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Catalyst for Transformation

How COVID-19 Can Accelerate Innovation In Nigeria's Healthcare System

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Executive Summary

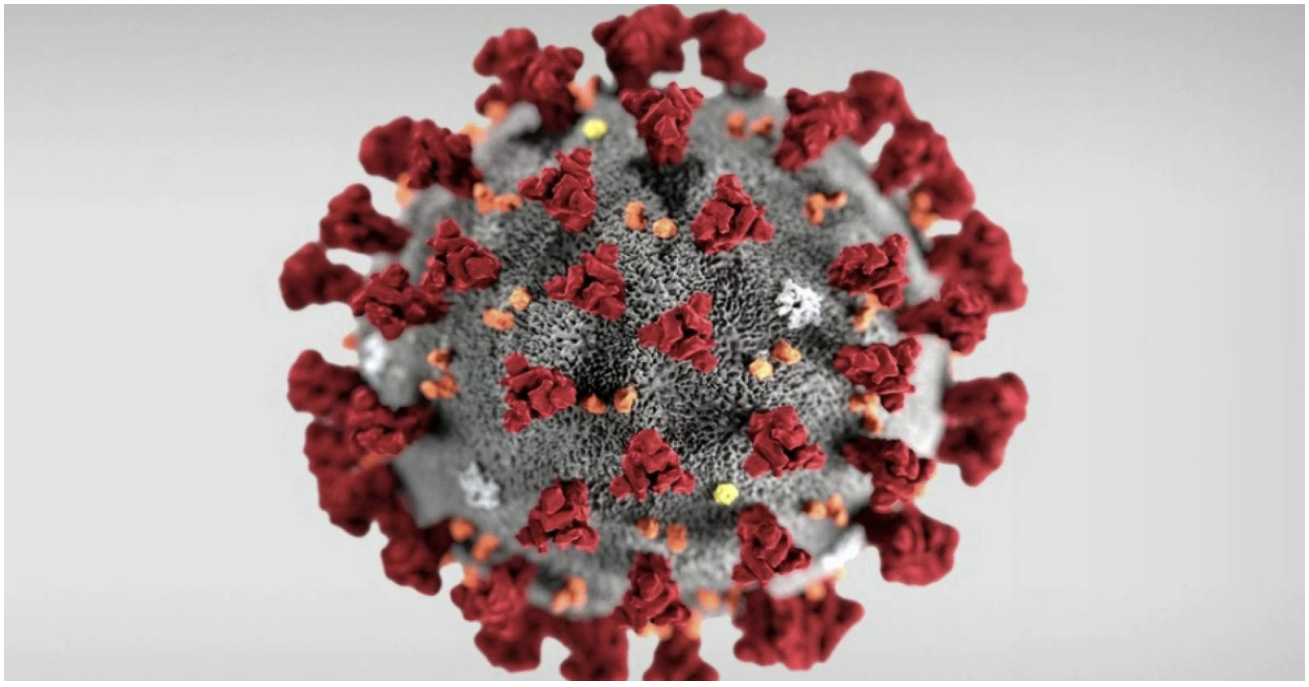
The year 2020 started on a positive note. Oil markets had improved, and there were signs that Nigeria's economy was on an upward trajectory.

At AACS, our position was that the status quo would not be good enough to drive the desired enhancement and that the government, businesses, and individuals needed to step outside of their comfort zones and seek disruptive innovation.

In healthcare, there was a clear need for innovation: Only 4.2%[1] of Nigeria's 2020 budget was allocated to the sector.

In a country with over 200 million inhabitants there are only 42,000 doctors available. That implies one doctor for every 4,762 people—a significant gap from the 200,000 doctors, or one for every 1,000 people, recommended by the WHO and the 680,000 doctors, one for every 294 people, needed to be on par with the average in OECD (Organization for Economic Cooperation and Development) countries.

While devastating, the COVID-19 crisis represents an opportunity to take major steps towards transforming the Nigerian healthcare system. It may be hard to think beyond the immediate demands of managing the crisis caused by the COVID-19 pandemic, but that is exactly what leaders must do - and do so urgently. If bold moves are made now to drive the widespread adoption of telehealth, access to healthcare can be extended to the currently underserved and excluded populus, and practitioners can be engaged and empowered. Embracing telehealth will make a significant impact on this crisis and the demands of future public health emergencies.



[1] Budget Office of the Federation

Starting Point: A Complex, Fragile, And Under Funded System

The Nigerian healthcare system is organised in three tiers:

- Tier 1: Federal Healthcare - Federal authorities define policy, enforce regulations, and oversee tertiary care facilities;
- Tier 2: State Healthcare - State authorities are responsible for secondary health facilities;
- Tier 3: Local Healthcare - Local authorities are responsible for primary care.

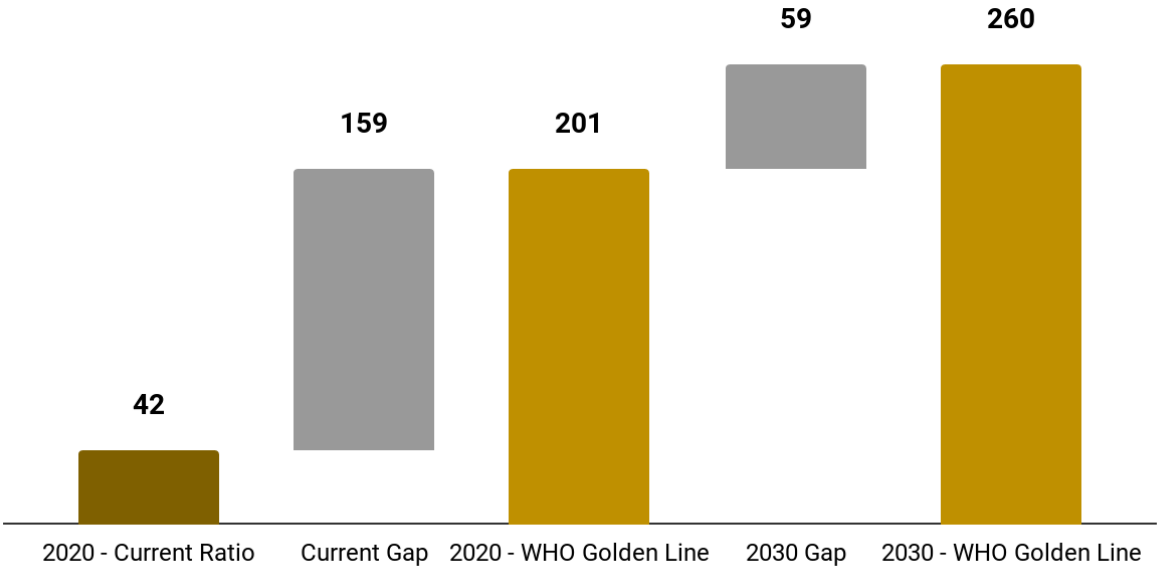
Under this structure authorities in each tier operate autonomously and often with inadequately defined roles. In some regions this leads to overlapping responsibilities. In others the government gives little attention or funding.

Despite making progress, Nigeria has a distressing record of health outcomes. Life expectancy in the country is just 53 years, compared with 61 years across Africa. Infant and maternal mortality is also extremely high. For every 1,000 births, there are 59 infant and 55 maternal deaths.[2]

There is also a critical shortage in the number of doctors available to support the population. While there are around 75,000 doctors registered with the Nigerian Medical Association (NMA) it is estimated that only 42,000 are currently practicing in the country. The result is that Nigeria has only .2 doctors per 1000. When compared with 3.4 doctors per 1000 on average in OECD countries, the magnitude of the gap becomes clearer. To meet the WHO benchmark of 1 doctor per 1000, Nigeria would need an additional 158,000 doctors immediately.

[2] World Health Organization

Gap in Supply Supply of Nigerian Doctors vs. Demand
(,000 doctors)(2020 - 2030)[3]



The nation's medical schools currently graduate around 3,000 doctors per year. Poor working conditions cause frequent conflicts between the government and the Nigerian Medical Association and regular strikes in public hospitals. As a result, a consistent stream of Nigerian doctors and nurses leave the county for better prospects abroad. It is estimated that around 2,000 Nigerian doctors leave the country each year.

Nigeria has only .9 hospital beds per 1,000 people which is far below the 4.7 beds per 1,000 people in OECD countries or even the average of 1.4 beds per 1,000 in other African countries.[4]

The country does not have a publicly-funded health-insurance market, and it is estimated that more than 70% of healthcare spending is paid for directly, out of pocket. Preventive care and early interventions are the exception rather than the rule, and citizens avoid health services until absolutely necessary.

The African Union and the WHO have recommended that nations on the continent spend a minimum of 15% of their annual GDP on healthcare. Over the last decade, Nigeria has spent around 5% of its annual GDP on healthcare. With this spending largely focused on recurrent expenditures, there has been very little investment in the sector. The National Health Act, passed in 2014, which requires that 1% of government revenue is set aside for basic healthcare has yet to be implemented.

[3] Nigerian Medical Association, AACS Analysis
[4] Nigerian health sector: Market study report, Pharma Access Foundation, March 2015, rvo.nl.

Further Stress: Demand For Healthcare Services Set To Increase

According to the WHO, Africa bears more than 24% of the global burden of disease, but has access to only 3% of health workers and less than 1% of the world's financial resources. Over the past several decades Africa has experienced a number of deadly outbreaks of communicable diseases (Lassa Fever, Ebola, etc.). While extremely deadly, these outbreaks have mainly been contained within regional clusters and have not spread across the continent or been transported to other parts of the world in a material way. This is likely, at least in part, due to the limited connectivity between African countries. At just 18%, Africa currently has the lowest percentage of intra-regional trade in the world, compared with 70% in Europe, 55% in North America, 45% in Asia, and 35% in Latin America.[5]

With the launch of Africa Continental Free Trade Area (CFTA), which was set to occur in 2020 before the outbreak of COVID-19 and the subsequent restriction, a new path is being charted towards Africa becoming a single continental market. Along with increased visa openness and harmonization of monetary policies, the United Nations Economic Commission for Africa predicts that the CFTA could increase trade between African countries by more than 50% from current levels to as much as $35 billion per year.

As Africa becomes more interconnected, it stands to reason that the periodic epidemics that have plagued the continent could spread much faster and have a more devastating impact and increase the burden on its healthcare systems. The even larger and more predictable increase in demand will come from the chronic conditions which are growing in prominence. As economic prosperity improves and the middle class expands the prevalence of chronic

[5] World Economic Forum - How a single market would transform Africa's economy

conditions, such as diabetes, chronic heart disease, hypertension, cancer, etc. will also increase. These conditions are already having a large impact in terms of lost economic production, direct healthcare costs, and loss of life.

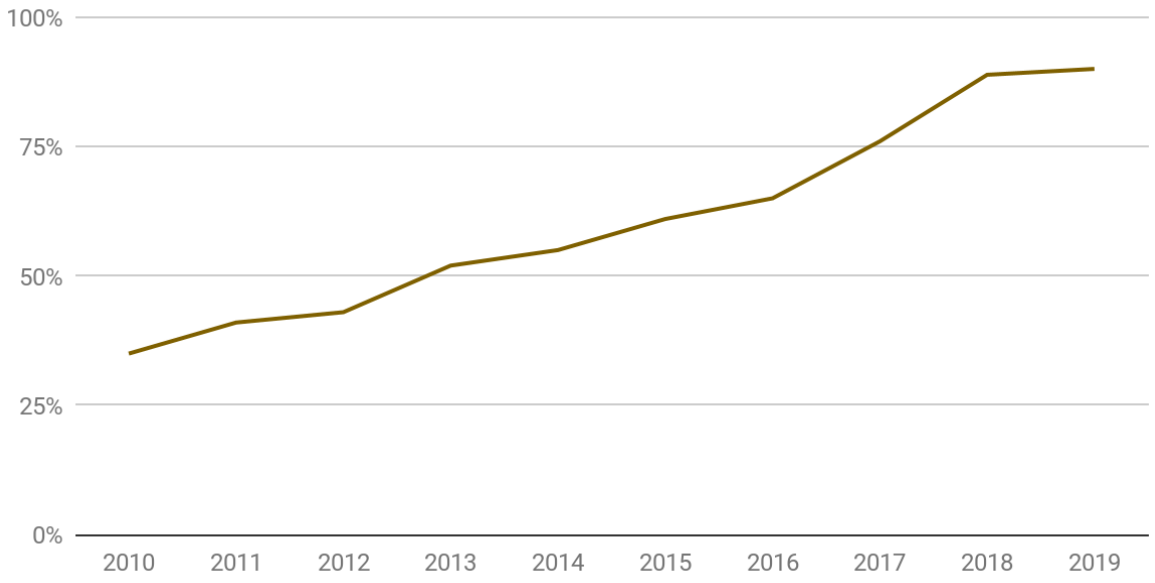
Global Adoption: Telehealth Services Becoming Ubiquitous

Globally, the COVID-19 pandemic has been a catalyst for telehealth. Once this period has passed, there will be many more dedicated users of telehealth. Most will have had their first experience during this window.

The concept of telehealth has been around since the 1960s when NASA engineers monitored astronauts' vitals and physicians communicated with them via audio and video links. Since then it has mainly been positioned as a means by which to enhance the delivery of healthcare to remote, hard to reach, and medically underserved populations, thereby improving quality of care and decreasing costs. More recently, however, supported by developments in technology, the sector has begun to use mobile devices to connect patients and physicians at a large scale regardless of their proximity, thereby increasing efficiency in the system and in decision making.

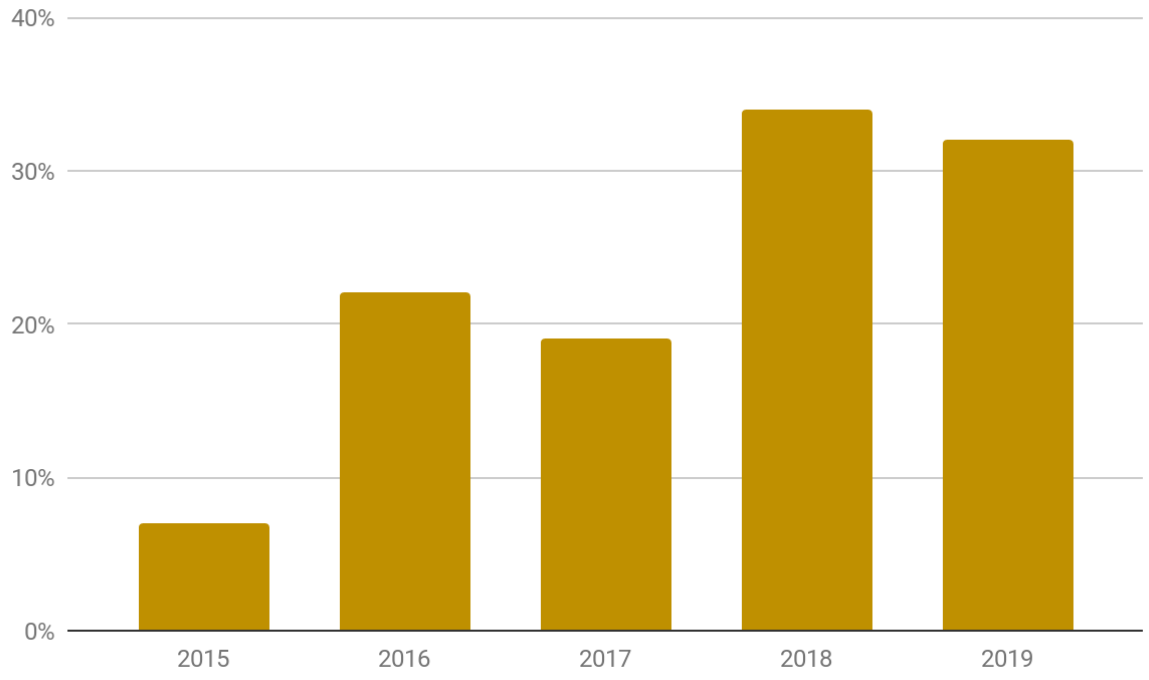
Despite its long history and clear potential, the adoption of telehealth has been restrained by lack of reimbursement, restrictive regulation, inertia of existing treatment patterns, and a general lack of awareness. As the structural barriers surrounding regulations and reimbursement are resolved, providers are becoming increasingly receptive to using telehealth.

Proportion of US Hospitals Adopting Telehealth
(%)(2010 - 2019)[6]



Among consumers, even those with access to telehealth, less than 10% had used telehealth before 2015. The reason for this was that awareness remained low.

US Consumer Adoption of Video Telehealth
(%)(2015 - 2019)[7]



[6] American Hospital Association - Factsheet, AACS Analysis
[7] Rockhealth Digital Health Consumer Adoption Report 2019

In emerging markets with large rural communities and limited healthcare infrastructure such as Nigeria, telehealth could have an outsized impact. Adoption, however, is generally behind that of the developed markets.

COVID-19 Crisis: Elimination of Barriers To Adoption Of Telehealth

Governments and healthcare systems are actively pushing users to this channel as they look to combat the COVID-19 pandemic and dampen usage of limited hospital capacity. The infectious disease management manifesto of “identify, isolate, and contact trace” as prominently touted by Dr. Anthony Fauci, Director of the National Institute of Allergy and Infectious Diseases (one of the US National Institutes of Health) can be best executed at scale through the use of technology. In addition, using telehealth instead of physical visits for non-COVID related needs reduces the burden on the overstretched system and significantly reduces the risk of exposure to those at highest risk should they become infected with the virus.

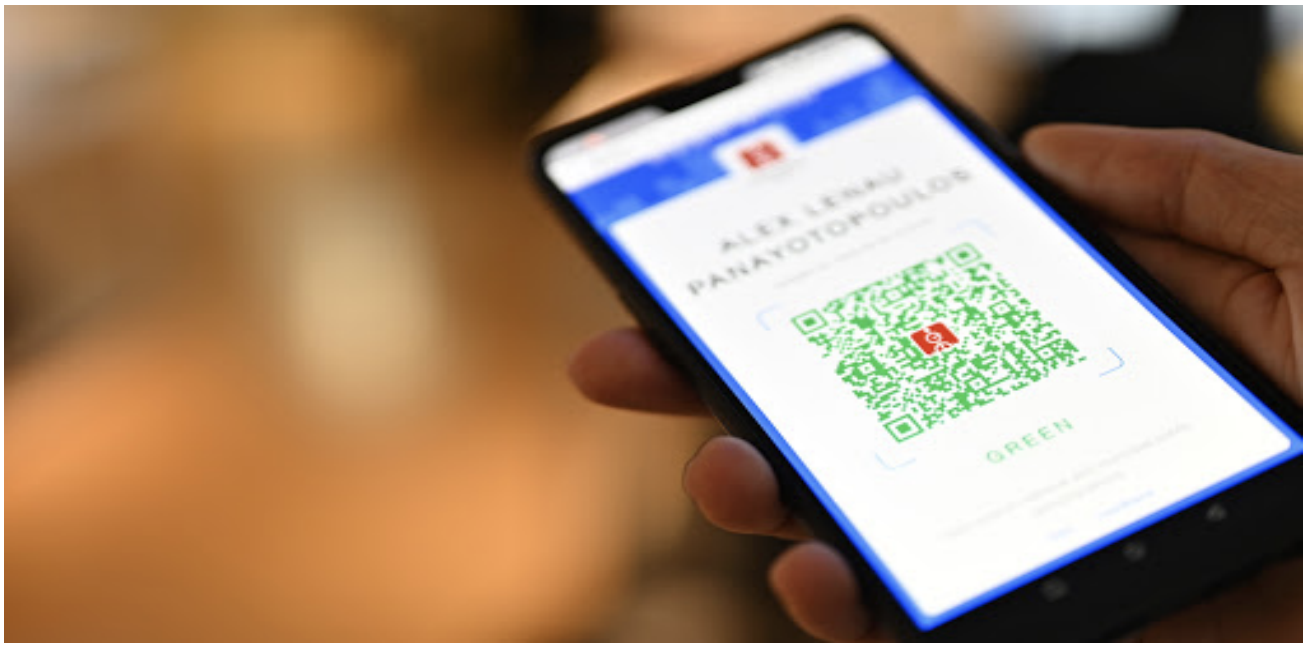
In China, over the past few years, the government has been slowly lifting restrictions on telehealth. The outbreak of COVID-19 has resulted in a full-fledged endorsement of the sector. The health-ministry gave full authorization to internet-based medical services to diagnose and treat patients, encouraged hospitals to give online consultations, and in some areas extended reimbursement for online medical care. The country’s leading telehealth providers, sensing the opportunity to consolidate their positions in a crowded field, have taken steps to focus on user acquisition instead of revenue and offered free visits. All this has led to the education of the market and driven a surge in awareness, trial, and adoption of telehealth services:

- JDHealth, says that its monthly consultations have grown tenfold since the start of the outbreak
- Baidu’s Wenyisheng, which translates as “Ask Doctor”, has been handling around 850,000 inquiries daily. Of those inquiries, 400,000 were respiratory-related which is around 50 times the level seen a year earlier
- Shares in Alibaba Health surged 42% and Ping An Good Doctor’s climbed 25% between January 1st and March 31st, 2020

The outbreak has also spawned innovative approaches to managing public health at scale:

- Cancellation or transition of non-essential surgeries and non-critical appointments to virtual visits in order to free up hospital space
- Leverage telehealth to triage potential cases and to coordinate additional activities (e.g., isolation, testing, and hospitalization)
- Manage contact-tracing and remote monitoring

- Closely monitor patient level health data by government agency capable of making widespread central decisions
- Launch Health QR codes - Individuals monitor and record their temperature and update their profile daily in order to maintain their health status (green indicates one can move freely, yellow requires a seven-day self-quarantine, and red a 14-day self-quarantine)



Way Forward: Using COVID-19 As Catalyst For Telehealth In Nigeria

At a time of consternation and uncertainty, risk assessment and contact tracing tools represent a “frictionless” entry point into telehealth, especially when promoted by governments, payers, and providers.

Widespread adoption of COVID-19 assessments would not only be an effective means of managing the pandemic in Nigeria, but also an opportunity to rapidly assemble rich population level electronic health records even for harder to reach segments of the population. The factors that identify people at elevated risk, should they become infected with the virus, include the existence of chronic conditions and age. This data could, in turn, be used to provide efficient preventive and prophylactic treatment for unrelated ailments during and after the crisis. This will help Nigeria to “leapfrog” the capital intensive healthcare infrastructure development approach followed by more developed economies.

Under ideal conditions and with consistent funding and support, a virtuous cycle can be created with:

- Increased access and improved quality of care, leading to
- Increased demand and satisfaction from consumers, leading to
- Enhanced willingness to contribute to health insurance programs, leading to
- Reduction in the burden of out of pocket expenses, and

- Greater levels of investment in healthcare infrastructure, which would further increase access

A strategic shift toward telehealth as the entry point to the Nigerian healthcare system would go a long way towards igniting this virtuous circle. Such a shift can be made through a coordinated approach to combating the COVID-19 pandemic and will require the following steps:

1. Promote and incentivize the widespread completion of a COVID-19 risk assessment, including medical histories, geolocation data, and contact information
2. Identify individuals with symptoms consistent with COVID-19, facilitate contact tracing, testing, and isolation programs
3. Consolidate feedback from individual medical histories to assemble a national electronic health record
4. Roll out a robust national telehealth system
5. Engage, train, and empower healthcare providers through e-learning and other means

Conclusion

The need for a comprehensive transformation of the Nigerian healthcare system cannot be overemphasized. Healthcare has been underfunded for decades, not deliberately, but because resources available to the government were not adequate to support a myriad of critical needs. It is widely accepted that Nigeria has a substantial infrastructure deficit. The African Development Bank (ADB) estimates this to be $100 billion per year[8]. The nation's annual budget, even during boom times, has been around $30 billion.

The challenges are enormous, and can not be solved through business as usual. Disruptive tactics must be deployed across healthcare, education, agriculture, science and technology, power, and other sectors of the economy.

At AACS, we are committed to promoting solutions. We believe that the existential threat caused by COVID-19 should be the catalyst for innovation in the Nigerian healthcare sector and are advising leading international telehealth firms and supporting local initiatives to make this happen. Combined with preventive actions like good hygiene, access to clean water and other basic necessities, such innovation can radically “flatten the curve“ and initiate the transformation of the national healthcare system.

[8] African Development Bank

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About AACS:

AACS is an international consulting and principal investments firm defined by its purpose which is to "bring the winning edge by inducing you to think out of the box, and driving the construction of the capabilities to bring those thoughts to life".

Our creed is a way of life that continually pushes you to walk roads less travelled be it in business, public service ,community development ,medical & scientific research or global and human relations. It is also important to note that one time disruption is not enough. Our creed demands that we stay prepared, consistently reimagine the possible, and constantly strive to improve.

The Authors:

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Dr. Falil Ayo Abina - Ayo is the Chairman of AACS. He has over 25 years of experience in the banking sector where he led industry leading teams and projects. He has advised public and private sector entities (including UCH Ibadan) on approaches to reform facilities and reduce healthcare tourism, and supported clients in deal structuring and fundraising for healthcare businesses.

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