



# INTEGRATED DIGITAL FINANCIAL SERVICE MODELS FOR FINANCIAL AND HEALTHCARE ACCESS

REGIONAL TRENDS AND REGULATORY CONSIDERATIONS



SPECIAL REPORT

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## EXECUTIVE SUMMARY

It is often said that health equals wealth, but unfortunately, the converse is also true: wealth can equal health.<sup>1</sup> The ability to pay for healthcare, from prevention and diagnostics to treatment and rehabilitation, not only determines a household's financial health but also household members' physical and mental wellbeing.

Along the patient journey, every health event is intertwined with a financial one. When people do not have adequate financial protection, either through public or private insurance, then healthcare is oftentimes paid for directly out-of-pocket by patients and their families. When out-of-pocket spending exceeds 10 percent of a household's income, it is considered catastrophic.

13.2%

In 2017, 13.2 percent of the global population, or 996 million people, spent more than 10 percent of household income on healthcare, and

25%

290 million people spent more than 25 percent of their household income on healthcare.<sup>2</sup>

Governments around the world have committed to achieving universal health coverage (UHC), encapsulated in the United Nations Sustainable Development Goal (SDG) target 3.8 and defined as all people having access to healthcare services when and where they need them *without suffering any financial hardship*. Despite this commitment, limited government revenue combined with competing development goals have prevented many countries from implementing UHC at adequate coverage and funding levels.

Financial inclusion has been shown to increase a household's resilience to financial shocks, including those associated with health events. When people can access and use well-designed savings, credit, digital payments, and insurance products, they are better able to prepare for and reduce risks and smooth healthcare consumption<sup>3</sup>. Using digital financial services (DFS), financial inclusion provides a novel approach to health financing that unlocks new sources of funding

and financing for lower- and middle-income patients and their families, addresses direct payment and transactional barriers to paying for care, and provides what all people deserve: options. Governments and private sector innovators are applying or embedding DFS in healthcare ecosystems as means to increase the coverage and funding available for healthcare expenses and to efficiently and securely manage healthcare transactions.

This report studies the application of digital financial services (DFS) to mutually support financial inclusion and improve healthcare access and resilience, along with accompanying policy approaches that enable DFS for healthcare innovation. **Digital payments** are used to pay for healthcare services and products, the wages of healthcare workers, and to better manage supply chains within the healthcare system. They offer not only convenience but also a trusted, secure, and affordable option for transactions and a digital record of payments made. **Digital credit/lending**, often combined with alternative credit scoring, is a model used by patients to pay for specific healthcare services for which the upfront costs are unaffordable. **Digital savings** allows for accessible funds for an urgent health event, safety and security in terms of usage, online tracking of expenses and automatic bill payments for recurring payments such as insurance premiums or subscription fees. **Digital remittances** contribute to increased healthcare access, utilization, and healthcare savings and expenditure, as the ease and cost at which cross-border transfers are made can positively impact the income of the entire household. Insurtech has deployed data analytics, payments services, and artificial intelligence for enhanced underwriting of healthcare insurance products and plans, risk assessment, claims management, improved user experience and distribution.

- 1 Sejal Mistry, Adrienne Mendenhall, and Rajvi Mehta. 2021. Breaking the health-poverty trap: How fintech can improve access to healthcare in Asia. ACCESS Health International.
- 2 World Health Organization and The World Bank. 2021. Global monitoring report on financial protection in health 2021. Geneva: World Health Organization and International Bank for Reconstruction and Development / World Bank.
- 3 Daniel Moore, Zahra Niazi, Rebecca Rouse, and Berba Karmer. 2019. Building Resilience through Financial Inclusion: A review of existing evidence and knowledge gaps. Innovations for Poverty Action.

## THIS REPORT STUDIES DFS TO MUTUALLY SUPPORT FINANCIAL INCLUSION AND IMPROVE HEALTHCARE ACCESS AND RESILIENCE ACROSS FIVE REGIONS

Through research conducted from May to June 2021, eighty-seven companies offered a total of 114 DFS for healthcare models across five regions of the world—Africa, Asia, Eastern Europe, Latin America, and the Middle East. Of the DFS for healthcare models studied, Insurtech was the most prominent (n=51), followed by digital payments (n=33), savings/e-wallets (n=15) and credit/lending (n=14). Seventeen companies offered DFS for healthcare models specifically for women. Africa and Asia led in the development of DFS for healthcare, together representing 77% (n=88) of the global DFS4H landscape.

### AFRICA

In Africa, the most common DFS for healthcare models were Insurtech (16), payments (7), and e-wallets (5). Of all five regions, Africa led in offering products and services specifically for women, with other models targeting low-income populations and small and medium enterprises (SMEs).

### ASIA

In Asia, the most common DFS for healthcare models were Insurtech (28), digital payments (9) and e-wallets (6). Out of five regions, Insurtech products (28), comprised more than half of DFS products offered in the region (55 percent). DFS for healthcare companies in Asia formed the largest number of partnerships out of all regions (28), aided by flexible know-your-customer (KYC) processes and relaxed onboarding requirements.

### EASTERN EUROPE

In Eastern Europe, few DFS for healthcare models exist, but of the models studied, the most common were digital payments (3) and Insurtech (2) for billing and patient management. Interviewees reported that dialogue is increasing between DFS, traditional financing institutions and healthcare systems and companies.

### LATIN AMERICA

Latin America is the only region where the leading DFS for healthcare model is G2P (4). Many public and private entities have started to lay the groundwork for regulations and partnerships that encourage innovation in financial services. Latin America specifically focused on vulnerable populations such as low-income populations and SMEs.

### THE MIDDLE EAST

In the Middle East, the most common models are Insurtech (3) and digital payments (2) for claims and billing. The Middle East (4) specifically focused on vulnerable populations such as low-income populations, small and medium enterprises (SMEs) and informal workers.





## KEY CONSIDERATIONS FOR GOVERNMENTS IN ENABLING DFS FOR HEALTHCARE MODELS

Central banks can provide regulatory clarity and act as stewards for innovation. While we found that DFS for healthcare innovation is driven by partnerships, primarily within the private sector, national financial inclusion and digitalization strategies allow for the development and scaling of DFS for healthcare models. Countries with thriving DFS ecosystems and a flexible regulatory environment are able to rapidly respond to population and public health workforce financing needs during health shocks such as the Ebola and COVID-19 pandemics.

Three fundamental action items were identified under these approaches where policymakers and financial regulators can make the most significant impact. This

includes knowledge-sharing between financial and healthcare sectors and across industries, consumer groups, and private and public stakeholders. Central banks can “*engage early and often with the market*” to co-design pilot projects and discuss regulatory hurdles in real-time. Governments can also find, test, and invest in DFS for healthcare models, using existing data to support pilot projects and further public-private partnerships for greater competition within the sector.

While the DFS for healthcare landscape is still expanding across all regions, COVID-19 and other stressors to the financial and healthcare systems demand that countries smartly invest in comprehensive digital solutions so that patients can access and pay for quality healthcare services without undue financial hardship.

## POLICYMAKERS CAN FURTHER ENABLE THE DEVELOPMENT OF DFS FOR HEALTHCARE MODELS THROUGH FOUR REGULATORY APPROACHES:

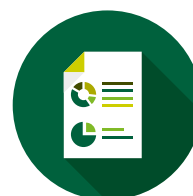
### WAIT-AND-SEE

This is an active learning strategy that enables unconstrained innovation while policymakers and regulators continuously monitor associated trends, eventually followed by interventions.



### TEST-AND-LEARN

This strategy allows each business case to function in a live environment subject to varying degrees of supervision and oversight and allows policymakers to collect data for evaluation.



### INNOVATION FACILITATORS

This is a more resource-intensive strategy enforced in a structured, top-down format to promote innovation and experimentation. These fall into three categories: thematic innovation hubs, accelerators, and regulatory sandboxes.



### REGULATORY LAWS AND REFORM

Immediate regulatory reform results in new laws or licenses specifically catered to innovative firms and business models. In the absence of applicable existing regulatory frameworks, strong policy responses can be used to re-evaluate and amend current regulatory frameworks, develop new ones, or prohibit certain DFS activities.





# SECTION 1

## INTRODUCTION TO HEALTHCARE AND FINANCIAL INCLUSION



Group of women in queue with blood report waiting for their turn while doctor, India. (PradeepGaur/iStock)



# INTRODUCTION

According to the World Health Organization (WHO) and the World Bank (WB), exorbitant healthcare expenses are a major driver of financial vulnerability, poverty, and bankruptcy for low- and middle-income people worldwide.

13.2%

As of 2017, 996 million people (13.2 percent of the global population) faced catastrophic healthcare expenses, defined as spending at least 10 percent of their household budgets on direct health expenses.<sup>4</sup>

In most countries, access to financing directly determines access to quality healthcare.

The link between financial and physical health is a key driver behind the worldwide commitment to universal health coverage (UHC). The central aim of UHC is to ensure that all people have access to health services when and where they need them without suffering financial hardship.<sup>5</sup> Importantly, national policies and programs at the highest levels of government have made UHC a key political issue requiring a whole-of-government approach. As countries move towards realizing the ambitious vision of *high quality and affordable healthcare for all people*, it is recognized that the success and sustainability of UHC hinge on the financial resilience of governments and households.

Financial inclusion means that individuals have access to useful and affordable financial products and services that meet their needs and are delivered responsibly and sustainably.

According to the World Bank, digital financial inclusion involves the “*deployment of the cost-saving digital means to reach currently financially excluded and underserved populations with a range of formal financial services suited to their need that are responsibly delivered at a cost affordable to customers and sustainable for providers*.”<sup>6</sup> Through digital financial services, previously financially excluded and underserved populations can now access payments, transfers, savings, credit, and insurance products and services, including for healthcare. Digital financial inclusion provides public and private sector payers with a broader set of tools to reach underserved populations and to achieve UHC.

To understand how DFS models are used to support financial and health access, this report analyses:

- > the link between financial inclusion and health and how DFS models can improve both health and financial access for low- and middle-income populations
- > the global and regional trends in the application of digital financial services for healthcare
- > the use of DFS for health models that support the financial inclusion of women and other vulnerable populations
- > the use of DFS to support the general population in the midst of health emergencies such as natural disasters and pandemics
- > highlight features of a regulatory environment that enables the functioning of DFS for health models while safeguarding public interest.

This paper begins by looking at five regions of the world - Africa, Asia, Eastern Europe, Latin America and the Middle East - to identify and assess the current landscape of DFS for healthcare models. The findings were based on a comprehensive global landscape assessment through literature review of existing initiatives where digital financial services were being used to enable access to healthcare services. We defined the scope of digital financial services to include digital versions of payments, credit/lending, savings, remittance services, and Insurtech; we included those programs that demonstrated the use of digital financial services that would improve access to healthcare services, information, or payments. To validate or refine the findings, we conducted interviews with finance, healthcare and policy experts and hosted focus groups with AFI member institutions.

This paper is intended for central banks and regulators interested in understanding the viability of DFS models in health and the successes and challenges for financial service providers (FSPs) working with healthcare and financial regulators. The report outlines trends, case studies and insights from interviews with DFS, healthcare and financial inclusion experts and practitioners to frame the decisions and outlook by regulators as DFS for healthcare models mature and expand to populations around the world.

4 [World Health Organization; World Bank. 2021. Tracking Universal Health Coverage : 2021 Global Monitoring Report. World Health Organization and World Bank.](#)

5 World Health Organization. 2021. Universal Health Coverage.

6 World Bank. 2015. [Digital Financial Inclusion.](#)



## THE LINK BETWEEN HEALTHCARE AND FINANCIAL INCLUSION

Access to financing is a major determinant of access to quality healthcare services for much of the world. This includes the affordability of healthcare, the amount and availability of funds to pay for services, and the ease of transferring payments from patient to provider.

Across the world, the right to health, one of the universal human rights, is manifested in governmental UHC policies. The central aim of UHC is to assure that all people have access to healthcare services when and where they need them *without suffering any financial hardship*.<sup>7</sup> In most countries, UHC is realized through a taxation-based or insurance-based system of national healthcare financing. Public or private access to healthcare insurance is an important mechanism of pooled funding that makes healthcare accessible and affordable for populations.

### THE WORLDWIDE COMMITMENT TO UHC:

- > UHC, as defined by WHO, is when “all people and communities can use the promotive, preventive, curative, rehabilitative and palliative healthcare services they need, of sufficient quality to be effective, while also ensuring that the use of these services does not expose the user to financial hardship.”<sup>8</sup>
- > In 2018, UHC was set as one of the key SDGs and articulated under SDG 3: Ensure healthy lives and promote well-being for all at all ages.<sup>9</sup>
- > In September 2019, the United Nations General Assembly held a high-level meeting on UHC, bringing together heads of state, political and healthcare leaders, policymakers. The United Nations General Assembly passed a resolution “to accelerate progress toward UHC, including financial risk protection, access to quality essential healthcare services and access to safe, effective, quality and affordable essential medicines and vaccines for all.”<sup>10</sup>
- > Globally, more than 100 low- and middle-income countries and their leaders have made the political commitment and launched UHC programs.

While many national governments have dedicated resources to UHC expansion (i.e., healthcare coverage for “all people”), out-of-pocket (OOP) expenditures—defined by the World Health Organization (WHO) as both monetary and in-kind expenses that households pay for directly out-of-pocket<sup>11</sup>-- remain high (Figure 1). Compared to the average rate of 18 percent across all OECD countries, the rates of OOP expenditures in healthcare in the studied regions hold at or well above this average.<sup>12</sup>

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The WHO states that high OOP are

“

strongly associated with catastrophic and impoverished spending” and that “protecting people from the financial consequences of paying for healthcare services out of their own pockets reduces the risk that people will be pushed into poverty because unexpected illness requires them to use up their life savings, sell assets, or borrow - destroying their futures and often those of their children.”<sup>13</sup>

”

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Paying for healthcare expenses OOP can result in “*distress healthcare financing*” or borrowing with interest from informal lenders to meet household healthcare costs. In the worst (and not uncommon) cases, this prompts people - mostly low-income earners - to delay or forego healthcare altogether, which leads to elimination of all preventive care, delayed diagnoses, untreated chronic disease, advanced stages of cancer, or even death. The negative impact of delayed care leads to increased demands for healthcare services, and when coupled with the inability to work and earn wages, it exacerbates the cycle of poverty impacting multiple generations.<sup>14</sup>

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7 World Health Organization, Universal Health Coverage.

8 United Nations Development Programme. 2019. [Universal Health Coverage for Sustainable Development - Issue Brief](#).

9 World Health Organization, [Sustainable Development Goals](#).

10 United Nations Development Programme, [Universal Health Coverage for Sustainable Development - Issue Brief](#), p. 11.

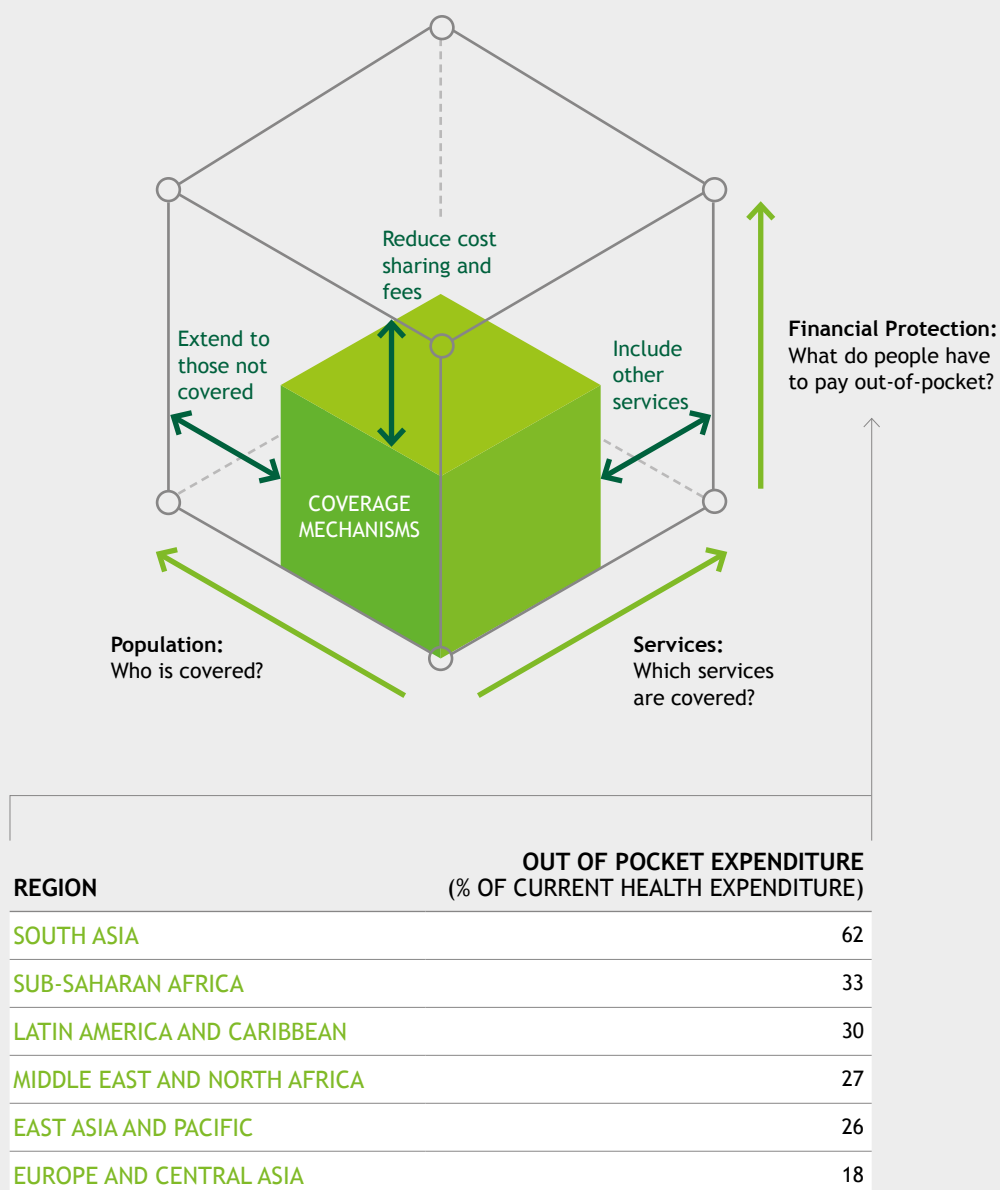
11 World Health Organization, [The Global Health Observatory](#).

12 Organisation for Economic Co-operation and Development. 2009. [Health at a Glance 2009](#). OECD Publishing. [https://doi.org/10.1787/health\\_glance-2009-en](https://doi.org/10.1787/health_glance-2009-en)

13 World Health Organization, Universal Health Coverage.

14 Por Ir, et al. 2019. [Exploring the determinants of distress health financing in Cambodia](#). Health Policy Plan 34 (1). doi: 10.1093/heapol/czz006.

FIGURE 1: THREE DIMENSIONS OF UHC AND REGIONAL OOP EXPENDITURE



Source: WHO and WB. 2015. Tracking Universal Health Coverage: First Global Monitoring Report. Geneva: WHO Press.

TABLE 1: REGIONAL NET COST TREND OF GENERAL INFLATION, 2019-2021

REGION	NET COST TREND (OF GENERAL INFLATION)		
	2019	2020	2021
ASIA	5.88	5.10	6.78
MIDDLE EAST/AFRICA	7.39	6.94	6.98
LATIN AMERICA	5.75	6.62	11.17

Source: WillisTowersWatson. 2021. 2021 Global Medical Trends Survey Report.

Additionally, healthcare costs often outstrip inflation,<sup>15</sup> leaving low- and middle-income families even further behind in terms of what they can afford. The cost of medical care increases every year in all countries, with financial burden disproportionately falling on low-income families.

In many developing countries, women experience greater barriers to healthcare where they are less likely to be income-earners or are empowered to manage household finances. Women represent the cornerstone of a family's overall health, as the primary caregiver in many families. Ensuring they have access to quality healthcare can lead to improved health for themselves and their entire families.<sup>16</sup> Most women need more healthcare, yet they are more likely to be poor; thus, healthcare costs threaten their healthcare and economic security.<sup>17</sup> The Commonwealth Fund study found that more women than men are underinsured and experience a greater pressure of rising healthcare costs.<sup>18</sup>

Financial inclusion - providing affordable and accessible financial products and services, to low-income segments of society- can complement and mutually reinforce UHC goals.<sup>19</sup> Through financial inclusion efforts, day-to-day financial transactions are made possible, savings are safeguarded, small businesses can invest and grow, budgets can be planned for school fees and water access, and sudden unexpected events, such as medical emergencies or deaths, can be mitigated.<sup>20</sup>

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- 15 Aon. 2021. 2021 [Global Medical Trend Rates Report](#).; WillisTowersWatson. 2020. [2021 Global Medical Trends Survey Report](#).
- 16 Jennifer Breshears Wheeler, Megan Foreman and Austin Rueschhoff. 2013. [Improving Women's Health Challenges, Access and Prevention: Women's Health Brief Series](#). National Conference of State Legislatures.
- 17 Gretchen Borchelt. [The Impact Poverty Has on Women's Health](#). Human Rights Magazine 43 (3).
- 18 Sheila Rustgi, Michelle Doty, and Sara Collins. 2009. [Women at Risk: Why Many Women Are Forgoing Needed Health Care](#). Commonwealth Fund 52 (1262).
- 19 Lisa Morgan and Craig Churchill. 2018. [Financial inclusion and health: How the financial services industry is responding to health risks](#). Geneva: International Labour Organization
- 20 Consultative Group to Assist the Poor. 2021. Why does financial inclusion matter today?. CGAP. Accessed 28 October 2021.
- 21 Alliance for Financial Inclusion. 2022. [National Financial Inclusion Strategies: Current State of Practice \(2022\)](#). Malaysia: Alliance for Financial Inclusion.

## EXTENDING FINANCIAL LITERACY

Financial sector regulators and policymakers have long focused on the “unbanked” and “underbanked” populations to increase access and usage of financial services and extend financial literacy into segments of the population excluded from formal financial services.

### SUSTAINABLE DEVELOPMENT GOALS

Financial inclusion has been identified as an enabler for 7 of the 17 SDGs. In 2020, the G20 recommitted to advancing financial inclusion worldwide, reaffirming its commitment to implement the G20 high-level principles for digital financial inclusion.



### MAYA DECLARATION

Since 2010, more than 55 AFI member countries have made commitments to financial inclusion under the Maya Declaration, and more than 60 countries have either launched or are developing a national financial inclusion strategy.<sup>21</sup>

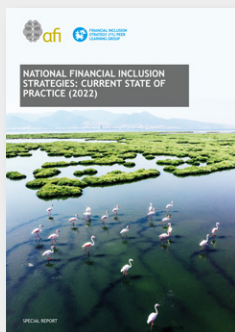


### WORLD BANK GROUP

The WB Group considers financial inclusion a key enabler to reducing extreme poverty and boosting shared prosperity, putting forward an ambitious global goal to reach universal financial access by 2020.







National financial inclusion strategies: current state of practice

[> View here](#)

The intersection of financial inclusion and healthcare dually pursues SDGs 1 and 3, eradicating poverty worldwide and ensuring healthy lives and well-being for all at all ages through financial risk protection, access to quality essential healthcare services, access to safe, effective, high-quality and affordable essential medicines and vaccines for all.<sup>22</sup> Ultimately, the goals of both financial inclusion and UHC serve the needs of the most vulnerable: whereas financial inclusion safeguards financial health, UHC safeguards physical health.

Despite similarities in the needs of both the unbanked and those targeted by UHC programs, it has not been the priority of FSPs to integrate their models with the healthcare sector. However, there is increased attention on the role of embedded finance - or the use of financial tools and services by a non-financial provider - in impacting industries outside of finance. In healthcare, there is a rising interest among public and private stakeholders to integrate DFS models to streamline processes for providers and patients and work towards the goal of high-quality healthcare for all.

Through this innovation process, healthcare and financial regulators emerge as key players in the design, implementation, and accountability of those involved, balancing the protection and safety of citizens with their right to pay for the services they need any way they choose. The sensitivity of healthcare and financial data leaves both sectors vulnerable to threats and misuse, creating the need for regulatory bodies to communicate and work together to assure policies uphold safe but effective innovation of DFS models in the healthcare sector.

Few mature examples exist of DFS for healthcare, making the impact of these models on health outcomes difficult to measure. However, access to DFS has been shown to promote equitable and timely access to healthcare services to otherwise unreached and underserved populations.<sup>23</sup> Through savings accounts to help people plan for healthcare

expenses, rapid loan approval for prompt access to care, and healthcare insurance to lessen the impact of unexpected healthcare shocks, along with other financial mechanisms, DFS has the potential to significantly impact the health of families worldwide, particularly when targeted at women and supported by digital literacy and effective consumer protection frameworks. The Alliance for Financial Inclusion has well-documented examples where DFS can accelerate women's financial inclusion and empowerment,<sup>24</sup> which can extend to the use of DFS in healthcare.



Lessons on enhancing women's financial inclusion using digital financial services

[> View here](#)

Traditionally, offering formal financial services to low- and middle-income earners was viewed as risky and expensive. However, DFS technology and new digital channels can offer safe and inclusive means of financial access and protection to expand the options of underbanked low- and middle- income people to finance their healthcare costs - often in more convenient, affordable, and ethical ways.<sup>25</sup> Given the urgency and importance of being able to seek healthcare services—when they are needed—then timely, affordable, trusted and secure financing becomes a vital service. DFS users are better able to finance healthcare and less likely to skip other essential goods and services (food, education) during a health shock, and they consume more healthcare services compared to people who do not use DFS.<sup>26</sup>

22 World Health Organization, [Sustainable Development Goals](#).

23 Emily Mangone, Pam Riley, and Kenya Datari. 2021. Digital Financial Services for Health: A Global Evidence Review. Rockville, MD: USAID Local Health System Sustainability Project, Abt Associates Inc.

24 AFI. 2020. DFSWG. [Lessons on enhancing women's financial inclusion using digital financial services](#).

25 Lauren Braniff and Pamela Riley. 2017. A Digital Finance Prescription for Universal Health Coverage. CGAP.

26 Mangone, Emily, Pam Riley, and Kenya Datari. 2021. Digital Financial Services for Health: A Global Evidence Review. Rockville, MD: USAID Local Health System Sustainability Project, Abt Associates Inc.

## TYPES OF DFS MODELS APPLIED TO HEALTHCARE

In this paper, DFS refers to a wide range of financial services - payments, credit, savings, remittances, insurance - accessed and carried out through various digital channels, including internet platforms, mobile phones and other handheld devices.

While these models do not solve for the high cost of healthcare or erase the vulnerability of low- and middle-income people to health shocks, they offer options that ease the burden in how to pay for healthcare, smooth health consumption, and open patients to a wider pool of financial resources. Together, these models offer low-income people alternatives to selling income-generating assets, taking out high-interest loans, or avoiding needed care that keeps a breadwinner healthy and able to work. They provide patients with a means to save for healthcare expenses, better repayment terms for loans, and discounts on products and services, while generating data for policy planners and innovators who seek to offer better, more targeted health financing models. Additionally, DFS may be used as a tool for blended financing, allowing patients to readily apply for and avail of donor, government, and insurance funds through one mobile platform. These consumer-centric DFS put patients at the center of health financing while reducing the administrative and transactional costs of paying for care.

More specifically, DFS are used in healthcare in the following ways.

**Digital payment** is a means of transferring value from one payment account to another with a digital device. These devices range from mobile phones (as mobile financial services), point-of-sales and computers to digital channel communications such as mobile wireless data or SWIFT. Digital payments are used to pay for healthcare services and products, the wages of healthcare workers, and better manage supply chains within the healthcare system. These payments are submitted through bank transfers, mobile money, and payment cards (credit, debit and prepaid cards). This category also includes digital health vouchers, often combined with e-wallets to improve the accessibility and affordability of prenatal, well-child, and chronic disease management healthcare services.

**Digital credit/lending** refers to loans acquired through digital channels, mobile phones, or via a third-party agent. Digital credit/lending can be seen in the healthcare sector in the form of loans for specific healthcare services for which the upfront costs are unaffordable. These services are enabled by alternative credit scoring tools to extend reach to underserved communities.<sup>27</sup> This mechanism is also seen employed in healthcare through peer-to-peer (P2P) lending for healthcare and microfinancing groups in the community setting.

**Digital savings** is a savings account or e-wallet which contains electronic deposits of money dedicated to healthcare expenses. Whether a general savings account with easy liquidity or targeted savings accounts specifically for anticipated healthcare costs, digital savings allows for accessible funds for an urgent health event, safety and security in terms of usage, online tracking of expenses and automatic bill payments.<sup>28</sup> Additionally, through health wallets, donors, insurers and governments can more efficiently and affordably offer vouchers, subsidies, incentives, and other financial products specifically for healthcare services.

**Digital remittances** refer to cross-border money transfers made using internet services by a migrant population.<sup>29</sup> Remittances are important to developing countries, and the ease and cost at which these transfers are made can positively impact the income of the entire household. When examined specifically in the context of healthcare, remittances can contribute to increased healthcare access, utilization, and healthcare savings and expenditure.<sup>30</sup> Finally, in addition to being key decision-makers for the health of their families, women are increasingly the breadwinners, sending a large percentage of their earnings home to their families in the form of remittances.<sup>31</sup>

**Digital insurance** refers to “Insurtech,” an insurance company, intermediary, or insurance segment specialist that utilizes technology to compete or provide value-added benefits to the insurance industry.<sup>32</sup> Applied

27 John Owens. 2018. [Responsible Digital Credit](#). Center for Financial Inclusion Accion and The Smart Campaign.

28 DBS Bank India Limited. 2019. [Benefits of Digital Savings Account. Digibank by DBS.](#)


29 Statista. 2021. [Digital Remittances](#). Statista

30 Gabriella Berloff and Sara Giunti. 2019. Remittances and healthcare expenditure: Human capital investment or responses to shocks? Evidence from Peru. *Review of Development Economics* 23 (4). <https://doi.org/10.1111/rode.12599>

31 WorldRemit. 2020. [Financial inclusion for women working abroad. WorldRemit.](#)

32 Jackson Mueller. 2018. [Insurtech Rising: A Profile of the Insurtech Landscape](#). California: Milken Institute.

FIGURE 2: TYPES OF DFS FOR HEALTHCARE MODELS ACROSS FIVE REGIONS



		AFRICA	ASIA	EASTERN EUROPE	LATIN AMERICA	MIDDLE EAST	TOTAL
PAYMENTS	E-banking	2	0	1	2	0	5
	Gov-to-person	3	0	0	4	0	7
	Payments	7	9	3	0	2	21
CREDIT / LENDING	Crowdfunding	1	1	0	1	0	3
	Dig Smart Card	1	0	0	0	0	1
	E-vouchers	1	1	0	0	0	2
	Microfinance	4	2		2	0	8
SAVINGS	E-wallets	5	6	1	2	1	15
REMITTANCES		1	0	0	0	0	1
INSURANCE		16	28	2	2	3	51
TOTAL		41	47	7	13	6	114

Source: ACCESS Health International

to healthcare, Insurtech has extended the reach of financial protection through underlying digital technologies (data analytics, blockchain and artificial intelligence) deployed for enhanced underwriting of healthcare insurance products and plans, risk assessment, claims management, improved user experience and distribution.<sup>33</sup>

We conducted a global landscape study of existing DFS for healthcare models using available public sources of information, complemented by interviews with DFS for healthcare innovators. We hosted two roundtable discussions with Central Banks who are members of AFI, where we presented initial insights from the study and solicited their feedback on the applicability of these insights to their regulatory decision making.

From April 2021-June 2021, eighty-seven companies with DFS for healthcare models were found across five regions of the world. These companies offered a total of 114 DFS for healthcare solutions, representing 10

different types of digital models. The most prevalent services offered include general healthcare, maternal and child healthcare services, and chronic disease management. Since 2020, some DFS for healthcare solutions started offering COVID-19 death, disability and adverse events-related products and services. Overall, 43 worked in claims and reimbursements, 56 in billing, eight in patient management and three offered a distribution platform for healthcare products and services. Seventy-one percent targeted the patient directly, 20 percent work with the payor, and nine percent work with providers or clinics.

17

Of the 87 companies with DFS for healthcare models, 17 offered products or services specifically for women.

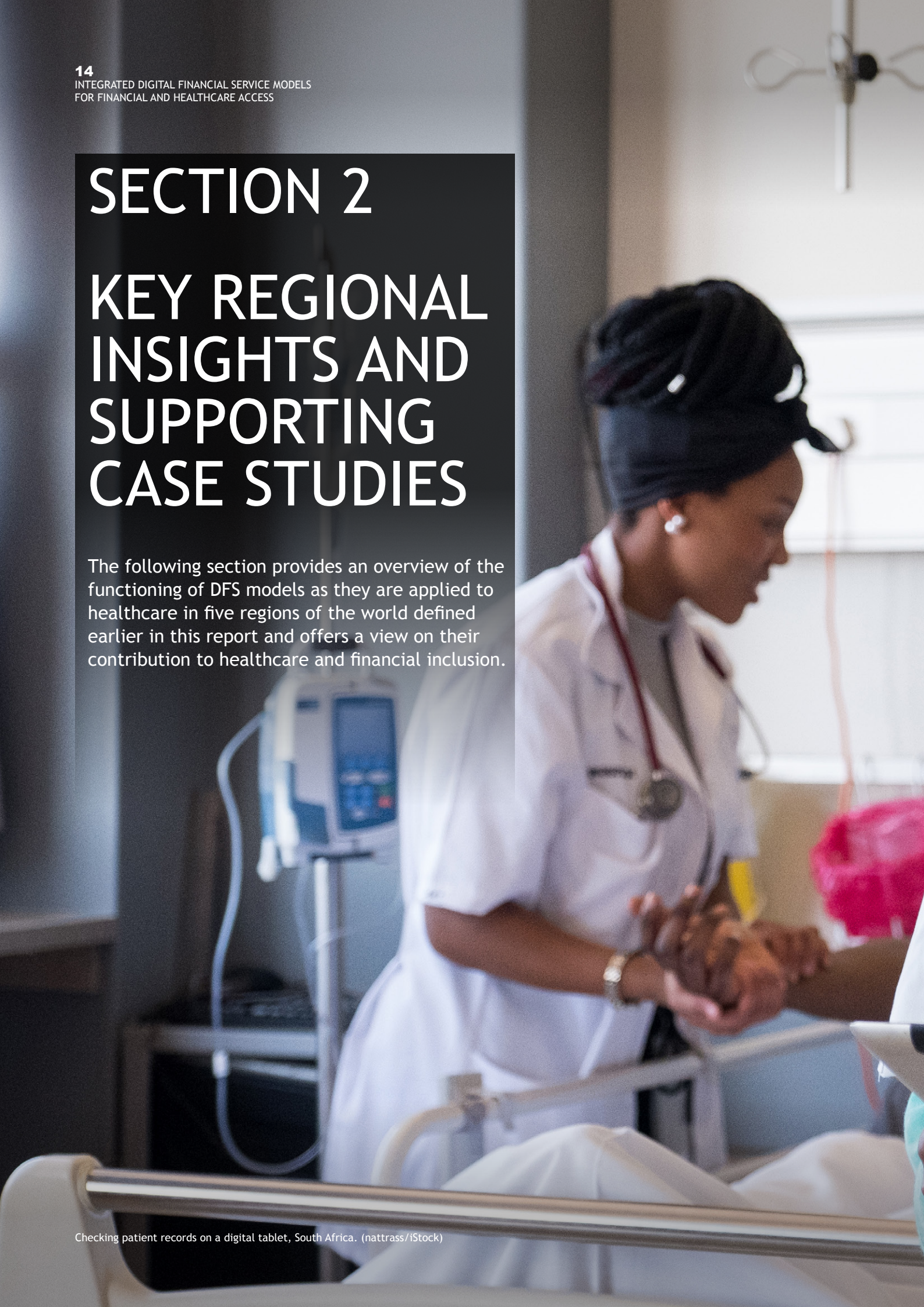
33 MetLife Foundation and ACCESS Health International Southeast Asia Ltd. 2021. [Breaking the health-poverty trap: How fintech can improve access to healthcare in Asia.](#)



# SECTION 2

## KEY REGIONAL INSIGHTS AND SUPPORTING CASE STUDIES

The following section provides an overview of the functioning of DFS models as they are applied to healthcare in five regions of the world defined earlier in this report and offers a view on their contribution to healthcare and financial inclusion.









## AFRICA

DFS MODELS	NUMBER
CROWDFUNDING (P2P)	1
DIGITAL SMART CARDS	1
EBANKING	2
EVOUCHERS	1
E-WALLETS	5
G2P	3
INSURTECH	16
MICROFINANCE	4
PAYMENTS	7
REMITTANCES	1
<b>TOTAL</b>	<b>41</b>

- > There are 41 DFS for healthcare models in 13 of the 54 countries in Africa.
- > Companies that offer DFS for healthcare models exist in 13 of 54 African countries, with Kenya hosting 1 in 4 of these models (11). The most common DFS for healthcare models found in Africa were Insurtech (16), payments (7), and e-wallets (5).
- > Of all five regions, Africa led in offering products and services specifically for women, with other models targeting low-income populations and small and medium enterprises (SMEs).



In 2021, 43% of people in Sub-Saharan Africa had a mobile phone, contributing 8% of GDP and equating to a value of almost \$140 billion, including \$6 billion to public funding.<sup>34</sup>

Meanwhile, thirty-three percent of adults in Africa have access to the internet, with smartphone connections accounting for nearly 66 percent of total online connections.<sup>35</sup> In recent years, the majority (54%) of venture capital in the Africa internet economy was invested in fintech, particularly for startups creating products and services for people who have been excluded from traditional financial services yet increasingly able to avail of mobile technology<sup>36</sup>. Fueled by the pandemic and rapid growth of the internet economy.

**70%** Africa now accounts for 70% of the global mobile money economy.<sup>37</sup>

Due to this broad reach, many DFS solutions can be applied toward improving access to healthcare services for vulnerable populations, encouraging economic empowerment for women, and improving money remittance processes and cash-in-cash-out services. The diversity of these products and services allows for greater reach and product utility, drawing on “super app” platforms with multiple functionalities that target the consumer’s needs. Regional leaders in DFS for healthcare include Kenya, Nigeria, and South Africa, with promising emerging DFS markets in Ghana, Rwanda, and Uganda.

Insurtech is the most common DFS for healthcare models utilized in Africa, and many mobile network operators are playing a role in localizing and delivering microinsurance products.<sup>38</sup>

34 GSMA. 2022. The Mobile Economy of Sub-Saharan Africa. London: GSMA.

35 ITU Publications. [Measuring Digital Development: Facts and Figures 2021.](#)

36 Google and IFC, a member of the World Bank Group. 2020. E-Conomy Africa 2020.

37 Aramé Awanis, Christopher Lowe, Simon K. Andersson-Mangang, and Dominica Lindsey. 2022. State of the Industry Report on Mobile Money. London: GSMA.

38 Simon Andersson-Manjang and Nika Naghavi. 2021. State of the Industry Report on Mobile Money. London: GSMA.



Due to the growth in smartphone connections and reach, mobile-enabled microinsurance products are now reaching segments of the population and protecting previously uninsured people against unpredictable financial shocks and devastating life events.

29%

In fact, life healthcare insurance products remain the most prevalent and in-demand products in Africa, with life insurance accounting for 29 percent of the total number of policies issued in June 2020.<sup>39</sup>

Collaboration between new and traditional players, such as technical service providers, financial institutions and DFS companies, is one key feature of partnerships that enable these products to thrive.

Increasingly, insurance packages specially made for healthcare emergencies are sold on Insurtech distribution channels. Insurtech companies provide an alternative to traditional insurance channels by offering user-friendly platforms, digital comparison tools, customized packages, and broader access and distribution. In Nigeria, Access Bank partners with the national healthcare insurance program and a Health Maintenance Organization (HMO) partner, Hygeia, to offer low- and middle-income users high-quality and affordable healthcare insurance. For an annual fee, users are covered for illnesses such as malaria, typhoid, upper respiratory tract infections and more.<sup>40</sup>

Digital wallets and e-vouchers have emerged as primary DFS models used for healthcare payments in Africa. Payment infrastructures of DFS for healthcare platforms such as M-TIBA in Kenya and MTN MoMo in Ghana allow for multiple service channels to be accessed easily at the point-of-transaction through a cashless experience. E-wallets and vouchers have also effectively facilitated healthcare payments through programs such as Kenya's Changamka's e-savings for specialized healthcare services and e-vouchers for sexual and reproductive health, family planning counseling, contraceptives, and screening, referrals and treatment for sexually transmitted diseases. E-vouchers provide an additional level of privacy that may not be available in other formats and can be geared specifically to young people and women.<sup>41</sup>

Most countries worldwide affected by the COVID-19 crisis are providing emergency relief to their citizens and affected sectors in the form of cash transfers, subsidies and other special packages.<sup>42</sup>



Policy framework for leveraging digital financial services to respond to global emergencies - case of COVID-19

> [View here](#)

COVID-19 has spurred the creation of new government-to-person (G2P) programs in Africa for previously unreached populations through simple, effective digital and mobile tools and via partnerships with telcos and rural and community healthcare initiatives. In Nigeria, DFS companies have solidified partnerships with the government to on-board users using their national ID, removing the need for multi-tier verifications. Government engagement should continue to ensure the advancement and growth of DFS models.<sup>43</sup>

In Kenya, regulators implemented temporary regulations to improve access to financial services during COVID-19. During the early days of the pandemic, the country experienced major economic consequences due to lockdowns. In response, the Central Bank of Kenya (CBK) suppressed the price of P2P low-value transfers to include free mobile money transfers up to USD8.80, USD 1,317 transaction limit for mobile money, and an increase in the daily limit for mobile money transactions to USD2,635, leading to a sharp decline in large transfers and a higher number of smaller transactions.<sup>44</sup> This benefitted those accessing banking services during COVID-19. After these policies expired, the CBK lowered the transaction fees further (less than USD 1) to continue easing the burden of COVID-19 restrictions on the population. These policy changes greatly benefitted low-income populations but would need to be reviewed in time and scope to ensure sustainability of businesses. The lower of transaction fees resulted in a loss of 15-20% of revenue for mobile network operators in Kenya.

<sup>39</sup> Ibid.

<sup>40</sup> Access Bank PLC. 2021. [HealthXtra](#). Access Ban.

<sup>41</sup> Innovations in Healthcare. [Changamka](#).

<sup>42</sup> AFI. 2020. [DFSWG. Policy Framework for leveraging digital financial services to respond to global emergencies - Case of COVID-19](#).

<sup>43</sup> Stakeholder interview, Joep Roest (CGAP), 2021.

<sup>44</sup> Central Bank of Kenya. 2020. [Emergency Measures to Facilitate Mobile Money Transactions](#). Central Bank of Kenya.





#### BOX 1. CASE STUDY 1: CORALPAY (NIGERIA)

**CoralPay is an ecosystem integrator and aggregator, acting as a one-stop payment gateway and transaction processor that enables information dissemination, social services, and data mining.**

##### **WHAT TYPES OF SERVICES DOES CORALPAY OFFER?**

CoralPay supports card payments (Visa Card, MasterCard) and alternative payment methods such as Alipay, QR codes, MasterPass, and mVISA. The CGate infrastructure (CoralPay's payment gateway) represents a telecom service that enables payments, messaging, access and interoperability. This is made possible by a switch built by CoralPay that is capable of recognizing the bank ID (which is used by all Nigerians to access government services) when using a device on an ATM, mobile wallet or for online purchases.

Recently, CoralPay expanded to offer messaging services, allowing for the gathering and processing of a vast amount of data. CoralPay's services are mainly used for P2P transactions but are also used frequently for e-commerce payments. Due to the COVID-19 pandemic, their reach expanded to offer payment services for church offerings, school fees, electricity bills, gaming and Netflix subscription fees. CoralPay will soon process healthcare insurance payments in collaboration with telecom operators and the Nigerian government by extending the collection of healthcare insurance premiums via mobile phones.

##### **WHAT WERE KEY PARTNERSHIPS FORMED BY CORALPAY TO ENABLE DFS SERVICES WORKING IN HEALTHCARE?**

CoralPay is working closely with the government to improve financial inclusion in Nigeria. CoralPay collaborates with the government and private healthcare

insurance companies as a part of the contributory healthcare insurance program. These partnerships were established to digitally (i.e. via mobile phones) collect the minimal installment contributions in return for essential healthcare services. Through this process, CoralPay eliminated cash collecting agents, minimizing the burden of travel for rural households, a benefit extending particularly to women who are time-poor and challenged by their domestic burdens if they have to travel long distances to access services. Furthermore, to assist those without mobile phones, CoralPay employed agency banking for cash-in and cash-out services to assist households with depositing installment payments.

##### **WHAT ARE THE IMPLICATIONS & POLICY CONSIDERATIONS FOR REGULATORS?**

CoralPay partners with the Nigerian government who also plays an active role in mediating the partnership between telcos and FSPs. In addition, the pandemic has prompted the government to improve its focus on financial inclusion and encourage state governments to provide greater support and assistance to vulnerable populations. As a result, the central government has allowed the integration of the national ID so CoralPay can process healthcare insurance payments. The government has also managed airtime prices, allowing CoralPay to become more accessible to rural population segments.



Source: CoralPay. 2020. CoralPay.; Stakeholder interview, Chioma Nkechika (CoralPay), 2021; David Whitehouse. 2021. Nigeria's CoralPay in talks with telcos to extend mobile phone insurance payments. The Africa Report. 24 March.



COVID-19 is not the first crisis where DFS for healthcare models has been able to sustain users during crises. From 2014-2016 when Ebola was at its peak, 60,000 frontline response workers were core to combatting the disease, yet missed, reduced, or delayed cash-based payments to these workers led to multiple strikes and a reduced workforce. In December 2014, the government of Sierra Leone, the worst-hit country alongside Liberia, and the donor community leveraged an already high mobile coverage rate of 90% and a nationwide agent network to digitize payments to frontline health workers, decreasing payment times from one month to one week and saving \$10.7 million in costs by January 2016. This required digitization of the value chain for payments, including through the use of mobile wallets, digital ID, and a centralized payee list to ensure that health workers were identified and paid the correct amount on time.

The Bank of Sierra Leone released mobile money guidelines to resolve the problem. Before the epidemic, no legal framework existed for mobile money, so the National Telecommunications Commission had been licensing mobile network operators and third parties to provide mobile financial services only as a value-added service.<sup>45</sup> Because there was no official partnership or process between the Bank of Sierra Leone and the National Telecommunications Commission, non-bank players were required to demonstrate their services to the central bank while issuing a “letter of no objection” outlining monitoring market conduct requirements and monitoring obligations. Initially, the Bank of Sierra Leone leaned towards a bank-led model where DFSs could operate only in partnership with licensed banks. However, the DFS companies were effective in driving digital payments even while the relationships between banks and DFS were still immature. Having already implemented the Automatic Clearing House in 2013, the Central Bank of Sierra Leone authorized mobile wallets, allowing hazard payments to be transmitted to the bank accounts of Ebola workers.<sup>46</sup>

At the commencement of the mobile cash transfer program, only 15 percent of Sierra Leone’s response workers had valid registrations for mobile money despite nearly all of them possessing mobile phones. To further this process, authorities accelerated the bare minimum KYC requirements to ensure rapid registration of response workers and allow them to receive digital payments. However, many workers lacked identity documents because Sierra Leone’s national identification system amassed only 15 percent of the population. To complicate the process, 70 percent of the population shared the ten most common surnames,

which, in turn, added to the problem of identifying payees accurately and securely.<sup>47</sup>

Ultimately, DFS companies use facial recognition software for the biometric identification of workers. This method was preferred to fingerprint scanning, considering the perceived risk of Ebola virus transmission through physical contact. In a country with few ATMs and point-of-sale terminals, workers were able to cash out payments via the 5,000 agents spread across the country and the staff of Bank of Sierra Leone’s 13 community banks, ensuring liquidity of payments. In addition, people reported a high level of satisfaction with mobile transfers as 98 percent of response workers were paid in a timely and precise manner. Overall, enabling regulations and effective DFS for healthcare solutions to pay frontline healthcare workers in Sierra Leone created:

- > greater financial inclusion for low- and middle-income healthcare workers
- > an end to unauthorized deductions by employers
- > cost-savings of over USD10 million for governments and partners<sup>48</sup>
- > paid workers who went back to work saved over 2,000 lives in Sierra Leone at the height of the epidemic.

There is now a growing body of evidence showing that digital payments can accelerate greater financial and social inclusion, and the role of regulators cannot be understated. After the Ebola epidemic, global financial regulators recognized that they have the opportunity - and the responsibility - to prepare the global policymaking community for the risks and benefits of digitization. Another country example is the initiative Digital Liberia, a public-private partnership to bring mobile money salary payments to scale. For this project to move forward, multiple government and non-governmental bodies worked together to reconfigure the regulatory framework for e-payments and initiated a series of pilot projects to understand costs and benefits.<sup>49</sup>

45 Joe Abass Bangura. 2016. *Saving Money, Saving Lives: A Case Study on the Benefits of Digitizing Payments to Ebola Response Workers in Sierra Leone*. New York: Better Than Cash Alliance.

46 Ibid.

47 Accion International. 2021. *Learning From Ebola: How Mobile Money Can Prevent Health Crises*. Center for Financial Inclusion.

48 Itai Agur, Soledad Martinez Peria, and Celine Rochon. 2020. Digital Financial Services and the Pandemic: Opportunities and Risks for Emerging and Developing Economies. Special Series on COVID-19.

49 Claire Gowen. 2020. *Digital Liberia and Electronic Government Activity*. Washington, DC: United States Agency for International Development and Chemonics International Inc.

## ASIA

DFS MODELS	NUMBER
CROWDFUNDING (P2P)	1
DIGITAL SMART CARDS	0
EBANKING	0
EVOUCHERS	1
E-WALLETS	6
G2P	0
INSURTECH	28
MICROFINANCE	2
PAYMENTS	9
REMITTANCES	0
<b>TOTAL</b>	<b>47</b>

- > There were 47 DFS for healthcare models found in ten of 35 countries in Asia. The most common DFS for healthcare models found in Asia were Insurtech (28), digital payments (9) and e-wallets (6).
- > Out of five regions, Asia has the most Insurtech products (28), comprising more than half of DFS products offered in the region (55 percent), including selling insurance products and digital payment claims and billing.
- > The main target customer base for these models were patients (71 percent). Seventeen of 47 models specifically focused on vulnerable populations, such as low-income populations and SMEs.
- > Of 47 models, only three focused on bringing healthcare and financial access to women specifically, while the remainder focused on general healthcare.



In many Asian countries, DFS ecosystems, UHC commitments, and an internet penetration rate at 66% of the population have created a foundation for further cross-sectoral innovation<sup>50</sup>. Hurdles such as hard-to-reach rural areas, vast linguistic and cultural diversity, and a huge population size have traditionally made financial and healthcare inclusion difficult. However, this report found multiple examples of innovative DFS in healthcare.

Indonesia has a growing digital healthcare ecosystem.

Healthcare is increasingly being presented as an end-to-end service through a convenient “superapp” approach that provides a positive user experience on par with e-commerce, ride-sharing, and other digital services.

Market leaders in telemedicine, Halodoc<sup>51</sup> and Alodokter<sup>52</sup>, have quickly grown from providing teleconsultation services to building a healthcare ecosystem. Through an integrated digital healthcare platform, these companies provide access to e-prescriptions through pharmacies and deliver medications through a partnership with the dominant ride-hailing company, Gojek.

In addition, the financial services authority in Indonesia has encouraged the social healthcare insurance program (BPJS Kesehatan) to integrate DFS solutions into the healthcare system. BPJS collaborated with leading national banks to facilitate payments through mobile banking and ATMs and is now embracing the solutions offered by startups, such as digital access to healthcare information, e-payments, and checking and paying for healthcare bills online.

50 ITU Publications. [Measuring Digital Development: Facts and Figures 2021.](#)

51 Indo Tekno Podcast. 2020. The Patient is Paramount: Jonathan Sudharta of Halodoc. KrAsia.

52 Dean Koh. 2020. [Indonesia's Alodokter Successfully Raises Series C Extension Funding.](#) Mobihealthnews.





## BOX 2. CASE STUDY 2: WEDOCTOR (CHINA)

WeDoctor is an internet hospital established in 2011 to help patients search for a clinician, reduce appointment waiting times, and allow doctors more time with their patients. WeDoctor offers a digital platform that provides medical services, online pharmacies and cloud-based enterprise software for hospitals and other services.

### WHAT TYPES OF SERVICES DOES WEDOCTOR OFFER?

With a force of over 270,000 clinicians, WeDoctor offers chronic disease management through online consultations, prescriptions, and other medical services. WeDoctor also works with offline (traditional) hospitals and collaborates with the national healthcare insurance program. The rural population is served by WeDoctor's mobile diagnostic van service, which is linked to the hospital system. To pay for these services, the government has deemed WeDoctor as an acceptable healthcare service that can be reimbursed by the national healthcare insurance program. In all, there are three main ways to pay for WeDoctor services:

- > Reimbursement through the national healthcare insurance program
- > OOP payment
- > "Pocket" healthcare insurance packages offered through a partnership between WeDoctor and commercial (private) healthcare insurance companies

### WHAT PROGRESS HAS WEDOCTOR MADE DURING THE COVID-19 PANDEMIC THAT LED TO IMPROVED PARTNERSHIPS?

Regulators in China created licenses for internet hospitals in 2015, granting these institutions the ability to provide online consultations and prescriptions. As more patients choose online medical care, the COVID-19 pandemic has driven WeDoctor user adoption rates. Due to the higher number of users, the government approves using public healthcare insurance funds to reimburse healthcare services offered by internet hospitals. This has clarified and solidified the monetization of internet hospitals and the business model. In turn, this has led to many more partnerships, both with online and offline healthcare facilities.

WeDoctor has been successful at managing chronic disease during the pandemic as well as furthering its reach into rural populations through mobile medical and diagnostic services and linking them with specialists. Since the start of the pandemic, WeDoctor has helped the government save 12.7 percent per prescription cost through an accountability process that ensures doctors on the platform are not over-prescribing medications.



Source: Stakeholder interview, Jeff Chen (WeDoctor), 2021.

The Philippines has similar priorities of embedding digitization firmly within policy and regulation frameworks within the banking sector. In 2020, BSP approved a framework that recognizes digital banks as distinct from existing bank classifications.<sup>53</sup>

This new regulation is a part of the Monetary Board's greater Digital Payments Transformation Roadmap, a framework that outlines the regulatory environment needed to cultivate digital innovation and transformation within the country.<sup>54</sup> This policy is an integral step towards building the Philippines' digital maturity and setting the stage for improved customer experiences, greater efficiency and transparency, and increased accessibility of a broader range of affordable financial products that can also meet the needs of underserved members of society.<sup>55</sup>

Payment platforms allowing (P2P) payments, bill payments and mobile banking are also prevalent in Asia. PayMaya in the Philippines provides a way to pay healthcare bills at the point of service through the PayMaya card or the PayMaya Scan QR code. Frequent medical purchases made with PayMaya include telemedicine consults, medical supplies, medications and first aid supplies. Healthcare insurance bills can also be paid using the PayMaya app.

One unique feature offered is an easy, convenient link displayed on the app that prompts users to set up a linked bank account specifically to save for healthcare needs. After the setup, PayMaya makes it very easy to allocate funds directly into this account. In addition to this, PayMaya offers healthcare and nutrition education, financial planning advice and contactless payment options for preventive care activities.<sup>56</sup>

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Of growing interest in Asia, mutual aid and Islamic banking *takaful* products (a type of Islamic insurance wherein members contribute money into a pool system to guarantee each other against loss or damage) utilize crowdfunding mechanisms to pay for healthcare services and address high OOPs costs.

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Although the pathway to regulating them remains unclear, these models offer broad coverage to large segments of the population at affordable prices. In Indonesia, *takaful* firms are pioneering affordable DFS for healthcare models that reach Muslim communities. FWD Takaful in Malaysia created FWD Kasih specifically for low-income earners. FWD also engages in strategic public and private partnerships to bring value-added healthcare services such as free chatbots (Walnut

Wellness), digital therapeutics (Naluri) and customized online insurance products for people with cancer and learning disabilities.<sup>57</sup> However, due to marginal profits in this sector, more strategic partnerships and investments are needed to continue products for this segment of the population.

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53 Government of the Philippines. BSP. 2020. Circular No. 1105 Series of 2020: Guidelines on the Establishment of Digital Banks. Manila.

54 Government of the Philippines. BSP. 2020. BSP Digital Payments Transformation Roadmap 2020-2023. Manila.

55 Armand Akee Papa. 2021. The Philippine Banking Industry's Digital Era Begins. The Manila Times.

56 PayMaya. 2020. How to Use PayMaya to Pay for Health-Related Expenses. PayMaya Stories.

57 Vineeta Tan. 2020. Digital at its core: FWD Takaful to roll out new online products. IFN Fintech.



## EASTERN EUROPE

DFS MODELS	NUMBER
CROWDFUNDING (P2P)	0
DIGITAL SMART CARDS	0
EBANKING	1
EVOUCHERS	0
E-WALLETS	1
G2P	0
INSURTECH	2
MICROFINANCE	0
PAYMENTS	3
REMITTANCES	0
<b>TOTAL</b>	<b>7</b>

- > Companies offering DFS for healthcare models exist in two out of ten countries in Eastern Europe.
- > The most common DFS for healthcare models found in Eastern Europe were digital payments (3) and Insurtech (2).
- > The top healthcare DFS products or services offered by these models in Eastern Europe are billing and patient management.
- > The most prevalent health area DFS for healthcare models focused on was general healthcare. The main target customer base for these models were providers.
- > Of the nine DFS for healthcare models, no DFS specifically focused on vulnerable populations or women.



In Eastern Europe's mostly bank-led environment, the DFS landscape remains nascent. Recently, neobanks (internet-only banks) have been increasingly focused on reaching the underserved and unbanked populations.

**23%** In the Commonwealth of Independent States (Bulgaria, Estonia, Kazakhstan, Latvia, Lithuania, Romania, Russia and Ukraine), e-wallet payments accounted for 23 percent of all transactions, with a credit card and cash as preferred options.<sup>58</sup>

Although progress is slow, there is a movement towards more cashless payment methods.

Digital financial services remain heavily regulated in many of the Baltic states in Eastern Europe. While DFS companies are exploring their options for expanding into industries such as healthcare loans and life insurance, there remain several regulatory and infrastructure challenges. Government regulations focused on DFS and digital healthcare innovation could significantly push the creation and adoption of already successful models in the region. Currently, stringent regulatory and KYC requirements in many countries in Eastern Europe require the consumer to show multiple forms of ID, such as passports, residence permits and driver's licenses.<sup>59</sup> The road ahead includes the task of assuring DFS privacy, safety, and higher efficacy of verification processes.

Varying forms of public and private healthcare insurance programs in Eastern Europe have cultivated traditional and innovative insurance models, modernized by digital distribution channels such as smartphone applications, gamification, and remote access to Telehealth services. Adoption of DFS in Eastern Europe is slower than in other regions, and it generally targets the wider population in order to first demonstrate success in DFS emerging technologies. The gender equity gap in Eastern Europe is relatively smaller than in other regions, as many countries have a long history of striving for gender equality. Distribution channels such as these - in addition to enabling regulations - could be especially useful in improving women's economic empowerment (WEE) and closing the gender gap in finance, education and healthcare in Eastern Europe.

<sup>58</sup> J. Luty. 2021. [Share of payment methods used in Eastern Europe and the Commonwealth of Independent States \(CIS\) in 2020. Statista.](#)

<sup>59</sup> Stakeholder interview, Eliot Goykhman (Zelf), 2021.

## LATIN AMERICA

DFS MODELS	NUMBER
CROWDFUNDING (P2P)	1
DIGITAL SMART CARDS	0
EBANKING	2
EVOUCHERS	0
E-WALLETS	2
G2P	4
INSURTECH	2
MICROFINANCE	2
PAYMENTS	0
REMITTANCES	0
<b>TOTAL</b>	<b>13</b>

- > Companies that offer DFS for healthcare models were found in seven out of the 20 countries in Latin America.
- > The most common DFS for healthcare model found in Latin America was G2P (4), the only region for which this was the case.
- > Latin America has specifically focused on vulnerable populations such as low-income populations and SMEs.
- > Of 13 total models, only two focused on bringing healthcare and financial access to women specifically.



Drawing parallels to Africa and Asia, Latin America has also seen a profound drive in the development and innovation of DFS, particularly in the midst of the COVID-19 pandemic.

Due to the healthcare crisis, the predominantly cash-based region has had to quickly move into digital and online payments through the rapid digitization of banks and G2P aid.<sup>60</sup> There is also an uptick in users previously not engaged in digital healthcare services who are now receiving G2P aid and engaging in cashless transfers.<sup>61</sup>

Though banks have rapidly digitized their products and services during the pandemic, DFS are ultimately driving financial inclusion in Latin America and designing products and services specifically for vulnerable and unreached populations.<sup>62</sup>

Overall, there are good opportunities and a high willingness for partnerships among healthcare systems and telemedicine companies. Still, the process of obtaining these is wrought with challenges as each step is done in silos, making the entire process time-consuming and difficult.<sup>63</sup>

In Brazil, the central bank supports innovation by allowing neobanks, such as Nubank, to offer a range of non-financial services through partnerships with insurance and healthcare companies. During the pandemic, Nubank provided funds for mental healthcare services for their customers and credit for customers short on cash for essential goods in partnerships with DFS company Rappi. Regulations and strategic partnerships also allowed Nubank to delve into Telehealth services for their customers, focusing these efforts on their SME and women-led business customers.<sup>64</sup>

60 Ximena Aleman. 2020. [Coronavirus Accelerates Change in Latin America's Fintech Sector](#). MarshMcLennan.

61 Ibid.

62 Stakeholder interview, Lariza Galindo (IFC), 2021.

63 Ibid.

64 Alejandro Gonzalez Ormerod. April 2020. [Nubank splurges US\\$3.8 million to help cash-short customers](#).



## BOX 3. CASE STUDY 3: PRO MUJER (BOLIVIA)

**Pro Mujer is a social enterprise that offers programs aimed at financial inclusion, improved healthcare and advanced education for low-income women in Latin America.**

**WHAT TYPES OF SERVICES DOES PRO MUJER OFFER?**

Financial services form the core of Pro Mujer's offerings, followed by healthcare services provided to women and can be accessed using their current line of credit. Healthcare services range from basic screenings to mental healthcare, nutrition education, and reproductive healthcare services.

**HOW IS PRO MUJER USING DFS TO IMPROVE WOMEN'S HEALTH?**

Pro Mujer has been applying DFS for healthcare models since its founding in 1990. In Argentina, interest rate payments are used to create access to healthcare services. In Bolivia, preferential prices for prepaid healthcare packages are provided to clients accessing Pro Mujer's financial services. Wanting women to have the right to choose the services and products that work for them, Pro Mujer has also helped women in Nicaragua in acquiring high-quality, effective contraceptive devices by negotiating prices directly with the pharmaceutical companies, including some of the costs in their communal banking credit, then purchasing the implants in bulk through a revolving fund.

Pro Mujer has partnered with insurance company Allianz to offer an e-wallet that can be used to pay for

healthcare services and other services and products while at the same time generating data about payments behaviors. This account can be opened using a digital ID, making it easier for unbanked, low-income populations to access. With the combined goal of improving physical healthcare, offering practical skills training to users, and expanding financial and digital literacy, this wallet built more services into the platform as the user base grows.

**WHAT ARE OTHER PRO MUJER HEALTH PROGRAMS OFFERED THROUGH DIGITAL CHANNELS?**

- > A bundled DF product for women who are victims of domestic violence
- > Telehealth in partnership with NGOs and healthcare organizations
- > WhatsApp chatbots for chronic disease and cancer screening

Pro Mujer serves as a mature model for employing DFS to enforce positive changes in women's overall well-being. They continue to fulfill their mission of investing in women (\$4.1 billion and counting) to bring about gender equality in the Latin American region.



Source: Stakeholder interview, Fernanda Diaz de la Vega (Pro Mujer), 2021; Stakeholder interview, Mauricio Viscara Vargas (Pro Mujer), 2021; Investing in Women is in Our DNA. Pro Mujer.; Pro Mujer. Our Work.



## MIDDLE EAST

DFS MODELS	NUMBER
CROWDFUNDING (P2P)	0
DIGITAL SMART CARDS	0
EBANKING	0
EVOUCHERS	0
E-WALLETS	1
G2P	0
INSURTECH	3
MICROFINANCE	0
PAYMENTS	2
REMITTANCES	0
TOTAL	6

- > Companies offering DFS for healthcare models exist in two of 17 countries in the Middle East. The most common DFS for healthcare models found in the Middle East are Insurtech (3) and digital payments (2).
- > Top healthcare products or services offered by these models in the Middle East include insurance and digital payment claims and billing.
- > The most prevalent healthcare area DFS for healthcare models in Africa focused on was general healthcare. The main target customer base for these models were patients.
- > Middle East (4) specifically focused on vulnerable populations such as low-income populations, SMEs and informal workers.
- > Of six total models, one focused on bringing healthcare and financial access to women specifically.



Digital penetration has steadily increased across the Middle East, with approximately 78% of the population with access to the internet<sup>65</sup>.

The region's heterogeneity lends to culturally, politically, and economically diverse communities. Stable infrastructures, major DFS investments and strong central banks have regulated digital payment services and other technology gateways and crowdfunding regulations in the UAE, Lebanon and Bahrain.<sup>66</sup> In Jordan, regulators supported COVID-19 relief efforts through digital delivery of government stimulus payments, facilitated the use of digital payments and provided support in healthcare applications. The central bank utilized digital payments to help limit the spread of infection by postponing the loan repayments of customers affected by the outbreak of COVID-19. Later, the Central Bank of Jordan launched the Finance Facilitation Program for SMEs to cope with the adverse effects of COVID-19 more easily.<sup>67</sup>

Dubai-based healthcare insurance startup, Sehteq is in the process of building a payment gateway to allow its users to apply for micro-loans to finance certain medical procedures not typically covered by insurance. This will allow small hospitals and clinics to manage their revenue cycle with insurance companies and medical supply payments to their vendors. Sehteq's goal is to streamline support healthcare systems, polyclinics and medical clinics to outsource all business and technology processes to allow healthcare systems to focus more fully on patients' needs.<sup>68</sup>

Overall, this report found that open banking can change the landscape in the Middle East by reshaping DFS and encouraging innovation outside the traditional financing sector. COVID-19 has shown that customers are more willing to share their data to help them transact more easily. Regulators in Bahrain have developed policy frameworks, and the Saudi Arabian government is implementing FinTech regulatory sandboxes to encourage innovation. An increasing number of FinTech and DFS companies are interested in entering the market; initiatives by regulators such as these open the door for more dialogue.<sup>69</sup>

65 ITU Publications. [Measuring Digital Development: Facts and Figures 2021.](#)

66 WeForum. October 2020. [COVID-19 spurred a rise in FinTech. Now regulators are catching up.](#)

67 AFI. July 2020. [Jordan quick to shield MSMEs amid COVID-19 downturn.](#)

68 <http://www.sehteq.com/>

69 PricewaterhouseCooper. 2021. [The local FinTech opportunity in a Post COVID-19 World.](#) PwC.

# SECTION 3

## INNOVATION HEALTHCARE CONCLUSIONS





## INNOVATIVE PARTNERSHIPS AND REGULATORY SUPPORT FOR DFS FOR HEALTHCARE

While the DFS for healthcare landscape remains nascent, government, private, and public companies have taken regulatory and collaborative actions that have bolstered the DFS ecosystem, creating more opportunities for DFS companies to explore partnerships with the healthcare sector.

Diverse and sustained partnerships are a key feature of a thriving DFS for healthcare model that can further financial and healthcare inclusion for vulnerable populations.

# 76%

Across all five regions, 76 percent of the total models formed partnerships with private companies, 17 percent with public organizations and seven percent with NGOs.

# 28

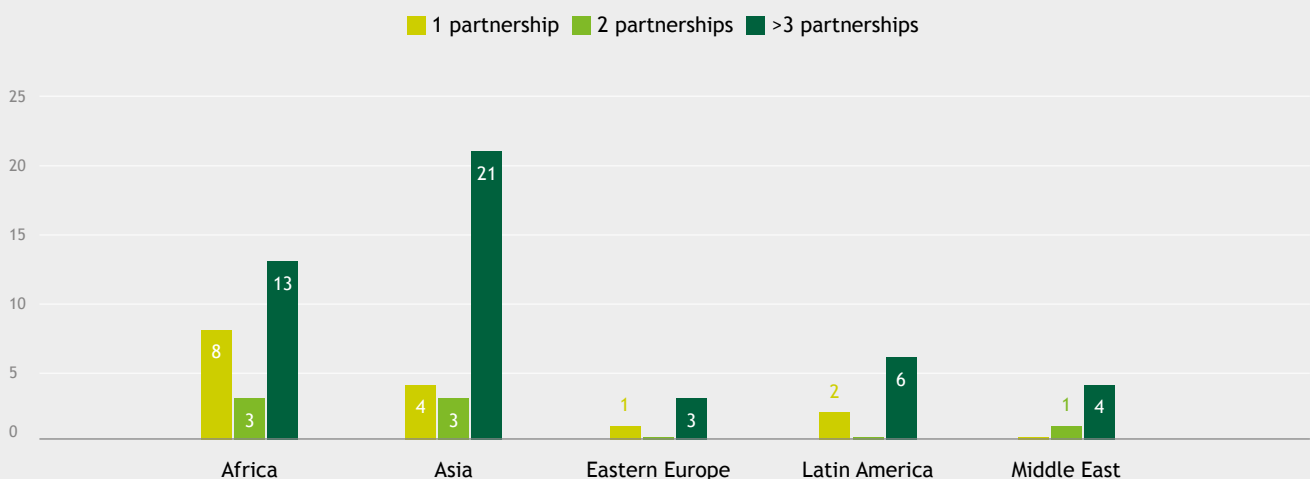
DFS for healthcare companies in Asia formed the largest number of partnerships out of all regions (28).



### AFRICA

In Africa, 24 of 41 total models engaged in partnerships to support their services' design, implementation, and scaling. Most of these partnerships were with private organizations, such as telecommunications companies (telcos) and insurance organizations. Countries like Nigeria and Kenya have formed partnerships to further financial inclusion in largely unbanked populations. Guided by the National Financial Inclusion Strategy, the Central Bank of Nigeria supports sandboxes that bring together partners, such as the Nigeria Inter-Bank Settlement System, Financial Services Innovators and the private sector, to drive policy change.<sup>70</sup>

**FIGURE 3: NUMBER OF DFS FOR HEALTHCARE MODELS INVOLVING PARTNERSHIPS**



Source: ACCESS Health International

70 Central Bank of Nigeria. 2018. [National Financial Inclusion Strategy \(Revised\)](#). Abuja: Central Bank of Nigeria.

In a cautious but active regulatory environment, regulators and partners can take customized action to further DFS innovation. In Kenya, telecommunications company Safaricom launched M-Pesa in 2007. Initially, M-Pesa was launched to improve the efficiency of microfinance institutions by increasing the user base and extending its reach into remote locations. Safaricom approached the Central Bank of Kenya (CBK) to propose a nationwide launch of M-Pesa, capitalizing on the government initiative to digitize the national financial system. This led to conversations with other entities, such as the Communication Commission of Kenya, the Ministry of Information and Communication and private sector companies. CBK determined there were more benefits than risks to trying out the M-Pesa model on a national level. The “Test and Learn” approach, described in more detail later in this report, taken by the CBK involved stop-gap measures instead of stifling regulatory reform and the classification of M-Pesa as a banking product. M-Pesa has partners across sectors, including healthcare, and more than 42 million active users.<sup>71</sup>



## ASIA

In Asia, key partnerships supporting DFS for healthcare models were mostly in the private sector. Consistent with the regional trend of DFS offering Insurtech and digital payments, most partnerships are between leading insurance providers and financial institutions. 68 percent of partnerships involve more than three stakeholders. One way that regulators in Asia directly support the advancement of DFS is by implementing more flexible know-your-customer (KYC) processes and relaxed on-boarding requirements, making it easier for consumers to open an account.<sup>72</sup>

In China, key public-private partnerships were necessary to legitimize telehealth during COVID-19, resulting in the reimbursement of telehealth services through the national healthcare insurance program. Government entities licensed “internet hospitals,” or online hospitals that provide medical consultations and prescriptions. To this end, regulators in China issued a series of policies to integrate online medical services and long-term prescription plans into medical insurance reimbursement allowances, facilitating the growth of medication delivery services and implementing oversight programs to assure consumer safety and high-quality services.<sup>73</sup>

The Philippines also has an advancing DFS ecosystem that supports the expansion of financial inclusion. Government regulators closely follow the market

to allow non-bank DFS companies to offer financial services and scale through licensed remittance agents. The Bangko Sentral ng Pilipinas (BSP) incorporates these learnings after observing how the product or service operates in the market for a few years.<sup>74</sup> Consequently, BSP has issued e-money regulations tailored to the Filipino market and runs a regulatory sandbox to innovate and scale the market continually. These regulatory successes make it easier for DFS companies to explore partnerships with non-financial entities such as healthcare.



## EASTERN EUROPE

In Eastern Europe, partnerships around DFS for healthcare models exist mainly between private companies: DFS or financial institutions, healthcare providers and medical products suppliers.

One such partnership can be found in Latvia between financial institutions and DFS company, Zelf. Zelf offers a way to transact digitally using only a phone number and any messaging platform (Facebook, WhatsApp, etc.).<sup>75</sup> While entering markets in Europe, Zelf has been working with partners who are willing to function within the existing bank-based regulatory environment. While most banking partners are risk-averse, many are willing to learn about the high level of safety digital transactions offer. New and creative DFS solutions such as the one Zelf offers are usually met with cautious optimism from regulators, showing the importance of balancing relationship-building and innovation.<sup>76</sup> However, some countries in the region have clear legislation restricting non-bank FSPs from issuing e-money. Still, other countries have few regulations overall, making DFS companies’ innovation difficult to penetrate the banking industry and provide services needed to work within the healthcare system.

71 Njuguna Ndung’u. 2021. [A Digital Financial Services Revolution in Kenya: The M-Pesa Case Study](#). Nairobi: African Economic Research Consortium.

72 Christopher Lowe, Erdoo Yongo, and Cicely Corbin. 2021. [Digital Identity: Accelerating Financial Inclusion During a Crisis](#). London: GSM Association.

73 Shuangyi Sun, Keting Yu, Zhen Xie, and Xiaoting Pan. 2020. China empowers Internet hospital to fight against COVID-19. *J Infect* 81 (1). doi: 10.1016/j.jinf.2020.03.061

74 World Bank. 2020. [How Regulators Respond to Fintech Evaluating the Different Approaches—Sandboxes and Beyond](#).

75 Zelf. [Card](#). Accessed October 28, 2021.

76 Stakeholder interview, Eliot Goykhman (Zelf), 2021.





## LATIN AMERICA

In Latin America, partnerships in DFS for healthcare were mostly among private companies. These partnerships include financial institutions, healthcare providers, medical products suppliers and telcos. Many public and private entities in Latin America have started to lay the groundwork for regulations and partnerships that encourage innovation in financial services. For example, Mexico's "Ley Para Regular Las Instituciones De Tecnología Financiera (Law to regulate financial technology institutions)" was set to take effect in 2021, providing opportunities for DFS companies to offer new products while subject to the same regulatory and supervisory requirements as traditional financial institutions.<sup>77</sup> By creating this framework, the government hopes to increase financial inclusion, promote a formalized economy and transition the mostly cash-based society towards DFS and transactions. The law provides regulations for digital wallets, crowdfunding and mobile payments. In addition, open banking and application programming interfaces will be required among all financial institutions in a consumer-centric approach.



## MIDDLE EAST

In the Middle East, existing partnerships around DFS for healthcare are mostly between private companies, such as telecommunication companies and insurance providers. Yet, there is a unique initiative among public entities. In 2020, the UAE government announced that it will merge The Insurance Authority (IA) with the Securities and Commodities Authority (SCA) and that the Central Bank of the U.A.E (CBUAE) will assume supervisory and regulatory responsibility of the insurance sector.<sup>78</sup> This change will give CBUAE a broader mandate to ensure high quality standards to more than one sector, including insurance, banking, and payments services. Previously, the IA required licenses and bank guarantees for Insurtech companies to operate, placing a national cap on the total number of licenses. Now, the CBUAE can assure best practices in this area, as well as facilitate the advancement of new technologies across the financial sector in an effort to create healthy competition, encourage innovative fintech solutions, and facilitate financial inclusion.

# DFS FOR HEALTHCARE CAN PROMOTE GENDER INCLUSION

As seen in the regional examples above, DFS for healthcare models can enable the path to include customer segments otherwise overlooked by formal financial services.

For example, the Bill and Melinda Gates Foundation's concept of WEE is defined as "the transformative process that helps women and girls move from limited power, voice, and choice at home and in the economy to having the skills, resources, and opportunities needed to compete equitably in markets as well as the agency to control and benefit from economic gains." For countries to progress towards WEE, women should be able to:

- > access to income and assets
- > have control of and benefit from economic gains
- > possess the power to make decisions<sup>79</sup>

Additionally, WEE presents "evidence of strong positive links between WEE and foundational healthcare outcomes for women and their families, including beneficial effects on nutrition, family planning, maternal mortality, and child mortality."<sup>80</sup> When women have more control over their household income, better choices are made for the entire family, such as greater investment in children's education, delayed marriage and reductions in gender-based violence.<sup>81</sup> DFS for healthcare models that make it easier for women to have control over household financial decisions can lead to better health-seeking behaviors and higher savings for current future healthcare needs.

DFS models - especially those that have adopted a gender lens - provide the basic tools needed for women to prosper in their economy, going beyond simply having a bank account to allowing them to have savings, build credit and make digital payments when and how they

<sup>77</sup> Angela Strange and Matthieu Hafemeister. 2021. [Latin America's Fintech Boom](#). Andreessen Horowitz. 13 April.

<sup>78</sup> Central Bank of the U.A.E. 2021. [CBUAE commences operational procedures to execute Insurance Authority merger](#). Central Bank of the U.A.E.

<sup>79</sup> Bill & Melinda Gates Foundation. 2019. Our approach. Women's Economic Empowerment.

<sup>80</sup> Ibid.



















<sup>81</sup> Ibid.

want. Further, DFS models can aid in empowering women-led businesses through improved access and use of financial services ranging from receiving loans and salaries to making merchant payments through e-wallet transfers. By integrating health-tech and DFS, various models can allow unreached and underserved populations to access comprehensive end-to-end healthcare services.

Though relatively few DFS for healthcare models adopt a gender lens when offering their services, there are key examples of what can happen when women's financial and healthcare access is improved through DFS. In Nepal, women who live in slums were offered easily accessible, no-fee bank accounts, which led to increased spending on meat and fish, education and ceremonies, equipping their entire households to better cope with healthcare emergencies. In the event of a healthcare shock, households with accounts saw a smaller drop in their income than households without an account.<sup>82</sup> BIMA, a leading mobile delivery-based insurance provider in Indonesia, has partnered with the Pacific Financial Inclusion Program to provide microinsurance products to underserved communities in Papua New Guinea. BIMA's innovative microinsurance products allow their customers, primarily women and those living in rural areas, to forego the lengthy paperwork process, preliminary healthcare checks and identification process required for traditional insurance products and allows users to subscribe via text message instead.<sup>83</sup>

Marie Stopes works with local partners in Madagascar to provide reproductive healthcare e-vouchers to young rural women. The 40 percent mobile penetration rate provided the opportunity to deliver the healthcare vouchers electronically and make the program appealing and novel to the younger generation targeted by the program. Healthcare vouchers are redeemable for voluntary family planning and sexually transmitted disease information and services.<sup>84</sup> In Kenya, having an M-Pesa account for emergency medical savings was shown to reduce transactional sex and self-reported sexually transmitted disease infections among women.<sup>85</sup> Additionally, through a combination of M-Pesa mobile banking, public information, and free treatment options, the cost of fistula repair and associated transportation costs were minimized.<sup>86</sup> Latin America-based Pro Mujer concluded that companies that add a gender strategy to their business processes improve profitability and productivity, talent pool and retention, creativity, innovation, and openness. It is not only the right thing to do; it is a smart choice.

TABLE 2: NUMBER OF DFS MODELS ADDRESSING WOMEN PER REGION

COUNTRY/REGION	DFS MODELS ADDRESSING WOMEN
<b>AFRICA</b>	 11
Egypt	 1
Ethiopia	 1
Ghana	 1
Kenya	 3
Madagascar	 1
Nigeria	 1
Senegal	 2
South Africa	 1
<b>ASIA</b>	 3
Bangladesh	 2
India	 1
<b>LATIN AMERICA</b>	 2
Mexico	 1
Paraguay	 1
<b>MIDDLE EAST</b>	 1
United Arab Emirates	 1
<b>TOTAL</b>	 17

82 Arisha Salman and Keiko Nowacka. 2020. Innovative Financial Products and Services for Women in Asia and the Pacific. ADB Sustainable Development Working Paper Series 67. Metro Manila: Asian Development Bank. DOI: <http://dx.doi.org/10.22617/WPS200119-2>.

83 Ibid.

84 Eva Burke, Judy Gold, Lalaina Razafinirinasoa, and Anna Mackay. 2017. Youth Voucher Program in Madagascar Increases Access to Voluntary Family Planning and STI Services for Young People. *Global Health Science and Practice* 5 (1). 23 February. doi: 10.9745/GHSP-D-16-00321.

85 Kelly Jones and Erick Gong. 2019. Precautionary Savings and Shock-Coping Behaviors: The Effects of Promoting Mobile Bank Savings on Transactional Sex in Kenya. *American University Working Paper Series*. 27 September. <https://doi.org/10.17606/cpav-7w34>.

86 USAID and FistulaCare. 2011. [Making Mobile Phones Work for Women with Fistula: The M-PESA Experience in Kenya and Tanzania](#).



# MAIN CONSIDERATIONS FOR POLICYMAKERS AND FINANCIAL REGULATORS

## REGULATORY APPROACHES TO DFS FOR HEALTHCARE INNOVATION

It is vital for any policymaker or financial regulator to ask which policy levers are available to them within the boundaries of their own regulatory environment and how these can be used and adapted to pave the way for partnerships and projects that support a thriving DFS for the healthcare sector.

By leveraging on current efforts to promote an enabling environment for DFS services, the way is paved for DFS for healthcare models to progress. The following DFS regulatory approaches can be used as general frameworks under which specific regulatory actions can be taken to support DFS in healthcare.

### WAIT-AND-SEE

In this approach, regulators are largely observers. This strategy enables unconstrained innovation while policymakers and regulators continuously monitor associated trends, eventually followed by interventions. While appearing as a more passive approach, this strategy is active learning. It involves close interaction with private and public entities to understand how new partnerships, products, and services work in the market.

### TEST-AND-LEARN

This approach emphasizes flexibility and cautious yet customized action on the part of the regulators. This strategy aims to allow each business case to function in a live environment subject to varying degrees of supervision and oversight and collect data for evaluation. As a result, the regulators can better understand the involved market risks and implement the necessary policy adjustments with respect to the particular business case.

### INNOVATION FACILITATORS

Acting as innovation facilitators is a more resource-intensive strategy enforced in a structured, top-down format to promote innovation and experimentation. The outcomes of these strategies often fall into three

categories: thematic innovation hubs, accelerators, and regulatory sandboxes.



### REGULATORY LAWS AND REFORMS

Immediate regulatory reform results in new laws or licenses specifically catered to innovative firms and business models. To accommodate DFS innovation in the absence of applicable existing regulatory frameworks, strong policy responses can be used to re-evaluate and amend current regulatory frameworks, develop new ones, or prohibit certain DFS activities.<sup>87</sup>

## KEY CONSIDERATIONS AND RECOMMENDATIONS

When it comes to creating an enabling environment for DFS for healthcare models, no solution will work on its own. In fact, engaging in multiple gender-sensitive/transformative regulatory approaches - and in some cases combining them - may be the best way forward to designing policies that protect consumers' financial and physical health while allowing innovation of DFS in healthcare.









The key is to create a “bridge” between financial and healthcare regulators, with the involvement of each ecosystem player, so that knowledge, inspiration, information and lessons learned can be shared. One example of this can be seen in the collaboration of insurance and labor regulators in Ghana to digitize the insurance renewal process, increasing the number of renewals by allowing users to pay premiums and renew their membership with mobile money.<sup>88</sup>

This collaboration brought together the right ecosystem players but was solidified by having the regulators and governments bodies involved in the process. Finally, when executed successfully, policymakers and regulator action should lead to collaborative pilot projects where all stakeholders are active participants, working towards financially sustainable, consumer-centric and well-regulated DFS for healthcare solutions.

<sup>87</sup> Sharmista Appaya and Helen Luskin Gradstein. 2020. [How Regulators Respond to Fintech: Evaluating the Different Approaches—Sandboxes and Beyond](#). Washington, DC: The World Bank Group.

<sup>88</sup> Aparna Dalal, Lisa Morgan, and Shilpi Nanda. 2019. [Case Brief: Nhia, Ghana](#). Geneva: International Labour Organization.

**FIGURE 4: REGULATORY, COLLABORATIVE AND INFRASTRUCTURE LIMITATIONS AND ENABLERS TO FINANCIAL AND HEALTHCARE ACCESS**

						
		AFRICA	ASIA	EASTERN EUROPE	LATIN AMERICA	MIDDLE EAST
<b>FACTOR 1: REGULATORY</b> 	Limitation	Fintechs are limited to functioning only within current banking regulatory frameworks				
	Enabler	Both Wait and See & Test and Learn approaches led to scaling of DFS for health model			In certain countries, regulations allow for bundling of health products, improving usage	Greater understanding when - regulators & FSPs maintain close relationship
<b>FACTOR 2: MULTI-SECTORAL PARTNERSHIPS</b> 	Limitation	In Mexico, sandboxes have been hard to get off the ground due to lack of interest from partners				
	Enabler	Finding the right partners helps regulators better understand consumer safety				
<b>FACTOR 3: DFS INFRASTRUCTURE</b> 	Limitation	COVID-19 had greater negative health and financial impact in countries in all regions with less mature DFS infrastructure				
	Enabler	Increased number of users and sufficient data demonstrates consumer satisfaction, high usage, and promotes gov collaboration			Bundling health products onto already effective tech platforms improves usage	



Based on the analysis of the current DFS for healthcare models and landscape and the supporting case studies, the following are the top three considerations for policymakers and financial regulators to highlight where and how their actions will have the greatest impact:

### KNOWLEDGE-SHARING AND AWARENESS

Activities to promote knowledge-sharing and awareness are particularly important for policymakers and regulators with nascent DFS for healthcare landscapes who want to identify and support emerging technologies. This strategy also encourages multisectoral engagement and the translation of technologies and approaches. Regulators can design and establish a process for continuous learning across industries, consumer groups, and private and public stakeholders. In Kenya, M-Pesa grew in an environment where knowledge-sharing was deemed a priority. Consequently, the model scaled and grew in a way that benefited all partners involved. Eventually, M-Pesa became a DFS platform that collaborators from many different sectors can build onto and offer their products and services, such as water vending machines for slums, virtual healthcare insurance products and solar energy services.<sup>89</sup>

**KEY ACTION:** Proactive awareness programs to find and support emerging innovative DFS for healthcare technology

### ENGAGEMENT AND COLLABORATION

WB recommends central banks to “engage early and often with the market” so they can benefit from stakeholders, such as new entrants, incumbents, individual experts, academics, industry associations and other regulatory authorities.<sup>90</sup> Common goals for an engagement strategy include co-designing plans for putting pilot projects in place, discussing regulatory hurdles in real-time with DFS partners who are already working in healthcare and evaluating engagement activities to assess processes that work and strengthen those that do not.

One of the most impactful actions regulatory bodies can take is to create a thematic innovation hub. Innovation hubs provide a dedicated point of contact for companies to raise inquiries with competent authorities on issues related to their business and seek non-binding guidance on regulatory and supervisory expectations.<sup>91</sup>

During a focus group hosted to develop this report, the Comisión Nacional Bancaria y de Valores (CNBV) of Mexico spoke about challenges when onboarding companies to their newly established DFS sandbox. In response, the Central Bank of Mexico implemented a sandbox challenge. This initiative challenged innovators to go through many kinds of training from various legal, financial, etc. In addition to creating partnerships to promote the sandbox, this challenge strengthened the business models of participating companies within the sandbox. Through these and similar initiatives, regulators can encourage the participation of DFS for healthcare companies in their sandboxes and innovation hubs.

An additional benefit to innovation hubs is bringing together regulators across the government. For example, in 2016, the Central Bank of France set up a DFS innovation unit to interface between project initiators and regulators, including coordinating between departments within the bank on projects regarding payment services projects and with France’s stock market regulator for investment services projects.

Thematic innovation hubs can also be intentionally designed through a lens of gender equity. In both healthcare and finance, equity does not trickle down; it must be concertedly designed for and prioritized. Similarly, government bodies and regulators must adopt an equity lens to investments in and support of digital financial products and innovation, including through the creation of thematic innovation hubs that target both women and underserved populations.

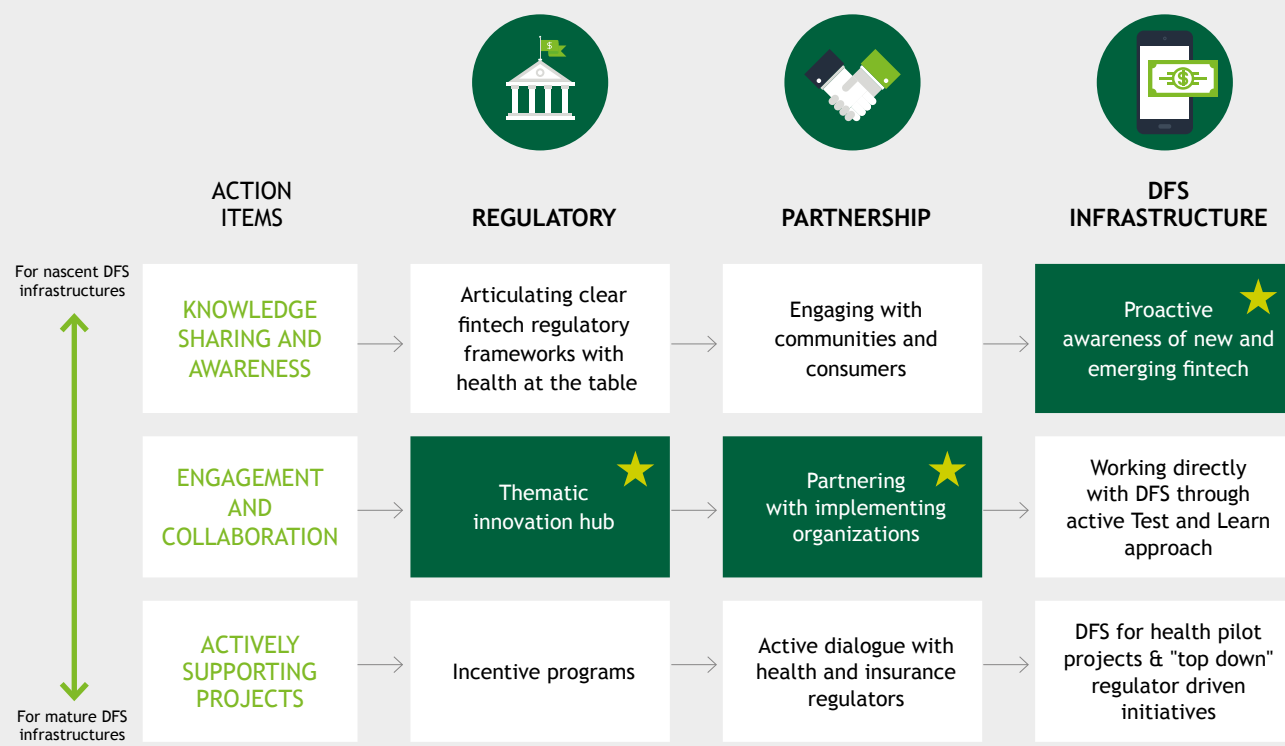
**KEY ACTION:** designing, creating, and implementing thematic innovation hubs with implementation partners

89 Njuguna Ndung’u, [A Digital Financial Services Revolution in Kenya: The M-Pesa Case Study](#).

90 Sharmista Appaya and Helen Luskin Gradstein, [How Regulators Respond to Fintech: Evaluating the Different Approaches—Sandboxes and Beyond](#)

91 Ibid.

FIGURE 5: PRIMARY RECOMMENDATIONS & AND KEY ACTIONS THAT SUPPORT DFS FOR HEALTHCARE



Source: ACCESS Health International

## ACTIVELY SUPPORTING PROJECTS

A more involved approach for regulators is to actively support programs and projects that find, test and invest in DFS for healthcare models. Some top-down regulator-driven initiatives use existing data to support more pilot projects and further public-private partnerships for greater competition within the sector. For example, in China, by offering internet hospital licenses and allowing certain Telehealth services to be reimbursed by the national healthcare insurance program, the industry grew rapidly. In this way, Chinese regulators progress with innovation rather than work against it while at the same time maintaining a level of control over the entire industry.

In the Philippines, insurance regulators such as the Insurance Institute of Asia Pacific promote certain microinsurance and microfinance products by acting as quasi-government bodies.<sup>92</sup> They do this by creating statutory qualifications for salespersons in the sector, participating in webinars featuring microinsurance products and allowing industries to promote a new

product or concept through its distribution channels.<sup>93</sup> In addition, the Insurance Institute of Asia Pacific provides information on microinsurance products and their ability to support low-income populations. It runs a program to improve financial literacy on life and non-life microinsurance. These efforts have successfully encouraged the formation of public-private partnerships in the microinsurance industry.<sup>94</sup> In the same way, financial regulators can promote health-specific DFS products and facilitate FinTech-healthcare partnerships.

**KEY ACTION:** support DFS for healthcare pilot projects and top-down regulator-driven initiatives

<sup>92</sup> Martina Wiedmasier-Pfister, Matthew Jowett, Dante Portula, and Gilberto Llanto. 2007. [Microinsurance Innovations Project \(MIP\) in the Philippines](#).

<sup>93</sup> Insurance Institute for Asia and the Pacific in cooperation with Asean Insurance Council. 2021. [Microinsurance - Assuring Success. Glue Up](#).

<sup>94</sup> Insurance Commission. [Magpaseguro Para Protektado](#). Micro Insurance.



# CONCLUSION

While the DFS for healthcare landscape is still expanding across all regions, this report demonstrates that the role of all partners - DFS, healthcare and regulators - in addressing the healthcare and financing needs of vulnerable populations, including women, through innovative products and services. The application of DFS in healthcare is still in its incipient, and there are promising but important questions to answer.

- > Can regulators pave the way towards an enabling ecosystem for these models to thrive?
- > Do regulators benefit through shared knowledge, pilot testing and actionable data collection?
- > Do healthcare providers benefit through improved access and quality of the care they can give?
- > Do DFS and finance companies benefit through a more comprehensive understanding of and penetration into unbanked and underserved populations?

- > And most importantly, are patients better able to access high-quality, affordable healthcare services, and does their financial health improve, using DFS for health models?

COVID-19 and other stressors to the financial and healthcare systems demand that countries smartly invest in comprehensive digital solutions so that patients can access and pay for healthcare services.

To do this, financial regulators must play an active role in enabling this progress. Adaptations and advances to both the finance and healthcare sectors in the first half of 2020 highlighted the failures of our current system that fell - and continue to fall - disproportionately on vulnerable populations.

The only way forward towards UHC is an ecosystem that enables this progress so all can access the healthcare services they need without suffering financial hardship.







## ABBREVIATIONS

<b>BSP</b>	Bangko Sentral ng Pilipinas
<b>CBK</b>	Central Bank of Kenya
<b>DFS</b>	Digital Financial Services
<b>FSP</b>	Financial Service Provider
<b>G2P</b>	Government-to-person
<b>KYC</b>	Know Your Customer
<b>OOP</b>	Out-of-pocket
<b>P2P</b>	Peer-to-peer
<b>SDG</b>	Sustainable Development Goal
<b>SME</b>	Small and Medium Enterprise
<b>Telcos</b>	Telecommunications Companies
<b>UHC</b>	Universal Health Coverage
<b>WB</b>	World Bank
<b>WEE</b>	Women's Economic Empowerment
<b>WHO</b>	World Health Organization

## GLOSSARY OF TERMS

<b>Cash-in-cash-out services</b>	services involving exchange of physical money to and from electronic value
<b>Cashless transfer</b>	mode of financial transaction using cards or digital accounts rather than physical money
<b>Credit scoring</b>	process used by lenders and financial institutions to determine the meritoriousness of a potential borrower
<b>Crowdfunding</b>	the practice of using digital platforms to match investors or donors to enterprises with specific projects to be funded
<b>Digital credit/ lending</b>	loans acquired through digital channels, mobile phones, or via a third-party agent
<b>Digital financial services</b>	financial services such as payments, credit, savings, remittances, and insurance that are accessed and delivered through digital channels
<b>Digital Insurance / Insurtech</b>	an insurance company, intermediary, or insurance segment specialist that utilizes technology to compete or provide value-added benefits to the insurance industry
<b>Digital payment</b>	a means of transferring value from one payment account to another with a digital device
<b>Digital remittances</b>	cross-border money transfers made using internet services by a migrant population
<b>Digital savings</b>	a savings account or e-wallet which contains electronic deposits of money dedicated to healthcare expenses
<b>Digital Smart Card</b>	a non-physical card used for electronic processes such as financial transactions and personal identification
<b>eBanking</b>	the process of accessing banking products and services through virtual means
<b>End-to-end service</b>	a service carried out by a provider from its beginning to its end without assistance from a third-party

<b>eVouchers</b>	a financial product which can be used to claim discounts, goods, or services through virtual means
<b>e-wallets</b>	an electronic service that keep financial resources and/or products and allow an array of digital transactions
<b>Financial access</b>	the availability and affordability of financial services considering the capability of individuals and firms
<b>Financial [inclusion]</b>	providing affordable and accessible financial products and services, to low-income segments of society
<b>Financial technology (Fintech)</b>	the provision of financial services through technology and innovation
<b>Government to person (G2P)</b>	disbursement government benefits and/or payments to its constituents
<b>Microfinance</b>	loans, savings, and other financial products in relatively low values offered to low-income clients
<b>Microinsurance</b>	custom insurance products offered to low-income clients
<b>Microloan</b>	loans of relatively low value offered to individuals to aid in development of small enterprises, or social protection investments
<b>Open banking</b>	the practice of sharing banking and financial data from financial institutions to third-party financial services
<b>Regulatory Sandbox</b>	an experimental set-up that allows regulators to test innovations by private entities in a controlled and supervised environment
<b>Super app</b>	platforms with multiple functionalities
<b>Takaful</b>	a type of Islamic insurance wherein members contribute money into a pool system to guarantee each other against loss or damage
<b>Unbanked</b>	the state of not having access to formal financial services

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