THE HEALTHCARE OPPORTUNITY

The Mobile Industry's Growing Role in Digital Health

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M4D

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GSMA Health Tech

The GSMA works with mobile operators, governments and organisations in the development sector to advance digital and emerging technologies such as artificial intelligence solutions in the health sector.

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Author
Akanksha Sharma, Head of ClimateTech and Digital Utilities, GSMA Mobile for Development
Clara Hewitt, Formerly Senior Insights Manager, GSMA Mobile for Development

Contributors
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CONTENTS

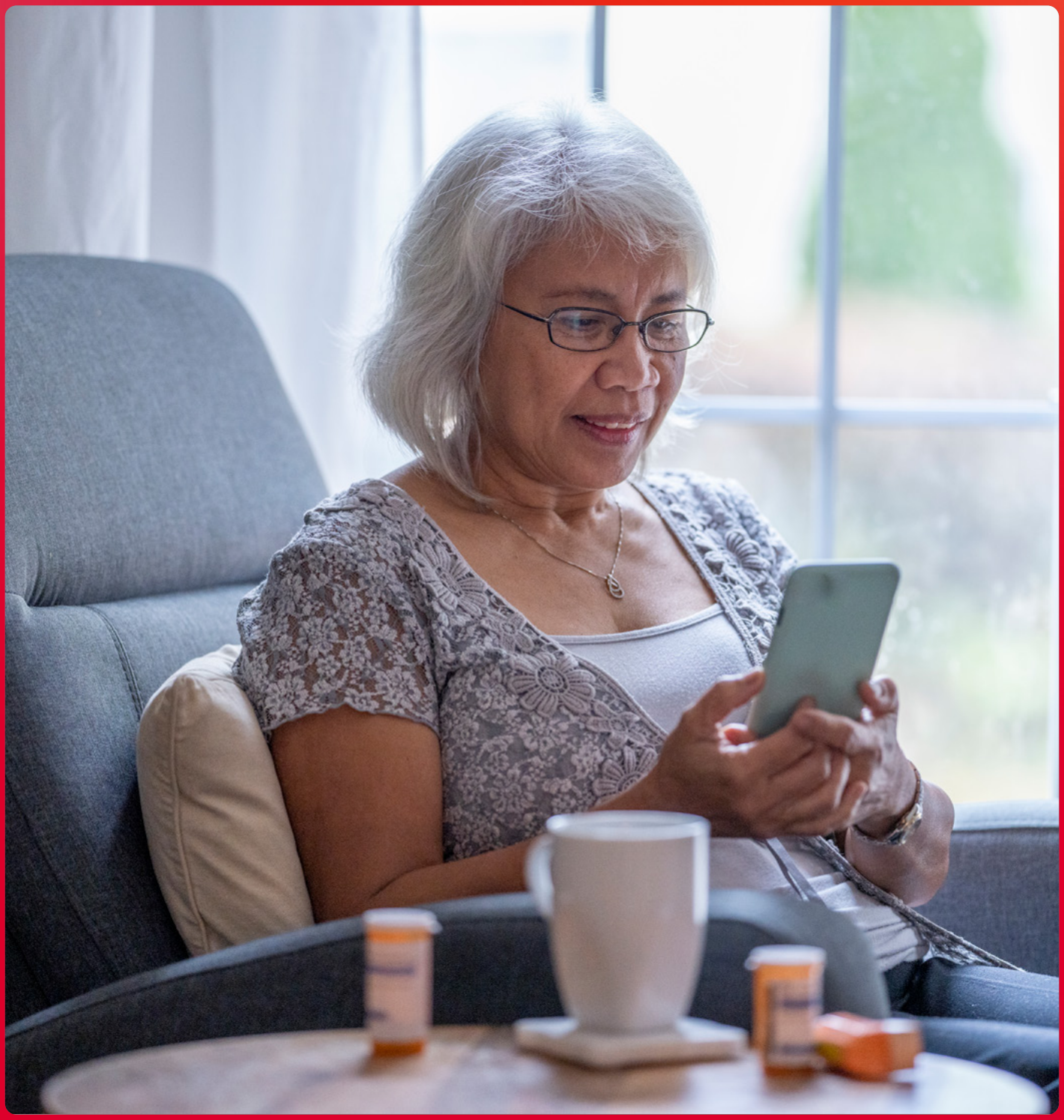
List of figures

List of tables

Acronyms and abbreviations

AI	Artificial intelligence
APAC	Asia Pacific
ARPU	Average revenue per user
B2B	Business-to-business
B2B2X	Business-to-business-to-X
B2C	Business-to-consumer
B2G	Business-to-government
CAGR	Compound annual growth rate
CSR	Corporate social responsibility
GenAI	Generative artificial intelligence
HIC	High-income country
IoT	Internet of Things
LMIC	Low- and middle-income country
MEA	Middle East and Africa
MNCH	Maternal newborn and child health
MNO	Mobile network operator
MoU	Memorandum of Understanding
ROI	Return on investment

1. INTRODUCTION



Health systems worldwide are facing greater pressures than ever before. Many countries are struggling to meet demand for health services amid significant capacity and budgetary constraints, while many citizens are experiencing unmet health needs because services are unavailable, too expensive or hard to access.

Some of the biggest challenges facing global health systems include:

- **Rising demand for access and convenience:** According to the latest World Health Organization (WHO)/World Bank global monitoring report on universal health coverage, 4.6 billion people lacked access to essential health services in 2023. Patients are also seeking access to healthcare services at times and locations that are convenient for them, including outside traditional health settings.
- **Workforce pressures:** There is a significant global shortage of healthcare workers, with the WHO predicting a global deficit of 11 million workers by 2030. These shortfalls are often even more pronounced in rural and remote areas.
- **Ageing populations:** There are ongoing global demographic shifts due to longer life expectancies. More than one in six people globally will be aged 60 years or older by 2030, and by 2050 this will rise even further to 2.1 billion people. Ageing is associated with more complex health needs, with many older adults experiencing co-morbidities (multiple co-existing health conditions) that often require longer-term care compared to episodic, acute illness, increasing the demand for personalised solutions and remote monitoring services.
- **Disease burden:** Countries are contending with a double burden of communicable[1] and noncommunicable[2] diseases. Chronic diseases such as cardiovascular disease, cancer and mental health conditions are responsible for 74% of all deaths globally and associated with increased health service use. Suboptimal vaccination uptake in many countries, particularly among children, is linked to rising rates of vaccine-preventable diseases such as measles and polio.
- **Climate change:** The climate crisis has been called the greatest global health threat of the century. Increasing extreme weather events are having a negative health impacts by increasing the likelihood of disease outbreaks from vector-borne, waterborne and foodborne diseases, and rising exposure to heat and pollution. Disruptions to water, sanitation and agricultural systems by droughts and flooding can also adversely affect health outcomes and threaten health system infrastructure.

While these challenges are experienced in every country, low- and middle-income countries (LMICs) are disproportionately affected.

This has led countries to modify healthcare operating models and adopt innovative, digital solutions to create more efficient and interconnected health systems, better meet the needs of patients and improve conditions for healthcare workers. This includes remote, preventative solutions and self-management to reduce demand on traditional healthcare facilities. Digital technologies offer significant potential to support these changes and make healthcare services more equitable, accessible and affordable, with better public health outcomes.

Research objectives

This global research aimed to map and evaluate the role of mobile network operators (MNOs) in delivering and enabling digital health solutions across both high-income and low- and middle-income contexts. This included an evaluation of the business models, organisational structures and factors enabling and hindering MNOs from participating in contrasting health ecosystems around the world. We also examined the different ways in which MNOs can help improve public health outcomes by enabling and delivering digital health solutions.

1 Diseases caused by bacteria or viruses that are spread between people or from animals to humans via the air, bites or through blood products and bodily fluids. Examples include malaria, tuberculosis and HIV/AIDS.
2 Diseases such as cancer, cardiovascular disease or diabetes, which are not passed from one person to another and typically have a long duration.

Summary of methodology

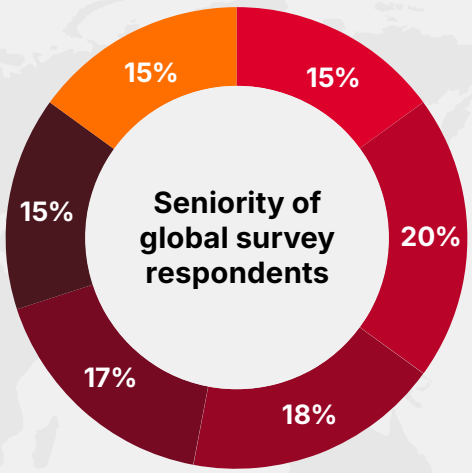
The insights and analysis from this global research study are based on the following:

- 44 semi-structured qualitative interviews with 28 representatives from MNOs and MNO subsidiaries across Europe (n=11), Asia Pacific (APAC) (n=7), Africa (n=4), Middle East (n=3) and North America (n=3), in addition to 16 global and digital health experts.
- Desk research to identify other relevant health-focused activities delivered and enabled by MNOs worldwide within the past 10 years.
- In collaboration with GSMA Intelligence, an online globally representative survey of 100 MNO respondents from five major geographical regions and 60 countries was conducted during November and December 2025. The survey aimed to identify how MNOs across contrasting regions currently deliver their health offers and to examine the opportunities and challenges MNOs perceive and experience when developing and scaling these offers.
- 93 survey respondents were from MNOs with established operations in the health sector and seven were from MNOs without any established operations in the health sector at the time of the survey.
- Target respondents were MNO representatives from managerial to C-suite levels with strategic and/or commercial responsibility for the health vertical within their company.
- All survey results presented are aggregated percentages across all MNOs surveyed.

Figure 1

Geographical distribution and seniority of global survey respondents

Region surveyed	Number of MNO survey respondents
Asia Pacific	30
Europe	30
Middle East and Africa	20
Latin America	10
North America	10



1.1 The digital health market opportunity

Over the past decade, the global digital health market has experienced exponential growth. During the COVID-19 pandemic, when access to traditional in-person services was dramatically reduced, MNOs underpinned access to virtual healthcare such as telemedicine, significantly accelerating demand for, and adoption of, digital health solutions.

According to analysis by GSMA Intelligence in 2025 (see Table 1), the global digital health market opportunity that year was valued at USD 208.17 billion, with high-income countries (HICs) accounting for $187.01 billion, while the market in LMICs was valued at $21.17 billion.

- In the 2025–2030 period, GSMA Intelligence has predicted a 6% compound annual growth rate (CAGR) for the global digital health market. For the same five-year period, GSMA Intelligence has estimated a growth rate of 7.4% for the digital health market in LMICs, relative to a 5.9% growth rate across high-income settings.

Table 1: The digital health market opportunity (USD billion)

	Market segment	2023	2024	2025	2026	2027	2028	2029	2030	CAGR 2025–2030
HICs	B2B*	159.29	164.30	173.47	183.16	193.38	204.17	215.56	227.60	5.6%
	B2C**	11.27	12.40	13.53	14.78	16.14	17.62	19.24	21.01	9.2%
HICs total		170.55	176.69	187.01	197.93	209.52	221.79	234.81	248.61	5.9%
LMICs	B2B	12.66	13.16	14.08	15.06	16.10	17.22	18.42	19.70	6.9%
	B2C	6.12	6.54	7.09	7.67	8.31	8.99	9.74	10.54	8.3%
LMICs total		18.78	19.71	21.17	22.73	24.41	26.22	28.15	30.24	7.4%
Global total		**189.26**	**196.40**	**208.17**	**220.66**	**233.93**	**248.00**	**262.96**	**278.85**	**6.0%**

*B2B – Business-to-business
**B2C – Business-to-consumer
Source: GSMA Intelligence analysis in 2025

1.2 Digitalising the health sector: opportunities and challenges

The digital transformation of the health sector presents a variety of challenges due to its complexity and range of actors, from government and regulatory bodies to public and private healthcare providers, donors, innovators, insurers and healthcare professionals. Most countries also face challenges coordinating highly fragmented physical and digital infrastructure.

There are significant variations in the digital maturity of health systems. In many countries, particularly high-income markets with myriad legacy systems, digital transformation spans more than two decades. Other countries are at a more nascent stage and less encumbered by outdated infrastructure. However, many health systems still rely on manual, paper-based processes, legacy infrastructure and fragmented systems that can hinder effective data sharing. Low interoperability has also been associated with negative patient outcomes due to poor coordination and continuity of care.

Although digitalisation in the health sector has been comparatively slower than sectors like manufacturing and finance, countries around the world are prioritising digital health transformation strategies, policies and legislation to modernise health systems. These efforts are reflected in the growing number of national digital health commitments – more than 120 WHO member states now have a digital health strategy. The adoption of digital services and solutions provides wide-ranging opportunities to deliver health services more efficiently, affordably and equitably. For example:

- **Supporting digitalisation and interconnectedness:** Digital solutions can enable the digitalisation of patient data (e.g. for patient health records or documentation of clinical trial outcomes), facilitate interoperability between health systems (e.g. between primary and secondary care facilities) and support administration and communication between healthcare professionals (e.g. within a given healthcare facility) as well as with healthcare stakeholders in the wider ecosystem (e.g. with health insurers and government public health authorities). In this way, health data can be managed more efficiently, swiftly and securely, and support better decision-making and timelier interventions based on more complete and accurate data.
- **Improving insights:** As health systems become more digitally mature with larger repositories of interconnected digitalised health data, tools such as AI offer opportunities to deliver more proactive and predictive healthcare. The predictive, analytical and diagnostic support provided by AI solutions can offer more detailed insights into healthcare demand and health system performance at the population level, which can aid decision-making and resource allocation.
- **Overcoming distance and time barriers:** Digital health solutions such as telemedicine services and remote patient monitoring tools can bridge gaps in healthcare access where there may be travel, mobility and time barriers to accessing traditional healthcare facilities. The impacts of these solutions can be even more pronounced for individuals living in low-resource, rural and underserved settings where transportation options may be limited or costly and there may be shortages of healthcare workers and specialist facilities.
- **Strengthening the resilience of health systems:** Digital solutions can strengthen health systems by helping to maintain critical operations during humanitarian and environmental crises. For example, remote patient monitoring tools, mobile health apps and telemedicine platforms can sustain access to healthcare and support self-management during conflicts, epidemics and natural disasters.

Faced with the magnitude and complexity of a digital transformation over many years, health systems require experienced, long-term and reliable partners with the necessary technological and delivery capabilities. In many countries, MNOs are already filling this role.

1.3 Why MNOs are expanding into the health sector

In recent years, a growing number of MNOs have developed new digital health offers or expanded existing ones. Given the health sector's reliance on reliable and secure network connectivity, MNOs are well-positioned to support digital transformation efforts. As the health sector becomes more device and data intensive and healthcare needs rise, many MNOs are looking beyond their traditional role as connectivity providers to support long-term digital transformation.

In many countries, MNOs have been diversifying their solutions in response to declining revenues and considerable competition, with several turning to the health sector as a strategic priority. This has led to MNOs redefining their value propositions and bringing significant value to health systems around the world.

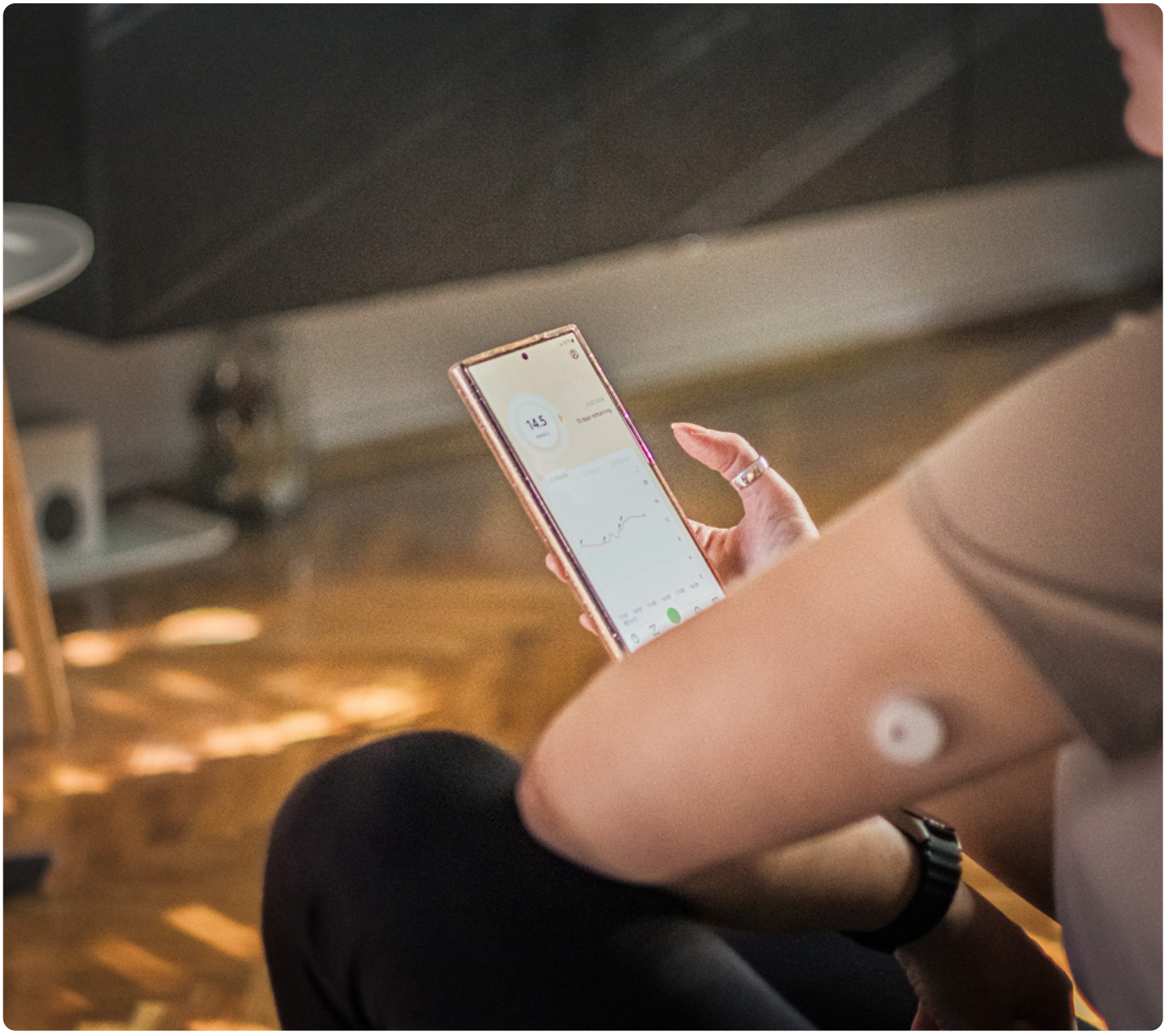
MNOs offer a unique combination of characteristics and capabilities that differentiate them in a competitive landscape and make them sought-after partners in the health sector.

MNOs have diverse capabilities in demand by the health sector:

- **Strong core capabilities:** In addition to providing network connectivity, MNOs have significant technological capabilities and expertise to support digital initiatives across the health sector. This includes large infrastructure and extensive experience in areas such as data and device management, cloud services, customer engagement and cybersecurity. MNOs are also accustomed to operating within regulated environments, which is key given that regulatory compliance is fundamental to delivering digital solutions within the highly regulated health sector.
- **Long-term operations:** The operational maturity of MNOs make them attractive and reliable partners, given their capacity to withstand changing markets and support digital transformation initiatives over many years. Their longevity can also provide a competitive advantage over smaller health tech companies with less established operations.
- **Significant reach and scale:** MNOs can deliver digital health solutions at scale thanks to their large geographical footprint, wide network coverage and extensive infrastructure and customer reach. These are key capabilities when it comes to reaching disparate health stakeholders (including health facilities and individuals) at scale, particularly in rural and underserved areas. Large subscriber bases and trusted relationships with existing customers also bring opportunities for MNOs to develop direct-to-consumer solutions to meet health needs at the individual level.
- **Local operations:** MNOs' strong in-country presence and sovereign infrastructure are key assets, as delivering health solutions requires country-specific healthcare knowledge, relationships with health sector stakeholders and compliance with healthcare regulations, including health data laws. This can be a key differentiator for MNOs as multinational tech companies may lack these capabilities at the local level.
- **Brand trust and recognition:** In most countries, MNOs are widely recognised brands with trusted reputations. This trust is vital for the sustained adoption of digital health solutions given the highly sensitive and personal nature of patient data and healthcare operations.

Common reasons MNOs develop digital health offers:

- **Strategic priority:** MNOs may choose to focus on health-focused solutions and initiatives as a strategic objective, which may be driven by support from senior leadership.
- **Meeting end user needs across the health sector:**
  - MNOs may enter procurement bids for, or be directly commissioned to provide, digital health solutions for individual or groups of public and private health organisations (e.g. across community, primary, secondary care or pharmaceutical companies) where they can offer relevant capabilities and expertise.
  - MNOs may receive increased commissions from existing customers for additional digital health solutions or services. In these instances, an MNO already providing a service (such as connectivity or managed IT services) may be commissioned to provide additional capabilities in other domains (such as customised digital health applications).
- **State-level or national-level commissions:** As noted later in this report, a number of MNOs have formed formal partnerships with local authorities or national governments (e.g. Ministries of Health or ICT) to support the development and maintenance of large-scale digital health infrastructure, such as electronic health record platforms or health information exchange systems.
- **Technology deployments:** Some MNOs have developed new offerings or expanded existing ones where they perceive opportunities to develop healthcare use cases for technologies such as AI, IoT and 5G private networks.



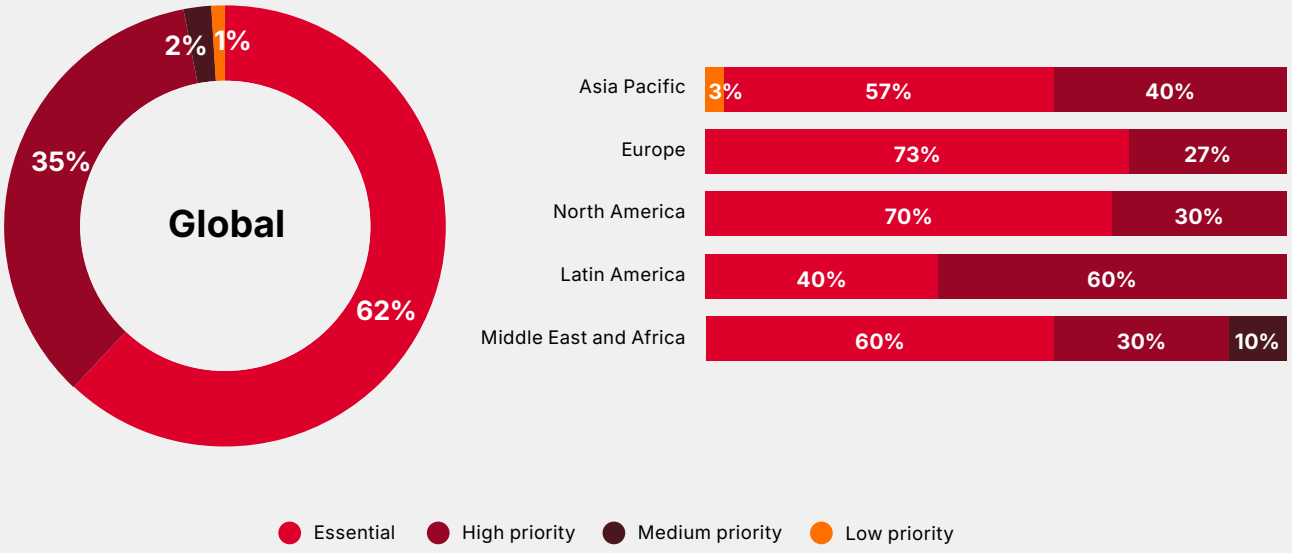
MNOs in both high- and low- and middle-income contexts consider the health vertical to be of high strategic importance.

- 62% of respondents surveyed rated the health vertical as a “high priority” for their company, while 35% of respondents rated it a “medium” priority.
- Across all global regions surveyed, MNO respondents in Europe and North America were most likely to rank the health vertical as a “high” company priority. Among MNO respondents in Middle East and Africa (MEA) and Asia Pacific (APAC), 60% and 57% of respondents, respectively, rated the health vertical as a “high” strategic priority.
- 3% of respondents in the APAC region indicated the health vertical was an “essential” strategic priority, while 60% of respondents based in Latin America perceived the health vertical to be a “medium” strategic priority.

Figure 2

Survey question: To what extent is the healthcare vertical a strategic priority for your company within the next 3–5 years?

(Global and by geographic region)



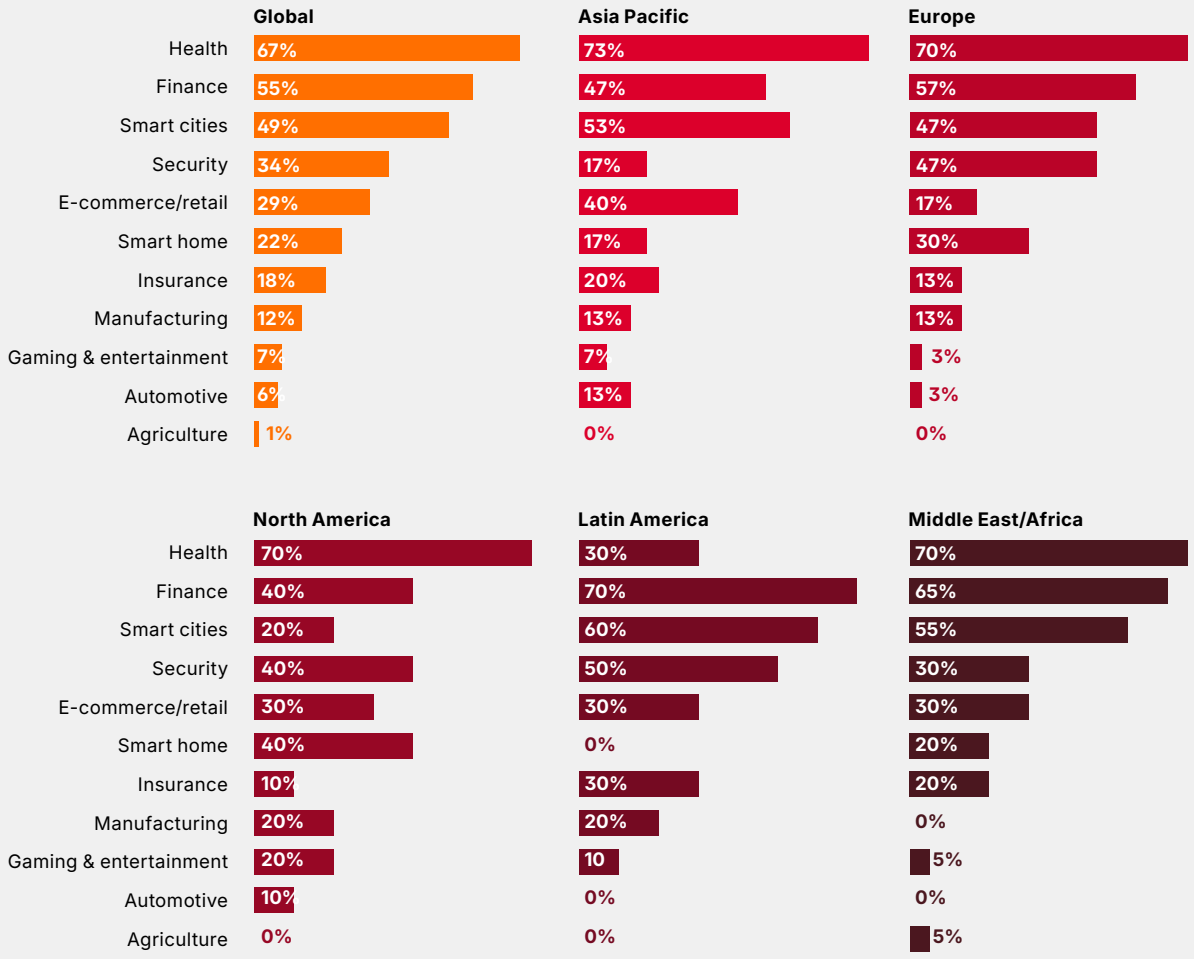
Out of 11 industry-adjacent sectors, survey respondents considered the health vertical the greatest strategic priority for their company.

- Relative to other non-core vertical sectors, such as finance and smart cities (ranked second and third, respectively), the healthcare vertical was ranked as the greatest strategic priority by MNO respondents.
- This high ranking was reflected in all global regions surveyed except Latin America. In this region, MNOs indicated the finance vertical was the greatest strategic priority while the health vertical was ranked fourth, jointly with the e-commerce vertical.

Figure 3

Survey question: Please rank how much of a strategic business priority the health vertical is considered for your company compared to the following verticals

(Rank 1/2/3 summary) (Global and by geographic region)



2. THE GLOBAL LANDSCAPE

Current trends in MNO digital health activities

Around the world, MNOs are responding to the health needs and digital transformation demands of the health sector, fulfilling different roles and serving a variety of end users. The roles and positioning of MNOs vary, depending on a combination of internal and external factors:

- The strategic objectives of the MNO in relation to the health sector
- The MNO's capabilities (e.g. internal healthcare expertise, resources and technology)
- The end user, their unique needs and commissioning structures (e.g. across local, regional or national levels of a health system; public or private healthcare providers; procurement processes)
- The wider healthcare ecosystem structure and market dynamics within a given country (e.g. the digital maturity and financing model of the health system; the policy and regulatory environment; procurement models; and competitive landscape)

Our research indicates that MNOs are primarily providing solutions for six categories of end users in the health sector (Table 2).

Table 2: Types of end users and digital health solutions delivered by MNOs

End user categories	Solutions enabled or delivered by MNOs
Consumer health (e.g. direct-to-consumer services delivered through mobile apps or wearable devices)	Remote monitoring tools, digital health apps, telemedicine services
Community care (e.g. domestic and social care settings, ambulance services)	Remote monitoring tools, telemedicine services, appointment management systems (supporting bookings, referrals and reminders), electronic health records, secure communication platforms, triage solutions, IoT-enabled sensor technologies, health data analytical tools, augmented and virtual reality solutions, medical billing software
Primary care (e.g. pharmacies and general practice settings)	
Secondary care (e.g. general or specialist hospitals (both public and private sector)	
State or national healthcare (e.g. agreements with national ministries or state departments of health or ICT, health insurers, local authorities, public health bodies or digital health agencies)	Large-scale digital health infrastructure including electronic health records, sovereign cloud services, interoperability solutions, health insurance integration platforms, data and analytics solutions
Pharmaceutical and life sciences companies (e.g. clinical trials) and healthcare laboratory testing	Digital solutions for health data documentation and analytics, laboratory and pathology information systems

Among these end users, the greatest demand for MNO services has been observed in public and private hospital settings, as MNOs' capabilities most closely correspond to the digital transformation needs of these environments. Primary, community and secondary care settings share similar needs in terms of digital solutions that support administrative processes (such as billing, referrals and appointment bookings), virtual appointments (telemedicine), remote patient monitoring and communication tools for healthcare professionals.

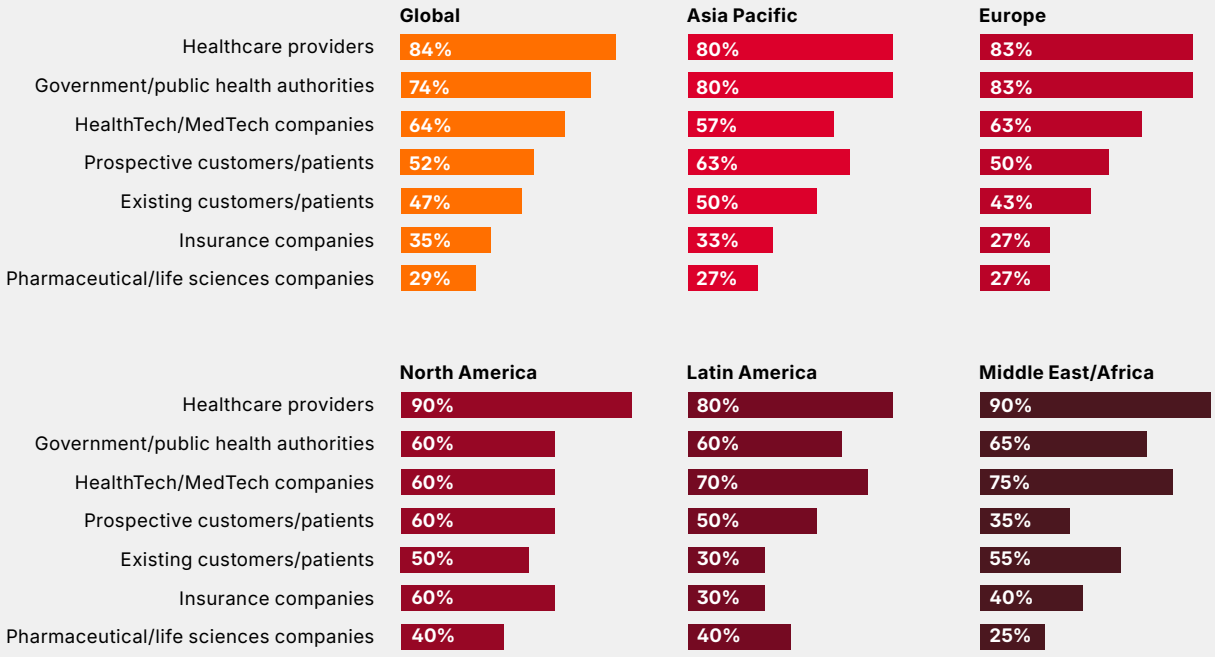
MNOs consider healthcare providers the most significant primary customers in the health vertical, followed by governmental stakeholders and public health authorities.

- Respondents considered healthcare providers (such as hospitals and other healthcare facilities, including community and primary care clinics) as the most likely primary customer by 10 percentage points, followed by government/public health authorities.
- Respondents in APAC and Europe considered both healthcare providers and government/public health authorities the leading primary customers within the health vertical, with respondents ranking both options equally in each region.
- Health technology companies and prospective individual customers were ranked the third and fourth primary customers by all respondents.
- The pharmaceutical and life sciences sector was the least likely to be considered a primary customer by respondents.

Figure 4

Survey question: Who does your company envision to be the primary customer(s) in the health vertical?

(Global and by geographic region)



2.1 MNO positioning and activities in the healthcare value chain

The capabilities that MNOs currently offer in the health sector can be conceptualised as a healthcare value chain (Figure 5). These five layers of the value chain represent the spectrum of capabilities that MNOs can provide in the health sector.

Figure 5

MNO capabilities and offerings in the healthcare value chain

Increasingly specialised health offerings ↑

↓ Core telco proposition

Value chain layer		Example MNO offerings
Direct clinical services		• Virtual doctor consultations and GP services • Medication delivery • Nurse triage services • Physical or hybrid clinics • Chronic care programmes
Healthcare applications and solutions	**Data analytics and insights applications**	• Population health dashboards • Operational analytics (patient flow/capacity) • Risk stratification tools • Clinical decision support • AI diagnostic imaging tools
	Digital (user-facing) engagement solutions	• Telehealth and virtual consultation platforms • Digital triage and symptom-assessment tools • Remote patient monitoring (RPM) • Wearable and device integration platforms
	Operational and administrative applications	• Appointment, referral and scheduling systems • Pharmacy management and e-dispensing • Billing and claims-processing • Workflow and task-management tools
Data and interoperability enablement		• Health information data exchange platforms (regional/ national) • EMR/EHR system integrations • Interoperability middleware and secure messaging
Cybersecurity, identity and compliance services		• Identity authentication services • Consent and access control management • Zero-trust security architectures • Cybersecurity for hospitals (DDoS) • Data sovereignty hosting • Managed SOC services
Connectivity and infrastructure foundations		• Mobile and fixed connectivity (4G/5G, fibre) • In-hospital networking (Wi-Fi, DAS, private) • Cloud, edge computing, data centre hosting • Secure WAN/VPN services • IoT enablement and medical device connectivity

Depending on an MNO's role and strategic positioning, it may offer solutions in one or several layers of the value chain. Rather than launching multiple offers simultaneously, MNOs tend to deploy solutions in a phased approach based on their internal capabilities, wider market dynamics and end user needs. With each ascending layer of the value chain, MNOs require successively more capabilities for specialist solutions, health sector expertise and regulatory compliance. This, in turn, requires greater investment and internal considerations regarding the MNO's operating model. These issues are discussed later in the report.

- **Layer 1:** At the first layer of the value chain, MNOs provide foundational services that enable digital health solutions, like connectivity and infrastructure (including packages of support with cybersecurity, identity and compliance functions). These capabilities are based on MNOs' existing expertise and competitive advantage in these domains.
- **Layer 2:** MNOs support the delivery of data platforms, such as electronic health records and health information exchange systems that enable health data storage, aggregation and interoperability. Many MNOs provide these platforms via government partnerships.
- **Layer 3 and 4:** MNOs (predominantly in HICs) support specialist healthcare applications and solutions tailored to meet the specific administrative, engagement or analytical challenges of different end users. There is growing demand from public and private healthcare providers for these bespoke, long-term solutions for common and high-frequency operational, communication and analytical tasks. Focusing on highly sought-after solutions such as remote monitoring and telemedicine is key to ensuring solutions are relevant to end users. Once deployed, MNOs can explore opportunities to scale solutions to new end users, as well as offer bundled connectivity, cloud, cybersecurity and identity services to capture greater value.
- **Layer 5:** At the top of the healthcare value chain, MNOs support the delivery of advanced specialist solutions that can have a direct impact on clinical care. This layer requires the greatest level of clinical expertise and regulatory compliance, which means it has the fewest number of active MNOs.

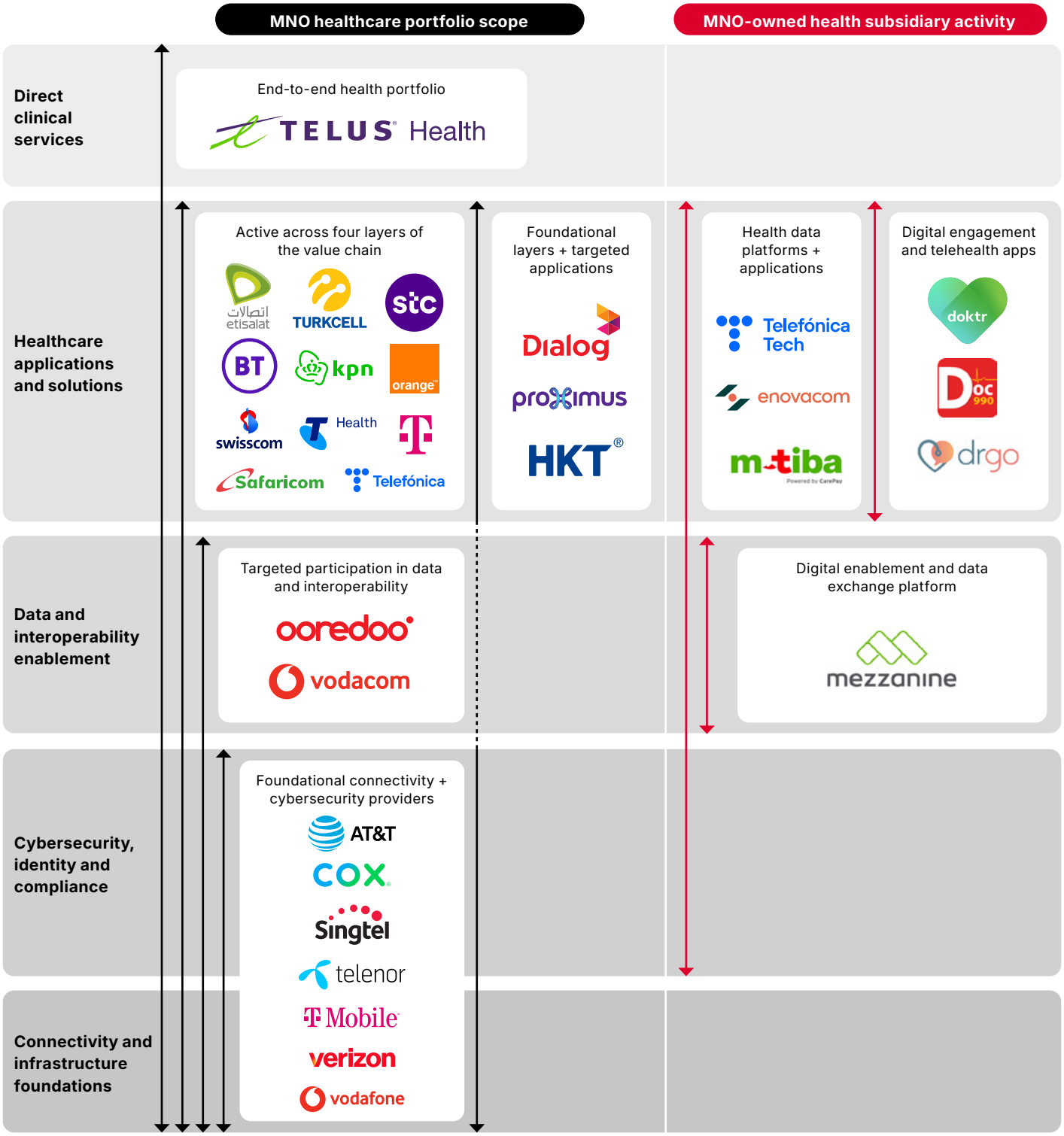
MNO activities can be categorised into four distinct types:

- **Managed IT services provider:** MNOs offer (directly or with technology partners) connectivity, cloud and cybersecurity services, as well as ongoing compliance, device management and maintenance support. They bring a strong customer service component to ongoing maintenance (which may be on a 24/7 basis), including Network and Security Operations Centre incident response capabilities.
- **Data platform provider:** MNOs support interoperability by providing a healthcare data platform to facilitate the capture and exchange of health data across different digital health systems, including administrative and clinical workflows.
- **Targeted healthcare solution provider:** MNOs develop bespoke solutions that address the specific needs of end users (such as demand for remote consultations and digital solutions to facilitate administrative functions).
- **End-to-end digital health solution provider:** MNOs offer integrated solutions across several layers of the healthcare value chain.

While some MNOs provide specialised, stand-alone solutions that are highly customised for specific use cases, others, notably those with more established, mature health operations and greater internal healthcare expertise, have developed end-to-end digital health solutions as part of a multi-service healthcare portfolio. These portfolios require significant investment to create a suite of solutions that may span several value chain layers and support integrations across distinct health systems.

Figure 6

The scope of MNOs' healthcare portfolios and MNO subsidiary activities



Source: GSMA

To provide even more value to healthcare providers, some MNOs are offering orchestration and integration capabilities. Already offering mature solutions, these MNOs are strengthening their competitive advantage by coordinating disparate clinical and administrative data flows at the health system level. In this way, MNOs can streamline oversight for healthcare providers and reduce the need to coordinate solutions across multiple third-party vendors. By minimising the administrative burden of managing multiple vendors, a single MNO can meet several digital health needs of a healthcare provider at once, providing opportunities to capture significantly higher value. Table 3 captures examples of MNO activities across the healthcare value chain.

Table 3: Examples of MNO activities across the healthcare value chain

Healthcare value chain layer	Examples of MNO activities
Connectivity and foundational infrastructure	• e&'s partnership with the United Arab Emirates (UAE) Ministry of Health includes providing an SD-WAN solution to support connectivity in healthcare facilities via the Ministry's mobile app, Sahatna. • In Malaysia, CelcomDigi offers a digital healthcare bundle to private health clinics and pharmacies, enabling customers to select different mobile or fibre internet plans depending on their service's unique needs. • Verizon Business provides hospitals in the USA with neutral host or combined neutral host and private 5G network capabilities.
IT services (e.g. cybersecurity, identity and compliance)	• Ooredoo offers security and identity solutions for healthcare facilities, including domain name system, email, and database security capabilities. • Telia has partnered with Cybernetica to offer customised cybersecurity services and training to health facilities across Estonia. • In Spain, Telefónica Tech provides a variety of managed services capabilities for healthcare providers, including service desk assistance and electronic health record upgrades and optimisation support.
Data and interoperability	• Enovacom (a subsidiary of Orange) specialises in healthcare interoperability solutions for acute hospitals and tertiary care settings, including psychiatric hospitals and cancer centres. • Through Kyivstar's acquisition of Helsi, the company is supporting the development of a national electronic health record platform across Ukraine. • Proximus' telemedicine platform Doktr has had more than 400,000 downloads and enables users to book virtual consultations with licensed general practitioners and psychologists in Belgium.
Healthcare applications and solutions	• KPN offers Zorg Messenger in the Netherlands, a communication tool that enables healthcare professionals to communicate securely. • Swisscom in Switzerland has developed curaBILL, a medical billing solution supporting invoice management for hospitals and clinics. • In Australia, Telstra Health offers MedicalDirector, a suite of software solutions including electronic health record and patient management solutions designed to support administrative tasks in primary and specialist care settings.

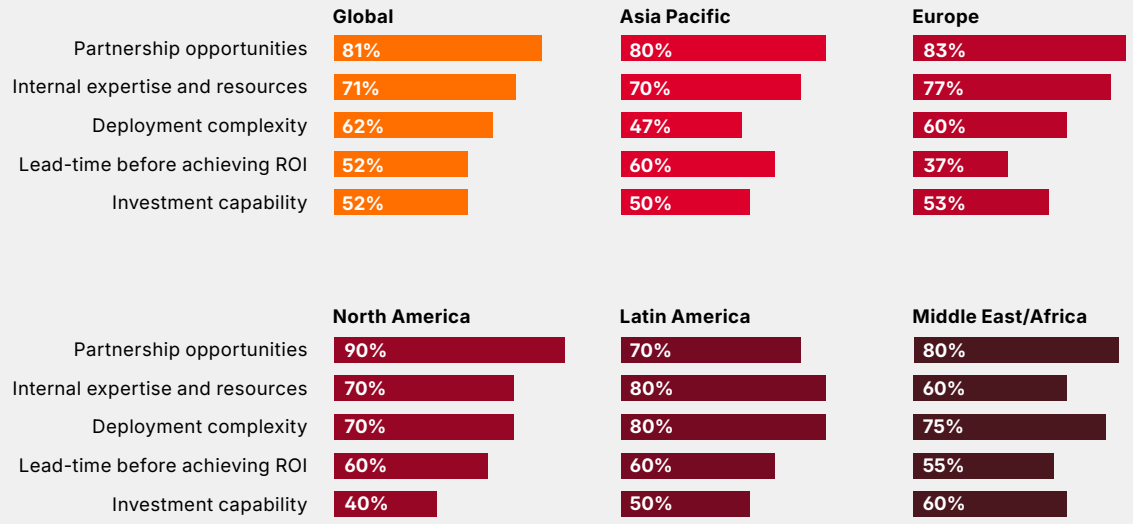
Opportunities for partnerships and access to relevant internal expertise and resources are critical considerations influencing MNOs' strategic positioning within the health vertical.

- The complexity of product and service deployments in the health vertical is also a key consideration for MNOs, ranking as the third most important consideration among survey respondents.
- MNOs also balance considerations such as return-on-investment (ROI) lead time and internal investment capability to inform their strategic positioning.

Figure 7

Survey question: What are the key considerations informing which part(s) of the health value chain (value chain layers described in the previous question) your company decides to launch and scale their health business?

(Global and by geographic region)



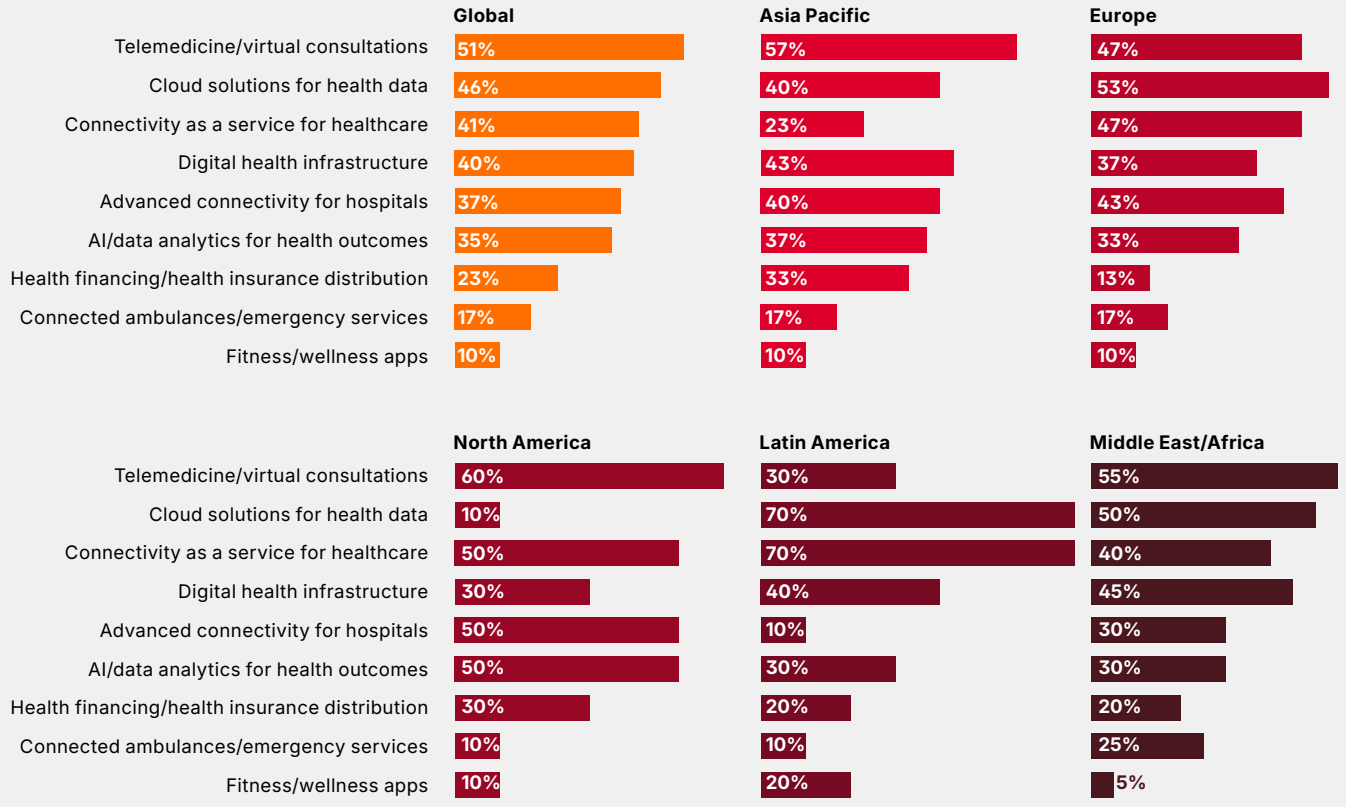
MNOs perceive telemedicine, cloud solutions, connectivity and digital health infrastructure capabilities as having the greatest commercial opportunities.

- Survey respondents viewed advanced connectivity for hospitals and AI/data analytics for improved healthcare outcomes as having similar commercial potential.
- Offers focused on emergency response, fitness and wellness were perceived to have the least commercial potential. Of all the regions surveyed, respondents in the MEA region indicated that emergency response solutions had the greatest commercial opportunity.
- MNO respondents from North America, Europe and APAC were most likely to perceive commercial opportunities from advanced connectivity for hospitals, compared to MNOs in Latin America and MEA.
- In Latin America, respondents indicated that cloud solutions for health data and connectivity as a service were the most – and significantly more – commercially favourable compared to other types of health offers.

Figure 8

Survey question: Which segments of the health market do you see as holding the greatest commercial opportunity for your company?

(Global and by geographic region)



2.2 MNO business models and organisational structures

To deliver their health solutions effectively, MNOs are implementing different business models and adapting their organisational structures and operating models. Our global survey results indicate that the most common business models are business-to-business (B2B) (94% of all respondents), business-to-business-to-X (B2B2X) (70%), followed by revenue-sharing (56%) and business-to-consumer (B2C) models (43%). MNOs with larger health portfolios and multiple health solutions may deploy several business models concurrently.

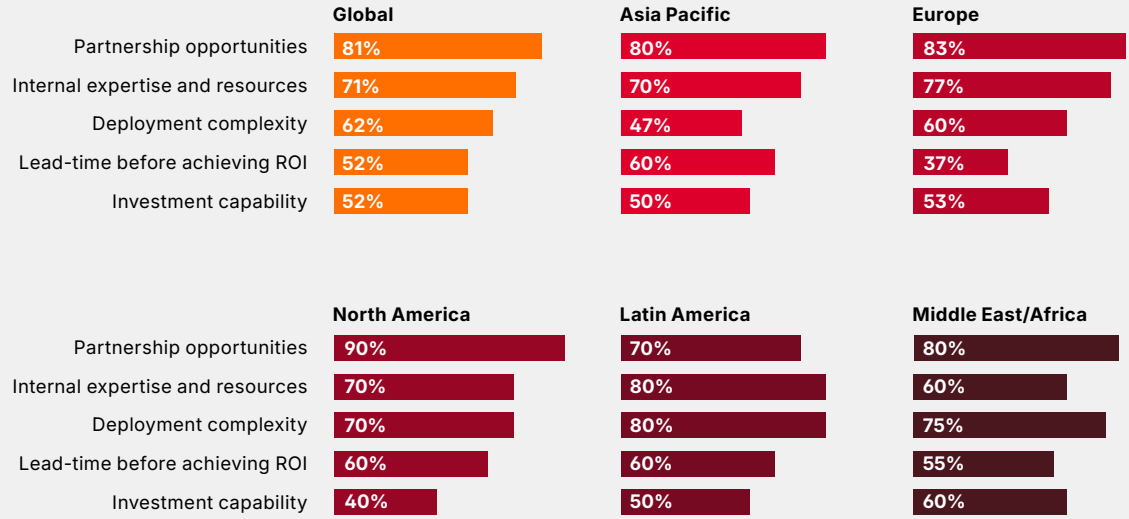
MNOs are using a range of business models to deliver their solutions within the health vertical, with B2B unsurprisingly the most adopted model.

- Revenue-sharing, followed by B2C models, were the third and fourth most common business models deployed by the MNOs surveyed. B2C models were most likely to be deployed in the APAC and MEA regions.
- MNOs in MEA were most (and significantly more) likely to deploy revenue-sharing models compared to the other global regions surveyed.
- MNOs in Europe were least likely of all the global regions surveyed to deploy B2C business models for their health offers.
- European and APAC MNOs were most likely to deploy B2B2X business models relative to the other regions surveyed.

Figure 9

Survey question: What business models does your company currently implement for your health vertical products and services?

(Global and by geographic region)



2.2.1 B2C business models are gaining momentum in the APAC region

Many MNOs have developed offers for healthcare consumers to differentiate themselves in their primary market, including telemedicine services, digital pharmacy capabilities (such as e-prescriptions), at-home lab testing services and health-related content. B2C models are gaining particular momentum in the APAC region, where many MNOs are leveraging their existing assets – connectivity, established billing infrastructure and large subscriber bases – to deliver these offers.

- Our research indicates that MNOs and subsidiaries in APAC and MEA are currently most likely to deploy B2C health offers.
- B2C health offers typically focus on enhancing the customer experience to deepen engagement and improve customer retention, as well as boosting average revenue per user (ARPU) through platform use.
- Common features of MNOs' B2C offers are telemedicine services, digital pharmacy capabilities (such as e-prescriptions), at-home lab testing services and health-related content.
- Access to B2C products is typically through stand-alone subscriptions, however, some MNOs offer access as part of data bundle packages, such as Telenor's Tabeeb Online and Telkomsel's Fita. Several MNOs are pursuing cross-selling and upselling opportunities to increase ARPU and bolster customer retention.
- Many MNOs (particularly in APAC) offer multiple health services on a single platform, typically a mobile app, where customers can remotely access services for different health needs (e.g. telemedicine consultations, prescriptions, informational health content). This not only enables MNOs to build customer loyalty, but also reduces the need for health facility visits and the associated time, travel and carbon footprint costs.
- Some B2C offers have unique differentiators, such as Telkomsel's Fita, which focuses on wellness and preventative health, and Grameen HealthTech's Shukhee, which prioritises affordability.
- To support adoption among end users, several platforms (such as Rakuten Mobile's Rakuten Senior and Telkomsel's Fita) incorporate gamification elements such as reward points (e.g. for reaching step count targets), vouchers (e.g. for gym passes) and discounts (e.g. for specific health services or remote consultations).

Table 4: Examples of B2C digital health solutions offered by MNOs

MNO/subsidiary	Solution
Dialog Axiata Sri Lanka	• Doc990 was established in 2016 and offers a channelling service that allows users to book consultations with doctors directly. • The digital platform is integrated with more than 140 private hospitals in Sri Lanka.
Grameen Group Bangladesh	• Grameen HealthTech's Shukhee app provides a suite of health offers including telemedicine and e-pharmacy solutions, as well as specialised services including mental health and physiotherapy.
HKT Hong Kong	• HKT launched DrGo in 2020, an app for telemedicine appointments and e-pharmacy services. • In July 2025, HKT reported that the platform had 406,000 users.
Jazz Pakistan	• Jazz launched FikrFree in 2024, a digital marketplace that helps users find affordable insurance solutions, including health insurance packages. • In 2025, Jazz launched Apna Clinic, a digital health platform that allows users to connect to a national network of registered doctors, pharmacies, laboratories and hospitals across Pakistan. Users can book remote consultations, order medication and manage their health records.
Safaricom Kenya	• CarePay, a health technology company, partners with Safaricom and PharmAccess to deliver M-TIBA, a mobile health wallet that allows users to manage funds for healthcare services, including medication. • On the platform, users can store different types of health funds, from health insurance cover to health savings. M-TIBA is integrated with Safaricom's M-PESA mobile money platform, which facilitates user payments to health facilities for healthcare services and medication.
Telenor Pakistan Pakistan	• Through Telenor Pakistan's Tabeeb Online platform, users can book and pay for medical appointments and order lab tests and medication. • The platform also includes capabilities that allow users to monitor core health metrics, including a BMI calculator and water intake tracker.
Telkomsel Indonesia	• Acquired by INDICO (Telkomsel's digital subsidiary), Fita is a preventative digital health platform. • Fita users are incentivised to develop healthier habits through personalised health guidance that includes exercise programmes, nutrition advice and health content, including healthy recipes.
Rakuten Mobile Japan	• Rakuten Mobile's Rakuten Senior app is aimed at older adults and aims to increase healthy lifestyle behaviours by incentivising walking activity and engagement in social activities. • Users can collect reward points based on their daily step count and participation in community events such as yoga and cooking classes.

Primary market

2.2.2 MNOs are supporting critical digital health infrastructure through government partnerships

Within the past five years, a growing number of MNOs have formed B2G (business-to-government) partnerships with national Ministries of Health and state Departments of Health and ICT to support the delivery of digital health platforms and cloud and AI solutions. These initiatives have reached significant numbers of people across wide areas. For example, in 2024, Vodafone Egypt reported that its digital health solutions were being used by 314 hospitals serving more than 6 million patients nationwide.

Some MNOs have opted to pursue a consortium approach and develop multi-stakeholder partnerships to combine complementary capabilities, spread out capital and risk and speed implementation. Such an approach can be observed in Kenya (see Table 5).

These collaborations demonstrate how MNOs are being recognised as trusted delivery partners for critical national healthcare infrastructure. Such agreements typically arise through government bodies directly commissioning specific services from MNOs or MNOs responding to procurement opportunities to support national digital health initiatives.

As these agreements typically span multiple years, they not only offer MNOs longer-term commercial sustainability prospects but also allow them to provide long-term value to health systems by supporting the delivery of high-impact national and regional digital health priorities.

Table 5: B2G partnerships for digital health

Africa	**Safaricom**	In 2024, Kenya's Ministry of Health announced that Safaricom would lead a consortium of companies, including digital health company Apeiro Digital and IT and communications provider Konvergenz Network Solutions Limited, to develop a national health IT system to support the digitalisation of public health facilities nationwide.
	Vodafone Egypt	Since 2023, Vodafone Egypt has supported Egypt's Ministry of Health to deliver a large-scale national Universal Health Insurance (UHI) initiative as part of the government's digital health transformation and insurance reforms.
	Tunisia Telecom	Tunisia Telecom has been supporting Tunisia's Ministry of Health to accelerate digital health transformation by deploying sovereign cloud and AI solutions.
APAC	**Telstra Health**	In 2025, Australia's Digital Health Agency announced a partnership with Telstra Health to upgrade the data architecture of the national electronic health record platform, My Health Record.
Europe	**Telefónica**	In 2025, Telefónica formed an agreement with Spain's Ministry for Digital Transformation to provide connectivity, public cloud infrastructure and AI and analytical capabilities for the National Health Data Space (ENDS) platform.
Middle East	**e&**	In 2025, e& UAE signed a Memorandum of Understanding (MoU) with Abu Dhabi's Department of Health to support connectivity for the city's mobile health app, Sahatna.
	STC Group	In 2024, STC Group announced partnerships with Saudi Arabia's Ministry of Health to support the Ministry's digital infrastructure, including its cloud and cybersecurity capabilities.

2.2.3 How MNOs' CSR initiatives are improving health outcomes

Many MNOs are delivering significant health impacts through health-focused corporate social responsibility (CSR) initiatives. These may be delivered alongside, or instead of, a commercial health offer. Across Africa, several MNOs are leading CSR initiatives to improve access to essential healthcare services (typically through the deployment and maintenance of telemedicine solutions) and tackle health inequalities, especially improving maternal, newborn and child health (MNCH) outcomes.

These CSR initiatives provide MNOs with additional ways to improve health outcomes at local, regional and national levels, deepen engagement with local communities and build credibility with governments and citizens as providers of healthcare solutions. In this way, MNOs can increase awareness of their health-focused activities beyond connectivity.

Table 6: CSR initiatives to improve health outcomes

Orange Egypt	• Orange Egypt's CSR division has signed an MoU with Egypt's Ministry of Communications and Information Technology – a two-year partnership to improve equitable access to healthcare through telemedicine services for rural and underserved communities across Egypt.
MTN Foundation Nigeria	• The Y'ello Doctor initiative supports primary healthcare delivery across six states, including communicable disease treatment. • A partnership with Private Sector Health Alliance of Nigeria under the "What Can We Do Together" initiative will upgrade 52 primary healthcare centres.
Safaricom Foundation and M-PESA Foundation Kenya	• Health impact is one of three focus areas at Safaricom Foundation, which has been leading regular mobile medical camps for the public to improve reproductive, maternal, newborn and child health outcomes across Kenya. • The M-PESA Foundation's medical camp programme has reached more than 160,000 people across 47 counties since launching in 2023. • The M-PESA Foundation has also been supporting telemedicine in hospitals across five counties in Kenya, including at Gertrude Children's Hospital.
Vodafone Foundation Tanzania, Lesotho	• Launched in 2013, m-mama is an emergency maternal and neonatal referral and transport initiative to improve maternal and newborn health outcomes in Tanzania (since 2013) and Lesotho (since 2020), in partnership with the government of each country. • Two apps have been developed to deploy, coordinate and monitor the urgent care provided. A dispatcher app uses GPS to identify the location of women who have sought help via the m-mama toll-free phone line, and another enables data reporting for m-mama (including the number of emergency transport trips and number of maternal and newborn emergencies). The dispatcher app also facilitates payments to drivers via mobile money upon the safe arrival of mothers and babies at a healthcare facility.

2.2.4 Organisational structures underlying MNOs' health offers

To limit the organisational and operational barriers to deploying services and solutions for the health sector, many MNOs have made strategic choices to adapt their operating model to focus more heavily on their health offer and better support delivery. The internal business structure for their health offer depends on factors such as the strategic priority of the health sector for the MNO, its positioning in the healthcare value chain and its internal resources for health offers.

While some MNOs are delivering their health offers through more generalised team structures, others have established dedicated, health-focused teams and business units. For offers that require more specialisation, such as digital health infrastructure or end-to-end digital health solutions, MNOs often deliver them through healthcare-focused teams, business units or subsidiaries. These teams and business units may have their own performance metrics and can support faster decision-making by integrating and centralising expertise internally. For example, by bringing together clinical and regulatory knowledge with healthcare-focused product development, sales and marketing functions.

Through our research, we have observed that MNOs' internal business structures for their health offers typically align with one of four types of specialisation:

- Select individuals focus on health-sector services and solutions as part of a broader (often B2B-focused) business unit or a sector-agnostic, product-focused team (e.g. security or IoT) (least specialised).
- A dedicated team is established to focus on the MNO's health offer(s), which may include specialist roles to manage the delivery of specific solutions.
- A specialised business unit (which may be external facing) is created that is responsible for the MNO's end-to-end healthcare strategy and delivery and may have distinct leadership and bespoke objectives.
- A health-focused subsidiary established by the MNO (most specialised).

Source: STL Partners

At the highest level of specialisation, an MNO may choose to formally establish a subsidiary with a specific focus on its health sector offer. Health-focused subsidiaries typically operate under a separate entity with distinct leadership and relative operational independence from the parent operator, with reporting channels at the senior leadership level of the MNO. Many subsidiaries leverage the MNO's core network and infrastructure, allowing more resources for developing and maintaining healthcare solutions and key stakeholder relationships.

While many health-focused subsidiaries have preserved the MNO's name and branding, others, such as Vodacom's Mezzanine and Orange's Enovacom, have created a distinct brand identity. At a global level, the most advanced health-focused subsidiaries are currently TELUS Health (of TELUS) and Telstra Health (of Telstra), which have both been operating for more than a decade. Both subsidiaries have developed an extensive portfolio of solutions across several layers of the healthcare value chain, apply B2B and B2G business models and serve a range of end users across the clinical, operational and financial domains of the health sector.

To further increase their internal healthcare expertise and external credibility, several MNOs and subsidiaries have appointed individuals, including at the C-suite level, from the health sector, including qualified clinicians and healthcare policy or regulatory experts. These teams balance a combination of healthcare knowledge (including clinical, health policy and regulatory expertise) and telecommunications expertise.

Table 7: Examples of MNO subsidiaries with a health focus

	MNO	Subsidiary	Primary market
Africa	Vodacom	Mezzanine	South Africa
APAC	Dialog Axiata	Doc990	Sri Lanka
	Grameen Group	Grameen HealthTech	Bangladesh
	Telstra	Telstra Health	Australia
Europe	Orange	Enovacom	France
North America	TELUS	TELUS Health	Canada

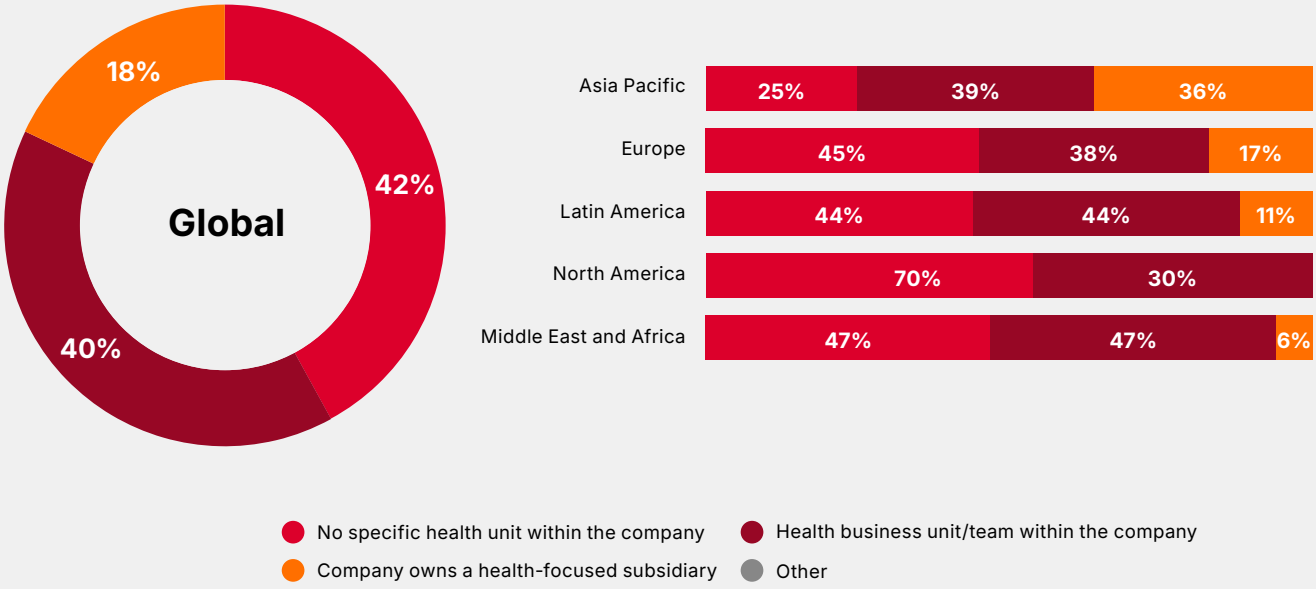
MNOs adopt different organisational structures to deliver health offers

- While 42% of MNOs surveyed did not have any specialist health structures within their company, which was the case for nearly half of respondents in Europe, MEA and North America, 40% of all respondents confirmed their company had a specialist health business unit or team.
- 44% of respondents from North America and 47% of respondents from MEA indicated their companies had specialist health teams.
- APAC was the most likely region to have established, health-focused subsidiaries.
- Respondents from Latin America reported the least amount of organisational specialisation for health solutions.

Figure 10

Survey question: Does your company have a dedicated team structure, or subsidiary, focused on the health vertical?

(Global and by geographic region)



3. MNO CONTRIBUTION

How mobile operators are assisting to create better health outcomes

Across low-, middle- and high-income countries, MNOs are playing active roles in strengthening public health systems and improving health outcomes. Through digital and mobile-based solutions to support the prevention and management of communicable and noncommunicable diseases, MNOs are significantly extending the reach and impact of public health initiatives, particularly for rural and underserved communities where there is a sizeable addressable opportunity for remote healthcare solutions like telemedicine services.

According to our global survey, MNO respondents indicated that formal commissions or partnerships would be critical to developing future products and services focused on tackling communicable diseases.

Public-private partnerships with MNOs are supporting routine immunisation for children on a national scale

Orange Côte d'Ivoire, in partnership with Gavi and the Côte d'Ivoire Ministry of Health, is helping to improve routine immunisation coverage for pregnant women and children under two. Since 2019, Orange Côte d'Ivoire has supported the development of M-Vaccin, a mobile app that allows women who are pregnant or have children under two years to register and receive vaccination reminders. Leveraging Orange's network, the app has been deployed in 17 districts across Côte d'Ivoire, with plans to support a national roll-out.

The vaccination history of a child or pregnant mother can be tracked using the app's digital vaccination record. Messages are available in voice format for people who cannot read and write, and 12 local languages have been integrated in the platform in addition to French. By collecting data from those who have been vaccinated, community health workers can identify children or pregnant women who have missed appointments and follow up with them.

M-Vaccin has significantly improved administrative efficiencies given that vaccination outreach was previously reliant on paper-based records and manual processes. To date, more than 29,600 children and over 43,000 pregnant women have been registered for vaccinations through the M-Vaccin platform.

Mobile money is enabling digital payments for healthcare workers delivering critical communicable disease campaigns

Digital payments to healthcare workers make public health campaigns much more efficient, and mobile money platforms are supporting immunisation campaigns for polio, malaria and other neglected tropical diseases in more than 30 countries across Africa. The World Health Organization (WHO) Digital Finance Team has worked in partnership with mobile money and digital financial services providers across the continent, with support from Ministries of Health and organisations including Dimagi and the Gates Foundation, to design new or strengthen existing digital payment systems to facilitate vaccination campaigns.

Mobile money solutions enable faster, more secure, accurate and complete payments compared to cash payments, and paying healthcare workers digitally has improved worker retention and motivation. Partnerships with SMS aggregators allow SMS messages with key updates on the roll-out of immunisation campaigns to be sent to community health workers at scale, both before and during the campaigns. Healthcare workers can also self-report their attendance for approval by administrators via Dimagi's CommCare platform, which is adapted to each local context in which the solution is deployed.

Establishing digital payment infrastructure can also support faster responses to public health emergencies, including communicable disease outbreaks which require healthcare workers to deliver unplanned emergency vaccination campaigns at significant speed and scale.

MNOs are strengthening public health systems through more efficient laboratory testing

Mezzanine (a subsidiary of Vodacom) has developed eLABS to digitalise laboratory processes in public health facilities in Zambia and South Africa. eLABS provides a digital solution to time-consuming, paper-based processes that require coordination across fragmented systems. The solution also enables patients to receive laboratory test results and appointment reminders digitally, and a dashboard tool allows health authorities to monitor the live status of laboratory testing across sites and identify operational issues. To date, eLABS has been used by more than 3,000 public health facilities to deliver more rapid turnaround of laboratory test results for diseases including HIV and tuberculosis.

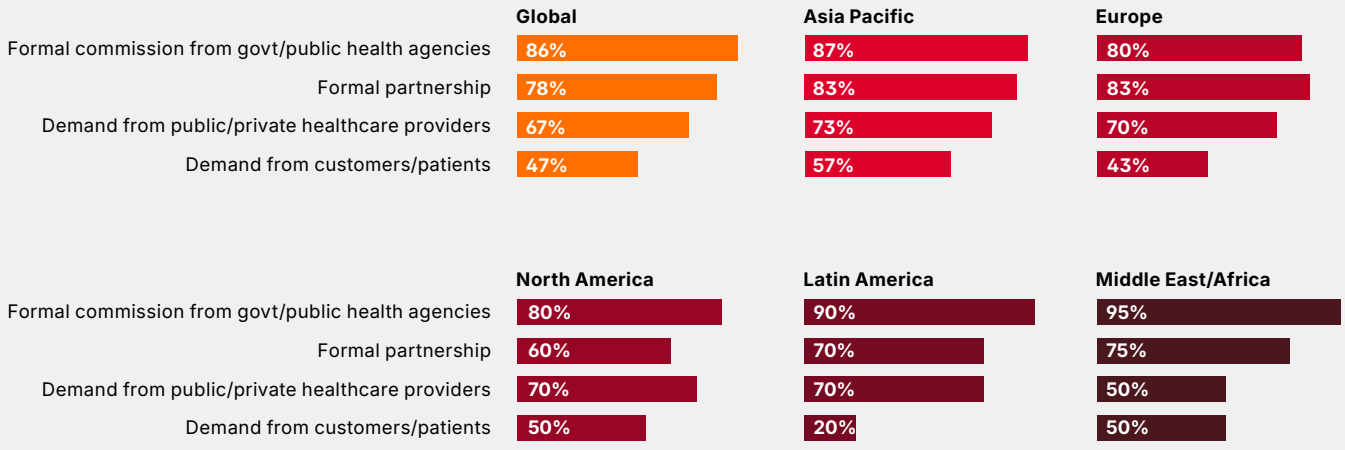
A formal commission from a government or public health agency would be a key factor in MNOs determining whether to launch a product or service with public health impact.

- Survey respondents also indicated that formal partnerships and healthcare provider demand across public or private settings would be factors influencing decision-making around launching products or services for communicable disease impact.
- Survey respondents indicated that demand from customers/patients was least likely to be a key condition affecting decision-making.

Figure 11

Survey question: What would be the key conditions for your company to take a decision to launch a product or service which has specific public health impact upon communicable diseases?

(Global and by geographic region)

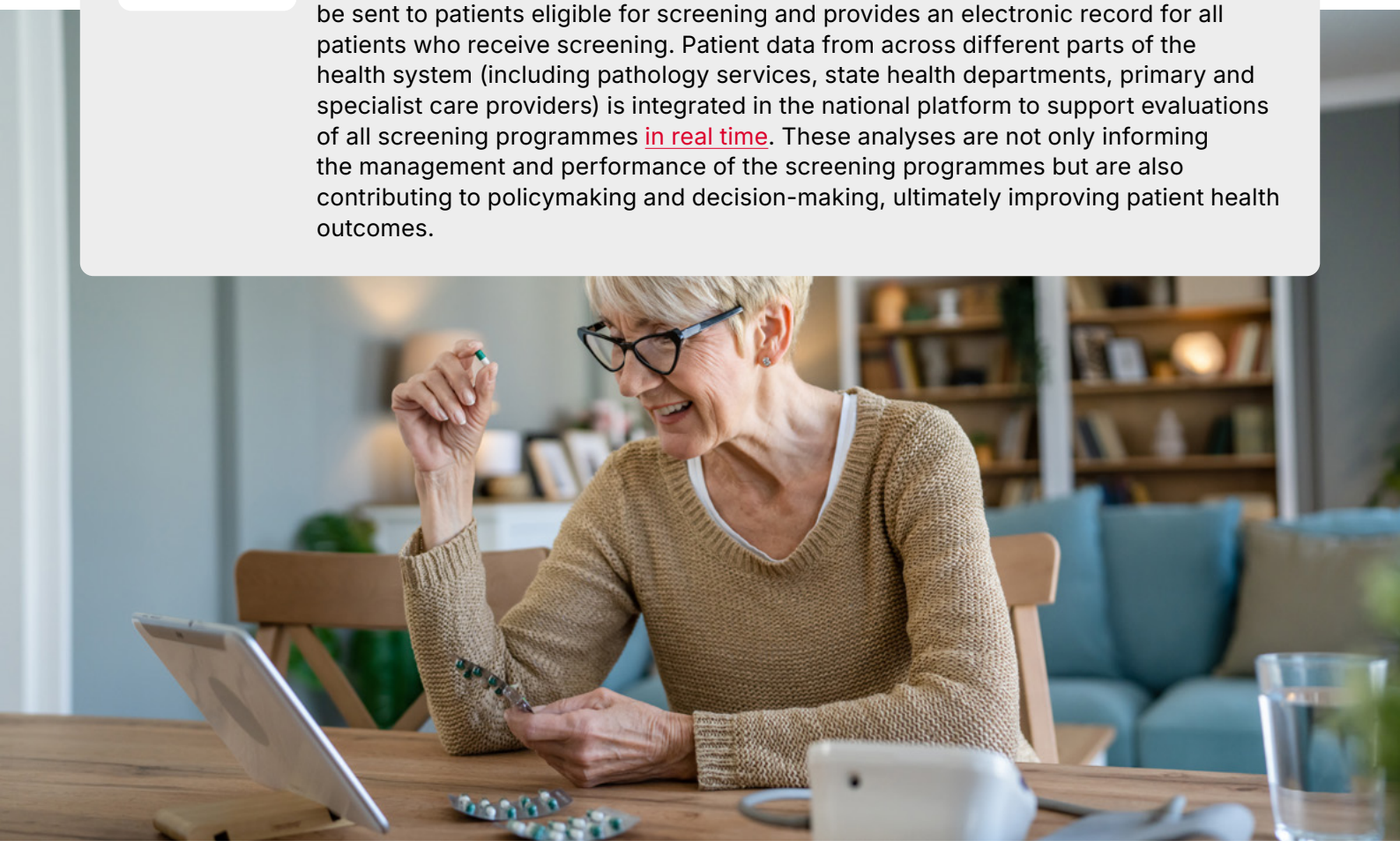


3.1 MNO subsidiaries are providing solutions for the management of chronic health conditions

The management of chronic noncommunicable diseases (such as cancer, diabetes and cardiovascular conditions) places one of the largest burdens on health systems in terms of healthcare needs, complexity and resources. These conditions require long-term continuous monitoring and often involve navigating interactions across multiple health systems, which can result in fragmented repositories of health data across different healthcare providers. The following are examples of solutions that MNO subsidiaries are providing to address these challenges.

In Canada, TELUS Health's Home Health Monitoring platform is designed to support patients with long-term health conditions such as heart failure and diabetes, which require ongoing monitoring and long-term management. This solution incorporates remote patient monitoring technologies such as pulse oximeters and blood pressure monitors and enables healthcare professionals to monitor and review a patient's health status remotely, enabling more proactive and preventative care and reducing hospital visits. In an evaluation study led by Canada's Island Health Authority, six months after receiving Home Health Monitoring, a 90% reduction in hospital admissions and an 82% reduction in emergency department visits was recorded for patients with heart failure.

Telstra Health operates Australia's National Cancer Screening Register, a digital platform that supports the national bowel, cervical and lung cancer screening programmes. The solution allows digital invitations, reminders and follow-ups to be sent to patients eligible for screening and provides an electronic record for all patients who receive screening. Patient data from across different parts of the health system (including pathology services, state health departments, primary and specialist care providers) is integrated in the national platform to support evaluations of all screening programmes in real time. These analyses are not only informing the management and performance of the screening programmes but are also contributing to policymaking and decision-making, ultimately improving patient health outcomes.



3.2 How MNO technology deployments can improve healthcare delivery

As highlighted earlier in this report, developing healthcare use cases that leverage the technological capabilities of MNOs, including 5G private networks, IoT and AI, can be a driving factor in decisions to develop or expand a health offer. Many MNOs are recognising opportunities to enhance and customise their health offers for end users and unlock commercial benefits through AI-as-a-Service business models.

Most MNOs active in the health sector are already leveraging these capabilities, allowing end users to realise significant benefits, from greater operational efficiencies to improved service reliability and security and more advanced health data analytical capacity. As global demand for healthcare data analytics grows, there will be increased focus on deploying AI-driven tools to maximise the value of digital health data repositories and unlock more benefits for health service delivery and patient outcomes. While some MNOs may offer these capabilities to healthcare stakeholders directly, others collaborate with technology partners to leverage their expertise and established delivery channels with end users across the health sector.

Our survey showed that MNOs are planning to increase their investments in these areas. Such investment will be critical to ensuring that health systems around the world can benefit from these innovations.

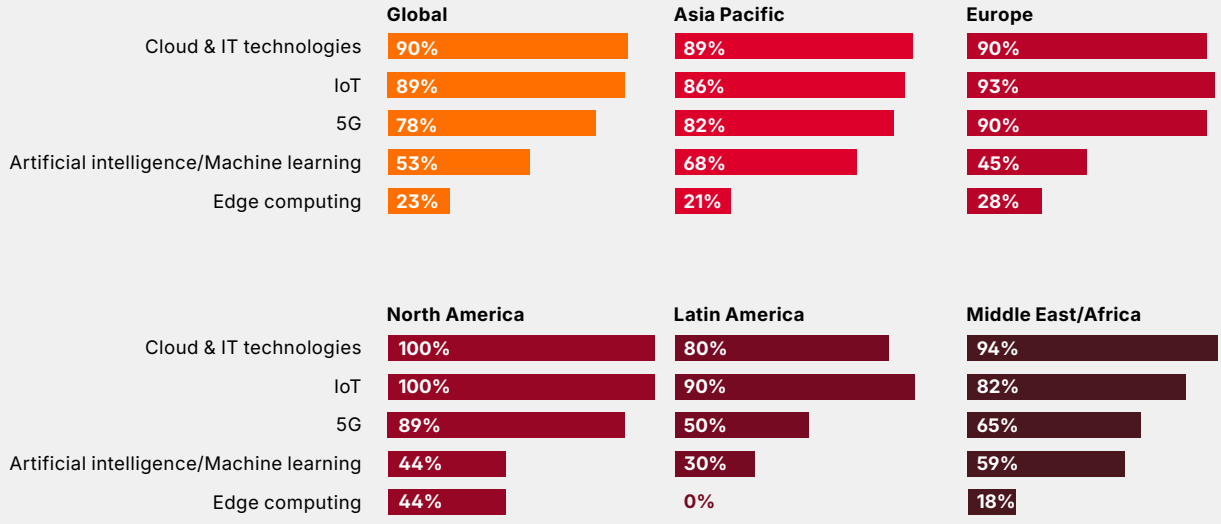
Most MNOs are already deploying a variety of technologies as part of their health offers.

- Across all global regions surveyed, AI, cloud and IoT were the leading technologies deployed by MNOs as part of their health offers.
- MNO respondents in Europe and North America are leading the most 5G deployments within the health vertical, followed by MNOs in APAC, MEA and Latin America.
- MNOs in APAC and MEA were most likely to be deploying AI technologies compared to other regions surveyed.
- Edge technologies were the least likely to be deployed by MNOs at present.

Figure 12

Survey question: Which (if any) of the following technologies are your company already deploying within your health vertical business?

(Global and by geographic region)



Examples of MNO technology deployments in the health sector

5G deployments are improving the reach, security and reliability of digital healthcare

The arrival of 5G networks presents significant opportunities for health systems to benefit from the high bandwidth and minimal latencies they offer. 5G networks can be particularly advantageous in contexts where Wi-Fi systems risk becoming saturated due to high communication demands. As 5G service deployments expand around the world, health systems will be able to:

- Transfer large quantities of health data more efficiently
- Deliver time-sensitive virtual healthcare services (such as telemedicine, remote monitoring, imaging or interventions such as surgical procedures) and education (such as interactive immersive training opportunities using augmented and virtual reality solutions) more reliably and securely over increasingly longer distances.

Demand for 5G private networks is also growing as health facilities seek better network stability, security and slicing capabilities to deliver more healthcare services digitally and support a greater number of connected devices. The customisation potential for certain healthcare environments and network slicing capabilities can also lead to connectivity provision becoming a priority for healthcare facilities.

- In France, Bouygues Telecom Business has partnered with Bordeaux University Hospital to deploy a 5G Standalone (5G SA) advanced network with network slicing capability to support remote consultations for ambulances and 3D modelling exercises for surgical operations and teaching.
- In Taiwan, Chunghwa Telecom has prioritised emergency data traffic by leveraging network slicing to unlock real-time diagnostic capabilities and enable health data-sharing between hospitals and ambulances in transit.

The potential of network connectivity to enable transnational healthcare delivery

A partnership between Kuwait's Ministry of Health and Zain demonstrates the potential of long-range network capabilities to support the delivery of remote health procedures. In September 2025, the organisations announced the completion of two hernia surgeries conducted remotely over the 12,000-kilometre distance between Jaber Al-Ahmad Hospital in Kuwait and Hospital Cruz Vermelha in Brazil. This was confirmed by Guiness World Records as the longest distance between patient and surgeon ever recorded. These transcontinental capabilities, underpinned by connectivity, demonstrate how MNOs can bridge healthcare gaps for communities in underserved regions who may lack local access to healthcare facilities or specialist healthcare expertise.

AI is enabling health systems to benefit from more predictive, in-depth population health insights

As already documented, MNOs have ambitions to expand their data analytics and insight capabilities across their health portfolio to help healthcare stakeholders at local, regional and national levels improve operational efficiencies, knowledge management and decision-making based on large-scale clinical and administrative datasets.

- In Thailand, True Corporation has partnered with Intel to leverage their combined 5G and AI capabilities to develop seven smart healthcare solutions, including digital pathology platforms, AI-driven diagnostic tools and continuous monitoring solutions for elderly patients.
- In Australia, Telstra Health has partnered with PowerHealth to create a PowerAnalytics platform that provides in-depth analyses to healthcare providers based on their financial and operational performance.
- In Germany, Deutsche Telekom has developed a sovereign health chatbot using generative AI (GenAI) to support internal knowledge management processes for healthcare providers and insurance companies.

IoT-enabled solutions can improve monitoring of healthcare environments and medical devices

The enhanced connectivity provided by advanced networks offers more opportunities for MNOs to deploy IoT-enabled solutions across the health sector. In IoT Market Forecast to 2030, GSMA Intelligence has estimated a 10% CAGR between 2023 and 2030 for the IoT healthcare market.

So far, MNOs offering these solutions have focused mainly on improving the monitoring of patients' health status and healthcare environmental conditions (such as ward temperatures) over extended periods and tracking the location of medical equipment within healthcare facilities.

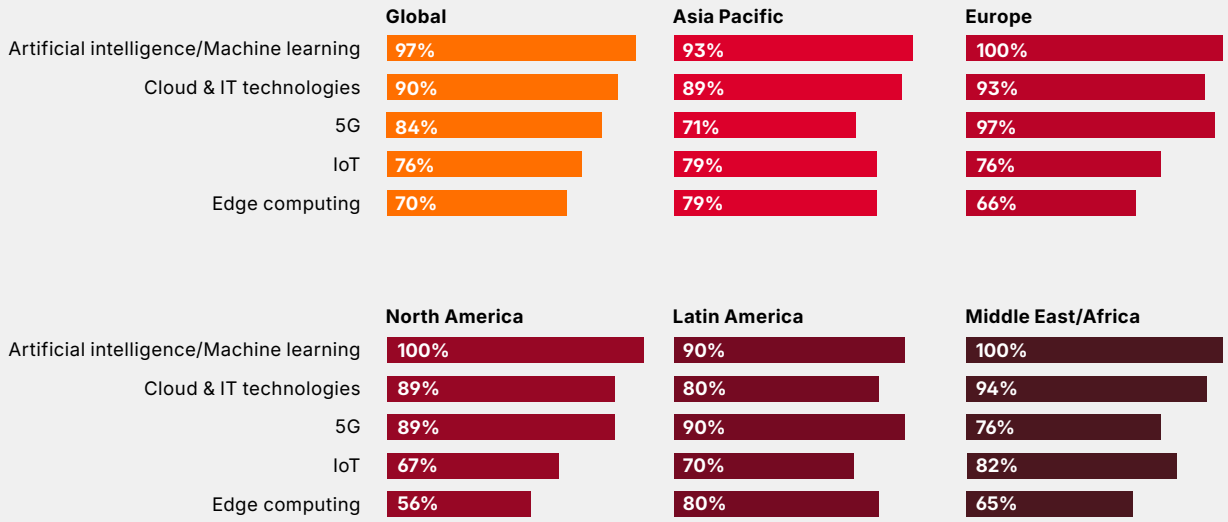
- IoT-enabled devices can support live monitoring of ambulance locations to optimise emergency response and track utility usage within hospitals, as demonstrated by Vodafone. In Denmark, Telenor has developed an IoT solution to digitally track the status of defibrillators and emit signals to engineers when device faults are identified.
- IoT-enabled devices can monitor the location and temperature of vaccines as they move through supply chains, as demonstrated by KPN's partnership with B Medical Systems.

Within the next three to five years, most MNOs plan to deploy AI, machine learning, cloud and IT technologies as part of their health business.

Figure 13

Survey question: Which of the following technologies does your company plan to deploy within its health vertical business within the next 3–5 years?

(Global and by geographic region)



4. NAVIGATING THE HEALTHCARE OPPORTUNITY

Factors supporting scale and key challenges

For MNOs that have chosen to develop a health offer, there is no blueprint for scale. As a result, the trajectory of each MNO is different depending on factors such as its strategic goals and approach, positioning within the healthcare value chain, as well as internal capabilities and expertise. At the same time, broader contextual factors also influence how MNOs navigate opportunities in the health sector, including the needs and digital maturity levels of different healthcare stakeholders, the local policy and regulatory environment, competitive landscape and wider market dynamics.

With different possibilities for scale, MNOs will need to clarify their strategic approach to expand their health offer and address the capabilities and expertise required. Reasons for expanding an existing health offer can include:

- **Positioning itself in the healthcare value chain to meet the needs of existing or prospective end users.** For example, an MNO already providing connectivity or infrastructure may pursue opportunities to move up the value chain, such as providing healthcare applications and solutions.
- **Developing solutions and services for new end users.** For example, an MNO already providing solutions to secondary care stakeholders may choose to approach new stakeholders in other healthcare market segments, such as primary or community care.
- **Entering new markets.** Depending on an MNO's footprint, these may be within the same or different geographical region than its initial health offer:

Although there are different reasons for an MNO's success, our research has identified five common factors that have supported market entry and scale.

1. Co-developing solutions with end users to meet their needs:

Regardless of their position in the healthcare value chain and ecosystem, ensuring that solutions are customised, relevant and meet the needs of end users is vital to maximising MNOs' health impact and providing support over the long term. Allocating time and resources to conduct in-depth evaluation of end users' needs and then supporting iterative co-design processes with frontline clinical and nonclinical staff are critical. Value propositions for services and solutions should ensure they are adequately customised for each designated end user, rather than being generic and sector-agnostic.

2. Develop a clear strategy for health offers and secure support from senior leadership:

Developing an internal health-focused strategy at an early stage can provide a guiding framework for MNOs to create and scale their health offers in a more systematic, coordinated way than following a broad strategy that might apply to other sectors. Developing a strategy enables MNOs to crystallise their strategic objectives for their health offer, define which layer(s) of the healthcare value chain they want to position themselves, which healthcare stakeholders they wish to prioritise and the necessary expertise and capabilities they will need to provide. As part of defining their strategy, MNOs should clarify their approach to scaling the health offer. A strategic approach is particularly important for MNOs developing or acquiring stand-alone digital health solutions, as it mitigates the risk of fragmenting their overarching health offer. In addition, securing strategic support for an internal health-focused strategy from senior leadership can provide the long-term support required to successfully execute health-focused strategies, as well as harmonise the health strategy with wider organisational strategic objectives.

3. Adapt organisational structures to support delivery:

By adapting their internal organisational structures, MNOs can align the development and delivery of their health offers with their overarching strategic approach to the health sector. The extent to which MNOs reorganise their internal organisational structure will depend on the strategic priority, specialisation and resources required for the health offer. Reorganisation can be particularly advantageous for MNOs intending to offer solutions at upper layers of the value chain, as well as those intending to create a larger portfolio of health solutions, both of which necessitate more dedicated resources and embedded healthcare expertise, particularly in terms of clinical knowledge and regulatory compliance, as well as the structure, commissioning practices, digital landscape and workflows (clinical and administrative) of health systems. MNOs can maximise their competitive advantage by building multidisciplinary teams with expertise across clinical, health system-level and telecommunications domains.

4. Sustain engagement with key healthcare stakeholders:

The benefits of developing relationships with key healthcare stakeholders, including policy and regulatory bodies and state and national health departments, are two-fold. On the one hand, MNOs can strengthen their understanding of end users' priorities (clinical, operational or administrative) and developments across the wider healthcare ecosystem, including digital health policies and regulatory changes – all of which can have a marked impact on an MNO's health offer roadmaps and associated planning and investments. At the same time, these engagements give healthcare stakeholders a more comprehensive view of the range of capabilities MNOs can offer beyond their traditional connectivity provider role. Sustained stakeholder engagement enables MNOs to build credibility and trust, as well as better anticipate and respond to end user needs or policy and regulatory changes.

5. Consider partnerships and acquisitions for expertise, credibility and market access:

Since most MNOs do not have internal health sector expertise at the outset of developing a health offer, many (in high-income and low- and middle-income geographies alike) have formed strategic partnerships to bridge this gap and support market entry or expand existing health offers. Our research indicates that telemedicine and e-pharmacy services are among the most common offers that MNOs are forming partnerships to deliver, although some MNOs and subsidiaries have also formed partnerships to offer access to health insurance or deliver digital health platforms. Partnerships and acquisitions offer opportunities for MNOs to:

- Access new capabilities they do not possess internally to launch an initial health offer or expand into other layers of the health value chain more quickly.
- Expand the reach of their capabilities and solutions to new end users, either within or across different markets.
- Develop new use cases, for example, by collaborating with technology partners to enhance a health data platform, analytics, or device offer.
- Build credibility, trust and recognition as a provider or enabler of digital health solutions.

MNOs view securing national contracts, partnerships and the growth potential of the healthcare market as enablers to scale their health offers.

- Although acquisitions were not considered a primary enabler to scale, approximately 20% of respondents in all surveyed regions considered them a supporting factor.

Figure 14

Survey question: What are the key enablers to scaling your company's health business?
(Global and by geographic region)

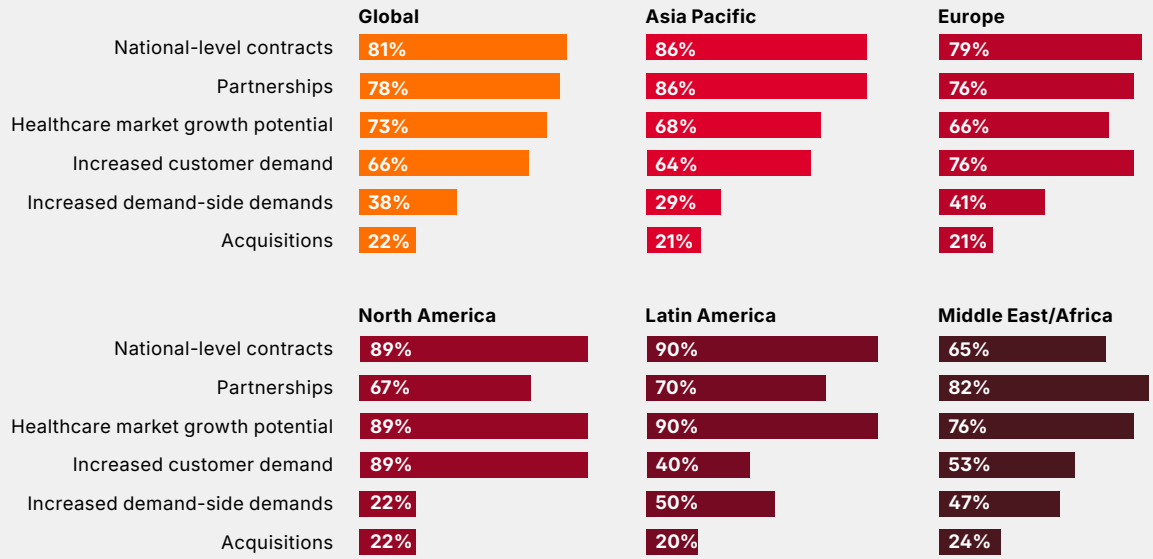


Table 8: Examples of MNO partnerships to deliver digital health solutions

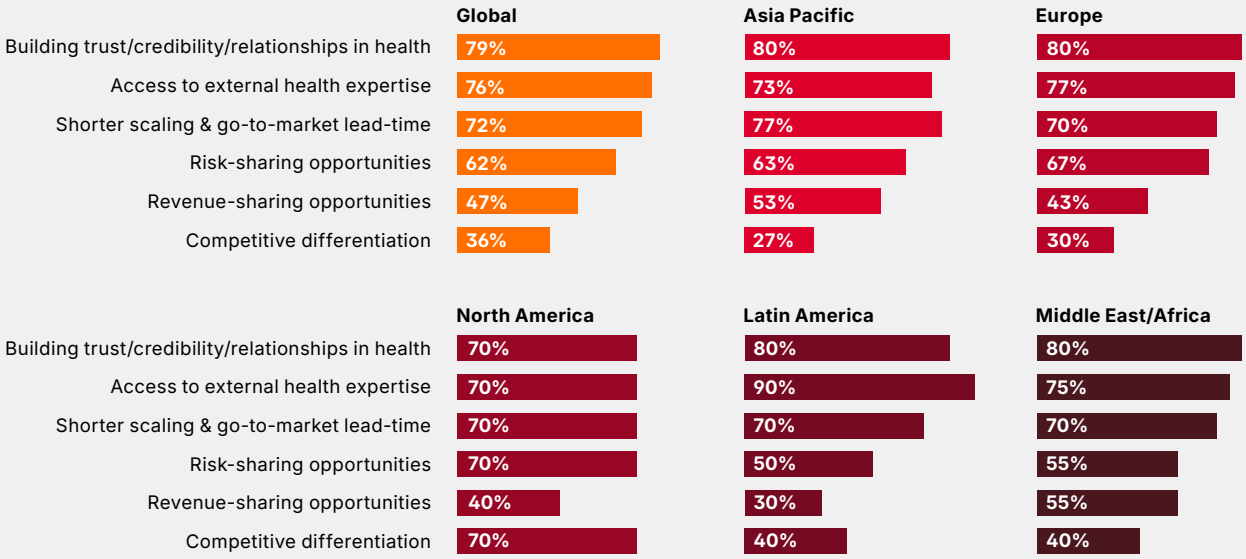
	MNO/subsidiary	Primary market	Partnership organisation and focus
Africa	**Airtel**	Nigeria	Established a partnership with Mobihealth International to deliver telemedicine services.
	Telecom Egypt	Egypt	Working with KareXpert to deliver a national digital health platform in Egypt that will harness Telecom Egypt's data centres to support a hospital information management system, electronic health records and health financing processes, including revenue cycle management.
	MTN	Ghana	Partnered with Medpharma to offer MCare to existing MTN customers – a mobile platform offering telemedicine, e-prescriptions and medication deliveries. MTN provides the billing infrastructure (via MoMo, MTN's digital financial services platform) while Medpharma manages clinical interactions, including a network of healthcare professionals and pharmacies.
APAC	**Doc990**	Sri Lanka	As part of Doc990's partnership with Allianz Insurance Lanka Limited, Allianz Medical policyholders can access discounts when accessing health services through the Doc990 platform.
	Grameen HealthTech	Bangladesh	Grameen HealthTech has established a range of partnerships, including with hospitals, pharmacies and insurance companies.
	Jazz	Pakistan	Launched a partnership with MedIQ Smart Healthcare to offer telemedicine, medication delivery and health insurance services.
	Telkomsel	Indonesia	Formed a partnership with health and life insurance company Rey to offer telemedicine services and health insurance.
	Telekom Malaysia	Malaysia	Delivers a digital pharmacy mobile app in partnership with Teleme Technologies. This supports pharmacists to dispense prescriptions and pharmaceutical services digitally, with a focus on reaching rural communities.
Middle East	**e&**	UAE	Announced a cloud-based telemedicine partnership with private hospital group Burjeel Holdings in 2024.

Developing credibility, gaining access to health expertise and shorter lead times for go-to-market and scaling are the three top factors affecting MNO decisions to form healthcare partnerships.

- When it comes to forming partnerships for health offers, survey respondents viewed opportunities for risk sharing as more significant considerations compared to revenue-sharing opportunities or competitive differentiation.
- Although competitive differentiation was ranked as the least important consideration for partnership formation overall, this was considered a significantly higher priority by MNOs in North America compared to those in other global regions surveyed.

Figure 15

Survey question: What are the key considerations which affect your company's decision-making around whether to form partnerships to support your health business?
(Global and by geographic region)



4.1 MNO acquisitions to strengthen healthcare capabilities and expand geographical reach

In recent years, a growing number of MNOs and subsidiaries have pursued strategic, targeted acquisitions of companies with health-focused capabilities and workforce expertise to expand a healthcare offer.

With this approach, MNOs can not only expand their existing portfolio of health solutions and enter new layers of the healthcare value chain by gaining swift access to new capabilities, but they can also reach new market segments, all of which can strengthen their competitive advantage and accelerate scale. Acquiring new specialised technologies can also help MNOs build credibility, trust and increase the value they offer to health systems.

As acquisitions require substantial upfront capital investment, health-focused acquisitions have predominantly been made by MNOs and subsidiaries that are well-established in the health sector, with several years of experience.

A significant proportion of MNOs pursuing acquisitions have prioritised access to proven health IT capabilities and solutions with strong clinical integrations with existing end users, particularly in secondary care settings.

Table 9: Example acquisitions by MNOs and subsidiaries

MNO/subsidiary	Acquisitions	Capabilities acquired
Deutsche Telekom	• Acquired Synedra IT GmbH and Akedis Innovations in 2025	• Health Content Management Platform Synedra serves 260+ hospitals
Enovacom	• Acquired Xperis and NEHS Digital in 2023 • Acquired Exelus in 2022	• Health data interoperability and medical imaging capabilities • Doubled Enovacom's staffing Telemedicine solution Nomadeec
TELUS Health	• Acquired Workplace Options in 2025	• Expansion into the global employer health and well-being market • Access to a network of 180,000+ providers in 200+ countries
Telstra Health	• Completed a full acquisition of Fred IT in 2024	• IT solutions for the pharmacy sector
Vivo	• Acquired Vale Saúde in 2023	• A subscription-based telemedicine platform providing in-person and online consultations to 3,000+ clinics, pharmacies and laboratories across Brazil

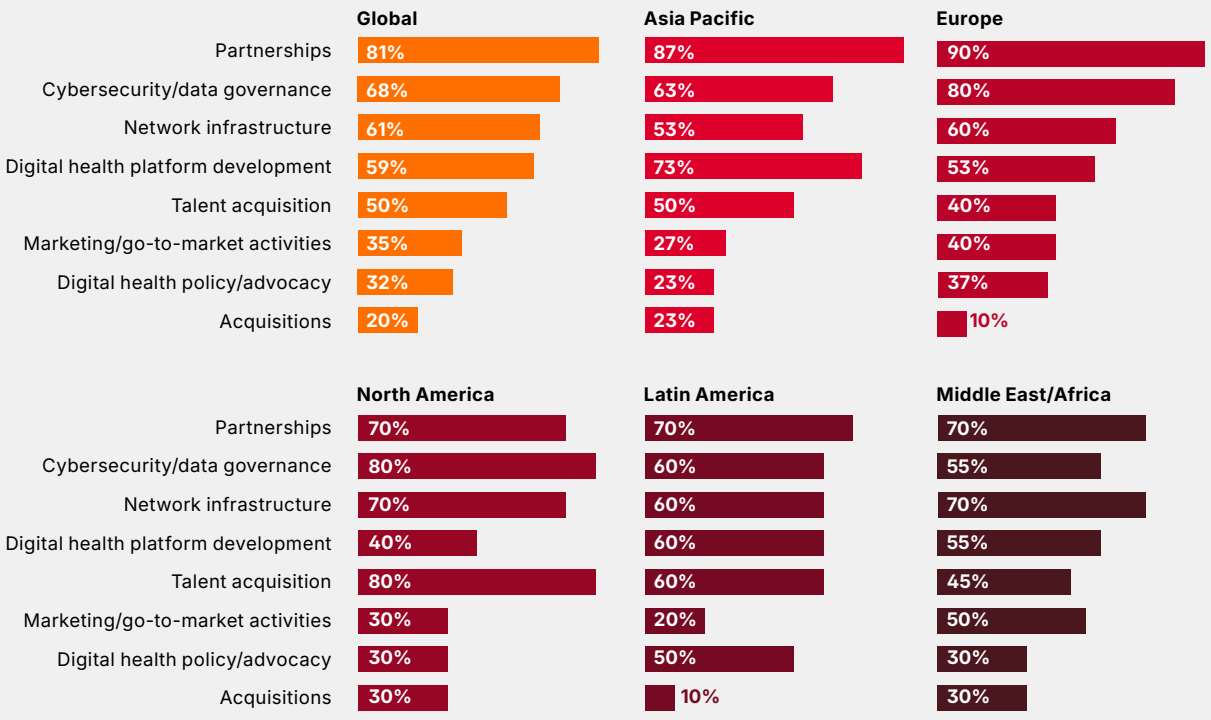
In the next three to five years, MNOs plan to prioritise investments in partnerships, cybersecurity and data governance, network infrastructure and digital health platform development.

- Respondents from MNOs in the APAC region had the most plans for investment in digital health platform development relative to other global regions surveyed.
- Digital health-related talent acquisition was considered an important focus area for future investment, particularly in North America and Latin America where MNOs' health offers have been less specialised.
- With respect to planned investments in marketing and go-to-market activities, survey respondents from MEA indicated the most plans relative to other global regions surveyed, followed by MNOs from Europe.
- While acquisitions were the least likely area for respondents to indicate investment plans, respondents from MNOs in North America and MEA were most likely to indicate investment plans relative to other global regions surveyed.

Figure 16

Survey question: In which area(s) will your company increase investment in the health vertical most significantly over the next 3–5 years?

(Global and by geographic region)



4.2 Key challenges MNOs are navigating in the health sector

Given the array of digital health opportunities MNOs can support, internal readiness is critical to navigate the unique characteristics, challenges and responsibility of operating within the health sector. The complexity, interoperability and coordination challenges presented by diverse and fragmented actors and digital and legacy systems (often within a single healthcare provider) can deter some MNOs from choosing to develop a health offer in the first place, or expand an existing one given the resources and healthcare sectoral knowledge required to effectively address these challenges. While these challenges may lead some MNOs to focus their efforts on alternative noncore sectors, the many MNOs that have developed health offers to date have demonstrated their agility and capacity to contend with these complexities.

Regulatory environment

The importance of providing services and solutions in a highly regulated sector with highly sensitive health data, time-sensitive patient care, critical digital health infrastructure and high volumes of administrative operations, means that the health sector requires a level of network and infrastructure reliability, regulatory compliance, resilience and cybersecurity comparable to that of military settings. Indeed, many countries have formally recognised their health sector as critical infrastructure. As many healthcare settings such as hospitals operate on a 24/7 basis, they demand high service availability and can afford minimal interruption, which means MNOs need to proactively monitor and maintain their solutions and carefully manage the implementation of new, or upgrade of existing, solutions to ensure optimal service delivery.

As the health sector becomes more digital, it will bring with it significantly greater digital complexity, device density, cyber risk and larger data flows. For MNOs, it will become increasingly complex to ensure the robust maintenance, compliance and safety of networks, solutions and health data governance. Keeping pace with the evolving healthcare regulatory environment will be critical, not only to ensure the continuity of healthcare operations and safeguard health data, but also to sustain trust and confidence in health offers. Given this, many MNOs, particularly those with health offers at the top of the healthcare value chain, have appointed dedicated security and compliance specialists to bolster the governance, compliance and resilience of their health offers.

Competition

In a highly competitive digital health landscape, MNOs face competition from established local digital health vendors as well as multinationals offering competitor solutions. In addition to developing a health offer that maximises their core assets and meets the needs of end users, MNOs can differentiate themselves as global players by building teams that combine healthcare, regulatory and telecommunications expertise and developing healthcare solutions built on internationally recognised standards.

Challenges to scale

Given the unique characteristics of country health systems, regulatory environments and MNOs themselves, timelines for reimbursement and paths to scale can be uncertain and often extend over years. This can create tension between timelines for commercial impact on an MNO's core business (typically quarterly) and those of health systems (which can take five to 10 years for large-scale and public-sector projects). While differences in healthcare regulatory environments across different countries typically prohibit replicable solutions between markets, some MNOs have chosen to form partnerships with groups of primary or secondary care healthcare providers (such as multi-site private hospital groups or pharmacies) that are owned by, and operate under, a single corporate entity. Such partnerships may enable MNOs to scale certain features of their solutions given that sites managed under the same group entity may share similar foundational features, such as governance frameworks and core digital infrastructure.

These challenges were echoed in our global survey, which showed that regulatory compliance, the complexity of the health sector and lack of health sector expertise were the most commonly perceived barriers to entering and scaling health offers.

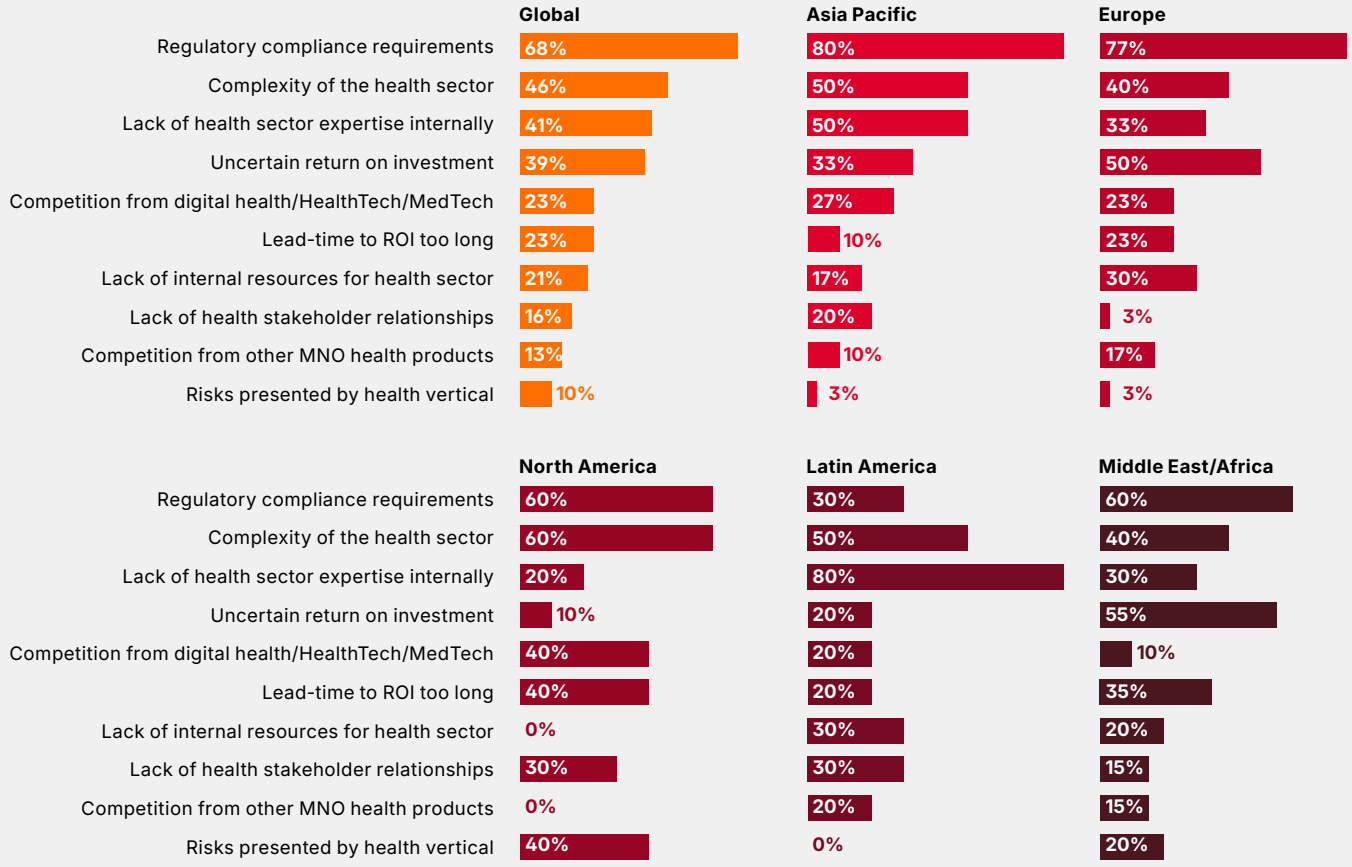
Regulatory compliance is the main reason MNOs decide not to enter the health vertical.

- After regulatory compliance, the most significant factors influencing an MNO's decision to not enter the health vertical were the complexity of the health sector and lack of relevant health sector expertise.
- Respondents ranked uncertain ROI as the fourth most likely reason MNOs do not enter the health vertical.
- Competition from digital health companies, long ROI lead time and lack of internal resources were ranked comparably by all MNO respondents.

Figure 17

Survey question: Which (if any) of the below reasons could be factors in your company deciding not to enter the health vertical

(Global and by geographic region)

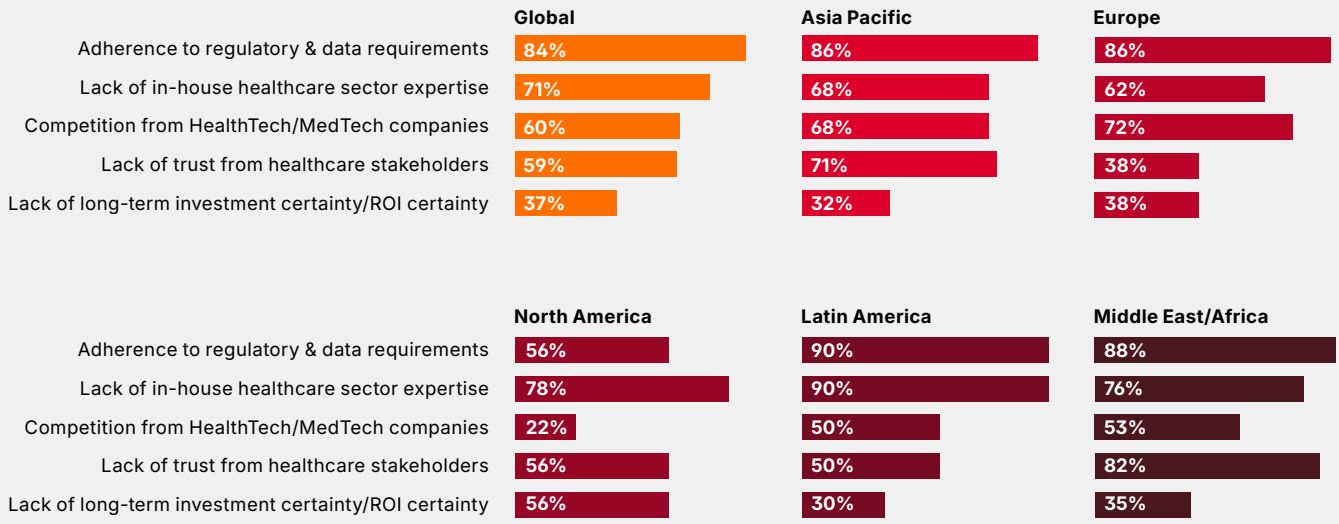


MNOs consider regulatory compliance and lack of health sector expertise as the most common barriers to scaling their health offers.

- MNOs in APAC and Europe rated competition from digital health companies as a greater barrier relative to MNOs in North America, Latin America or MEA, which reflect the fact that several MNOs in these regions are deploying a wide variety of health offers.
- Of all the regions surveyed, respondents in MEA and APAC were most likely to indicate lack of trust from healthcare stakeholders as a key barrier compared to other regions.
- Overall, uncertainty about ROI was least likely to be considered a key barrier. This option was most likely to be considered a key barrier among respondents from North America relative to the other regions surveyed.

Figure 18

Survey question: What are the key barriers to scaling your company's health business?
(Global and by geographic region)



5. RECOMMENDATIONS

For MNOs shaping and scaling a health offer

MNOs with well-established health offers have recognised the need for a multi-stakeholder, ecosystem-focused approach to shaping and scaling their health offer. Such an approach reflects the complex nature of the health sector itself and its various structures and digital transformation challenges.

For MNOs planning to develop a new health offer or expand their existing health business, there are several factors to consider to optimise the offer and ensure maximum health impact. These considerations are primarily centred around:

- Recognising and addressing the unique characteristics of the health sector and end user needs
- Defining an internal health-focused strategy
- Developing the capabilities and operating model to optimise delivery

Recognise the unique characteristics of the health sector and meet the specific needs of end users.

The health sector has unique characteristics compared to other sectors, including longer timescales for ROI, which typically span multiple years. Many MNOs, especially those wishing to deliver solutions at higher levels of the health value chain, will need to acquire additional expertise (either internal or external) to develop their health offer, which takes time and requires planning and investment.

Ensuring that solutions meet the needs of end users is paramount. At the local level, MNOs need to develop a comprehensive understanding of the specific challenges and requirements of end users and co-develop solutions to meet them. MNOs support change management processes during solution implementation, practice robust maintenance and ensure compliance with local regulatory requirements.

At the health systems level, by proactively engaging with healthcare stakeholders like policy and regulatory bodies (for example, through consultations and other industry engagement), MNOs can contribute to policy-shaping initiatives, keep pace with evolving healthcare regulations and ultimately ensure that their strategic approach and solutions both evolve and align with local and national policy and regulatory developments in the wider health ecosystem.

Develop a focused strategy for healthcare with sustained leadership.

While there may be high-level lessons that MNOs may be able to extrapolate from their strategies and experience in different sectors, a longer-term health strategy can enable them to define their role within the complex health landscape and adopt a strategic, ecosystem approach to developing their health offer. This will help ensure solutions are complementary and maximise value.

- Strategies should clarify the layer(s) of the value chain the MNO will deliver in, identify target end users and factor in extended time horizons for commercial reimbursement and health impact. In addition, ensuring compliance with regulatory requirements should be a considered a strategic priority for developing and delivering all health offers.
- Long-term, strategic support from senior leadership can also ensure sustained investment in health initiatives and alignment with the MNO's overall strategy.

Consider organisational adaptations and external opportunities to build expertise and optimise delivery.

To develop a sustainable health offer, MNOs need to ensure their existing internal expertise is aligned with their overall health strategy and ambitions. MNOs should therefore recognise their capability gaps and consider opportunities to access healthcare expertise appropriate to their value chain position and meet the needs of end users. By adapting their organisational structure in line with their strategic approach, specialisation of their health offer and associated expertise, MNOs can optimise their capacity to deliver their offer and maximise the likelihood of success. As such, MNOs should consider whether to:

- Develop new capabilities in-house (e.g. through recruitment of experts with clinical, administrative and regulatory healthcare expertise)
- Form external partnerships or pursue strategic acquisitions
- Adapt their internal organisational structures to increase specialisation and expertise in regulatory compliance. This can include creating a bespoke team or specialised business unit with responsibility for the health sector or establishing a specialised, healthcare-focused subsidiary with distinct operations and objectives.

6. CONCLUSIONS

MNOs are moving beyond connectivity – enabling and advancing digital health solutions across diverse health settings and geographies.

MNOs are not only supporting the resilience, inclusivity, efficiency and affordability of health systems, but are reshaping how healthcare is accessed and delivered across low-, middle-, and high-income countries. MNOs are demonstrating their strong and unique potential to leverage their trusted brands, scale, infrastructure and capabilities, which span connectivity, data platforms, and apps.

From bridging rural-urban divides in healthcare access to coordinating fragmented systems, MNOs choosing to develop a health offer can embrace opportunities to accelerate digital transformation and improve health outcomes across contrasting health settings, from individual citizens to national health systems.

From empowering healthcare workers and patients through mobile-first solutions to supporting critical digital health infrastructure, coordinating disparate health data sources, enabling telemedicine and pharmacy services and reaching underserved populations, MNOs are advancing patient health outcomes and national health priorities.

MNOs are adapting – transforming their operating models to deliver significant health impacts.

While connectivity remains a core strategic asset upon which health systems and digital health transformation depend, MNOs are pursuing opportunities to capture and deliver substantial value beyond this foundation, creating digital health architecture, connecting disparate health systems, facilitating swifter access to remote healthcare and enabling earlier detection and long-term monitoring of ill health. In doing so, MNOs are recognising the need to develop new capabilities, adapt their operating models, forge partnerships and pursue acquisitions to cement their position within the health sector and deliver sustainable impact at scale, particularly for underserved communities.

MNOs' continued ability to accelerate digital transformation across health systems and improve public health outcomes will depend on meeting local, regional and national healthcare needs. This will require developing additional expertise, deepening relationships with healthcare stakeholders, adapting organisational structures and continuing to build trust and credibility by ensuring robust regulatory compliance.

As MNOs take on increasingly important roles across the health sector, their healthcare contributions and impact may become a significant feature of their identity beyond connectivity.

MNOs are driving the digital future of healthcare – at home, in health facilities and beyond.

MNOs are enhancing the quality, impact and reach of healthcare services around the world. As health systems continue to be reconfigured to deliver more preventative, personalised, digitally enabled and community-based models of care, MNOs will continue to offer the digital and network capabilities underpinning these advancements.

Patients, health systems and healthcare professionals stand to gain significantly from MNOs' expanding role in global digital healthcare, and the coming years will see greater convergence between the telecommunications and healthcare sectors, with lasting impact.

Our research demonstrates that alliances between health systems and MNOs are simultaneously strengthening health ecosystems and underpinning the future of digital healthcare delivery, paving the way to improved healthcare access and outcomes for citizens around the world.

GSMA Head Office
1 Angel Lane
London
EC4R 3AB
United Kingdom

gsma.com

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