Inclusive Health Systems: Innovations towards Health Equity in Africa

WHITE PAPER
JANUARY 2023
Contents

Foreword 3
Executive summary 4
Introduction 5
1 Barriers and actionable solutions for stakeholders 9
2 Four principles to advance social innovation and entrepreneurship 27
3 Practical pathways forward 30
Conclusion 32
Contributors 33
Endnotes 35

Disclaimer
This document is published by the World Economic Forum as a contribution to a project, insight area or interaction. The findings, interpretations and conclusions expressed herein are a result of a collaborative process facilitated and endorsed by the World Economic Forum but whose results do not necessarily represent the views of the World Economic Forum, nor the entirety of its Members, Partners or other stakeholders.

© 2023 World Economic Forum. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, including photocopying and recording, or by any information storage and retrieval system.
Foreword

François Bonnici
Director, Schwab Foundation for Social Entrepreneurship and Head of Social Innovation, World Economic Forum

Monika Lessl
Executive Director, Bayer Foundation

This white paper showcases actionable ways in which social entrepreneurs and innovators in health tackle key issues related to closing the health equity gap. It examines the work and actions of social entrepreneurs across Sub-Saharan Africa through the COVID-19 pandemic and draws from rich meta-research and artificial intelligence-data analytics that have emerged over the COVID-19 pandemic life cycle and beyond.

Notably, the actionable insights offer substantive evidence of the distinct ability of social entrepreneurs and innovators in health to react to systemic health shocks, bolster government responses, develop inclusive solutions to health system barriers, create socioeconomic systems that prove resilient during crises and tackle the root causes of health inequity, by embracing local contexts. It is important to recognize that this ability to react is partly due to the actions of private and public partners that help create an environment where social entrepreneurs can act in catalytic ways.

This paper is a result of the collaborative and multistakeholder approach driven by the World Economic Forum’s Global Alliance for Social Entrepreneurship, the Schwab Foundation for Social Entrepreneurship and the Bayer Foundation, bringing together academic leaders from the University of Cape Town Bertha Centre for Social Innovation and Entrepreneurship, and Impact Hub Africa, in consultation with data research providers, health practitioners from the private and public sectors and experts on social innovation across Sub-Saharan Africa.

Through this research, we suggest that a holistic and inclusive attitude to social entrepreneurship and innovation in health is necessary and will be vital in moving the social system closer to achieving true health equity. Social entrepreneurs are one of the key actors that can drive the needed systems change. By drawing on their understanding of the landscape and context in which they operate, social entrepreneurs co-create and pioneer solutions and business models that help to reimagine and rebuild our healthcare, education, environmental and urban planning systems, among many others to be more just, sustainable and equitable.

Crises that come on the heels of complex health challenges such as HIV/AIDS and the increased prevalence of chronic non-communicable diseases occurring across Sub-Saharan Africa will only accelerate as the continent and the world prepares to confront climate change, access to water, migration and conflict, looming recession and food insecurity. There is thus a need to re-examine the concept of health equity as a part of a much wider social justice goal that cannot be achieved without addressing structural inequities in societies. Emphasizing health equity as everyone’s business and partnering with social innovators who lead the way in developing practical and scalable solution to address systems barriers provides an actionable pathway for different stakeholders, including corporate and philanthropic leaders, alongside the public sector to follow through on their equity commitments.
Executive summary

The COVID-19 pandemic and response measures presented many hardships to people living in Sub-Saharan Africa. Coordination was initially a challenge among governments in the region, as public health policies, lockdowns, the economic measures taken were not always designed with vulnerable populations in mind. This meant that the response to the virus was slow and fragmented, which lead to an erosion of social trust and a proliferation of misinformation.

The COVID-19 pandemic was also a time of triumph in the face of adversity. In addition to better coordination by regional bodies such as the African Union (AU) and Africa CDC, on the front lines, social innovators across Africa organized online and digital technologies to respond to the COVID-19 pandemic in their local communities, such as developing asset-lite models of social enterprises, which were well-timed during the COVID-19 pandemic. There was also a strong sense of community-centred approaches, with growing notions of reciprocating, sharing solidarity and providing care for more vulnerable segments of the population.

Over the years, social innovation and entrepreneurship in health across Africa have shown enormous value in addressing healthcare delivery gaps and in contributing to universal health coverage and patient-centred health systems. Arguably, social entrepreneurship provides an inclusive platform for people from different disciplines and sectors to contribute collectively to their local health system. Social innovation and entrepreneurship in health may also be understood to be a mechanism through which societal goals can be achieved.

The insights contained in this paper helped to surface ten barriers of inclusive health systems as well as associated solutions and gaps. The COVID-19 crisis demonstrated that social innovators could be critical actors in addressing such barriers by harnessing a sense of community-centred approaches with strong notions of reciprocating, sharing solidarity and providing care for more vulnerable segments of the population.

Insight 1: Cultivating enabling environments (both public and private sector) activates solutions to systemic and protracted health systems barriers

- Amplified by the COVID-19 pandemic, barriers concerning the logistics and transport of medication, received the lion’s share of attention from international and local actors. Here, social entrepreneurs were given the opportunity to leapfrog their solutions, specifically in scaling digital technologies. However, other logistical and supply chain challenges, specifically with regards to access to rural populations – encompassing roads quality, internet access and the supply of essential goods, among others, gained less of a spotlight with community-centred solutions still to be scaled.

Insight 2: Many solutions remain underused across barriers

- The research has shown that two types of solutions – innovations in diagnostic technologies and digital health – accounted for 25% of the total share of innovations and have been effectively used to address barriers such as lack of access and affordability of quality healthcare and medicine, economic impacts, as well as challenges in digitalization and data. However, these innovations had not emerged in addressing gender equality, access to basic needs, stigmatization or persistent challenges in capacity or infrastructure.

Insight 3: To activate social innovations, stakeholders will need to undergo a fundamental shift in alignment towards a broader health equity agenda while embracing strategic systemic focus

- The barriers identified demonstrate that a systemic shock tends to expose existing societal weaknesses and worsen broad health inequalities. By accepting that health equity is a societal goal, there needs to be a recognition that social factors are integral to developing fairer health systems. To collaborate for inclusive health systems through social innovation and entrepreneurship, four principles are recommended: actively build for the long haul, acknowledge that progress is not linear, commit to actively building resilience and embrace radical partnerships and opportunities for collaboration.

This paper is a step towards raising awareness and initiating actions, especially within the Global South, intending to reduce barriers to health equity while also understanding that there is great variance across geographies and contexts. An effort to continue driving this forward must include wider exploration and comparison of the barriers and solutions identified on a global, regional and cross-thematic scale. Doing so will bring in additional partners and actors and stimulate the public sector engagement necessary to ensure the continual testing and iteration of the insights generated.
Introduction

The barriers to creating inclusive health systems in Africa are widespread and challenging to overcome.

Africa continues to face sustainable development challenges, and the effects of global climate change and the COVID-19 pandemic have only exacerbated these conditions. In response to the challenges, many countries and cities on the continent have, over the years, become vibrant hubs for social innovation and entrepreneurship. Promoting innovation and social economy, which comprises multiple models with a common goal of creating a more inclusive and sustainable economic paradigm, is seen as a contributor to inclusive and sustainable development and demonstrates who the key actors in the environment are, what types of partnerships and cross-collaborations are integral to success and how governments in African countries can contribute to creating enabling environments for social innovators and entrepreneurs.

The objective of this white paper is to demonstrate how social innovation can offer actionable solutions in addressing systemic barriers while building health equity across Sub-Saharan Africa. Examining the catalytic impact that the COVID-19 pandemic had on social entrepreneurs and innovators in health uncovered the lessons and actionable insights gleaned from these important stakeholders and change agents within the inclusive health system.

This paper is an analysis that employs a mixed-method approach, entailing:

- An artificial intelligence- (AI) driven data and analytic approach that initially collected more than 1.9 million articles and posts (news reporting, online discussions and academic publishing), which were then distilled to approximately 450,000 sources that were used for analysis. The scope of the analysis was 48 countries in Sub-Saharan Africa and languages included English, French, Portuguese, Spanish, Arabic, Swahili, Amharic and Yoruba.
- 35 hour-long semi-structured interviews with health experts, including representatives from governments, international organizations, social enterprises, private businesses, non-governmental organizations and academia (most of which are based in African universities).
- Three consultation workshops, with local stakeholders and partners with the support of the 2022 Sankalp Africa Summit, and Impact Hub Africa for Harare and Accra validation sessions workshop, which convened key stakeholders and helped to frame the research goals.

<table>
<thead>
<tr>
<th>Terminology</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barriers</td>
<td>Obstacles or factors that hinder progress towards inclusive health systems.</td>
</tr>
<tr>
<td>Sub-barriers</td>
<td>A deeper dive into the granular barriers that hinder progress towards inclusive health systems.</td>
</tr>
<tr>
<td>Solutions</td>
<td>Innovations that target the barriers to creating inclusive health systems that come from social innovators, entrepreneurs and actors at the ground level.</td>
</tr>
<tr>
<td>Types of solutions</td>
<td>Broad categories of solutions that were developed to strengthen the health system.</td>
</tr>
<tr>
<td>Enabling environment</td>
<td>Factors that promote the creation of solutions to tackle barriers. These factors stem from the collaborative action by ecosystem actors such as governments, regulatory bodies, funders, global and local stakeholders.</td>
</tr>
<tr>
<td>Gaps</td>
<td>The divide between barriers and solutions.</td>
</tr>
</tbody>
</table>

TABLE 1 Definitions of terminology used in this paper
Barriers to inclusive health systems and innovative solutions

The systemic barriers highlighted in this paper were identified through AI analysis and in-depth interviews and span different areas of the healthcare system as well as the policy and regulatory environment in which health and social innovators and entrepreneurs try to work within.

It is unsurprising that in an assessment of the data examined, the most prominent barriers being reported were the lack of screening and documentation on disease control and public health, lack of tech-forward healthcare systems, adapting to digitalization and mitigating the impact of the COVID-19 pandemic on micro, small and medium enterprises (MSMEs) through the digitization of services, and the lack of accessibility of medical data. The lack of technological innovations and infrastructure in the healthcare system is another frequently mentioned barrier, mostly in Rwanda, Kenya and Nigeria.

### Ten barriers to creating inclusive health systems and their respective share (%)

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weak healthcare capacity and infrastructure</td>
<td>24.7%</td>
</tr>
<tr>
<td>Economic impact of COVID-19</td>
<td>13.5%</td>
</tr>
<tr>
<td>Inequity related to COVID-19</td>
<td>14%</td>
</tr>
<tr>
<td>Stigmatization and insufficient health literacy</td>
<td>9.4%</td>
</tr>
<tr>
<td>Digitalization and inaccessibility of data</td>
<td>7%</td>
</tr>
<tr>
<td>Challenges to the access to basic needs</td>
<td>2.7%</td>
</tr>
<tr>
<td>Malnutrition and food insecurity</td>
<td>5.3%</td>
</tr>
<tr>
<td>Supply chain disruptions and logistic challenges</td>
<td>1.7%</td>
</tr>
<tr>
<td>Lack of access and affordability of quality healthcare and medicine</td>
<td>16%</td>
</tr>
<tr>
<td>Gender inequality</td>
<td>5.8%</td>
</tr>
</tbody>
</table>

Source: Impact Intelligence
The COVID-19 pandemic catalysed innovation and adoption of digital technologies in African countries, which resulted in some well-being tech start-ups thriving. Additionally, several digital health solutions have been reported that address different barriers to inclusive health. These include interventions such as the Ugandan company Teheca where parents and nurses are connected for postnatal at-home care, and Sila Health in Zimbabwe, which provides access to basic healthcare through chat platforms. The period following the pandemic has been a great accelerator of digital transformation for Africa, as organizations increased their investment in digital technologies to attain greater agility and improve their response to the disruption caused by the pandemic.² Throughout the pandemic, fintech solutions have been helping the continent’s small- and medium-sized enterprises (SMEs) and MSMEs overcome these and other challenges by enabling digital transactions and facilitating fast and convenient access to credits.³

Examining regional data trends has revealed valuable geographic insights. For example, the lack of on-demand emergency deliveries of vaccines, medical supplies and life-saving medications was a major barrier reported in Ghana, Rwanda, the Democratic Republic of Congo, Malawi and Mozambique. This barrier is mostly reported in relation to access in rural areas, as one of the drivers of this barrier is the lack of physical and digital infrastructure. Innovative approaches and solutions were considered to overcome this issue, the most prominent instance being drone delivery services. South Africa, Zimbabwe and Botswana reported a strong focus on health inequity and COVID-19 apartheid, while reporting in Nigeria, Cameroon, Uganda and Tanzania was characterized by a strong focus on healthcare infrastructure.

Not all the solutions that unfolded through the research are novel; some emerged due to scaling and adapting existing interventions and business models. Still, others developed from collaborations and partnerships that capitalized on the unique context of the pandemic.
Enabling environment

In the context of this paper, a supportive enabling environment is essential for health innovation. Enabling environments can include formal elements, such as public policies, governance structures, regulatory frameworks and investment programmes, and informal elements, such as cultural, social and economic norms and practices that influence innovation actors, networks and systems. Developing the capacity for innovation and entrepreneurship is challenging but doing so helps to drive systemic change and sustainable impact.

Public enablers refer to governments, regulators, policy-makers or public sector organizations that actively promote the creation of environments conducive to developing solutions. Private enablers refer to actors, funders, incubators and accelerators, among others, within the private sector that contribute to cultivating the enabling environment. Figure 3 shows where countries are placed along a spectrum of public and private enablers.

**FIGURE 3** List of African countries on a spectrum of strong public and private enabling environments

Four principles to advance social innovation and entrepreneurship

The insights identified within this paper are further grounded in four key principles for stakeholders that emerged when examining the patterns that surfaced during the AI scan and interviews with innovators and entrepreneurs. These principles speak specifically to the mindset and attitude embodied by social entrepreneurs and innovators that enabled them to respond to the challenges of COVID-19. They might not be applicable in every context, but they help to frame a holistic, systems-focused approach.
Barriers and actionable solutions for stakeholders

Ten key challenges present opportunities for building inclusive health systems in Africa.

The pandemic exacerbated the barriers to inclusive health by challenging infrastructure capabilities, broadening inequities and disrupting the established way of life and work. The following insights and strategies are particularly helpful in conceptualizing how stakeholders and partners can develop strategies that promote inclusive health locally and within broader Sub-Saharan African development issues.

1 Weak healthcare capacity and infrastructure

According to the analysis, weak healthcare capacity and infrastructure had the greatest gap for solutions and enablers. This implies that the healthcare system continuously faces chronic issues for which few solutions and enabling factors encourage innovation. There is a clear dearth of medical and protective personal equipment as well as a scarcity of clinics and qualified healthcare personnel, which social innovators are trying to solve. Still, the enabling environment is not conducive to these measures. Poor health infrastructure presented challenges in relation to screening mechanisms, early warning measures and the ability to produce and transfer vaccines; solutions were developed to address these issues, but here a strong enabling environment would be able to cultivate more solutions. This is a priority area and requires the commitment and willingness of stakeholders to bridge the gap and create conducive environments for solutions.

**FIGURE 4** Breakdown of sub-barriers with solution and enabler scores for barrier 1: weak capacity and infrastructure

<table>
<thead>
<tr>
<th>Sub-barriers</th>
<th>Solution score</th>
<th>Enabler score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of medical equipment and protective equipments</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Lack of clinics and qualified healthcare personnel</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Weak screening, prevention and early warning measures for diseases</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Lack of infrastructure to produce and transfer vaccines</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Poor working conditions for health workers</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Poor management of medical waste</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: Impact Intelligence
1. **Insight 1:** Cultivating enabling environments (both public and private sector) pays off, it activates solutions to systemic and protracted health systems barriers.

Collaboration between the World Health Organization (WHO), Medicines Patent Pool, the Access to COVID-19 Tools (ATC) Accelerator and COVAX were actors that enabled, supported and fast-tracked vaccine technology transfer. This resulted in companies such as Afrigen in South Africa producing vaccines locally.

**Recommendations for insight 1:**

Global and local actors play important roles in creating enabling environments to reduce weak healthcare capacity and infrastructure. The momentum of removing global and local policy barriers should be sustained in order to promote inclusive innovation.

---

**TABLE 3**

<table>
<thead>
<tr>
<th>Sub-barrier</th>
<th>Social innovation solution examples</th>
<th>Solution type</th>
<th>Enabling environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of infrastructure to produce and transfer vaccines</td>
<td>Companies such as Afrigen, in South Africa, manufacture vaccines and adjuvants locally.</td>
<td>Development and production of medications, medical equipment and vaccines</td>
<td>WHO, Medicines Patent Pool, and the ATC Accelerator/COVAX were actors who supported the transfers of vaccine technology for vulnerable countries and populations.</td>
</tr>
</tbody>
</table>

**Examples illustrating weak capacity and infrastructure and the low spread of solutions**

**Recommendations for insight 2:**

Create a wider spread of solutions across the barrier to target different aspects of the healthcare system. This includes knowledge and awareness building, support systems for community innovators, mobility and homecare solutions for patients and provision of sanitation and utilities.

---

**TABLE 2**

<table>
<thead>
<tr>
<th>Sub-barrier</th>
<th>Social innovation solution examples</th>
<th>Solution type</th>
<th>Enabling environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weak screening, prevention and early warning measures for diseases</td>
<td>Kenya’s <em>Tibu Health</em> provides medical services, testing and vaccine services at home.</td>
<td>Mobility and homecare solutions</td>
<td>Governments, including in South Africa and Nigeria, have reiterated the important role of public-private partnerships (PPP) in improving the efficiency, quality, innovation and health impact of both private and public healthcare systems.</td>
</tr>
<tr>
<td></td>
<td>Redbird in Ghana, provides pharmacies with rapid tests for diseases and blood values.</td>
<td>Telemecne and digital health solutions</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Vive Teens</em> in South Africa provides mental health services to teenagers through an app. Any warning signs of depression, anxiety or suicidal ideation trigger a call for help from family and mental health professionals</td>
<td>Telemecne and digital health solutions</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Last Mile Health</em> provides healthcare workers and healthcare services to rural and remote areas.</td>
<td>Mobility and homecare solutions</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>North Star Alliance</em> provides clinic services to truck drivers travelling along borders and highways who may not have access to healthcare services.</td>
<td>Mobility and homecare solutions</td>
<td></td>
</tr>
</tbody>
</table>

**Recommendations for insight 2:**

Several of the solutions developed were in the areas of mobility and homecare solutions, as well as telemedicine and digital health solutions. Additionally, many organizations took the opportunity to develop training opportunities for healthcare workers, thereby increasing health force capacity on the continent. However, many other types of solutions remain underused across these crucial sub-barriers.
## Lack of access and affordability of quality healthcare and medicine

Strong themes emerged regarding issues around the access, affordability and quality of both basic and specialized healthcare. There were few enabling factors that encouraged social innovation and entrepreneurship to overcome the sub-barriers, while some enabling factors were weak. This contributes to the persistence of the barrier. Similarly, problems relating to the access and affordability of medicine and contraception constitute another large theme. However, the sub-barrier ranked lower on the solution gap rank, which implies that solutions were more easily created in this priority area.

### FIGURE 5

Breakdown of sub-barriers with solution and enabler scores for barrier 2: lack of access

<table>
<thead>
<tr>
<th>Sub-barriers</th>
<th>Solution score</th>
<th>Enabler score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to affordable, high-quality, basic and specialized healthcare</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Access to affordable medicine and contraception</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Coverage and insurance costs</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Counterfeit drugs</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: Impact Intelligence

1. **Insight 1:** Cultivating enabling environments (both public and private sector) pays off, it activates solutions to systemic and protracted health systems barriers.

Strong enabling environments helped to address some of the sub-barriers identified, such as access to affordable medicine and contraceptives. Insights into coverage and insurance also surfaced as an example of how the public sector can contribute to creating strong enabling environments.
Recommendation for insight 1:

Despite the success in creating enabling environments for access to medicines, contraception, costs and coverage for healthcare, other solutions struggle with poor enabling environments. Access to affordable, high-quality, basic and specialized healthcare requires stronger enabling environments and efforts from both private and public actors for solutions that will contribute to inclusivity.

2. Insight 2: Many solutions remain underused across barriers

As shown above, for the “access to affordable medicine and contraception” sub-barrier, there is a concentration of solutions in the transport and storage of medications, medical equipment and vaccines, followed by telemedicine and digital health solutions, diagnostic technologies and health data and payment solutions. Examples of solutions to this barrier include the Whispa Health and MyMedicines apps in Nigeria and the Medikea health app in Tanzania.

Recommendation for insight 2:

There is a general spread across the types of solutions for this barrier, however, there is also room for improvement:

- In telemedicine and digital health solutions, measures can be adaptive to reduce the volume and burden on the public health sector; scale online pharmacies, decentralize chronic medication distribution and strengthen primary care through community health workers. All components in the healthcare system play an important role here.

- In terms of communication, there should be a redesign of communication outreach efforts to ensure that general health communication does not falter in the face of a crisis. Interruptions to testing and treatment (HIV/AIDS, malaria, tuberculosis, etc.) will only serve to exacerbate the general health burden once pandemics have abated.

- Efforts should go towards creating support systems for entrepreneurs who want to enter this specific area of innovation, as well as entrepreneurs already working in this area to scale and grow their innovations.
The COVID-19 pandemic brought a renewed focus to health inequity across the continent. The low COVID-19 vaccination rate in Sub-Saharan Africa has been described as partly a result of vaccine hoarding by rich countries. Unequal vaccine distribution and the solidarity – or lack thereof – of the international community has been a frequent topic in online conversations.

**FIGURE 6**

Breakdown of sub-barriers with solution and enabler scores for barrier 3: inequality related to COVID-19

<table>
<thead>
<tr>
<th>Sub-barriers</th>
<th>Solution score</th>
<th>Enabler score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unequal vaccine distribution and low vaccination rate</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Lack of equipment and supplies to fight COVID-19</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: Impact Intelligence

**TABLE 5**

Examples illustrating inequality related to COVID-19

<table>
<thead>
<tr>
<th>Sub-barrier</th>
<th>Social innovation solution examples</th>
<th>Solution type</th>
<th>Enabling environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unequal vaccine distribution and low vaccination rate</td>
<td>Amref Health Africa focuses on creating access to healthcare through human resources for health, health service delivery and investments in health, as well as addressing vaccine inequity across the continent.</td>
<td>Development and production of medications, medical equipment and vaccines</td>
<td>The WHO is working with the ministries of health in African countries to design oxygen plants for sustainable and self-sufficient local oxygen supply. The COVAX initiative, and the African Export-Import Bank, guaranteed the procurement and distribution of $400 million Johnson &amp; Johnson vaccine doses to African countries.</td>
</tr>
<tr>
<td></td>
<td>Prior to June 2021, South Africa did not have the capacity to manufacture vaccines from scratch. The <a href="https://www.southafrica.net/technology-transfer-hub">South African technology transfer hub</a>, facilitated by the WHO, will ensure that South African companies BioVac Institute and the Afrigen Biologics will be equipped with the technology, skills and licensing required to manufacture vaccines at an industrial scale locally.</td>
<td>Development and production of medications, medical equipment and vaccines</td>
<td></td>
</tr>
</tbody>
</table>

1. **Insight 1:** Cultivating enabling environments (both public and private sector) pays off, it activates solutions to systemic and protracted health systems barriers.

There are moderate enabling environments for the barrier of inequality related to COVID-19. It demonstrated that both global and local level actors could collaborate and create access to medical equipment and supplies for more vulnerable countries.

**Recommendation for insight 1:**

The lessons learnt from the COVID-19 pandemic can be applied and carried forward for future pandemic preparedness to prevent the same inequity from continuing. Policies, plans and roadmaps should be created by global and local actors to navigate future pandemics and avert inequality.

2. **Insight 2:** Many solutions remain underused across barriers

Most of the solutions were concentrated in the development and production of medications, medical equipment and vaccines. These examples illustrate how the COVID-19 pandemic catalysed innovative solutions.
**Recommendations for insight 2:**

There can be more efforts invested in focusing efforts in other solution areas. For example, knowledge and awareness building to counter stigma and false information should be strengthened as a solution. There is also a need to strengthen solutions that create support systems for entrepreneurs, especially those whose innovations emerged as a direct response to the COVID-19 pandemic.

### 4 Economic impact of COVID-19

The economic impact of COVID-19 includes disruption of business continuity as the transition to remote work within low- and middle-income countries (LMICs) was challenging due to infrastructure and socioeconomic realities. Restrictive local policies and a lack of government support made it difficult for social entrepreneurs to fill gaps in the healthcare system. Additionally, unlike their peers in areas such as fintech, health entrepreneurs have found it difficult to raise funds during the COVID-19 pandemic amid a deteriorating economic environment.

#### FIGURE 7

**Breakdown of sub-barriers with solution and enabler scores for barrier 4: economic impact of COVID-19**

<table>
<thead>
<tr>
<th>Sub-barriers</th>
<th>Solution score</th>
<th>Enabler score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deteriorating economic environment</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Difficulties accessing funding and support</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Business continuity challenged by infrastructure and social problems</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Lack of government support and restrictive local policies for entrepreneurs</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

**Source:** Impact Intelligence

#### TABLE

1. **Insight 1:** Cultivating enabling environments (both public and private sector) pays off, it activates solutions to systemic and protracted health systems barriers.

The enabling environments during the COVID-19 pandemic were extremely strong. Many barriers were removed, and processes were fast-tracked to mobilize additional funding used in response to the COVID-19 pandemic, specifically by private sector actors and investors.
### TABLE 6 Examples illustrating economic impact of COVID-19

<table>
<thead>
<tr>
<th>Sub-barrier</th>
<th>Social innovation solution examples</th>
<th>Solution type</th>
<th>Enabling environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficulties accessing funding and support</td>
<td><strong>Bridge for Billions</strong> is an entrepreneurship programme that supports organizations with training entrepreneurs.</td>
<td>Support systems for entrepreneurs</td>
<td><strong>Cross Border Impact Ventures</strong> is an enabling actor in the ecosystem that provides capital for devices to benefit women, children and adolescents.</td>
</tr>
<tr>
<td></td>
<td><strong>The Ashoka East Africa</strong> branch supports social entrepreneurs or fellows by providing assistance with their social innovations and enterprises.</td>
<td>Support systems for entrepreneurs</td>
<td><strong>Impact Hub</strong> branches in Accra and Harare supports entrepreneurs by running programmes, facilitating networks and communities.</td>
</tr>
<tr>
<td></td>
<td><strong>Health Tech Hub Africa</strong> supports digital innovators in Africa with education, training and access to funding opportunities.</td>
<td>Support systems for entrepreneurs</td>
<td><strong>The South African Breweries (SAB) Foundation</strong> is a trust that invests funds towards developing entrepreneurship in South Africa.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>The Unknown Group</strong> provides early-stage financing for founders with promising solutions that can be scaled and provide a conducive environment for founders to thrive.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>We Share Forward</strong> is a non-profit that promotes and supports social entrepreneurs and changemakers in communities while using a pay it forward principle to recycle capital.</td>
</tr>
</tbody>
</table>

#### Recommendations for insight 1:

Despite enabling environments for accessing funding and support, there is still room for the various governments and local policy-makers to create more enabling policy environments to support innovators and social entrepreneurs as policies remain restrictive.

**2. Insight 2: Many solutions remain underused across barriers**

There was a general spread of solutions for this specific barrier, with many solutions falling into the category of support systems for entrepreneurs, followed by transport and storage of medications, medical equipment and vaccines, and telemedicine and digital health solutions.

#### Recommendations for insight 2:

Unlocking financing has, in turn, highlighted a pathway to unlock support systems for entrepreneurs, innovators and youth. There should be continuing investment in support systems to strengthen their efficiency and effectiveness, as well as extra effort that can be directed towards mobilizing additional capital and providing a cushion against macroeconomic events that will strengthen the development of solutions for this barrier.
Stigmatization and insufficient health literacy presented a considerable gap in designing solutions during the COVID-19 pandemic. This was evident in the literature as well as interviews with social innovators working in the field. Relatedly, discrimination towards various groups, such as sex workers, disabled people and religious minorities, has been reported.

**Figure 8**

Breakdown of sub-barriers with solution and enabler scores for barrier 5: stigmatization and insufficient health literacy

<table>
<thead>
<tr>
<th>Sub-barriers</th>
<th>Solution score</th>
<th>Enabler score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of knowledge and awareness</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Vaccine hesitancy and misinformation</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Lack of knowledge and health literacy of educators and parents</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Stigmatization</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Discriminaiton towards certain groups/minorities</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: Impact Intelligence

1. **Insight 1:** Cultivating enabling environments (both public and private sector) pays off, it activates solutions to systemic and protracted health systems barriers.

There were strong enabling environments and efforts to address the lack of knowledge on COVID-19 and vaccination awareness during the COVID-19 pandemic. However, misinformation and misconceptions emerged as obstacles to immunization campaigns for COVID-19. This was reinforced by poor health literacy among educators, parents and informal influencers. Furthermore, there were and are considerable barriers to further strengthening the enabling environments to address issues such as mental health and sexually transmitted diseases, as there is a deep mistrust of governments across the continent that heightened during the COVID-19 pandemic.
### TABLE 7: Examples illustrating stigmatization and insufficient health literacy

<table>
<thead>
<tr>
<th>Sub-barrier</th>
<th>Social innovation solution examples</th>
<th>Solution type</th>
<th>Enabling environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of knowledge and awareness</td>
<td><strong>Hopeful Nkomo</strong> provides mental health education and awareness services in Ghana.</td>
<td>Knowledge and awareness building</td>
<td>A former Namibian Minister of Health organized information sessions together with companies to inform employees and combat myths associated with vaccination.</td>
</tr>
<tr>
<td></td>
<td><strong>Geedka Mooska</strong> is an educational programme for Somali speaking children that uses “edu-tainment” to make learning fun. As the COVID-19 pandemic began, Poet Nation Media modified several public health videos and created a set of superhero puppet characters called Hiddo &amp; Hirsi who seek to protect their neighbourhood from various types of dangers, including COVID-19. These educational videos are the first of their kind for Somali-speaking children. All these videos were approved by the Ministry of Health in Somalia.</td>
<td>Knowledge and awareness building</td>
<td>Governments enlisted celebrities, influencers, officials, assemblymen and chiefs in vaccination programmes. The engagement of all trusted stakeholders was more likely to increase vaccine uptake than government institutions alone.</td>
</tr>
<tr>
<td></td>
<td><strong>BrandMed</strong> in South Africa provides digital health solutions focused on lifestyle changes and awareness of disease prevention.</td>
<td>Telemedicine and digital health solutions</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Digital Medic</strong> provides education and awareness content to patients and the public using digital health technologies.</td>
<td>Telemedicine and digital health solutions</td>
<td></td>
</tr>
<tr>
<td>Vaccine hesitancy and misinformation</td>
<td><strong>Pulse Africa</strong> in Ghana provided information and awareness throughout their platforms to prevent misinformation and fake news.</td>
<td>Knowledge and awareness building</td>
<td>Resolve to Save Lives, which works globally, creates a collaboration between journalists and doctors, using media to enlighten audiences and decrease vaccine hesitancy.</td>
</tr>
</tbody>
</table>

**Recommendation for insight 1:**

There was still plenty of stigmatization and discrimination towards certain groups and minorities during the COVID-19 pandemic. Authorities and different actors in the environment can strengthen their efforts to create more enabling environments to mitigate these negative occurrences by encouraging more education and easing digitalization and access to data.

**2. Insight 2:** Many solutions remain underused across barriers

There were numerous solutions to tackle this barrier with knowledge and awareness building.

**Recommendation for insight 2:**

Analysis revealed that there are weak and fragmented solutions to address this barrier, which reflects deeper structural and systemic barriers. Knowledge and awareness building can be better structured to be the most useful tool in combating stigma, averting misinformation and decreasing discrimination towards vulnerable groups. There are also digital solutions that have been developed to provide information and education related to health and raise awareness among patients. However, this barrier requires long-term, systems-thinking solutions to cultivate streamlined solutions and create inclusive health systems.
During the COVID-19 pandemic, the digitalization and inaccessibility of data presented a small gap in solutions, which, when coupled with strong enabling environments, contributed to digitally focused social innovators and social enterprises thriving. Insufficient digitalization and digital infrastructure in healthcare, including the limited use of digital tools and data to fight the COVID-19 pandemic, remain important obstacles to inclusive health. Systems for storage, analysis and sharing of medical records and patient histories are described as lagging behind the Global North, along with digital solutions to better serve patients, such as online appointment booking and referral systems.

**FIGURE 9** Breakdown of sub-barriers with solution and enabler scores for barrier 6: digitalization and inaccessibility of data

<table>
<thead>
<tr>
<th>Sub-barriers</th>
<th>Solution score</th>
<th>Enabler score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of digital infrastructure</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Insufficient use of digitalization to fight the pandemic</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Need for digital solutions to serve patients</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Inaccessibility of medical records and patient histories</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Need for agricultural digitalization</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Lack of data for genomic data on African ancestry</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: Impact Intelligence
### Examples illustrating digitalization and inaccessibility of data

<table>
<thead>
<tr>
<th>Sub-barrier</th>
<th>Social innovation solution examples</th>
<th>Solution type</th>
<th>Enabling environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insufficient use of digitalization to fight the COVID-19 pandemic</td>
<td>GeoEpid and Prundge make use of digital technologies to fight COVID-19 through contact tracing, resource management, self-assessment and reporting.</td>
<td>Diagnostic technologies and health data</td>
<td>Through a project financed by the European Union, the Belgian development agency aims to strengthen the Rwanda Food and Drug Authority through the provision of key laboratory software (laboratory information management system).</td>
</tr>
<tr>
<td>Lack of digital infrastructure</td>
<td>Digitalized diagnostics technologies are created to improve access in rural areas. The Ubenwa start-up, based in Nigeria makes use of AI powered software to analyse crying sounds of infants to detect medical anomalies.</td>
<td>Diagnostic technologies and health data</td>
<td>The Ghanaian Nursing and Midwifery Council began online licensing examinations for registered mental health nurse candidates which has since progressed to a stage where the online licensing examination system has been rolled out for all the nursing and midwifery programmes in Ghana. Liberia followed suit as the second country in Africa.</td>
</tr>
<tr>
<td>Need for digital solutions to serve patients</td>
<td>Companies such as Helium Health (Nigeria), Eyone (Senegal), OGow Health (Somalia) and Afya Rekod (Kenya) help healthcare institutions and patients to digitize, store and access medical records.</td>
<td>Diagnostic technologies and health data</td>
<td>The Agency for Universal Health Coverage in Senegal has launched a new digital platform, leading the way alongside Ghana and Rwanda in the advancement of universal health coverage.</td>
</tr>
</tbody>
</table>

**Recommendations for insight 1:**

Despite creating enabling environments for digitalization and the accessibility of data, one key area where no enablers were present was in the lack of data for genomic data on African ancestry. As knowledge and evidence is sparse and healthcare is biased towards other population groups, there is a need to create more inclusivity for all patients accessing healthcare systems and tailoring treatment plans accordingly.

**Recommendations for insight 2:**

Although there is a wide range of solutions spread across different areas, some areas may provide an opportunity for strengthening. For example, strengthening knowledge and awareness-building solutions, management and recycling of waste for medical purposes and provision of nutritious and affordable food for vulnerable populations.
Women face unique challenges that make their access to quality health harder. Issues in healthcare infrastructure, as well as social norms that alter care-seeking behaviours, create gaps in access to maternal healthcare, sexual and reproductive health, and menstrual health. It is also visible in the data that the economic challenges faced by entrepreneurs due to COVID-19 constitute an even greater issue for female-led enterprises and female entrepreneurs.

### Breakdown of sub-barriers with solution and enabler scores for barrier 7: gender inequality

<table>
<thead>
<tr>
<th>Sub-barriers</th>
<th>Solution score</th>
<th>Enabler score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal and reproductive health and awareness</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Gender inequality affecting health</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Pandemic’s disproportionate effect on women</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Lack of support for female entrepreneurs</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Source: Impact Intelligence

1. **Insight 1:** Cultivating enabling environments (both public and private sector) pays off, it activates solutions to systemic and protracted health systems barriers.

As shown by the data analysis, there are instances of both local and global enablers rising to the occasion by assisting and supporting women in their business development. On a local level, the support is frequently in the form of creating job opportunities for women such as the Lemlem Foundation, which was created to support impoverished women artisans in Africa with programmes that offer training and job opportunities in the textile and fashion sector. On a global level, examples of support mainly consist of providing women with the relative tools and funding to build greater impact businesses such as the Women Entrepreneurship for Africa (WE4A) project.
### TABLE 9  
Examples illustrating gender inequality

<table>
<thead>
<tr>
<th>Sub-barrier</th>
<th>Social innovation solution examples</th>
<th>Solution type</th>
<th>Enabling environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of support for female entrepreneurs</td>
<td>The FemBioBiz Accelerator Programme, implemented across southern Africa, builds and supports the</td>
<td>Support systems for entrepreneurs</td>
<td>There was a widespread foundation of global communities, such as Reunify that built</td>
</tr>
<tr>
<td></td>
<td>growth of women-owned and led businesses in the health and agricultural biotech field among other</td>
<td></td>
<td>a network of female entrepreneurs, granting access to venture capital for social</td>
</tr>
<tr>
<td></td>
<td>technologies, with an impact on health, nutrition and food security.</td>
<td></td>
<td>impact projects led by women, aimed to improve the health and lives of women.</td>
</tr>
<tr>
<td>Maternal and reproductive health and awareness</td>
<td>The Perinatal Mental Health Project in South Africa provides mental health support to mothers</td>
<td>Knowledge and awareness building</td>
<td>The Nigerian government pledged to deconstruct gender and social norms that hinder</td>
</tr>
<tr>
<td></td>
<td>through social workers and training healthcare workers to be more sensitive to the needs of girls</td>
<td></td>
<td>the agency, autonomy and access to rights-based family planning for women and girls.</td>
</tr>
<tr>
<td></td>
<td>and women in labour.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>mothers2mothers provides maternal health services to women using a mentor mothers initiative that</td>
<td>Knowledge and awareness building</td>
<td></td>
</tr>
<tr>
<td></td>
<td>provides maternal health services to women.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The Cup Foundation empowers underprivileged girls by providing them with sustainable menstrual</td>
<td>Knowledge and awareness building</td>
<td></td>
</tr>
<tr>
<td></td>
<td>cups and comprehensive education on sexuality and reproductive rights.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Recommendations for insight 1:**

Despite the enabling factors implemented by actors, the COVID-19 pandemic still elicited a disproportionate impact on women and gender inequality in health persists. These present long-term, complex systemic issues that need to be worked on and which require the collaboration of all actors in the environment. Better alignment between philanthropic actors, investors and corporates could also directly strengthen the enabling environment to reach more female innovators.

2. **Insight 2:** Many solutions remain underused across barriers

There are a few solutions targeting women’s sexual and reproductive health and awareness through knowledge and awareness building.

**Recommendations for insight 2:**

More action is required to invest in diagnostic technologies and health data. Considering the negative impact of the COVID-19 pandemic and the caregiver roles that women play, there need to be more solutions targeting the provision of nutritious and affordable food, mobility and homecare solutions for women.
According to reporting and online discussions, a general lack of access to nutritious food has become exacerbated by a lack of public awareness and information about healthy nutrition. The problem is especially severe among vulnerable groups such as refugees and the urban poor.

**FIGURE 11** Breakdown of sub-barriers with solution and enabler scores for barrier 8: malnutrition and food insecurity

![Breakdown of sub-barriers with solution and enabler scores for barrier 8: malnutrition and food insecurity](image)

**TABLE 10** Examples illustrating malnutrition and food insecurity

<table>
<thead>
<tr>
<th>Sub-barrier</th>
<th>Social innovation solution examples</th>
<th>Solution type</th>
<th>Enabling environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of access to nutritious food</td>
<td>Companies such as Keki-Mawe (Malawi), BabyGrubz (Nigeria), TipGlobal Health (Rwanda) and BeNuFoods (Ethiopia) work on mitigating the malnutrition issue by producing nutritional food.</td>
<td>Provision of nutritious and affordable food</td>
<td>The SUN Pitch Competition awards cash prizes and technical assistance to the winning SMEs with the most innovative nutrition solutions.</td>
</tr>
<tr>
<td>Food insecurity</td>
<td>Farmers Pride is an online-to-offline marketplace that connects farmers with everything they need to succeed by using technology to improve the capacity of women-owned agro-dealer stores to ensure increased farm production and improved family income and food security.</td>
<td>Agritech solutions and support systems for farmers</td>
<td>The Cost of Hunger study, an African Union-led study that has been conducted in 21 African countries, seeks to estimate the social and economic impacts of child undernutrition in Africa and spur action.</td>
</tr>
</tbody>
</table>

1. **Insight 1:** Cultivating enabling environments (both public and private sector) pays off, it activates solutions to systemic and protracted health systems barriers.

Actors in the environment recognize the need to create more enabling environments for solutions. So far, enabling environments only favour lack of access to nutritious food and food insecurity.
Recommendations for insight 1:

While a lot of efforts from the international multilateral organization are focusing on nutrition, the enabling environments to promote and educate the public on nutrition remain poor. It is critical that the private sector helps to support these efforts, as there is a real opportunity for cross-sectoral collaboration with partners focusing on agriculture, climate and land rights issues.

2. Insight 2: Many solutions remain underused across barriers

Recommendations for insight 2:

Although there is a spread of the different types of solutions, there is an opportunity to create more solutions across the different types, especially in the provision of nutritious and affordable food and to prevent food insecurity.

Challenges to access to basic needs

This barrier focuses on access to water, sanitation, electricity, education and food, the lack of which can further increase the burden of diseases on various regions of Africa. Similarly to the barrier of weak capacity and infrastructure, accessing basic needs presented significant challenges to social innovators and entrepreneurs. However, during the COVID-19 pandemic response, enabling environments were more conducive for social innovators to develop and scale solutions.

Breakdown of sub-barriers with solution and enabler scores for barrier 9: challenges to access to basic needs

<table>
<thead>
<tr>
<th>Sub-barriers</th>
<th>Solution score</th>
<th>Enabler score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unfulfilled basic needs</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Multidimensional poverty</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Vulnerability to disasters and extreme weather events</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: Impact Intelligence

1. Insight 1: Cultivating enabling environments (both public and private sector) pays off, it activates solutions to systemic and protracted health systems barriers.

There are large enabling environments for basic unfulfilled needs, specifically created by public sector and multilateral organizations and coalitions. For example, the United Nations Development Programme’s (UNDP) Solar for Health project supports Liberia and other countries to power public health facilities through solar power.
### TABLE 11: Examples illustrating challenges to access to basic needs

<table>
<thead>
<tr>
<th>Sub-barrier</th>
<th>Social innovation solution examples</th>
<th>Solution type</th>
<th>Enabling environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unfulfilled basic needs</td>
<td><strong>Asili</strong> is a social enterprise supported by Eastern Congo Initiative, United States Agency for International Development (USAID), and other organizations. Their model focuses on creating businesses that improve clean water and healthcare access, creating sustainable and self-sufficient systems that do not depend on constant humanitarian aid.</td>
<td>Provision of sanitation and utilities</td>
<td>European Investment Bank investments have helped to connect rural Senegalese communities to the electricity network and increased access to finance by smallholders. The UNDP’s Solar for Health project supports Liberia and other countries to power public health facilities through solar power. In Tanzania, the construction of 22 solar-hybrid mini-grids is in progress.</td>
</tr>
<tr>
<td></td>
<td><strong>Provision of sanitation and utilities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lack of sanitation services is addressed by companies such as <strong>Sanergy</strong>, that provide clean, affordable toilets and waste management services to low-cost areas.</td>
<td>Provision of sanitation and utilities</td>
<td>The government of Sierra Leone is running the Rural Renewable Energy Project (RREP), aiming to provide power to rural communities through small grid-connected solar power plants.</td>
</tr>
<tr>
<td></td>
<td><strong>Water Access Rwanda</strong> and <strong>Joalex Uganda</strong> are examples of social enterprises that focus on clean water access and sanitation issues. They offer affordable and simple solutions in different regions of Africa.</td>
<td>Provision of sanitation and utilities</td>
<td></td>
</tr>
</tbody>
</table>

**Recommendations for insight 1:**

The enabling environments for addressing multidimensional poverty still require work to address systemic issues. All actors, across global and local levels need to work on long-term enabling environments to increase inclusivity and affordability.

**Recommendations for insight 2:**

Access to basic needs presents a considerable challenge to overcome. If basic needs are not met, then the vulnerable population segments will not be able to thrive. More innovative solutions at the ground level need to be created.
The negative impact of COVID-19 on the supply chains of different vital items is the biggest focus of this barrier. These items include farm products and other food items, as well as pharmaceuticals and vaccines, all of which may need cold chain storage technologies to be working properly and in integration with the supply chain. The disruptions in supply chains tend to affect rural areas and mountainous areas more severely. The supply chain disruptions and logistic challenges was a barrier that had a small gap to solutions as well as a small enabler gap, which in turn meant that social innovators and entrepreneurs were able to thrive despite this barrier.

### FIGURE 13

Breakdown of sub-barriers with solution and enabler scores for barrier 10: supply chain disruptions and logistic challenges

<table>
<thead>
<tr>
<th>Sub-barriers</th>
<th>Solution score</th>
<th>Enabler score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logistics and transport issues of pharmaceuticals</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Supply chain disruption</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Underserving of rural populations</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

Source: Impact Intelligence

1. **Insight 1:** Cultivating enabling environments (both public and private sector) pays off, it activates solutions to systemic and protracted health systems barriers.

There are strong enabling environments for this barrier from both private and public sectors. These are namely in the logistics and transport of pharmaceuticals and disruption in the supply chain, both indicating the willingness of the industry to support these types of solutions.
### Examples illustrating supply chain disruptions and logistic challenges

<table>
<thead>
<tr>
<th>Sub-barrier</th>
<th>Social innovation solution examples</th>
<th>Solution type</th>
<th>Enabling environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply chain disruption</td>
<td>Problems with access and cold chain requirements of COVID-19 vaccines are addressed by companies including Zipline Ghana.</td>
<td>Transport and storage of medications, medical equipment and vaccines</td>
<td>World Bank’s support for Burundi’s response to COVID-19 included strengthening cold chain storage, including refrigerators and cold rooms.</td>
</tr>
<tr>
<td></td>
<td>Rwanda’s Kapsule uses market intelligence to digitalize processes, identify bottlenecks and track key performance metrics. Pharmaceutical manufacturers can monitor their supply chains, identifying bottlenecks. Pharmacies and warehouses can accurately manage inventory and arrange logistics. Government bodies are given bird’s eye and granular insights to the progress of health programmes.</td>
<td>Transport and storage of medications, medical equipment and vaccines</td>
<td></td>
</tr>
<tr>
<td>Logistics and transport issues of pharmaceuticals</td>
<td>Arone Delivery addresses the issues in logistics and transport of pharmaceuticals by using autonomous drones powered by solar energy to deliver medical supplies.</td>
<td>Transport and storage of medications, medical equipment and vaccines</td>
<td>The government of Ghana established the Coronavirus Supply Chain and Trade Disruption Team in view of the COVID-19 impact on Ghanaian businesses, especially SMEs, to urgently mobilize teams to assist in addressing specific supply chain issues and challenges affecting businesses.</td>
</tr>
</tbody>
</table>

**Recommendations for insight 1:**

Despite the strong enabling factors for some sub-barriers, there is still some effort required to address rural populations and ensure inclusivity in the health system.

2. **Insight 2:** Many solutions remain underused across barriers

**Recommendations for insight 2:**

In line with the identified enabling environments, solutions were concentrated in the transport and storage of medications, medical equipment and vaccines.

Solutions are spread in other areas but have the potential to be strengthened, especially in the provision of nutritious and affordable food, sanitation and utilities and validation of the authenticity of medications and medical equipment.
Four principles to advance social innovation and entrepreneurship

To cultivate inclusive health systems, actors should look to foundational principles to anchor their work.

The insights identified through intensive interviews and workshops are further grounded in four key principles that speak to the teachings of Margaret Wheatley, the systems theorist, who wrote that “we live in a world of complex systems whose very existence means they are inherently uncontrollable”; thus, to effectuate change requires patience, commitment, resilience and collaboration.4

Inclusive innovation means to involve those affected by the solution in the planning, implementation, and assessment thereof. Solutions based on personal experience of a crisis or challenge on the ground, have greater traction and validity. They are more likely to be embraced by those they are intended for, more likely to galvanise local action, and more likely to be sustainable. Inclusive innovation reaffirms the importance of narrowing the gaps between planners, activists, and beneficiaries. This is a key social innovation principle that holds in and outside times of crisis.

Solange Rosa, Director, UCT Bertha Centre for Social Innovation and Entrepreneurship

FIGURE 14 Four key principles for partners

1. Actively build for the long haul
2. Acknowledge that progress is not linear
3. Commit to actively building resilience
4. Embrace radical partnerships and opportunities for collaboration

Source: Bertha Centre for Social Innovation and Entrepreneurship, University of Cape Town Graduate School of Business
For many of the subjects interviewed, their focus pre-COVID-19 was already on survival versus rapid growth through short-term market share gain. This meant that they were largely better able to weather the long period of instability that COVID-19 represented. Additionally, they were able to view the COVID-19 pandemic as an opportunity to re-examine their organizational purpose, their relationships with funders and other stakeholders, and how they interacted with their customers and ultimate beneficiaries. This comfort with uncertainty, and the ability to act with agility, are key characteristics of a systems change agent. By deliberately creating for the long haul, social entrepreneurs in health can avoid the trap of allowing competition to dictate their pace. Instead, by taking the time to build their business model, by expecting that breakthroughs will emerge against a longer timeline, and by authentically engaging with their customers and partners to create an interconnecting web of reciprocal relationships, these entrepreneurs have shown themselves able to thrive through adversity.

In actively building for the long haul, it is necessary for all actors within the system to:

- Innovate through employing participatory approaches that respect the rights of all stakeholders, particularly the most vulnerable and neglected, to ensure fair participation in social and health system decision-making.
- Innovate through engaging community and stakeholder buy-in by building mutual trust, thereby ensuring long-term support, engagement and goodwill.
- Innovate through building business models and opportunities that prioritise organizational strengths, continuous learning and teaching, and flexibility.
- Innovate through institutionalizing an iterative mindset; this requires laying a stable foundation for an organizational culture that empowers experimentation, allows for collaborative testing and rewards both success and failure.
- Innovate through de-prioritizing short-term, output-centred metrics and prioritizing informed risk-taking and strategic pacesetting.

Creating national and regional environments that support entrepreneurship requires inclusive strategies that are adequately resourced, supported and committed to. After all, entrepreneurship does not occur in a vacuum. However, the limited resources and infrastructure within Sub-Saharan Africa mean that countries are not able to comprehensively provide the necessary stable foundation from which to create value and drive development. Despite this, Africa has a rich entrepreneurial landscape, and this robust entrepreneurship culture has contributed to a growing number of African incubators and accelerators, to the promulgation of government policies and standards, and to a societal push that encourages new business and innovation activities. For many, the COVID-19 pandemic was an opportunity to reflect on what progress meant within the system that they were operating in or changed their conception of that system. It allowed for an expansion from a purely health or biomedically focused agenda to a more societally focused one that allowed for an interpretation that included the web of interconnected touchpoints and activities that the COVID-19 pandemic highlighted, where health intersected with gender rights, youth development, education and economic development.

In acknowledging that progress is not linear, it is necessary to:

- Innovate by taking advantage of open-access information. This type of knowledge-sharing reduces barriers, encourages stakeholder transparency, facilitates sharing of technical and financing support, and boosts collaborative efforts.
- Innovate through inclusive digitalization by developing digital tools, technologies and infrastructure ensuring equitable access, supportive regulatory framework, user and beneficiary privacy, regional coherence, and robust data collection and sharing.
- Innovate through developing collaborative environments that allow innovators and entrepreneurs to draw on collective wisdom, mentorship and skills development.
- Innovate through co-learning and capability building by promoting inclusive multistakeholder coalitions, networks and partnerships, ensuring a common language and systems-centric methodology.

Principle 1: Actively build for the long haul

Principle 2: Acknowledge that progress is not linear
Principle 3: Commit to actively building resilience

Building for the long haul and being clear-eyed about the nature of progress and success are key traits that encourage entrepreneurial resilience. In this context, the traditional definition of resilience is the ability to withstand and overcome adversity. The COVID-19 pandemic has, therefore, arguably been a once-in-a-lifetime test of resilience for the stakeholders interviewed during this research. For the entrepreneurs and stakeholders interviewed, the COVID-19 pandemic demonstrated that resilience is not necessarily an inherent trait but a muscle that must be exercised as individuals, teams, and organizations. Having the ability to recognize a need is one way in which social entrepreneurs were able to demonstrate their ability to learn from and respond to their environments. It demonstrates that they continually learn and adapt their approaches—key factors in building resilience. One such instance of responding to a need has been the recognition that accessible mental health services were necessary during the COVID-19 pandemic, which providers highlighted as one of the crucial needs of communities during the time.

In committing to actively building resilience, it is necessary to:

- Innovate through developing a shared understanding that social systems are complex, ever-changing and experiential. Conventional solutions do not solve wicked problems.

- Innovate through creating advocacy platforms that are inclusive and adaptable and which address power imbalances, mitigate inherent biases and promote equitable participation.

- Innovate through developing robust feedback loops that allow for open communication, real-time change and strong bonds between stakeholders.

- Innovate by creating mutual trust and long-term commitment by building bridges between stakeholders.

Principle 4: Embrace radical partnerships and opportunities for collaboration

Social innovators and entrepreneurs focused on health services do not conduct their activities in isolation. Rather, these actors work within complex systems that expand outwards from the local level to the regional, the national and ultimately to the global level. It is important to understand how these actors work within the systems in which they operate since this informs how they partner with one another, how programmes and services are integrated with government health systems, and how these actions impact and influence service delivery at the front lines of healthcare. Enabling cooperation and collective social innovation alongside other systems change actors often results in co-developed and locally anchored solutions. Unlocking these partnerships’ full potential requires a greater level of trust, mutual understanding and collaboration between government, business and societal actors. Such collaboration across sectors can create and enhance a mutual understanding that is vital to addressing societal challenges.

In embracing radical partnerships and opportunities for collaboration, it is necessary to:

- Innovate by actively seeking out partners and collaborators from different disciplines, institutions, businesses, multilaterals and government departments. Crossing boundaries can accelerate change.

- Innovate by unlocking multi-sector participation and developing a collaboration framework that can support social entrepreneurs working with complex social issues.

- Innovate through strategic convenings that engage a wide variety of stakeholders and drive solidarity, engaged problem-solving, confidence building and shared value creation.
Practical pathways forward

Advancing health equity requires commitment to addressing structural inequities and strengthening enabling environments.

When examining the barriers, solutions, enabling environments and insights gleaned from the participant interviews, there are several key areas where it is possible for stakeholders to play an important role in accelerating the impact of social entrepreneurs in health across Sub-Saharan Africa. Conversely, stakeholders – including private sector actors, corporate entities, investors and philanthropists – can rely on social entrepreneurs to scale and embed their solutions to propel health equity and address systemic barriers.

To create inclusive health systems, there are some actions that can be taken according to the strength of the enabling environments as well as the maturity of the solution. The following matrix describes solution areas according to enabling environments, and where investments with higher and quicker returns can be made.

Figure 15 shows how different solutions can be created along with the strength of the enabling environments. When both the solutions and enabling environments are weak, it points out deeper structural issues that need to be addressed. On the other hand, it can be seen that there was a group of solutions from social innovators that thrived when there was a supportive enabling environment.
Solution types by the number of addressed barriers versus the strength of enabling environment

Figure 16 illustrates the types of solutions versus the number of barriers addressed. This again highlights successful and proven solution types and those that require more supportive enabling environments from the public and private sectors to be applied for wider and more structural barriers.

This research suggests that curated and cultivated public-private efforts could propel support environments for social entrepreneurs, payment solutions, agritech and knowledge and awareness types of solutions, expanding the number of innovations and addressing critical gaps.

Source: The Schwab Foundation; the Bertha Centre for Social Innovation and Entrepreneurship, University of Cape Town Graduate School of Business

Inclusive Health Systems: Innovations towards Health Equity in Africa

31
Conclusion

This actionable white paper, and its key findings, shed light on where enabling environment actors across private and public sectors, philanthropic and social enterprise support organizations, as well as local and global networks, could direct their interventions and align their efforts to increase impact and benefit from the lessons and the sense of urgency imposed by the COVID-19 crisis.

Social entrepreneurs and innovators offer practical solutions to some of the world's most intractable problems, but to fully realize this potential, an important shift needs to take place to better tackle the inequities in health that exist across the African continent. The barriers highlighted in the report are not unexpected; this fact only demonstrates that a health agenda that focuses solely on healthcare delivery is not adequate to meet the needs of African communities. Instead, it is necessary to build an inclusive health system that is positioned as a social fairness goal and is designed to address the structural inequalities – political, social and economic – that continue to sustain health inequities on the African continent.

Central to advancing action on health equity is the ability of decision-makers to understand where their greatest opportunities for impact exist. The findings in this report offer a number of interventions and partnership models for various stakeholders that could inform the areas of greatest health equity return, thus, reducing barriers to health equity through a systemic approach. It is also setting the scene and encourages continued research efforts – across geographies and different contexts – evaluating the potential and avenues for social innovators in tandem with private and public actors to impact health outcomes and social fairness.
Contributors

Bayer Foundation

Peng Zhong
Director, Social Innovation

University of Cape Town Bertha Centre for Social Innovation and Entrepreneurship

Gillian Moodley
Senior Project Manager

Katusha de Villiers
Health Systems Innovation Lead

World Economic Forum

Ekaterina Demushkina
Community and Initiatives Lead, Global Alliance for Social Entrepreneurship

Acknowledgements

Partners for the actionable insights:

Impact Intelligence

Seyfettin Baran
Analyst

Guliz Koldas
Programme Manager

Tomas Larsson
Senior Adviser

Nikolaj Moesgaard
Co-Founder and Partner

Impact Hub Africa

Hope Muchanyuka
Manager, Impact Hub Harare

Kelechi Ofoegbu
Chief Operations Officer, Impact Hub Accra

Tapiwa Nyandoro
Africa Development Lead

Tadzoka Pswarayi
Director, Impact Hub Harare

Auxicilia Rabwi
Business Development Associate, Impact Hub Harare
We would also like to extend our thanks to the following organizations for their contributions to the report.

African Health Innovation Centre
African Paediatric Fellowship Programme
Amref Health Africa
AMP Health
Ashoka East Africa
Boehringer Ingelheim Making More Health
Bridge for Billions
Broadreach Health
Cross Border Impact Ventures
The Cup Foundation
DigitalMedic
HealthEdu
HealthTech Hub Africa
Hopeful Nkomo
Kapsule Tech
Last Mile Health
LGT Venture Philanthropy
Medikea Health
MobiKlinik
mothers2mothers
Motepe Foundation
MyMedicines
North Star Alliance
Open Road Alliance
Perinatal Mental Health Project
Pulse Media
Redbird
Remote Doctors for All
SAB Foundation
Shonaquip Social Enterprise
SIHI Ghana
SIHI Malawi
SIHI Uganda
Somalia Response Lab
Spark Health Africa
Tebita Ambulance
TIP Global Health
Unknown Group
Vitol Foundation
Vive Teens
We Share Forward
Whispa Health
WHO Afro Innovation Office
WHO Innovation Hub
Zipline International

Editing and design

Laurence Denmark
Designer, Studio Miko

Martha Howlett
Editor, Studio Miko

George Messer
Designer, Studio Miko


The World Economic Forum, committed to improving the state of the world, is the International Organization for Public-Private Cooperation.

The Forum engages the foremost political, business and other leaders of society to shape global, regional and industry agendas.