fostering innovation in health technologies must remain strategic priorities. These efforts will not only strengthen health systems but also contribute to broader socio-economic development and the realisation of the right to health for all.

Emergency Risk Management for Health

The past decade, culminating in the COVID-19 pandemic, has underscored the strategic imperative of strengthening emergency risk management capacities across OIC countries. Despite the early emphasis of the OIC-SHPA (2014–2023) on emergency preparedness, the pandemic exposed critical vulnerabilities in public health systems, supply chains, and

institutional coordination mechanisms. It also highlighted the disparate levels of risk exposure and response capacity among OIC Member States. While some have developed robust national mechanisms and institutional structures to manage complex crises, many others have yet to build sufficient resilience to effectively anticipate and respond to large-scale health emergencies, particularly in the context of conflict, fragility, or limited resources.

This disparity calls for targeted intra-OIC cooperation, especially in support of the most vulnerable Member States. As the post-SHPA agenda takes shape, coordinated efforts under the OIC umbrella must prioritise capacity-building, technology transfer, and operational readiness. In this regard, South-South collaboration and shared learning should be scaled up to help disseminate tested practices, risk communication tools, and emergency response frameworks.

At the national level, Member States are encouraged to establish or strengthen dedicated public institutions for health emergency preparedness and response. Drawing on global best practices—including from countries like the UK and Canada—such institutions should focus on risk surveillance, scientific advisory mechanisms, and industrial innovation aligned with public health priorities. In particular, national entities can help catalyse research and development in medical countermeasures, including diagnostics, vaccines, and therapeutics, while also supporting innovation ecosystems that improve preparedness for future threats.

Given the rapidly evolving global health landscape, alignment with emerging international frameworks such as the WHO Pandemic Agreement is crucial. National preparedness strategies should be harmonised with these multilateral commitments to ensure timely data sharing, coordinated response measures, and equitable access to medical products during health emergencies.

Finally, building resilient systems requires investment not only in infrastructure but also in people. Strengthening human resources through training, public health leadership development, and community-based preparedness is vital. OIC institutions should continue to facilitate knowledge exchange and skills development to ensure no country is left behind in future crises. A forward-looking emergency risk management agenda must be inclusive, science-based, and rooted in regional solidarity to effectively protect populations and safeguard development.

Information, Research, Education and Advocacy

As the OIC-SHPA 2014–2023 concludes, it is evident that strengthening information systems, health research, education, and advocacy has been instrumental in improving the resilience, responsiveness, and equity of health systems across the OIC region. Despite notable efforts, important gaps remain. Therefore, the development of robust national health information systems must remain a top priority.

Reliable, timely, and disaggregated health data is essential for evidence-based policy-making, effective resource allocation, and monitoring progress toward national and international health goals. To support this, countries should accelerate efforts to digitise

data collection systems and harmonise key indicators with international frameworks such as the SDGs and the International Classification of Diseases (ICD).

Health research in many OIC countries remains underfunded, fragmented, and disconnected from policy priorities. A coordinated approach that promotes strategic investment in priority health research areas is urgently needed. Countries should support national research councils and strengthen partnerships with academic and international institutions. Increased engagement in global research collaborations—particularly in critical areas such as non-communicable diseases, mental health, climate-related health threats, and antimicrobial resistance—will be essential. Given the growing global threat of AMR, national strategies to monitor resistance trends, promote rational antibiotic use, and support alternative therapies must be integrated into public health plans and research agendas.

Education and training systems must also be enhanced to build a capable health workforce. Beyond clinical training, curricula should include emerging themes such as digital health, emergency preparedness, community engagement, and climate-health linkages. Expanding scholarship schemes and encouraging mutual recognition of health qualifications across OIC countries can also support intra-OIC mobility of trained personnel and knowledge transfer.

Public health advocacy remains underutilised in many contexts. Member states should invest in culturally sensitive communication strategies that engage trusted messengers—such as religious leaders, community elders, or youth groups—to challenge harmful practices and promote healthy behaviours. Greater use of mass media and digital platforms can help scale up awareness on issues such as nutrition, immunisation, mental health, and gender equity in health access.

Lastly, efforts should be made to address the social and cultural determinants of health through participatory, community-driven approaches. Health policies must reflect the lived realities of diverse population groups across the OIC region. Platforms like the OIC Health Portal and SESRIC's capacity-building initiatives offer valuable tools to share good practices and lessons learned. Strengthening collaboration among national governments, regional institutions, and global development partners—including the Islamic Development Bank and Islamic Solidarity Fund—can further enable integrated and sustainable progress.

A renewed OIC health agenda must build on these foundations, ensuring that knowledge generation, data use, human capital development, and culturally informed advocacy become central pillars of health sector transformation across Member States.

ANNEX

A. Major Country Groups used in the Report

OIC Countries (57)

Code	Name	Code	Name	Code	Name
AFG	Afghanistan	GUY	Guyana	PAK	Pakistan
ALB	Albania	IDN	Indonesia	PSE	Palestine
DZA	Algeria	IRN	Iran	QAT	Qatar
AZE	Azerbaijan	IRQ	Iraq	SAU	Saudi Arabia
BHR	Bahrain	JOR	Jordan	SEN	Senegal
BGD	Bangladesh	KAZ	Kazakhstan	SLE	Sierra Leone
BEN	Benin	KWT	Kuwait	SOM	Somalia
BRN	Brunei Darussalam	KGZ	Kyrgyzstan	SDN	Sudan
BFA	Burkina Faso	LBN	Lebanon	SUR	Suriname
CMR	Cameroon	LBY	Libya	SYR	Syria
TCD	Chad	MYS	Malaysia	TJK	Tajikistan
COM	Comoros	MDV	Maldives	TGO	Togo
CIV	Cote d'Ivoire	MLI	Mali	TUN	Tunisia
DJI	Djibouti	MRT	Mauritania	TUR	Türkiye
EGY	Egypt	MAR	Morocco	TKM	Turkmenistan
GAB	Gabon	MOZ	Mozambique	UGA	Uganda
GMB	Gambia	NER	Niger	ARE	United Arab Emirates
GIN	Guinea	NGA	Nigeria	UZB	Uzbekistan
GNB	Guinea-Bissau	OMN	Oman	YEM	Yemen

Developed Countries* (41)

Andorra	France	Lithuania	Slovak Republic
Australia	Germany	Luxembourg	Slovenia
Austria	Greece	Macao SAR	Spain
Belgium	Hong Kong SAR	Malta	Sweden
Canada	Iceland	Netherlands	Switzerland
Croatia	Ireland	New Zealand	Taiwan Province of China
Cyprus	Israel	Norway	United Kingdom
Czech Republic	Italy	Portugal	United States
Denmark	Japan	Puerto Rico	
Estonia	Korea	San Marino	
Finland	Latvia	Singapore	

* Refers to "advanced economies" as classified by the IMF. Last update April 2025.

Developing Countries

Includes all countries other than those classified as developed countries.

B. OIC Countries by Income Group

High Income* (8)

Bahrain	Guyana	Oman	Saudi Arabia
Brunei Darussalam	Kuwait	Qatar	United Arab Emirates

Upper Middle Income* (14)

Albania	Indonesia	Libya	Türkiye
Algeria	Iran	Malaysia	Turkmenistan
Azerbaijan	Iraq	Maldives	
Gabon	Kazakhstan	Suriname	

Lower Middle Income* (20)

Bangladesh	Djibouti	Lebanon	Palestine
Benin	Egypt	Mauritania	Senegal
Cameroon	Guinea	Morocco	Tajikistan
Comoros	Jordan	Nigeria	Tunisia
Côte d'Ivoire	Kyrgyzstan	Pakistan	Uzbekistan

Low Income* (15)

Afghanistan	Guinea-Bissau	Sierra Leone	Togo
Burkina Faso	Mali	Somalia	Uganda
Chad	Mozambique	Sudan	Yemen
Gambia	Niger	Syria	

* Country grouping by income level is based on World Bank classification by GNI per capita in 2023. Accordingly;

- Low-income countries: with a GNI per capita of $1,145 or less,
- Lower middle-income countries: with a GNI per capita between $1,146 and $4,515,
- Upper middle-income countries: with a GNI per capita between $4,516 and $14,005, and
- High-income countries: with a GNI per capita of more than $14,005.

C. Organisations that Recognise/Accredit Medical Schools or Medical Education Programs in OIC Countries, as of April 4, 2025

Country	Organisation
Albania	Quality Assurance Agency in Higher Education
Azerbaijan	Independent Agency for Accreditation and Rating (IAAR)
	Quality Assurance Agency in Education
Bahrain	The Education and Training Quality Authority
Bangladesh	Bangladesh Medical and Dental Council
Egypt	National Authority for Quality Assurance and Accreditation of Education (NAQAAE)
Gambia	National Accreditation and Quality Assurance Authority (NAQAA)
Guyana	Accreditation Commission on Colleges of Medicine (ACCM)
	Caribbean Accreditation Authority for Education in Medicine and Other Health Professions (CAAM-HP)
	National Accreditation Council
Indonesia	Lembaga Akreditasi Mandiri Perguruan Tinggi Kesehatan (Indonesian Accreditation Agency for Higher Education in Health)
	National Accreditation Agency for Higher Education
Iran	Secretariat of the Council for Undergraduate Medical Education (part of the Ministry of Health and Medical Education)
Iraq	National Council for Accreditation of Medical Colleges (NCAMC) / Ministry of Higher Education and Scientific Research
Jordan	Accreditation and Quality Assurance Commission for Higher Education Institutions (AQACHEI)
Kazakhstan	Independent Agency for Accreditation and Rating (IAAR)
	Eurasian Centre for Accreditation and Quality Assurance in Higher Education and Health Care (ECAQA)
	Independent Kazakhstan Quality Assurance Agency in Education (IQAA)
	Independent Kazakhstani Center of Accreditation
Kuwait	Turkish National Accreditation Council for Medical Education's (UTEAK) Association for Evaluation and Accreditation of Medical Education Programs (TEPDAD)
	National Bureau for Academic Accreditation and Education Quality Assurance (NBAQ)
Kyrgyzstan	Independent Agency for Accreditation and Rating (IAAR)
	Agency for Accreditation of Educational Programs and Activities (AAEPO)
	Accreditation Agency for Educational Organizations and Programs (Sapattuu Bilim)
	EdNet
	Ministry of Education and Science National Accreditation Council
Lebanon	Turkish National Accreditation Council for Medical Education's (UTEAK) Association for Evaluation and Accreditation of Medical Education Programs (TEPDAD)
	Ministry of Education and Higher Education
Libya	National Center for Quality Assurance and Accreditation of Educational and Training Institutions (NCQAA)
Malaysia	Malaysian Qualifications Agency
	Malaysian Medical Council
Maldives	Maldives Medical and Dental Council
Nigeria	Medical and Dental Council of Nigeria
	National Universities Commission
Oman	Oman Authority for Academic Accreditation and Quality Assurance of Education (OAAAQA)
	Turkish National Accreditation Council for Medical Education's (UTEAK) Association for Evaluation and Accreditation of Medical Education Programs (TEPDAD)

Country	Organisation
Pakistan	Higher Education Commission, Pakistan
	Pakistan Medical and Dental Council
Palestine	Accreditation and Quality Assurance Commission (AQAC)
Qatar	National Committee for Qualifications and Academic Accreditation
	Turkish National Accreditation Council for Medical Education's (UTEAK) Association for Evaluation and Accreditation of Medical Education Programs (TEPDAD)
Saudi Arabia	Education & Training Evaluation Commission (ETEC) / National Commission for Academic Accreditation and Evaluation (NCAAE)
Senegal	National Authority for Quality Assurance in Higher Education, Research and Innovation
Somalia	National Commission for Higher Education (NCHE) (Somaliland)
	National Health Professions Council
Sudan	Sudan Medical Council
Syria	Directorate of Quality and Accreditation/Ministry of Higher Education
Tajikistan	Independent Agency for Accreditation and Rating (IAAR)
	Ministry of Health and Social Protection of Population of the Republic of Tajikistan
Türkiye	Turkish National Accreditation Council for Medical Education's (UTEAK) Association for Evaluation and Accreditation of Medical Education Programs (TEPDAD)
Uganda	Uganda Medical and Dental Practitioners Council
	Uganda National Council for Higher Education
United Arab Emirates	Commission for Academic Accreditation
Uzbekistan	Eurasian Centre for Accreditation and Quality Assurance in Higher Education and Health Care (ECAQA)
	Independent Agency for Accreditation and Rating (IAAR)
	Ministry of Health / Ministry of Higher and Secondary Specialized Education
Yemen	Council for Academic Accreditation and Quality Assurance of Higher Education

Source: Foundation for Advancement of International Medical Education and Research (FAIMER), Directory of Organizations that Recognize/Accredit Medical Schools. https://www.faimer.org/dora/

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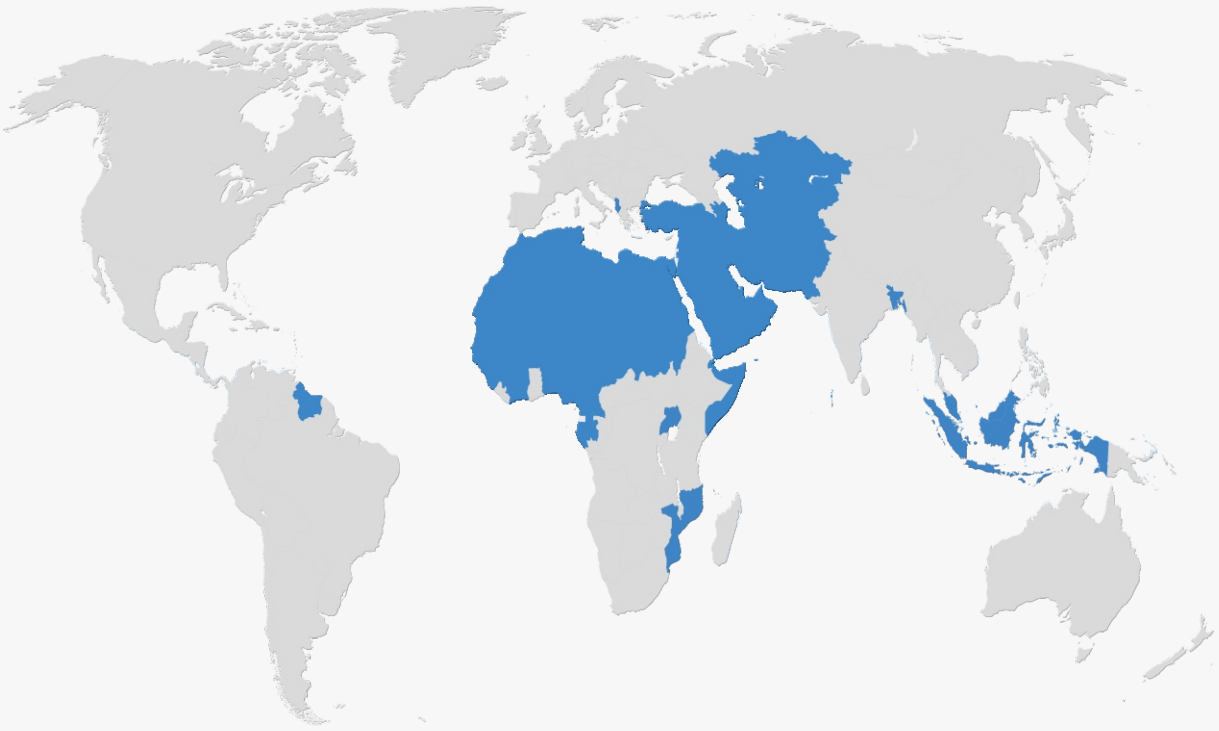

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