

Partnerships for Resilient
Health Systems

Session report

Manufacturing & Supply Chain



12th November 2020



This webinar is brought to you by Africa Health Business (AHB)

AHB is a pan-African advisory, consulting and investment firm that focuses on innovative partnerships to transform health in Africa. AHB promotes the growth of the private health sector in Africa to generate affordable, accessible, and quality healthcare for all.

Speakers



MODERATOR

Dr. Amit N. Thakker
Executive Chairman,
Africa Health Business



KEYNOTE SPEAKER

Ms. Chidinma Ifepe
Head of Buyer Management,
Africa Medical Supplies Platform



PANELIST

Dr. E. Ahmed Ogwell Ouma
Deputy Director,
Africa CDC



PANELIST

Dr. Stavros Nicolaou
Group Senior Executive
Strategic Trade,
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PANELIST

Dr. Harald Nusser
Global Health Expert



PANELIST

Ms. Yasmin Chandani
CEO,
InSupply Health

Event Partners



Webinar Poll Results

What are the biggest challenges to healthcare product manufacturing in Africa?

29%

Lack of good infrastructure such as transportation systems, communication

5%

High cost and inefficient process of importing raw materials

10%

High quality standards set by international bodies such as the WHO

19%

Adequately trained and skilled staff to operate the manufacturing plant

37%

Lack of an enabling business environment

What factors would boost local healthcare product manufacturing in Africa?

29%

The implementation of investment incentives in the manufacturing sector such as tax holidays, guaranteed purchase orders, etc.

31%

Harmonisation of the African regulatory environment and governance systems

11%

Larger trade opportunities/incentives for exports out of Africa

18%

Strengthening the enabling environment for public private collaboration

11%

Establishment of research centres on the continent

What are the biggest challenges to healthcare product supply chains in Africa?

17%

Access to location and tracking technology for supply chain management

22%

Finding the right distributors to reach the vast number of countries

17%

Counterfeit and parallel imports

11%

Efficient transportation networks

33%

Fragmented markets increasing the cost of distributing products



Kaushal Shah
Head of Pharmaceuticals
& MedTech,
Africa Health Business

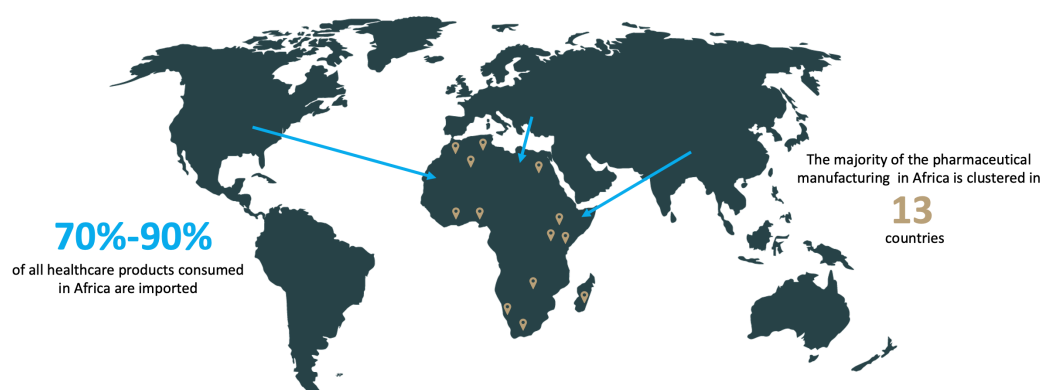
COVID-19 has greatly disrupted our supply chains. The measures to contain the pandemic have triggered unprecedented measures by national governments that have caused local and global trade disruptions. This has threatened our supply chains not only for the management of COVID-19 itself, but also for all essential commodities that we need to maintain the health of our populations.

With imports comprising as much as 70-90% of healthcare products consumed in most countries in Africa, it is important that we consider an increase in the local production of these products as a way to create stronger and more resilient healthcare systems. Taking pharmaceuticals as an example of the continent's reliance on imports – most countries are uncompetitive for local pharmaceutical production and only a small number of African countries have a handful of local companies who produce for the domestic market.

The continent overall has approximately 375 drugmakers clustered primarily in 13 countries. As highlighted in the map, in North Africa, Morocco has developed a sizeable pharmaceutical manufacturing industry – and in sub-Saharan Africa, only Kenya, Nigeria, and South Africa have a relatively sizable pharmaceutical manufacturing industry, with dozens of companies that produce for their local markets and, in some cases, for export to neighbouring countries.

Almost all the companies are drug-product manufacturers. Up to a hundred manufacturers in sub-Saharan Africa are limited to packaging. Only a handful of drugmakers produce APIs, and none have significant R&D activity. Africa's pharmaceuticals demand is met mainly from Asia (with over a third of the drugs in terms of value coming from India and China), Europe (the UK, France, Germany, Switzerland, Italy, Ireland etc) and the US.

Africa is heavily reliant on imports



Going forward, we need the public sector to create a more enabling environment for the local production of healthcare products and the private sector to direct more investment towards the local manufacturing of these healthcare products. There has been advancement in local manufacturing, with companies in the private sector such as Revital Healthcare in Mombasa producing medical commodities such as syringes and blood collection tubes and Biovac in Cape Town producing vaccines for diseases including measles and hepatitis B. But by far, the majority of the investment has gone towards pharmaceutical manufacturing as I highlighted before and no investment has gone towards the local production of more sophisticated devices and equipment such as MRI and CT scanners.

The pandemic has highlighted that we need a more coordinated, reliable and self-sufficient healthcare manufacturing and supply chain. We need to make full use of flexibilities within the Trade and Related Aspects of Intellectual Property Rights (TRIPS) and Doha Declaration on TRIPS and Public Health to boost the local production of generic medicines. We need to work on policies and regulations that will strengthen local manufacturing capabilities (especially for essential generic medicines, vaccines and medical commodities) and expand intra-African trade through better harmonization and coordination of trade liberalisation and facilitation.

Additionally, we believe that PPPs are essential for the genuine progress of our healthcare product manufacturing capabilities. Africa Health Business is at the centre of this partnership drive which is why we are having this discussion today.

One such partnership is the African Medical Supplies Platform. The AMSP portal is an online marketplace that enables the supply of COVID-19-related critical medical equipment in Africa. AMSP was developed to ease the difficulties and open up the medical supplies market to Africa, and as part of the Partnership to Accelerate COVID-19 Testing (PACT) of Africa CDC. It integrates African and globally vetted medical suppliers to ensure cost-effectiveness and transparency in the procurement and distribution of COVID-19 related supplies.



MODERATOR

Dr. Amit N. Thakker
Executive Chairman,
Africa Health Business

The issue of manufacturing and supply chains in Africa requires us to be more innovative. The COVID-19 pandemic dramatically interrupted the global supply chain, which has prompted us to start looking inwards to ensure our health system remains intact, rather than looking at external sources for supplies. Ministries of health even struggled to find the PPE necessary to protect health workers and other citizens, showing why we need to become more independent and self-reliant. Manufacturers of non-essential products repurposed to fill this need, which shows that we have the capacity within Africa to produce many products for ourselves.

When we look at more complicated products, however, such as vaccines and medications, we need a technical and long-term plan. So we need to plant the seeds and be innovative now, so that by the time the next pandemic occurs, we have already become self-reliant and can save the lives of citizens across the continent.

Our panelists today have a wide range of experiences and areas of expertise. Our audience represents about 35 to 40 countries, including many delegates from Africa, but also from the U.S., U.K, and Asia.

Our keynote speaker is the Head of Buyer Management at the Africa Medical Supplies Platform, which is a platform where telecom companies and other non-healthcare companies came together with leaders in institutional continental structures like Africa CDC to show what Africa can do for African supply. We are proud of this platform. It's working, and we want it to continue to remain a place for ministries and private sector to effectively buy quality products at a reasonable price with great transparency.



KEYNOTE SPEAKER

Ms. Chidinma Ifepe

Head of Buyer Management,
Africa Medical Supplies Platform

Let's go back to the start of the pandemic. At the time, we had not seen a rapid rise in cases on the continent, but through associations and the work Africa CDC was doing with the WHO Consortium, Africa had secured some diagnostic test kits. But if you look at the allocation that was given to Africa, it was around 10 million diagnostic test kits for 16 weeks for the entire continent. This came to about 60,000 test kits by country per month. Just hearing those numbers, you can already tell that if we were restricted to this amount of supplies, it was going to be really difficult for us to scale our testing strategy.

Enter the Africa Medical Supplies Platform. This is the brainchild of multiple stakeholders, both private and public. What we wanted to do was to come together and build a supply mechanism that leveraged the very best of the private sector and the very best of public health expertise to build up a supply chain to provide real-time access to a global manufacturer base for the continent.

By thinking through the structure, we started seeing some possible bottlenecks. For example, Africa is not only dealing with the COVID-19 pandemic. We have been consistently dealing with multiple infectious diseases and other health challenges. So how can we make sure this is valuable for African Union member states? How do we make sure it is accessible to donor organisations that want to support member states in their COVID-19 strategy?

With active participation from our stakeholders, the blueprints for the African Medical Supplies Platform was really bold. We wanted to create a digital marketplace to support both the sellers and the buyers on the continent to access critical medical supplies. Because we were also conscious of transparency of costing, making sure there was real-time availability of supplies, ensuring the supplies were high quality and from certified suppliers, we had to work with multiple players to design, at the very least, a minimum viable process as an emergency response to the pandemic.

Since we launched in June 2020, what we've seen has been a real-time shift in demand. It started off with a huge demand for PPE. We've seen it then gradually shift to diagnostics and critical equipment requirements. Just having an extra source of supplies provided a lot of confidence in health care systems. They were confident that they could fight the pandemic because of the support at the level of the Africa CDC and our other partners.

While we have established a structure, there are a few things that we've seen that are not unique to our situation. We've seen how vulnerable the supply chain system is. We've seen how needed an agency like the African Medicines Agency is when it comes to harmonisation of regulations across the continent. Once products come into the continent, there are 55 different regulatory bodies that need to approve and certify those products before they can be utilised in the different countries. This slows down how fast products can get to end users or remote communities. It also slows down some of the gains we might have seen in acting really fast.

This platform is a novelty that we hope will be carried on far into the future. As conversations around the African Continental Free Trade Area progress, we hope that this is a start of integration between technology, public sectors and their

policymakers. The opportunity to leverage existing infrastructures that have worked well in private sector in the public sector cannot be overemphasised.

The African Medical Supplies Platform is just one instrument, targeting manufacturing and supply chain issues on the continent. But the reality is that there are multiple other business unit organisations doing incredible work in this space and we must continue having these discussions. We must continue shining a light on the conversations that need to happen to ensure we can leapfrog into the future.

Today, Africa has a population of about 1.3 billion, but tomorrow there's an estimate that it's going to be around 2.4 billion. The structures we have today are not enough to scale for our population size of tomorrow. So these conversations are very important, but so are the players in private sector, public sector, communities and organisations that speak up. For these solutions, we must come together to build a strong, structured and sustainable framework for growth.



PANELIST

Dr. E. Ahmed Ogwell Ouma
Deputy Director,
Africa CDC

Africa CDC is about four years old now after launching in January of 2017 in response to the Ebola outbreak in West Africa. It became very clear to our leaders that we needed our own public health agency here in Africa to be able to coordinate our response. In our four years, we have tried to meet that mandate and under this COVID-19 pandemic, we have lifted a lot more than a four-year-old should be able to lift.

Today I want to focus on the manufacturing and supply chain aspects of partnership for resilient health systems. When we have different types of outbreaks on the continent, it usually effects just a few countries. Even the Ebola outbreak involved about three or four countries actively. But with the COVID-19 pandemic, it has affected everyone.

At the beginning of the pandemic, everyone needed everything required to address COVID-19. Wherever anything was being manufactured (gloves, masks, test kits, PPEs in general, ventilators, oxygen concentrators, ICU beds), there was a ready market and people from different parts of the world, governments and organisations wanted to purchase them. This put an unprecedented strain on the supply chain globally. Additionally, China has become one of the core factories for meeting product demands on a global scale, and for some weeks, they were manufacturing absolutely nothing because of lockdowns. When they were manufacturing nothing, it meant that whatever was in stock was running out quickly, and yet the need was still growing.

International Challenges

When we look at the international perspective as far as the COVID-19 supplies are concerned, there was a significant shortage because the supply chain was disrupted, manufacturing was not happening at a good rate and the demand was increasing. The shortage was at all levels of the supply chain.

Secondly, even when products were available, moving them from point A to point B was extremely difficult. Because almost every country was on lockdown, moving

goods was practically impossible. At Africa CDC, we had the luxury of being able to move in and out of countries in Africa because of the key support from our member states. This provided us with the ability to move our staff relatively easily to go to the epicenters of the pandemic. However, because we were not manufacturing much on the continent at the start of the pandemic, we had to make special arrangements for how these supplies would then be able to get from wherever it was produced (whether they were in Asia, Europe or North America) to our populations here in Africa. We had to figure out how it would reach the laboratories, health workers and other institutions that require those supplies.

The third challenge internationally was the issue of quality. Because the demand was so high, some individual companies started to repurpose their facility to manufacture items that were in really high demand, like masks and the overall gowns that are needed for our frontline health workers. How can we be sure that what we're buying is actually going to protect our health workers? It may look like a mask, but does it have protective abilities? Additionally, many of our regulatory bodies were not functioning at full scale, so these suppliers had that question mark. As Africa CDC, we dealt only with the suppliers we knew had good products and whose certifications were above board. It was not easy because there are not too many that were working at full speed at that time.

African Challenges

One of the primary challenges facing the African continent was basic quantification. How much do we need of each and every item? We didn't have adequate numbers in terms of the burden of disease at country level and, although the number of cases were small, the populations and the number of people at risk were large. How do we quantify what we need so that we can purchase in amounts and at speeds that actually help those who are on the frontline of this work?

The second challenge was what to do after purchasing items. How do we move them? The Africa CDC has a good partnership with Ethiopian Airlines whose cargo flights did not stop. We are now expanding that to other airlines on the continent to be able to move goods relatively easily.

Additionally, we had the challenge of actual procurement, because everybody wanted the same items. How do we make sure that we're getting good quality? How do we make sure that we're getting it in good time? How do we make sure that we have the resources that we need? Our partners from across the world came through and provided us with the resources that we needed to be able to move some of these supplies very fast from wherever it was manufactured to Africa. We also received some very important donations from our friends across the world at a very critical time, which helped to ensure that Africa was functioning at decent levels.

A very big challenge that African countries are still facing is in the area of market intelligence. Where do we get a particular product? How are we able to access it at a price that is reasonable? So these challenges show that Africa still needs to develop, and we are working with African countries to be able to improve these as fast as possible.

Too few humanitarian corridors were there at the beginning of the pandemic and, as the second wave comes into Africa, and as we expect at least some partial lockdowns, this is something we may face again. The past eight or so months, however, has given us significant experience and we think we will be able to handle it.

Africa CDC Response to Challenges

The chairperson of the African Union Commission, His Excellency Moosa faki Mahamat, called all the health ministers he had to Addis Ababa in February to sit and discuss how best to respond to the pandemic, as the first case had been reported in Egypt a week earlier. The ministers adopted the Africa Joint Continental Strategy for COVID-19, which is what has been guiding all of our response activities and the preparedness support we are offering to countries across the continent. It has also been guiding our planning, not just for this particular pandemic, but for pandemics that may come in the future.

Under this strategy, we established the Africa Task Force for Coronavirus, which is headed at national level by directors of national public health institutes or similar departments in ministries of health. We meet every week, assess where we are, and chart a way forward based on the evolution of the pandemic.

We then launched the Partnership to Accelerate COVID-19 Testing on the continent. It was very clear to us from the very beginning that if we don't test, we cannot be able to know our burden. If we don't know our burden, then we can't adequately prepare. So we established this partnership and brought on board the three aspects of response: testing, tracing and treating. In order to make this possible, we had a very good set of partners supporting us. In fact, our member states within Africa very generously donated to the COVID-19 Response Fund to ensure that we were able to support our responders and member states.

You have heard about the African Medical Supplies Platform, so I will not repeat that, but I will talk about vaccines. We held a conference and adopted a strategic plan to develop vaccine trials on the continent. And here we are looking at how Africa can ensure equitable access to vaccines that are proven to work across the globe. We want to ensure that we can actually get the vaccination distributed. Having the vaccine is one thing, but having vaccinations given to the population is another thing. We have huge challenges on the continent around anti-vaccine misinformation, cold chain issues, ensuring that it actually reaches populations in more rural and remote areas, as well as shortages when it comes to qualified health personnel.

So, as Africa CDC, we have established a process following the direction of the Bureau of the Assembly of Heads of States of the African Union, led by His Excellency, President of South Africa, Cyril Ramaphosa, and we've been given very clear marching orders to continue and carry things out as boldly as we can to ensure that Africa is fully participating in preparing for the vaccine season.

We also recently launched the Africa Against COVID-19 campaign, which is for saving lives, saving economies and saving livelihoods. We are targeting opening up the economy safely, opening up schools safely, and ensuring that people are able to also travel safely.

Finally, there is a great opportunity for manufacturers on the continent. We have great potential. The health market is over \$250 billion, but local manufacturing is still extremely small. For drugs alone, we import something in the range of 90 to 95% of what we need. For equipment, it is even higher than that (in the 98% range), meaning that the opportunity for African manufacturers to step into this space is significant. We need to encourage them to start creating partnerships for appropriate technology transfer, so that we can start manufacturing here. In fact, if we did that, even on a small scale, the number of jobs that would be created would be in the tens of millions. This would protect our supply chain so that tomorrow, when we need to react quickly, we have our factories here, we have our knowledge here, and we have our products being manufactured here. We hope our African manufacturers will be able to take advantage of this opportunity, which is also being supported by the African Continental Free Trade Area, a key tool and platform for African manufacturers to be able to access markets.

We are also working with technology to try and ensure that food procurement is benefiting the African country and the African citizen. We are trying to scale up the capacity for sustainable financing by ensuring that governments understand the need to put in their own money so that our local philanthropists also appreciate the need to invest back into Africa. We are also encouraging our private sector organisations to do what is required to build African capacity for domestic financing.

In conclusion, the three primary things that we need to put in place:

1. **Systems** – We need to put in place systems where we can collect data quickly, analyse it and use it for purposes of securing our own supply chain. Whether we are manufacturing here or accessing it from outside, we need that data. And that data needs to be accessible at the click of a button. This is possible to do; we have seen it happen during COVID-19. We update our data twice a day, meaning that we have real-time data that we are able to use. Systems need to be in place and these systems must be backed by policy, law, planning and resources from government.
2. **Local manufacturing and production** – We must start producing our own PPEs, therapies and vaccines. Africa is producing vaccines for animals, and the base of any vaccine is the same. It's a pathogen, and it's a living thing. If we are able to produce vaccines for animals, why aren't we producing vaccines for human beings? We are challenging the African manufacturers and those who are able to invest to get our local production running in all necessary areas.
3. **Coordination** – This is where Africa CDC comes in. We must coordinate irrespective of where we work, including private, public, intergovernmental organisations, philanthropy and so on. We must coordinate so that all our energies are in synergy and produce something that is positive for the continent.



PANELIST

Dr. Stavros Nicolaou

Group Senior Executive
Strategic Trade,
Aspen

The topic we're discussing today is critical. It is framed by the pandemic that is currently unfolding, but it goes much deeper and broader than just COVID-19. I would like to start by making a few observations.

We know that Africa has the most disproportionate disease burden on any continent in the world. We also know that African pharma and medical equipment and device sectors are characterised by a pharmaceutical medical trade deficit. Even for South Africa, which has probably the most developed pharmaceutical manufacturing base on the continent, the pharma trade deficit is around 65%. So to be a little more precise, the pharma market is valued at 58 billion Southern African Rand, and the trade deficit is between 35 and 37 billion. That's not a very good picture, and the rest of the continent mirrors it. This sectorial deficit is the fifth biggest contributor to South Africa's overall current account deficit. These are all important metrics that sovereign rating agencies and investors will be guided by, and they are not good metrics. In fact, they don't make sense. If you have one of the most disproportionate disease burdens, and one of the highest consumption of medication, and one of the lowest per capita GDP spend, common knowledge would say that you should be producing more of these products on the continent. This is quite an indictment on all of us, because we should never be placing ourselves or future generations in this position.

Aspen has significantly bucked this trend and have done so in a fairly short amount of time. Aspen has been in existence for 23 years and is poised to make a significant leap, not only making in-country impacts, but a global one. We have quite a simple business model, but we've approached the epidemics that have manifested on the continent over the last two and a half decades with a patient-centric mindset. This led to us pioneering generic antiretrovirals on the continent, reducing pricing from \$5,000 per patient treatment per year to around \$165-170. We responded rapidly and swiftly to the multi-drug resistance and later the extreme drug resistant TB by producing two important drugs within Africa.

One week ago, we announced a groundbreaking deal with Johnson & Johnson that is a technology transfer and a commercial manufacturing arrangement for Johnson & Johnson's publicised COVID-19 candidate vaccine. It's a significant development because to have an African company manufacturing a vaccine for a company as credible and well reputed as Johnson & Johnson for global markets is a significant achievement for the continent. It's a vote of confidence in both our scientific capabilities and our technical capacities. So it is very possible to achieve great things on the continent in this area; Aspen has proven that it's possible.

What do we as Africans need to do to both galvanise and stimulate local manufacturing on the continent so that we're not perpetuating this unacceptable existence of continuously being input-dependent and reliant? There are three key and manifest issues we need to take into consideration:

1. We need to have absolute commitment and conviction, and courage of our convictions. There's not a week or a month that goes by on the African continent that we're not discussing an African pharmaceutical manufacturing plan. We talk a lot about it and put up great presentations, but we never seem to be able to get to the implementation phase. This is largely because we are focused on the short term, not the longer term.

2. The industrial leaders and policies we have at our disposal on the continent are not well-coordinated. Many countries around the world, when they're looking to kickstart industries and attract investors, call investors in and give them a guaranteed off-take over a longer term. Our continent is left to the devices of one- or two-year tenders, and a significant amount of donor funders. Donor funders might be well intentioned, but they're not great for creating industries and they are largely part of the problem that perpetuates the deindustrialisation or lack of industrialisation on the continent. So we've got to get small entrepreneurs and give them long-term off-take (seven to ten years), price benchmark, and give certainty and predictability that any investor in any sector would expect.
3. We need to have regional and continental integration. Manufacturing is largely about getting economies of scale, and those economies of scale give you competitiveness both domestically and globally. It is not possible to be competitive if you depend on small volumes. We need to better apply the regional and continental consolidation, whether it's through the free trade agreements or other levers we have at our disposal, so that the few producers we have (and hopefully new ones that come into the market) will have true market access to reach economies of scale and start making money.



PANELIST

Dr. Harald Nusser
Global Health Expert

"Measure what you treasure. You don't get what you expect, but what you inspect."

Ellen Job
CEO, Unilever

When it comes to partnership with private sector organisations, it is important for both sides and co-creators to have the situational analysis done before public-private partnership is even manifested in a memorandum of understanding. We have often learned this the hard way.

When we looked at non-communicable diseases (NCDs), we figured out that in one country, the prevalence difference from one sub-national level to the other was as much or more than 15 percentage points. So if you're looking at hypertension, for example, this could be largely different and completely unexpected when comparing with overall national assumptions disseminated through global databases or through the WHO. NCD medicines are usually not found in facilities, but they are available in more than 80% of pre-diagnosed households. So there is a mechanism which allows patients and households to get hold of the medicines. The question is, how is that really working? To understand and work on this is going to be critically important because it has implications with regard to vaccinations in the future.

The global WHO essential medicines list usually does not coincide with national essential medicines lists, which are not frequently updated, though I have seen an improvement in recent years. Referral hospitals often operate with yet another procurement list for their facilities. Even the national essential medicines list often does not coincide with medicines that are first seen from the standard treatment guidelines. On top of that, the National Hospital Insurance Fund would not necessarily cover NCD medicines.

This leads to another observation: the poorest people pay the most in absolute terms. This is for various reasons. They not only pay the highest price for the medicine, but they also need to pay three times. First, they pay for the health insurance and might be disappointed. Second, they may procure insufficient quantities of the medicines that are not working. And then they have to pay for the real medicine. Now, what that tells us is that there needs to be coordination in order to have the situation analysis done and conducted without time pressure, and without undue delay before in a public-private partnership stance.

On the other hand, we increasingly see that organisations, institutions and the private sector, are reporting on the number of people that they claim to reach. Usually this number is derived algorithmically by the boxes that have left the facilities of the manufacturing sites. But does that really tell us, or is that just the business indicator? It's critically important to look at the number of patients reached at the facility level and then ask further questions How have those patients been reached? Through a functioning health system? Have the prescriptions been made according to the standard treatment guideline, or have those prescriptions been made based on what the prescriber knew was available at the nearest pharmacy or public facility? Has the coverage of the populations really increased, or was it just about substitution? And if it was partially substitution, has the out-of-pocket spend been cut down? Looking into these questions would give answers on the societal impact a public-private partnership has had.

So what could solutions look like beyond the situation analysis? It's important that stakeholders, especially and in particular the private sector, move from a "we know" to a "we learn" mindset, from a "we own" to a "we share" mindset; from a "we lead" to a "we help convene" mindset. The WHO public-private partnership checklist is a useful tool to apply, which establishes requirements for public-private partnerships and transparency within them. For example, has there been a pre-established monitoring and evaluation framework and logic model? Is there a public disclosure plan for the results or interim results? Have transition plans being worked out to local ownership when the public-private partnership ceases to exist? This requires coordination and trust amongst partners. Sharing vulnerability, admitting failures and sharing why the organisations have a vested interest to engage in public-private partnership would be a good first step to building that trust.



PANELIST

Ms. Yasmin Chandani
CEO,
InSupply Health

inSupply Health is a Kenyan supply chain advisory firm. We are affiliated with GSI, but we are a small social enterprise and startup. We are focused on a couple of different things. We believe in localisation and contextualisation, and our mission is to transform lives through co-creation. We work to co-create innovative and sustainable solutions for healthy communities. One of the things that we strive for is that supply chains reach clients with the products they want or need. Manufacturing at global and regional levels has been significantly disrupted due to COVID-19, both when it comes to getting supplies to the country level as well as at the country level. It's important that once a product gets to the country it actually reaches clients at the end of the supply chain.

If we look at what it takes to build resilient, responsive and equitable supply chains, what did we learn from COVID-19? The pandemic actually didn't have surprises for us at the country level. It only revealed vulnerabilities we already knew existed. We

know that resilience is vital, that supply chains need diversified sourcing strategies, they need to be able to update the inventory policies in the current context and they need to reach everyone equally. We were reminded of this when COVID-19 happened. Inequities in access were magnified. As we experience shortages, those who are marginalised in the health system become even more marginalised.

We also know that responsiveness is heavily dependent on data. Without data, it is impossible to be responsive because there are such differences in regions within our different regions when it comes to the disease burden. Without that data, it is very hard for supply chains to deliver commodities where they are needed. Sometimes our national information systems are fragile and, with COVID-19 and disruptions in work attendance, the data became even more unreliable.

There are two primary things that are important for resilience and responsiveness.

1. Taking a client-centered approach is critical for ensuring supply chain continuity. If you put the client at the center of the solution and look at the problem from the client's perspective that is likely when you're going to be able to solve the problem most effectively for them.
2. We learnt in our work that remote and virtual approaches are feasible, and they can be very important in enhancing self-sufficiency for capacity and resilience.

Building data driven, client-centered supply chains



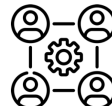
Human Centered Design

A methodology that puts the creation of solutions for user challenges back in the user's hands



cStock

A mobile reporting, resupply tool for community health volunteers



IMPACT Teams

Multidisciplinary quality improvement teams that meet routinely, review data, problem solve and take action



Virtual Learning

e-learning modules customized to IMPACT team members to build competency

There are four different practical ways in which we are trying to build these data driven and client-centered supply chains:

1. Human Centered Design - This is a methodology that puts the creation of solutions back in the user's hands. Users and experts are brought together, but there is no assumption that the experts understand the problem. By bringing in the voices of those closest to the problem, a proper solution can be built into the design.
2. cStock: We carried out human centered design with cStock, a mobile reporting and resupply tool we have developed for community health volunteers. It is used in several different counties within Kenya, including Siaya, Wajir, Turkana,

Samburu and Mandera. We knew that if it was to work with nomadic and migratory communities, we really needed to hear from them. We redesigned cStock for that purpose, and it's now being used by over 3,000 community health workers, some of whom have low literacy, some of whom have phone ownership and connectivity challenges, but yet they're able to use it to report on their stock status.

3. **IMPACT Teams** - The other thing we do is acknowledge that health workers need tools and support to make decisions effectively. One of the things we saw during the pandemic was a disruption of services, because clients are scared to go to health facilities. This is where client centeredness is really important. There's no point sending your commodities to a facility when there are no patients there. We need to understand what the new normal will look like for patients. Are they going to come to facilities for healthcare? How do we take the services and products to where the patients are actually going to access them?
4. **Virtual Learning** - We realised that even health workers needed to protect themselves, so we put content online and let them figure out how they can drive their own learning and competency-based journeys.

Many people talk about when we “go back to normal.” We believe that, when it comes to accessing services and products, the new normal is likely going to look different. People's habits have changed around where and how they access health services. It is important for us to keep that in mind, and make sure that we meet the clients where they are looking for products and services. We have the opportunity to tap into the transformative power of digital and adapt innovations for the context of the client. That doesn't mean quickly bringing in solutions that haven't been tested and are not appropriate for our settings, but it does mean thinking strategically about how data can transform the way we serve clients better, and how we build our supply chains. We need to be creative about solving our challenges as we look to the future.

Questions & Answers

Q: Do you think technology is being used effectively to impact the cost of healthcare delivery?



Ms. Chidinma Ifeje: We've done some work around utilising technologies to drive effective healthcare systems on the continent, but there's still a lot of work to be done. For example, we need to take advantage of telemedicines. We saw how critical it was during this pandemic period. If we have telemedicine as an efficient healthcare system, we can deploy it to people in different settings, who are dealing with different types of diseases. The use cases for technology in healthcare systems cannot be overemphasised. There is also such a huge untapped potential of leveraging technology structures that already exist around the continent. The opportunities are there, we just need to leverage them.

Questions & Answers

Q: What is your view on locally packaged products in the overall pharmaceutical supply chain?



Dr. Harald Nusser: It would work. From a public perspective, almost every country is urging the private sector to do production locally, so an aligned approach would be very appreciated. For the private sector, it's important to do this in a gradual way that can be started with release and secondary packaging, primary packaging, formulation and API production, because with every step there needs to be associated training and exchange of information in order to ensure and retain the quality standards.

Q: How can we improve measuring outcomes in healthcare?



Ms. Yasmin Chandani: We need to think about new metrics for measuring what success looks like. Until now, we have looked at efficiency as an important measure, but we also need to look at things like resilience to measure successful supply chains in the context of pandemics (both current and future) that help us balance between efficiency and other measures. Efficiency is really important, but not if there's no product reaching clients. So I think we need to balance measures of efficiency with resilience, agility and responsiveness, so that we can also measure service to clients.

Q: What strategic communication is needed in the manufacturing and supply chain activities with regards to COVID-19?



Dr. E. Ahmed Ogwell Ouma: As far as communication is concerned, it cannot only be manufacturing and supply chain. It needs to be the complete package, where you are creating enough education in the population so that there is a place where you are able to consume whatever it is that you want to manufacture. When you've created that market, then you come back to manufacturers and supply chain firms. They want to make a profit, and if we are able to secure a market locally, as we are doing with the Africa Medical Supplies Platform, and as each government should be doing at the local level, then you will find that issues of manufacturing can be easily communicated. We'll find more manufacturers adapting their factories or establishing completely new factories if they see that there is a good business opportunity. This cannot be done by government alone. When we talk about all types of supply, from kits to PPE to masks to gloves to ventilators, whatever it is that we need will mostly come from the private sector, but the government needs to provide an environment where manufacturers are able to do good business. When it comes to communication, investment will only come when governments buy products manufactured within their borders. But if there are signals within the government procurement system that they prefer to procure from outside, getting local manufacturing will be extremely difficult. Policies that assure a market and are then communicated to the public will be extremely useful. At Africa CDC, we are trying to use the Africa Continental Free Trade Area to expand the market for local production to the entire 1.3 billion on the continent.

Q: How can the private sector help? What can the private sector do to help to improve manufacturing and supply chain on the continent?



Dr. Stavros Nicolaou: I think private sector needs to work collaboratively with government, the state and also the various institutions. A carrot and stick approach might work in certain sectors, but is unlikely to be successful in our sector. This is because pharmaceutical products have a very different dimension to them compared to other commodities. The quality and the safety aspects alone are incredibly important considerations. These plans have to be jointly developed, but then we need to have a level of frankness, which often doesn't exist between the private and the public sector, that the implementation process has proper monitoring and evaluation and, through appropriate structures and governance, that this is followed every step of the way.

We tend to talk a lot about these things, but when it comes down to implementation, we don't have the courage of our convictions. This is why we need joint monitoring between the private and public sector with proper governance systems so that if people are missing deadlines or not implementing or not following a policy, they need to be called out. Execution and implementation need to be prioritised.

Parting Shots

Ms. Chidinma Ifepe:

We need to make coordinated and sustainable decisions for the future of Africa.

Dr. E. Ahmed Ogwel Ouma:

There is no security in the supply chain if you do not manufacture what you need. So we must manufacture what we need. We can only then supplement with what someone else is manufacturing. If we don't do that, we are not out of the woods.

Dr. Harald Nusser:

Collaboration is the new innovation, yes, but collaboration in the sense of caring and sharing. This is what is needed, in a transparent way.

Dr. Stavros Nicolaou:

Forward. Stop talking and start doing.


Ms. Yasmin Chandani:

Tap into the transformative power of digital, adapting for context and clients. Focus on clients.

These conversations are facilitated by Africa Health Business. For more information on how you can attend and participate, please go to <https://www.africahealthbusiness.com/register/>.



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