

White Paper

Innovative Funding Models for High-Cost Non-Communicable Diseases (NCDs)

A global study of new solutions disrupting healthcare financing

2ND EDITION

COMMISSIONED BY



PREPARED BY



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Foreword

The current pressure on healthcare systems around the world has highlighted the urgent need for a faster and more comprehensive effort to strengthen them, particularly in low- and middle-income countries (LMICs), most of which now face additional difficulties accessing finance due to the economic crisis. Cancer care has traditionally been excluded from the agenda of international development aid and is now further impacted by falling state budgets and limited out-of-pocket spending, meaning that now more than ever financing lines from new partners and investors need to be secured, particularly since the COVID-19 pandemic.

However, from conversations with local and international investors, beyond the traditional international development community, have confirmed that there is capital potentially available to tackle non-communicable diseases (NCDs), but no readily investable pipeline of initiatives due to an awareness and technical preparation gap. This report addresses the complex emerging universe of innovative and collaborative healthcare financing mechanisms and aims at making it simpler for local stakeholders to understand the landscape. This is the first step toward simplifying innovative finance and making it accessible to the cancer community, a goal City Cancer Challenge Foundation (C/Can), launched in 2017, is dedicated to and enthusiastic about collaborating with Roche and several other national and international partners.

Each financing project needs to be crafted to meet local needs. The interests of each individual stakeholder, whether care providers, policy makers or investors, needs to be carefully mapped and matched to create a successful financing structure. That task requires giving access to expertise, as well as building local capacity and providing the right platform for the development of trust-based relationships. Another frequently overlooked requirement for successful multi-stakeholder collaboration is the availability of data. All the mechanisms described in this report rely on effective data at all stages of project development, from the feasibility study to continuous outcome measurement.

Therefore, local and international technical cooperation is required to facilitate the conversation between stakeholders, support the development of investor-friendly, data-driven ecosystems and to develop an investment pipeline. The involvement of different stakeholders, including pharmaceutical companies, is thus an important steppingstone toward a world with quality and equitable cancer care.

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Executive summary

Non-communicable diseases (NCDs) account for an increasing disease burden, with global mortality estimated at 41 million people every year^[1]. Generally, low and middle-income countries (LMICs) are disproportionately affected by NCDs, and these are where the bulk of NCD deaths occur. A repeated lack of investment in NCDs will contribute to a global loss of approximately US\$47 trillion in Gross Domestic Product (GDP) from 2011 to 2025^[3].

The costs of NCDs to health systems, businesses and individuals, are high and growing. Within the next ten years, cancer treatment costs alone are expected to rise by one-third,^[4] creating pressure on healthcare payers in both the public and private sectors. As a result, global movements are increasingly directed towards preventing or treating high-cost NCDs. Firstly, Sustainable Development Goal 3.4 aims to reduce one-third of premature mortality from NCDs by 2030. Secondly, a growing number of countries are moving towards Universal Health Coverage (UHC). Despite these efforts, around 100 million people continue to be pushed into extreme poverty because they have to pay for health care themselves.^[5]

Long-term NCDs are expensive to manage, and the risk of catastrophic healthcare expenditure increases in LMICs. Combining insufficient public coverage and reimbursement for innovative therapies coupled with heavy disease burden^[6] exposes patients to out-of-pocket treatment costs. Patients unable to afford the cost of care go without the needed treatment, leading to suboptimal outcomes. Disease funding and patient outcomes are fundamentally linked. Therefore, there is an urgent need for new innovative models to address the funding gap in LMICs.^[7,8]

This updated report identifies additional innovative funding models and highlights the concepts with new case studies. It combines observations from the **2019 report “Innovative Funding Models for Treatment of Cancer and Other High-Cost Chronic**

Noncommunicable Diseases” and a study of the latest models to refresh our view of how different stakeholders strive to provide sustainable funding and financing for healthcare globally. This is one part of the global ecosystem striving for sustainable funding for NCD patients - with all levels of global health agencies, governments and the private sector starting to increase focus on the topic.



Purpose of the report

This study identifies and assesses innovative funding trends and models for high-cost NCD treatments globally. The objective is to enable readers to understand better the possibilities of innovative funding models currently being used globally. It will also showcase unmet needs, namely affordability, while stressing the need for stakeholder collaboration to improve patient access and financial protection. There is a great potential for shared knowledge among policymakers and relevant stakeholders to tackle challenges in the healthcare space.

A shortlist of innovative funding mechanisms from around the globe were selected based on their financing structure and influence in driving regional macro trends. Through this context, these new models offer learnings on ways to improve the effectiveness and efficiency in adopting sustainable resources for high-cost NCDs across other geographies.

The report also highlights implementation guidance, and presents a chance to reflect on what parts of the funding processes are necessary to be adapted, to accelerate the ways we support health services research. As highlighted above, all of these models have potential, at varying degrees, to be applied and learned from in the high-cost NCDs area.

Innovation framework

This study characterizes funding and financing innovation through a single framework - comprising five archetypes (refer to visual beside):

Results

Through our research, we narrowed down a shortlist of 106 examples of innovative funding mechanisms globally; 31 case studies were selected to be showcased within this report based on their innovative nature and potential for learning and adoption across other regions.

There are various examples of funding models showing innovation in resource mobilisation and/or pooling. This is achieved by leveraging strategic partnerships where resources are pooled and directed at specific initiatives and/or implementing partners. Select examples include lottery-based funding, multi-donor pooling, sales-linked & matched donations and charity funded medical partnerships. Another method includes petitioning voluntary contributions from the patients or general population, as is the case in health mutual aids, and top-up insurance schemes. Government-initiated funding schemes can also increase financial protection—common examples include multi-partner contribution funds.



Government funding schemes are innovative schemes designed and disbursed by governments to suit the needs of its citizens. Increasingly, these funds are generated by multiple stakeholders.



Blended finance uses catalytic capital from public or non-profit sources to increase private sector investment in sustainable development. It allows organizations with different objectives to invest alongside each other while achieving their own goals (whether financial return, social impact, or a blend of both). Funding is typically tied to specific outcomes, timelines or obligations.



Novel private insurance offer coverage for either products/services that are not typically covered (e.g. diagnostics) or for patient groups who are not typically covered by traditional private insurance (e.g. pre-existing conditions)



Multi-source crowdfunding is any means of incentivizing or bringing together multiple stakeholders (individuals, companies, or non-profits) to raise funds. There are often incentives involved for the different stakeholders (e.g. tax incentives for private companies and the public).



Financial services cover any means of enabling alternative payment methods for patients (beyond direct payment, insurance, or reimbursement), in advance or in arrears of incurring cost. These services, such as credit or savings plans, are enabled through Fintech or traditional banking services.

Other funding models demonstrate innovative means of channelization, allocation, or resource implementation. This is executed through debt financing instruments to facilitate payments over time, such as credit services, cryptocurrency-enabled platforms, and mobile health wallets and saving plans. There are examples of insurance products that deploy funding for holistic patient-centred care, such as pre-existing conditions coverage, new integrated technology inclusion, microinsurance and public-private insurance partnerships. Lastly, there are blended

finance models with the strategic use of development finance and philanthropic funds to mobilize private capital funds. These examples include development impact bonds and catalytic public-private partnerships.

Key considerations and success factors

Key stakeholders, including policymakers, funding bodies, providers and healthcare companies, need to assess the ‘fit’ of any given funding model to their respective market to maximize impact and sustainability.



Local experience and implementation capabilities are essential for successfully executing and adopting a funding program, including for globally driven initiatives.

Program sponsors should ideally partner with local stakeholders with the relevant experience to achieve a program effectively.



Programs should be designed to be mutually beneficial for all the stakeholders involved, with well-defined roles and responsibilities.

Additionally, successful programs typically are simple to execute with minimal ambiguity for patients and the implementation partners.



Government readiness is important for the successful implementation of long-term funding models. Local government stability, clear regulatory policy and advocacy from key institutions play an essential role in creating a conducive environment to foster innovation.

The government's priorities and goals towards including high-cost NCDs into mainstream health systems typically provide the much-needed impetus for stakeholders to focus on the unmet needs in treatment and financing.

Action for the future



Innovative funding models must complement long-term government initiatives, such as the attainment of universal health coverage (UHC). Initiatives that aim to reduce the growing healthcare expenditure burden while maintaining or improving patient access and health outcomes will contribute to long term sustainability.



Moving forward, modern techniques can be used to monitor patient outcomes data and enable public payers to measure performance and returns. Policy makers should aim to foster an environment that encourages and facilitates innovative partnerships and approaches, while healthcare companies should evaluate the long-term strategy of programs and create fitting partnerships (including with competitors) to address unmet needs. Patient groups, providers, NGOs, foundations,

physician communities are key influencers for policy making, as well as can be potential partners for funding and implementation.



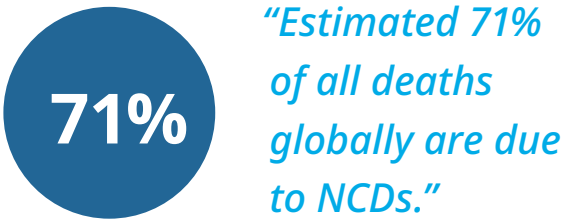
Finally, it is important for programs to localize and be tailored to unique market needs while bringing in learning from regional and global success stories. Localization of innovative funding models will not only improve patient and partner adoption but will also make execution more efficient and sustainable in the long run.



Role and added value of innovative funding models for NCDs

Challenges posed by NCDs are significant and growing

Non-communicable diseases (NCDs) kill approximately 41 million people each year, equivalent to 71% of all deaths globally.^[1] NCDs, generally are of long duration and result from a combination of genetic, physiological, environmental and behavioural factors. The main types of NCDs can be categorized into four groups: cardiovascular diseases, cancers, respiratory diseases and diabetes.^[1] Cancer is the second leading cause of death and is responsible for an estimated 9.6 million deaths in 2018. Globally, cancer accounts for 1 in 6 deaths.^[2]

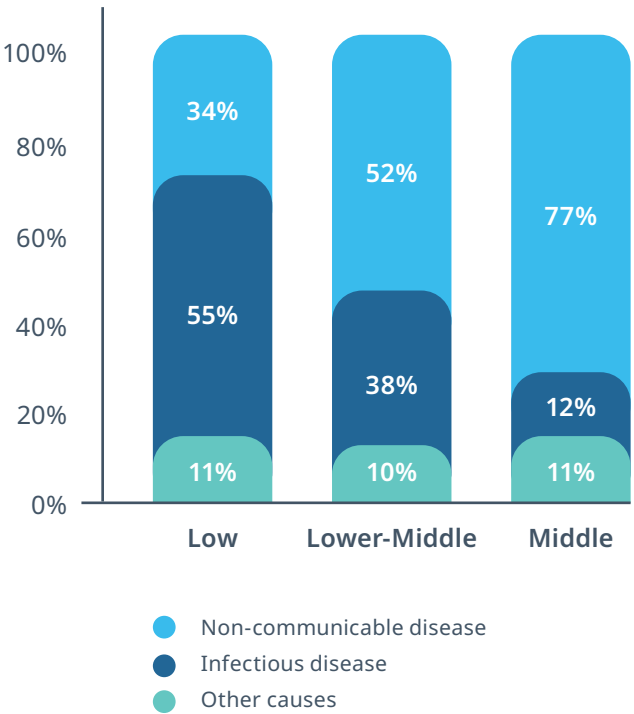


NCDs disproportionately affect people in low and middle-income countries (LMICs), where approximately more than 75% of global NCD deaths occur. Furthermore, 85% of “premature” patient deaths between the ages of 30-69 years occur in LMICs.^[2]

Current funding for NCDs falls short of what is required to deliver global targets, particularly the 2025 Global NCD Targets and Sustainable Development Goal (SDG) 3.4, which calls for a one-third reduction in premature mortality from NCDs by 2030.^[9] The cost of repeated underinvestment in NCDs has been estimated to contribute a total of US\$47 trillion in lost Gross Domestic Product (GDP) from 2011 to 2025 globally.^[3]

Despite meaningful efforts, several LMICs solutions have not yet reached the level required to fully address the extent of the complex problems posed by NCDs. Very few LMICs maintain accurate and comprehensive registries and run surveillance or research programs needed to make informed policy decisions. As a result, there is little focus on prevention or early diagnosis of the diseases, and often patients present themselves at late stages when treatment is more challenging, costly and with lower survival rates. Additionally, in most LMICs, public reimbursement of high-cost NCDs is limited—leading to out-of-pocket (OOP) or private spending by patients.

Figure 1. Share of DALYs by disease and country social-demographic index (2019)



By nature, NCDs are long-term, leading to repeated and ongoing costs and amassing high financial burden, driving the patients and their families into a poverty-illness cycle. In this cycle, inadequate treatment leads to loss of health, higher morbidity, lost income and more severe impoverishment.^[10] A chronic lack of financial risk protection leaves patients (and families) exposed to a choice between economic catastrophe or abandoning treatment.

Existing challenges of traditional funding sources

There are four primary sources of healthcare funding:

- 1 **Public spending** by public payer or government, overseas development aid
- 2 **Private spending** through insurance coverage pay-outs
- 3 **Out-of-pocket** spending by patients and families at the point of service
- 4 **Donor funding** to patient or to governments by non-profits and global health agency initiatives

Across LMICs, there are large and uneven variations in access to new innovative therapies for NCDs. Links between funding and treatment outcomes give rise to a greater need for both public funding and other funding strategies to address the gaps in the countries.^[7,8] Recent increases in health spending remain below those seen in pre-financial crisis years.^[12] New access models drawing on fresh funding sources are needed to cater to patient needs.



“Approximately 90% of LMIC annual investment in healthcare comes from national governments and overseas development assistance.”

Approximately 90% of LMIC annual investment in healthcare comes from national governments and overseas development assistance.^[11] Public reimbursement and spending on high-cost NCDs typically have restrictions on the amount and type of spend on treatment. In the private sector, health insurance companies often supplement publicly provided health coverage.

Global multilateral organizations are working towards policy and institutional change to strengthen national efforts to address the burden of NCDs (e.g. WHO Global Action Plan for the Prevention Control of NCDs 2013-2020), and support universal health coverage, (e.g. WHO Plan of Action: Health Systems Governance for Universal Health Coverage). However, there is limited dialogue in improving the overall understanding of innovative funding models available and the opportunities for countries to learn from each other.

“Links between funding and treatment outcomes give rise to a greater need for both public funding and other funding strategies to address the gaps in the countries.”

Study Methodology

Research methodology

The first edition of this report combined secondary research and primary interviews with 32 industry stakeholders and experts between November 2018 and February 2019 to identify funding models for cancer treatment for each selected country and region. Findings from existing publications were also leveraged, including the “Innovative funding models for cancer treatment in Asia” report from ACCESS Health International.

Since then, Roche and IQVIA have conducted reviews of the funding and financing ecosystem, updating the previous approach with a review of recent innovative funding cases, taking in new considerations to support our research related to NCD funding. This new approach has revealed additional case studies and new, emerging funding and financing archetypes. This report combines the insights from the previous work and new models to refresh how different stakeholders strive to provide more significant funding and financing for healthcare globally.

Country & region selection

This report covers 15 markets from 5 regions around the world. While the scope of this study does not include a comprehensive review of all countries in all areas, the intention is to highlight examples from selected markets from which global learnings can be extracted and shared. The regions and countries included in this study are summarized as follows:

In addition to regional and country-level examples, this study also looked at global initiatives that have impacted more than one region in scope.

Asia



Bangladesh



China



Hong Kong



India



Philippines



Singapore



Thailand



Vietnam

Latin America



Argentina



Mexico

Middle East



United Arab
Emirates

Europe



Italy



Poland

Africa



Kenya



Nigeria

This geographic selection considered criteria such as availability of information on health funding systems, diversity of approaches to health funding and various health system development and regional diversity.

Therapy scope

This study primarily focuses on innovative funding models for high-cost chronic (e.g. cancer) or rare non-communicable diseases, like haemophilia or multiple sclerosis, where there are relevant learnings.

Inclusion and exclusion criteria

This study focuses on funding models that provide monetary or in-kind support for treatment to individuals for non-communicable diseases. Health funding models for innovative therapies should consider the broader cancer care services as well as ongoing health systems strengthening efforts in the country—due to this, the following additional inclusion and exclusion criteria were defined:

- Funding models must be deployed in at least one country and impacting NCD patients
- Funding models which exclusively focus on screening, diagnosis, surgery, radiology and/or palliative care without supporting medical treatment are excluded from this report
- Funding models for the supply of NCD treatment services directly (e.g. salaries, equipment, infrastructure) are excluded
- Traditional funding models are excluded in this study (Further explained in the next section)

This study focuses on innovative models because this has proven to be a more viable funding endeavour to provide long-term support for patients and research efforts.

Alongside this, innovative funding can leverage the use of resources and facilities to support a broader coverage and thereby, a more accessible and inclusive solution. Such comprehensive approaches allow the model to cast a wider net and hence, secure more extensive funding. Looking beyond an individual level, because innovative funding has a wider outreach, it offers more ways to involve new stakeholders in the model. This will eventually allow for knowledge exchange across more parties and encourage learning.



Defining funding models

This study defines a funding model as a configuration of any mechanism that impacts funding, access, or coverage to treat NCDs.

The 3 health financing dimensions: funding, access, coverage

The World Health Organization has recognized 3 key dimensions of health systems which are important for universal health coverage: the proportion of health costs covered (funding), who is covered (access), and which health services are covered (coverage).

The model has been used to examine the extent to which NCDs services are covered:



Direct costs

The amount of financial protection from external sources that helps offset the out-of-pocket burden for NCD care



Population

The extent to which the entire population has access to funding to pay for NCD services and the extent to which NCD funding is equitable among different population groups



Services

The extent to which NCD funding prioritizes each of the basic NCDs and treatment care services: screening, diagnostics, surgery, medicines and palliative care

The absence of financial resources affects each of these dimensions. This results in a higher out-of-pocket burden on patients, and lower coverage for people who do have access. This report seeks to analyze the approaches of various stakeholders to leverage innovative funding models to address gaps in one or more of these dimensions.






Within the scope of mechanisms that can be considered funding models, there are two broad categories: traditional and innovative. The focus of this study is on innovative models.

“Typically, a traditional funding model relies on a single source. An innovative funding model builds on a two-way relationship between multiple stakeholders, forming a unique form of funding”

Assessing the global funding and financing landscape

To assess and categorize the landscape today, a stakeholder-based analysis was undertaken to conceptualize the range of possible funding and financing models today. Funding and financing can stem from single stakeholders and combinations of stakeholders. A long list of archetypes in practice today was generated by looking at the potential collaborations between stakeholders. The model has been used to examine the extent to which NCD services are covered. These dimensions are defined in relation to NCDs as follows:

Figure 2. Assessing the global funding and financing landscape

		IN PARTNERSHIP WITH				
		 General public	 Government <i>(National, Local Gov.)</i>	 Private co. <i>(Pharma, Bank, etc.)</i>	 Private insurance <i>(Inc. Reinsurer)</i>	 NGO
IN PARTNERSHIP WITH	General public	<ul style="list-style-type: none"> • Donation • Multi-source crowdfunding • Financial services 				
	Government	<ul style="list-style-type: none"> • Matched donation • Reimbursement • Government funding schemes • Financial services 	<ul style="list-style-type: none"> • Government funding schemes 			
	Private co.	<ul style="list-style-type: none"> • Patient assist programs • Financial services • Multi-source crowdfunding • Reimbursement 	<ul style="list-style-type: none"> • Blended finance • Patient assist programs • Reimbursement • Donation 	<ul style="list-style-type: none"> • Donation • Multi-source crowdfunding • Patient assist programs 		
	Private insurance	<ul style="list-style-type: none"> • Private insurance • Novel private insurance • Financial services 	<ul style="list-style-type: none"> • Blended finance • Financial services 	<ul style="list-style-type: none"> • Novel private insurance • Financial services 	<ul style="list-style-type: none"> • Novel private insurance • Financial services 	
	NGO	<ul style="list-style-type: none"> • Donation • Multi-source crowdfunding 	<ul style="list-style-type: none"> • Donation • Multi-source crowdfunding 	<ul style="list-style-type: none"> • Blended finance • Patient assist programs 	<ul style="list-style-type: none"> • Blended finance 	<ul style="list-style-type: none"> • Donation • Multi-source crowdfunding

From the table above, the unique relationship between multiple stakeholders not only determines a characteristic of a funding mechanism but also spur innovation in funding models. This long list was then assessed to determine whether the archetypes were truly innovative or more embedded as traditional funding models.

Funding source affects the characteristic whether it is to be traditional or innovative. Typically, a traditional funding model relies on a single source. An innovative funding model builds on a two-way relationship between multiple stakeholders, forming a unique form of funding.

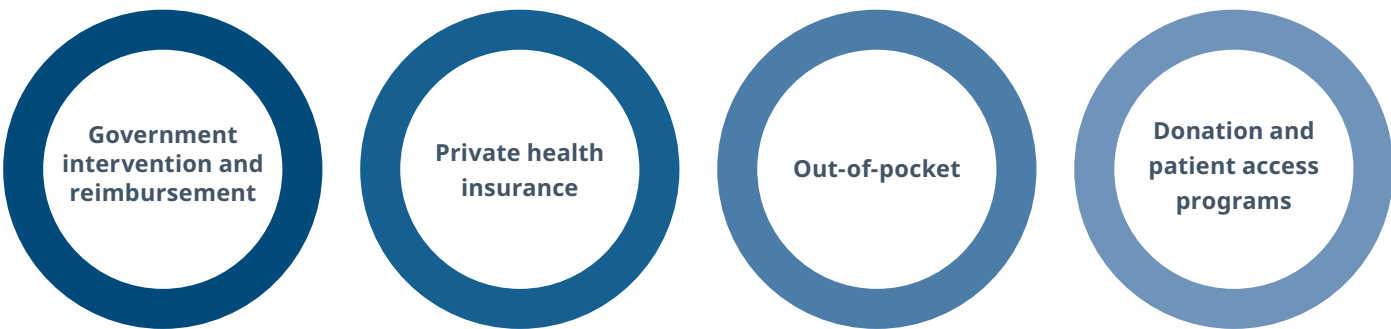
Traditional funding models

Traditional funding models have always been the basic source of funding that is widely accepted as the recourse channel for the common public. However, historically, limitations on accessibility, sustainability, efficiency, and susceptibility to changes within the political landscape have persisted.

Traditional funding models include how patients have previously been able to pay for the cost of treatment. While traditional models still play a role in healthcare funding and financing globally, they are now embedded in the landscape, with no significant developments in the last 5-10 years.

These models are not documented in the report and tend to be similar across markets and regions:

Figure 3. Traditional funding models



It is important to note that traditional funding models can be enhanced through some innovative components.

Enhancements can be categorized by approach to be single entity vs multi-entity. For example, a traditional insurance program can be innovative if the insurance product is delivered through a telecom provider, or

crowdfunding can be made innovative by sourcing funds from a wide range of sources.

Additionally, we see some entirely new funding models emerging (such as catalytic investment in blended finance), which represent a step-change in approach, offering a new means of generating or disbursing funds.

Innovative funding models

The term “innovative financing” was developed in 2002 to describe new financing from non-traditional sources and incentives to mobilize them to achieve the Millennium Development Goals (MDGs).¹³ Building consensus on a unified definition of “innovative” is challenging. It implies an ongoing and active evolution; what is innovative today may become traditional as new inputs, processes, organizational reform, products, and services emerge.

To better understand the types of innovations and make recommendations to inform future policy, we sought to analyze the innovative models according to their essential characteristics through a single framework with five archetypes.

The five archetypes of innovative funding and financing

The assessment categorized innovative funding and financing into five archetypes, based on the component of the model that makes it innovative. They are:

Figure 4. 5 archetypes of innovative funding



Regional trends in innovative health financing for NCDs

Asia region

Asia is home to the greatest number of innovative funding models identified in the scope of this study, with India and China driving this trend.

There are several examples of results-based financing initiatives for healthcare in India. Providers have a pay-for-performance incentive where they get returns based on the measured outcomes of the programs including development impact bonds.^[14] While these initiatives are still in the planning and feasibility phase, they show promise as a model to enable social investors to provide financial support for patients unable to pay out-of-pocket or through insurance.



In private insurance, various innovations in Asia include mutual aid for the poor,^[15-17] new integrated tech inclusion for holistic coverage^[18] and private top-up schemes for critical illnesses.^[19] These insurance-based programs increase the coverage of financial protection to uninsured or provide additional protection to the insured, in some cases both.

Africa region

This study also found numerous innovative funding models for NCDs in Africa. Compared to other regions, Africa had the most regional alliances and initiatives including the Red Ribbon Pink Ribbon partnership,^[20] and African Access Initiative.^[21] In addition, non-governmental organizations have been greater drivers behind the innovative models in this region compared to others covered in the study. These findings are further supported by the presence of overseas development aid in Africa. OECD estimates that nearly US\$53 billion was disbursed to Africa in 2019, greater than any other region in the world.^[22]

Hospital and healthcare provider capacity are major challenges in African countries.^[23] Several facilities in Africa also actively collaborate with oncology



institutions in developed markets to strengthen research, care delivery and improve access to treatment.

Though the insurance market is still relatively under-developed, telecommunications companies have started to play a bigger role in health financing with the advent of fast-growing mobile penetration in the region.^[24]

Latin America region

Latin America has the highest rates of income inequality in the world.^[25] There are several examples of local NGOs and private companies that are working in underserved communities and low-income families in the region.

For example, Mexico has one of the highest rates of death attributable to diabetes and a correspondingly high measure of disability-adjusted life years. To address this shortcoming, RGA Latin America recently



partnered with a local insurance company launched an initiative to change the way insurance was conceptualized and sold in the country.^[26]

Middle East region

In the Middle East Region, examples of innovative funding models focus on public-private insurance partnerships that assess the patients' individual affordability to insurance schemes providing targeted benefits to the high proportion of expats in the region.^[27]

In Lebanon, banks offer loans for medical treatments, given that government reimbursement can take several months. The simplicity of this financing model, like those



of the debt financing schemes in India and China, does not diminish its value to patients who otherwise may not be able to pay for the upfront cost of treatment.

Europe region

In the geographic scope of study, it was found that a fewer number of innovative health funding models existed in Europe regionally. In most European countries, healthcare expenditure is dominated by a single payer. One payer, AIFA in Italy runs an initiative to improve funding for innovative products by levying 5% of pharmaceutical companies' promotional expenses into a ring-fenced AIFA fund.^[28]

There is also a limited involvement of private insurance players given the regulatory environment. One notable exception to this is also in Italy, where



there is a strategic collaboration between an insurer and a pharmaceutical company to provide access to advanced genomic testing to policyholders.^[29]

Two other types of innovative partnerships were identified in this region: game-based crowdfunding^[30] and novel sales-based donations schemes.^[31]



Global inventory of innovative funding models

Summary of innovative funding models

Following on from the previous study, a shortlist of 106 examples of innovative funding mechanisms from around the globe were selected based on their financing structure. We have characterized them along with the five funding and financing archetypes – government funding schemes, blended finance, novel private insurance, multi-source crowdfunding, and financial services.

The diverse set of examples from this study is a testament to the broad range of financing solutions currently being used to address affordability gaps in treatment. In the subsections below, we will analyze the

drivers and impact of specific funding models through a deep-dive selection of case studies. The 31 case studies are designed to highlight the diversity of funding models in terms of the degree of innovation, source of innovation, geography, and the availability of public information.

Innovative funding archetypes

Table 1. Summary of innovative archetypes and sub-archetypes

Innovative funding archetype	Sub-archetype	Descriptions
 Government funding schemes	Multi-party contribution funds	Government funds disbursed for predetermined conditions, generated or collated through innovative means
	Tax-based innovation funds	Government funds allocated for specific disease or medicines, collected through standard or targeted taxation
 Blended finance	Development impact bonds	The results-based financing structure for external financing of public services in low and middle-income countries
	Catalytic public-private partnerships	NGO or governments offering catalytic investments to encourage private sector involvement
 Novel private insurance	Microinsurance	Microinsurance product that leverages mobile or retail channels to provide financial protection and improved access to health care for the low-income population
	New integrated technology inclusion	Insurance scheme which provides coverage of high-cost technologies or services to patients, that would typically not be included
	Public-private insurance partnerships	Collaborations between private insurers and governments to generate new insurance models or complement public health insurance
	Pre-existing conditions coverage	Insurance schemes that provide coverage for patients with pre-existing conditions, that would not usually be included
 Multi-source crowdfunding	Mutual aid	Voluntary contribution from members in exchange for low-threshold yet cost-effective health protection
	Lottery-based funding	Funding collected from lottery revenues and deployed to finance high-cost treatments
	Sales-linked and matched donations	A partnership between foundations and private sector players to link public donation amount to sales revenue or private donations
	Multi-donor pooling	Pooling of multiple individual donors through gamification or crowdfunding platforms
 Financial services	Credit services	Debt financing partnerships in which patients pay for treatments in small quantity throughout a fixed period or have credit-linked discounts
	Cryptocurrency-enabled platforms	The new generation of platforms to support health financing needs leveraging cryptocurrency
	Mobile health wallets and savings plans	Mobile-based virtual 'health wallet' that allows people to save, borrow, and share money for healthcare at meagre costs

Government funding schemes

A Tax-based innovation funds

Tax-based innovation funds are government funds allocated for specific disease or innovative medicines. They are collected through general or specific taxation, such as taxes on promotional spend from pharmaceutical companies.



Government funding schemes

Italy



Public funding by Italy's NHS

While the Italian National Health Service (AIFA) has full public coverage (funded primarily through corporate and value-added tax revenues), there are still gaps for some ultra-high cost therapies.

The type of public funding pathways for therapies differs based on the status of market authorization.^[28]



Program design & offering

Funding before market authorization

- Physicians can apply for the AIFA (Italian Medicines Agency) 5% fund
- Upon funding approval, the patient's cost of treatment is reimbursed by the AIFA
- Under the law, drug companies must pay 5% of their promotional expenses for the AIFA 5% fund, which is used for promoting orphan disease research and improving access to drugs awaiting market entry

Funding after market authorization

- Orphan drugs which achieved the full innovative designations can be funded through the Innovative Drug Fund, enabling a sustainable funding pathway for patients



Outcomes

- ~65% of the applications (82 patients) have benefited from the fund for an expenditure totaling 14 million € in 2017

B Multi-party contribution funds

Multi-party contribution funds refer to innovative means of for-patients financial assistance in the form of local, state, or federal government grants and other entities, to build sustainable financial support for the niche healthcare and rare disease area.

The case studies below offer insights into how multiple parties contribute to the same cause for three countries.



Government funding schemes

Singapore



The Singapore Rare Disease Fund

The Rare Disease Fund (RDF) was established through a multi-party contribution fund to provide long-term financial support for patients with rare genetic diseases who require treatment with high-cost medicines.^[32]



Program design & offering

- For every S\$1 of public donation, the government will triple the amount, boosting the impact of the fund
- Tax deduction of 250% are provided for eligible donations
- RDF donor wall is published on KKH's website to recognize the fund donors



Key stakeholders

- Ministry of Health
- Private companies
- NGOs
- General public



Outcomes

- ~USD 70m have been raised to date to support children with these diseases:
- Primary bile acid synthesis disorder
- Gaucher disease
- Hyperphenylalaninemia
- Pompe disease



The Nigeria Cancer Health Fund

This mechanism is an example of how cross-collaboration between public and private sectors can lead to beneficial outcomes for society. A private sector coalition alongside the cooperation of the IFC World Bank worked together with multiple federal government institutions to establish the Nigerian Cancer Health Fund (CHF). The fund seeks to enable patient access to global Standards Of Care (SoC) without suffering from financial hardships.

It also aims to lift affordability restrictions of the SoC for indigent patients and at the same time, strengthening the country's cancer care ecosystems by improving the quality of its service system.

The program goal is to guide the Ministry of Health (MoH) towards becoming a strategic purchaser of services.^[33]



Program design & offering

The program intention is to create a sustainable funding source that:

- Addresses the problem of limited access to cancer SoC due to affordability issues
- Leverages on cancer prioritization in Nigeria
- Involves multiple stakeholders with capacity to improve cancer care condition in Nigeria



Key stakeholders

- Government institutions: MoH, MoF & Central Bank, National Health Insurance Scheme (NHIS) and Members of the Nigerian National Assembly
- Private sector: Roche, General Electric Healthcare, Varian, Elekta, Healthcare Federation of Nigeria
- International Finance Corporation (IFC World Bank)
- Civil society groups: Coalition of First Ladies Against Cancer - FLAC, Abuja Breast Cancer Support Group



Outcomes

- A funding pathway for bottom of the pyramid patients to access the standard of cancer care
- Continuous quality control over providers leading to a strengthened cancer environment
- Collaborative governance model between public and private sector

Blended finance

A Development impact bonds

Development impact bonds (DIBs) are a results-based financing structure for external financing of public services in low and middle-income countries. DIBs fund public services through contracts where private investors provide upfront flexible funding to service providers, and outcome funders repay these investors based on the outcomes achieved by people receiving services.

Due to the potential of this innovative funding solution for NCDs in general, a relevant example coming from maternal and newborn health is included in the case study below to be taken as a reference.



Blended finance

India



Utkrisht Rajasthan maternal & newborn health development impact bond

Launched in 2018, the Utkrisht impact bond is the world's first maternal and newborn health development impact bond with over US\$8 million made available for outcomes-based funding over three years.

The DIB is funding two service providers, Hindustan Latex Family Planning Promotion Trust (HLFPPT) and Population Services International (PSI), to support private facilities to: improve the quality of care provided to mothers and newborns, and prepare for certification by NABH and Manyata.^[14]



Program design & offering

- The objective is to improve the quality of maternal care for up to 600,000 pregnant women in Rajasthan's private health facilities
- In order to do so, the program aims to support up to 440 Small Healthcare Organizations (SHCOs) to meet new government quality standards and adhere to them over the long term.
- The Utkrisht impact bond is made possible through public-private partnership. It is the first of its kind to have leveraged private capital raised from private investors and aims to achieve full adoption by the Indian government
- Payments are made when the private facilities have been verified to be ready for NABH and Manyata certification. If private facilities get certified, it will allow them to seek reimbursement from government and participate in cash transfer schemes and insurance programmes, thereby eventually enabling greater coverage of patients.



Key stakeholders

- Outcome funders: Merck for Mothers and USAID
- Providers: Hindustan Latex Family Planning Promotion Trust (HLFPPT) and Population Services International (PSI)
- Investors: UBS Optimus Foundation and co-investment from the implementation manager (Palladium) and service providers (HLFPPT and PSI)

B Catalytic public-private partnerships

In this section, the following two case studies are examples of fundraising partnerships led by non-profit organisations that provide or support care treatment for patients who are otherwise unable to access appropriate care.

These community-based organisations have strong relationships with stakeholders in the communities where they operate and hold the viewpoint that access to oncology and high-cost NCD treatment should be available to all.



Blended finance

Africa



African Access Initiative (AAI)

The African Access Initiative (AAI) is a public-private partnership that targets the growing cancer crisis in Africa. BIO Ventures for Global Health (BVGH) runs the AAI wherein they are expanding access to cancer medicines and technologies by establishing affordable business and pricing agreements between companies and African governments.^[21]



Program design & offering

- Using data generated by African hospitals and governments, AAI helps expand access to cancer medicines and technologies and address the cancer data gap in African through clinical trials
- They are also strengthening healthcare infrastructure and building clinical oncology capacity via workshops and fellowships
- African ministries of health and cancer leaders are engaged to ensure AAI activities are driven by their priorities and needs. AAI is not a donation-based program. Pharmaceutical companies are engaged to ensure access to quality, lifesaving cancer drugs in a sustainable and patient-focused manner



Key stakeholders

- BIO Ventures for Global Health (BVGH)
- African Organization for Research and Training in Cancer (AORTIC)
- International Federation of Pharmaceutical Manufacturers & Associations (IFPMA) / Access Accelerated
- Ministries of Health of Cameroon, Côte d'Ivoire, Kenya, Nigeria, and Rwanda
- Pfizer Inc.
- Takeda Pharmaceutical Co. Ltd



Blended finance

Multi-region



The SDG500 Platform Investment Opportunity

SDG500 is a groundbreaking impact investment platform dedicated to financing the Sustainable Development Goals (SDGs). The platform's objective is to raise USD\$500 million for six funds to invest in hundreds of businesses in emerging and frontier markets.^[34]



Program design & offering

- SDG500 offers an exposure to six impact funds targeting businesses in the various sectors, including HEAL, a venture fund investing in emerging markets for health tech startups
- Each of the six funds follow a blended finance approach in partnership with a specific UN agency, development finance institution or international NGO
- The funds will use either debt or equity to bridge the missing middle financing gap between seed and growth stage for businesses in emerging and frontier markets



Key stakeholders

- United Nations Capital Development Fund (CDG)
- Multiple private companies
- Multiple NGOs

Novel private insurance

Novel private insurance refers to innovation that transforms traditional private insurance, either in its design, coverage, or accessibility, making it possible for a broader population to access innovative treatments, diagnostics, or other innovative technologies.



Microinsurance

Microinsurance products offer coverage to aid low-income individuals or households by providing insurance policies tailored to their needs. It is often found in developing countries, where patient groups are not typically covered by private insurance. Because the compensation value generally is lower than the usual insurance plan, the insured individuals pay considerably smaller premiums.

The subsequent three case studies focused on microinsurance products that leverage mobile or retail channels. Given the expansive mobile penetration in LMICS, telecommunications providers can become great partners due to their installed capacity to distribute, collect and pool resources. Additionally, high transit stores such as retail outlets represent promising distribution channels, exemplified by the partnerships between insurers and the Thai government to introduce microinsurance policies at convenience stores.



Novel private insurance

Bangladesh



Tonic, mobile-based health and wellness platform

Telenor Health is the digital health subsidiary of the leading telecom company Telenor Group. In 2016, Telenor Health launched its first product, Tonic.

As a digital healthcare service, Tonic provides a mixture of health information, advice and service through mobile operator Grameenphone.^[35]



Program design & offering

- Tonic is one of Asia's first comprehensive mobile-based health and wellness services platform providing a myriad of digital health services from health information to a modern health line and exclusive medically related financial benefits
- The program offered to customers within four unique package offerings, Tonic Life (healthcare information in Bengali-language), Tonic Doctor (telemedicine), Tonic Discounts (exclusive discounts on key services at more than 50 hospitals), and Tonic Cash (reimbursement for hospitalization)



Key stakeholders

- Telenor Health
- Grameenphone



Outcomes

- Since it has launched, the platform has attracted over five million subscribers, one million phone-based consultations and approved over 25 thousand discounts on medical services.



Novel private insurance

Africa



Airtel insurance with MicroEnsure

Airtel and MicroEnsure launched their first simple health insurance product in Ghana in 2014 and have since launched in seven other African markets.

This is a unique partnership between insurance and telecom companies which provides an alternative to increasing access to health financing and provides a 'win-win-win' business model for the insurer, the telecom company and the patient.^[24]



Program design & offering

- Airtel insurance rewards loyal customers with free insurance when they spend a minimum amount of airtime (usually US\$2).
- Qualifying customers receive a lumpsum of up to US\$150 paid to them via mobile money if they spend three or more nights in any hospital in the country for any medical reason.
- Customers can learn about the insurance product through an Unstructured Supplementary Service Data (USSD) menu and through monthly SMS communications informing them of the amount of insurance they earned for the following month.
- Airtel pays premiums to MicroEnsure and other partner insurance companies on behalf of the customer.



Key stakeholders

- MicroEnsure
- Airtel



Outcomes

- As of December 2018, over 3.1 million patients were covered under this scheme.



Novel private insurance

Thailand



Private Microinsurance Policies

In Thailand, micro-policies from five leading insurance companies- Muang Thai Life Assurance, Bangkok Insurance, Muang Thai Insurance, Alliance Ayudhya Assurance and Thaivivat Insurance have been sold in convenience stores like 7-Eleven since 2013 to provide low-cost insurance policies for the poor to protect against risks such as cancer, Songkran accidents or home fires.^[36, 37]



Program design & offering

- Microinsurance targets low income, rural families in the provinces who are uninsured because of the affordability and complexity of traditional insurance products
- The Office of the Insurance Commission (OIC) initiated these microinsurance plans with annual premiums of up to US\$30 which are easy to understand
- Thaivivat Insurance offers cancer protection for an annual premium of 711 Baht, paying 50,000 Baht when clients are diagnosed and additional 20,000 Baht for medical care per month up to 10 months



Key stakeholders

- Muang Thai Life Assurance
- Bangkok Insurance
- Muang Thai Insurance
- Alliance Ayudhya
- Assurance
- Thaivivat Insurance

B

New integrated tech inclusion

Apart from microinsurance, insurers have also developed innovative plans which provide more holistic coverage for NCDs. For example, screening-based insurance leverages cutting-edge diagnostic technology to increase financial protection available to patients.

The following two examples showcase insurance programs that provide policyholders with coverage for specific diagnostics and treatment decision support, reinforcing the role of insurers in patient care management.



Novel private insurance

Italy



Advanced genomic testing

AXA Partners Italia and Roche Italia are launching a strategic collaboration to include in their health policies the services of Foundation Medicine (part of the Roche Group) for the genomic profiling of metastatic or locally advanced solid tumors.

The detailed information obtained from these services will allow doctors to personalize their treatment approach.^[29]



Program design & offering

- Policyholders will be able to access Foundation Medicine's genomic profiling services through their GP
- These services use innovative NGS (Next Generation Sequencing) technologies
- NGS can provide detailed information on genomic alterations detected in solid tumours, associated with possible therapies available or in trials



Key stakeholders

- Roche Italia
- AXA Partners Italia



Novel private insurance

China



The Beijing genomics institute screening & insurance package

In partnership with Henan Zhongyuan Life Science Research Institute, which is the main funder of the program, the Beijing Genomics Institute Canseq's home screening and insurance package allows women to test themselves for human papillomavirus (HPV) in a private setting.^[18]



Program design & offering

- After paying for one of the three insurance plans (three years, nine years, or lifelong), payers not only receive a home testing kit but also an anti-cervical cancer insurance plan attached to the package
- The scope and content of the insurance is contingent upon the screening result.
- All fees associated with screening, diagnostics, and treatment are fully covered by the Canseq program



Key stakeholders

- Beijing Genomics Institute Canseq
- Henan Zhongyuan Life Science Research Institute Co. Ltd.

C Public-private insurance partnerships

The following examples demonstrate public-private insurance partnerships that provide for the marginalized communities, which are otherwise left out of traditional models. These schemes support the screening and medical expenses for the groups. Public-private partnerships leverage private insurers' capability and capacity to develop insurance schemes for previously left-out populations.



Novel private insurance

U.A.E.



Cancer insurance for low income population

Roche collaborated with AXA to investigate innovative approaches of providing affordable cancer funding. As a result of this collaboration, Roche provided medical education and disease management guidance to AXA and the DHA to develop supplementary insurance coverage for expatriates.^[27]



Program design & offering

- Roche has partnered with the Dubai Health Authority (DHA) and leading international health insurer AXA to develop a new compulsory funding scheme under the name of "Dubai Cancer Initiative – BASMAH"
- The initiative covers screening and treatment for colorectal, breast and cervical cancers. The initiative provides comprehensive access for all expatriates in Dubai, including those in low-income groups



Key stakeholders

- Roche Dubai
- Dubai Health Authority (DHA)
- AXA



Outcomes

- 4.4 million expatriates, across the income spectrum are now able to access funding for cancer treatment
- Regardless of their insurance policy, a system has been planned to account for future population growth and will benefit all Dubai residents through better screening and diagnosis



Novel private insurance

India



The Jharkhand health scheme model

Launched in 2019 the insurance scheme covers 24 districts in Jharkhand. The aim of the health scheme is to develop a health scheme covering all families below the poverty line.^[38]



Program design & offering

- The state, Jharkhand, implemented the scheme through a hybrid model, which means INR 0.1 million on insurance mode and INR 0.4 million on Trust Mode are held by the SHA (State Health Agency) per family per year
- The program includes secondary and tertiary illnesses, and the benefits are for all beneficiary family members through public and private hospitals across the state
- The scheme has no exclusion clause and introduced a cashless facility for the poor.



Key stakeholders

- Indian Government
- AXA Reinsurance India



Outcomes

- The health scheme achieved their shared target of enrolling 5.72 million families by working in synergy. Health benefits worth INR 6.97 billion were provided as of January 2021.

D Pre-existing conditions coverage

Insurance companies have also developed disruptive insurance products for conditions that are systematically excluded from traditional insurance, such as Type 2 diabetes or pre-existing conditions. The example below highlights one such model in Mexico.



Novel private insurance

Hong Kong



ManuSilver Care

ManuSilver Care, an insurance package introduced by Manulife Hong Kong, specifically targets those between the ages of 50 to 80. This is the age demographic most vulnerable to cancer, with research showing that over 60% of cancers occur amongst people over 60 years of age.^[19]



Program design & offering

- The insurance package offers an 'early-stage cancer benefit,' which provides each user with 25% of the notional amount for each diagnosis of carcinoma-in-situ, and a 'major cancer benefit,' amounting to 100% of the notional amount if late-stage cancer is diagnosed
- Holders who pay the premium up to the age of 85 are covered until the age of 100, thereby ensuring that the most high-risk segment of the population receives adequate protection



Key stakeholders

- Manulife Hong Kong



Novel private insurance

Mexico



Amae health insurance - Diabetes

Mexico has one of the highest rates of death attributable to diabetes and a correspondingly high measure of disability-adjusted life years. To address this shortcoming, RGA Latin America recently partnered with a local insurance company launched an initiative to change the way insurance was conceptualized and sold -Amae, a digitally delivered insurance product and the first coverage targeted to individuals with type 2 diabetes in Mexico.^[26]



Program design & offering

- Amae provides access to a comprehensive platform of personalized services, such as diet and exercise plans, lab tests, and medical monitoring, and a wellness rewards program
- Users can access all these benefits through one online hub
- Ultimately, Amae seeks to improve the quality of life for policyholders through a customized digital experience



Outcomes

- Amae has demonstrated early success at generating leads on social networks, especially Facebook, having reached a community of more than 130K followers in a period of seven months
- This experience has provided key learnings about what it takes to be successful in this type of venture
- The Amae team continues to learn new ways to most effectively market the benefits of the platform to the community and ultimately convert these benefits to insurance sales.
- The team is hopeful that Amae will eventually lead to opportunities to offer insurance products to people living with other chronic diseases and believes this innovation will change the way insurance is conceptualized and sold in Mexico.

Multi-source crowdfunding

A Mutual aid

This study found three innovative funding models which focused on mobilizing resources voluntarily from both current and future patients. These funding models created attractive pull incentives which encouraged participation and investment from targeted population segments.



Multi-source crowdfunding

China



Xiang Hu Bao, mutual aid platform

Xiang Hu Bao, which means “mutual protection”, is an online mutual aid platform introduced by Ant Group (Alipay), provides participants with a basic health plan covering 100 types of critical illnesses, including cancer, critical brain injury and acute myocardial infarction, or heart attack.^[39]



Program design & offering

- Xiang Hu Bao requires no upfront payment or admission fees
- It is available to participants between 30 days and 59 years of age who meet basic health and risk criteria
- When a participant makes a claim, supporting evidence must be submitted via the Alipay app and then it goes through a review and approval process
- Once claims are approved, the participant will receive a one-time pay-out of up to RMB 300,000 (~US\$43,000), the cost of which is shared equally by the other participants



Key stakeholders

- Ant Group



Outcomes

- The platform has attracted over 150 million participants since it was launched, helping health protection in China become more inclusive by making it more accessible especially to the lower income group and those living in rural areas.
- In 2019, each member paid 29 yuan. This year, Ant Group capped member payments at 188 yuan – about the cost of two KFC bucket meals



Multi-source crowdfunding

China



Shuidi HuZhu (Shuidai Mutual Aid)

Shuidi (Waterdrop) is a Chinese insurance company that plans to solve high medical fees most patients face, especially those with a critical illness.^[15]



Program design & offering

- A patient pay-out platform designed to reduce the financial burden of those inflicted with diseases
- The program runs on a peer-to-peer economy model and raise capital from other users' monthly membership fees for patients who cannot pay medical bills
- User use WeChat to pay and they can choose to chip-in between RMB 1, 3 or 10 every month
- Upon a health diagnosis, the user applies for pay-out capped at RMB 300,000. Once approved, the participant received pay-out in their WeChat account



Key stakeholders

- Shuidi, private insurance company



Multi-source crowdfunding

India



Inter Aide and ATIA Health Mutual Fund

Inter Aide and ATIA, with the support of the Sanofi Espoir Foundation, worked with 6 local partners to provide mutual health services to their micro-entrepreneur members, who are generally excluded from any health coverage system.^[16, 17]



Program design & offering

- This micro-credit model allows families to join a mutual health scheme for a fee of US\$1.50
- This creates social protection for the poorest families in certain districts of Pune and Mumbai
- Some of the benefits this scheme entitles members to claim are cancer screening, consultation, treatment coverage and a refund of hospitalization worth up to US\$210



Key stakeholders

- Inter Aide and ATIA
- Sanofi Espoir Foundation
- Private companies



Outcomes

- As of December 2013, Mutual Health Funds covered 14,058 families or 54,230 individuals.

B Multi-donor pooling

Individuals commonly use crowdfunding platforms to raise funds for personal causes. These campaigns can be initiated by the patient or by a partner organisation.

Partner-initiated crowdfunding platforms, like Watsi, work with medical partners to create profiles on behalf of patients from LMICs.



Multi-source crowdfunding

Multi-region



Watsi crowdfunding

Watsi is a non-profit healthcare crowdfunding platform that enables individual donors to directly fund medical care for individuals in developing countries without access to affordable medical care.^[40]



Program design & offering

- Watsi lets anyone donate as little as \$5 to directly fund high-impact surgical care for patients around the world
- Donors can donate directly to a patient who needs a life-changing surgery or sign up to automatically support a new patient every month
- The program works with medical partners like African Mission Healthcare Foundation who identifies and prepares profiles for patients that need low-cost, high-impact medical care
- The platform aims to become 100% financially sustainable through contributions from individual donors and corporate partnerships, and to be authorized by the government



Key stakeholders

- African Mission Healthcare Foundation
- Watsi



Multi-source crowdfunding

Africa



Pink Ribbon Red Ribbon (PRRR)

Pink Ribbon Red Ribbon (PRRR), an independent affiliate of the George W. Bush Institute, is an innovative global partner of national governments, non-governmental (NGO) and multilateral organizations, foundations, and corporations.^[20]



Program design & offering

- Founded in 2011, PRRR leverages public and private investments in global health to combat cervical and breast cancer in five African countries (Botswana, Ethiopia, Namibia, Tanzania, Zambia) and Peru
- PRRR's activities include education, vaccination, screening, treating and providing support, increasing access to treatments and training healthcare providers



Key stakeholders

- George W. Bush Institute
- NGOs
- Private companies



Multi-source crowdfunding

Kenya



The Faraja Medical Support Fund

Faraja Cancer Support, provide patient support services, launched the Faraja Medical Support Fund (FMSF) to provide adult and pediatric patients with cancer treatment in both private and government institutions across Nairobi.^[43]



Program design & offering

- Faraja aims to raise 100 million KSh through partnerships with companies, trusts and foundations to ensure up to 50 patients receive appropriate cancer treatment every year.
- These funds cover medical costs associated with cancer treatment
- To qualify for a grant, individuals submit an application form which is vetted monthly by members of an expert panel
- The selection criteria is based on the financial status of the applicant, type of cancer, prognosis and age



Key stakeholders

- NGOs
- Private companies



Outcomes

- A pilot project for the Faraja Fund was carried out in 2014 from a donation given by Nakumatt Holdings during their October cancer awareness campaign.
- The pilot funded 42 children and adults at the cost of 5.5 million KSh

C Lottery-based funding

Another innovative funding approach by multi-source crowdfunding is lottery-based funding. Examples of government-led lottery-based funding were found in the Philippines.



Multi-source crowdfunding

Philippines



Philippines Charity Sweepstakes Office

The Philippine Charity Sweepstakes Office is a government agency responsible for providing funds for national health initiatives, and medical assistance charities that provide health services.

By conducting charitable sweepstakes, races, and lotteries, the program aims to maintain and expand the government's capability to provide a sustainable source of funding for health and welfare related projects.^[41]



Program design & offering

- The Philippine Charity Sweepstakes Office represents a new attempt from the government of the Philippines to diversify the source of funding for patients suffering from illnesses such as cancer
- The Individual Medical Assistance Program, for instance, provides funding for cancer treatment such as chemotherapy and radiotherapy. The program shoulders a certain amount of medical expenditure that would otherwise come from patients
- Another example is the At Source Ang Processing Program, in which the Philippine Charity Sweepstakes Office enters into an agreement with several private and government hospitals willing to provide chemotherapy drugs to cancer patients at a 20% discount rate in addition to providing the health services by Individual Medical Assistance Program



Key stakeholders

- Ministry of Health Philippines

D Sales-linked and matched donations

The following three case studies are examples of a sales-linked donation program developed through a partnership between foundations and private sector companies, including a mobile game developer, a bank, and a craft brewery.



Multi-source crowdfunding

Poland



War on Cancer Mobile Game

'War on Cancer' is a free-to-play fundraising mobile game, where money can actively be donated to a real-life chosen cancer patient whilst the player enjoys playing a shooter game.^[30]



Program design & offering

- Player progresses through various levels of killing as many cancer-monsters as possible
- There are 'in-app purchasing' options (e.g., additional ammunition packages, ads served) which link to a fundraising page for a real-life patient in need through the Alivia database
- If the player does not identify a specific person to link their account to, then any money raised goes to 'Skarbonka' – a fundraising pool that supports all the patients



Key stakeholders

- Saatchi & Saatchi Interactive Solutions (IS) Poland
- Polish charity, Alivia Oncological Foundation (Fundacja Onkologiczna Alivia)



Outcomes

- The game has been extremely effective, earning more than five million Polish Złoty (approximately €1.2million)
- A special international edition of the game is being launched to promote the Foundation's reach across Europe



Multi-source crowdfunding

Vietnam



SeALady Cashback

SeALady Cashback is a collaboration between SeABank and the Brighter Future Foundation, which aims to boost funding for breast cancer patients by allocating a portion of product sales to charity.^[42]



Program design & offering

- For every 1 million VND that SeABank credit card users spend, they will contribute 2,000 VND to the Cancer Patient Support Fund - Bright Future Foundation
- While the approach has been successfully used on a larger scale elsewhere, namely with (Red) products for HIV/AIDS and Pink Ribbon products for breast cancer, it is yet to be rolled out extensively in Asia



Key stakeholders

- SeABank
- Bright Future Foundation



Multi-source crowdfunding

Poland



Good Beer Campaign by Rak'n'Roll Foundation

The Rak'n'Roll Foundation partnered with a local brewery with the aim of supporting cancer patients in Poland through a sales-linked donation program.^[31]



Program design & offering

- The Rak'n'Roll Foundation partnered with a local brewery with the conceptual and creative support from Grey Poland in 2017
- Together, they created a new beer brand in which 50 Eurocents per bottle was donated to support cancer patients in Poland



Key stakeholders

- Rak'n'Roll Foundation
- Grey Poland
- Private companies



Outcomes

- This initiative turned into a self-sufficient donation engine within a year, with sales of 1,500 bottles and further investment to increase production
- Rak'n'Roll gathered 50% more tax-based charity donations compared to the previous year

Financial services

A Credit services

The following three case studies are related to debt financing partnerships. Patients from these cases are either offered zero-interest loans or strategic investment loans for access to innovative screening services.



Financial services

India



Arogya finance zero-interest loan

Mumbai-based Arogya Finance is a social healthcare venture which offers loans for medical treatment to the traditionally un-banked. HealthCare Global Enterprises, which runs a cancer treatment hospital network in India, has partnered with Arogya Finance to offer first year interest-free loans to cancer patients.^[44]



Program design & offering

- Arogya provides direct financial loans of US\$300 to US\$7,000 for a period of 12 months and pays the medical bills on behalf of the patient directly to the hospital or service provider
- The loan tenure is from six months to 48 months 0% interest rate for one year, 6% for two years, 8% for three years, 9% for four years. A processing charge of 2% on loan amount is applicable
- In addition to direct financial loans, patients can register for a cashless insurance card with an embedded pre-approved loan based on their ability to pay. This loan card can be used for the cardholder and their family members



Key stakeholders

- Arogya Finance
- HealthCare Global Enterprises



Financial services

Thailand



The KTC 0% instalment plant

Krungthai Card Public Company Limited (KTC) in partnership with Roche Thailand, aims to relieve the financial burden of patients who uses Roche Thailand Limited pharmaceutical products such as selected cancer treatments and haemophilia treatments.^[45]



Program design & offering

- KTC offers a six and ten month instalment payment plan at 0% interest rate for Roche Thailand Limited pharmaceutical products
- Patients pay directly for their treatment in participating public and private hospitals with KTC credit card to access the benefits



Key stakeholders

- Roche Thailand
- Krungthai Card Public Company Limited (KTC)



Financial services

Argentina



GETNET Credit Card Instalments

Roche Argentina has established a partnership with Banco Santander to develop an innovative access solution.

The solution aims to reach the country's out-of-pocket patient segment and expand Foundation Medicine (FMI) comprehensive genomic profiling (CGP) Services in Argentina.^[46]



Program design & offering

- The partnership allows patients to order FMI CGP Services with their credit card
- Patients benefit from instalment payments with favourable interest rates through a one-click link on the FMI ordering portal



Key stakeholders

- Roche Argentina
- Banco Santander



Outcomes

- This solution is expected to expand the affordability of FMI CGP testing from 2%–3% to an estimated 30% for newly diagnosed cancer patients in Argentina
- To further broaden access to FMI CGP Services in Argentina and across Latin American (LATAM) countries, Roche is developing several initiatives, including:
 - » Patient Support Program (PSP) that offers a personalized discount based on patient's economic situation
 - » Specialisation Course on Cancer Genomics and Precision Medicine to raise awareness of the value of cancer genomics and precision medicine among healthcare practitioners (HCPs) and other stakeholders

B Cryptocurrency-based platforms

This study identified examples of cryptocurrency-enabled platforms that have unlocked additional funding for the treatment of high-cost NCDs and applied innovative ways of deploying this funding.

Technologies like cryptocurrency have led to a new generation of platforms, which can support health financing needs. One example of a global technology company that is transforming how funding is mobilized and deployed is below.



Financial services

Multi-region



OncoPower platform

Launched by Witty Healthy, OncoPower is a platform that uses blockchain technology to help cancer patients keep track of their medical data across providers and offers users incentives.^[47]



Program design & offering

- The tool will be funded by blockchain and digitally-generated security called Onco
- Participants can then use Oncos as a medium of exchange within OncoPower for services rendered between community members. For example, oncologists can exchange Oncos for consultations or patients can use Oncos to receive services like a personalized nutrition plan from a dietitian or a consultation with a patient advocacy representative.
- The platform also enables smart-contracts between payers and providers, patients, and pharmaceutical brands to improve medication adherence or report cancer treatment and genetic data
- Participants are both shareholders and users. They retain both the clinical and social benefit and most of the financial benefit via Onco which is distributed using transparent consensus algorithms.



Key stakeholders

- Witty Healthy

C Mobile health wallets and savings plans

The final innovation in deploying funding is an example of technology-enabled mobile health wallets. As mobile adoption exponentially increases in LMICs, partnerships with telecom providers to address health financing gaps have emerged. Examples of mobile health wallets from India and Kenya are featured below.



Financial services

India



Affordplan Swasth program

YES BANK in partnership with Affordplan, announced the launch of 'Swasth Card', a co-branded healthcare card, under Affordplan Swasth program in its endeavour to enable families plan and manage their finances for their healthcare needs.^[48]



Program design & offering

- Key features and benefits of the Affordplan Swasth program are access to healthcare services and treatments at a discounted price and cashback benefits for outpatient consultation, diagnostics, medicines, and In-Patient Department (IPD) treatment
- The program also provides access to loan facilities for IPD treatments in case a customer faces a liquidity issue. The loan for the treatment is sent directly to the hospital
- Apart from that, it also has basic coverage against accidental hospitalization, disability, or death and an inbuilt rewards platform which provides wellness related products and services in the form of rewards and incentives to customers



Key stakeholders

- Affordplan
- YES Bank



Financial services

Kenya



M-TIBA mobile health wallet

M-TIBA, a new health mobile 'health wallet' that allows people to save, borrow, and share money for healthcare at low costs. The program was designed to fit the needs of slum dwellers and poor rural populations where health behaviors are rarely captured, it is difficult to be formally assessed for insurable risk, and healthcare is often paid out-of-pocket.^[49]



Program design & offering

- M-TIBA payments for health services and products are digitally recorded in real-time. People can pool resources to effectively pre-pay for health while improving their insurable risk profile
- Funds for M-TIBA are stored in specialized wallets through M-Pesa and can be used at over 1,800 healthcare providers, who form part of a nationwide M-TIBA network
- Donors and insurers can also use M-TIBA to offer healthcare financing products such as vouchers, managed funds and low-cost health insurance to specific segments of the Kenyan population



Key stakeholders

- Safaricom
- PharmAccess
- CarePay



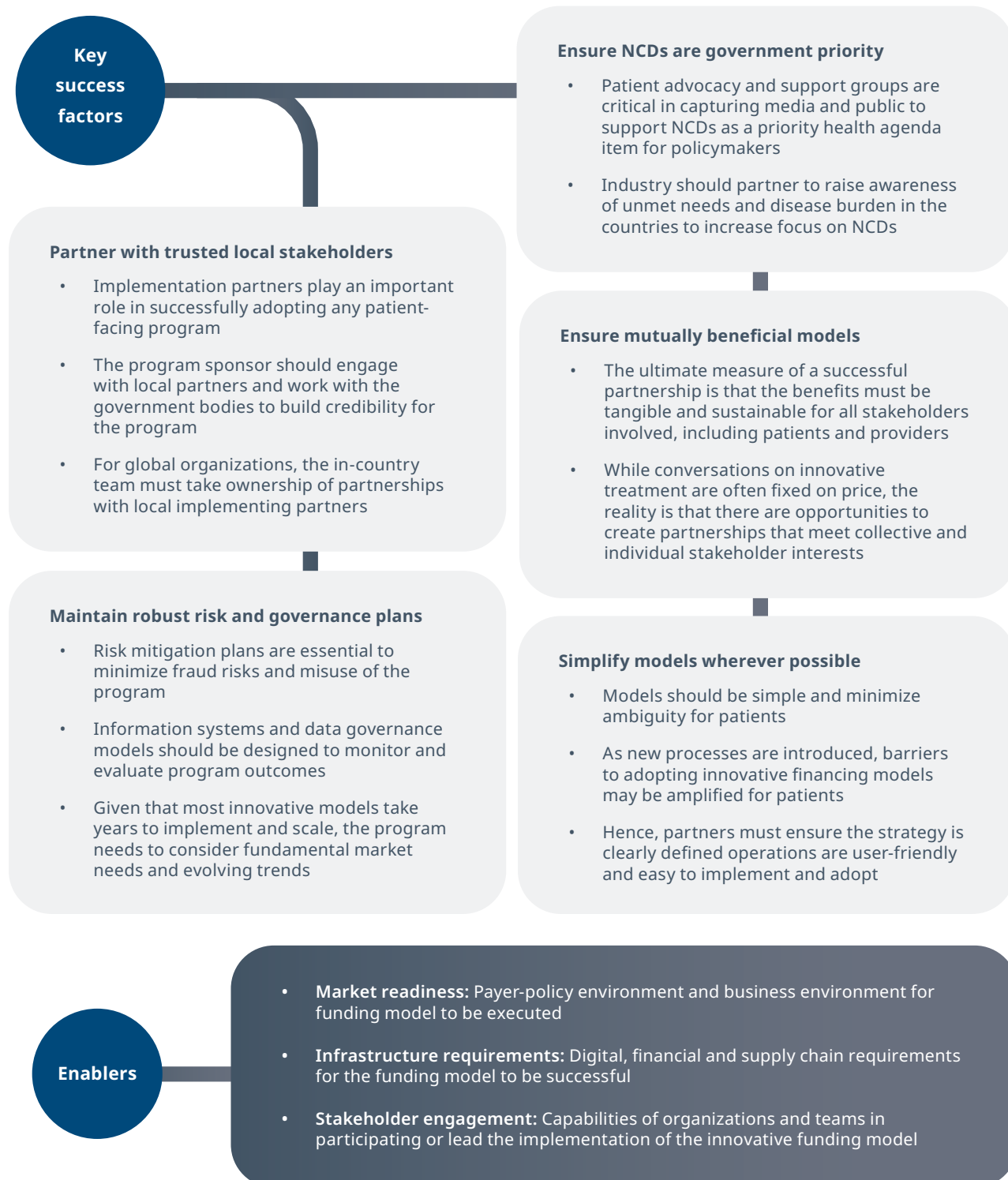
Outcomes

- In a 9-month trial of 10,000 people in Nairobi, over 90% responded positively when asked to earmark US\$10 for treatment for children (up to 5yrs old)
- 77% of the women indicated that they are willing to save for health in their wallet

Implementation of innovative funding models

The global inventory of funding models in the previous section summarizes the innovative funding models identified by this study. Five key pillars have been pinpointed to ensure the overall success and

sustainability of the funding programs implemented. To establish a strong foundation for these, key success factors, the fit and relevance of these funding models and their environment must be considered.



The call to action for the future of health financing

Innovative funding programs identified in this report strive to address the gaps in treatment access due to affordability and payment. However, these programs alone will be insufficient to address the growing NCD

burden across the world. There is a need for broader discourse to significantly reduce the access gaps globally.

Leveraging universal health coverage (UHC) reforms

Many LMICs are working to achieve greater universal financial protection in health care, with funding from domestic sources that combine public insurance and co-payment. UHC is the belief that everyone, everywhere should have access to quality health services where and when they need them, without suffering financial hardship. UHC implies financial protection that promotes equity and efficiency and reduces the risks of financial shocks to families by reducing out-of-pocket payments.

Establishing universal entitlement to key services through guaranteed benefits packages is a cornerstone of improving access to cancer care. While cancer encompasses a set of chronic and complex diseases which challenges the limits of UHC and pathways to progressive universalism, it is critical that cost-effective cancer interventions are progressively incorporated into universal health care coverage packages.

Funding programs should complement the UHC reforms and support the initiatives of the government to ensure sustainability. The government will continue to be the largest spender for healthcare in most of the LMICs, so it is important that funding initiatives are focused on addressing the unmet needs in the markets.

Additionally, due to lack of formal evaluation and recent efforts for UHC reforms, it is often difficult to assess the impact of innovative and expensive

therapies on patient outcomes at a sub-national level in most LMICs. Hence, there is a need to monitor patient outcome data including registries or other real-world initiatives which leverage technology to enable measurement of treatment outcomes and provide protection against fraudulent billings.

Importance of partnerships in innovative financing

Of the various types of innovative models identified in our research, the majority were driven by partnerships. The necessity for such partnerships is a consequence of the complex web of funding and service gaps, which cannot be resolved by any one party working alone. By pooling complementary expertise and capabilities, traditional funders have been able to address specific service gaps to meet patient needs.

Successful partnerships require all stakeholders to take an active role in shaping the funding, design and delivery of the proposed model. Through primary and secondary research, this study has summarized some of these key roles below:

Table 2. Summary of stakeholder roles

 <p>Government</p>	<ul style="list-style-type: none"> • Governments can foster a regulatory environment which encourages and facilitates innovative partnerships and approaches to health financing, through intersectoral partnerships • Governments can explore partnerships that will fill funding gaps, and cover populations and services not reached by existing funding models • Governments can strengthen, fund, and implement national cancer control plans, with specific goals to improve cancer outcomes and measurable indicators of current and future cancer expenditures
 <p>Insurers, banks and other financing institutions</p>	<ul style="list-style-type: none"> • Financing institutions can leverage their health economic data to help establish the gaps in financial risk protection, making the distinction when proposed models are CSR initiatives or for-profit services • Insurers can consider how best to incorporate screening, diagnosis and other care services in addition to disease treatment so that insurance products are a “one stop shop” • Insurers can also develop new risk-sharing models to expand its customer base, especially for marginalized and vulnerable communities (e.g. microinsurance plans)
 <p>Healthcare companies</p>	<ul style="list-style-type: none"> • Healthcare companies should assess long-term strategy of proposed partnership or financing model, business case for investment, sustainability, alignment with corporate social responsibility (CSR) and other externalities (e.g. strengthening country capacity to advance care delivery) • Global healthcare companies can leverage its global footprint and deep understanding of disease in collaborations at the global, regional, national or sub-national scale
 <p>Telecommunications companies, retailers, other private sector actors</p>	<ul style="list-style-type: none"> • Private sector stakeholders that traditionally played a limited role in healthcare provision can play a larger role in health financing, specially related to risk pooling • Telecommunications companies and retailers have strong distribution networks and can enable access to a wide user base for health financing interventions
 <p>Foundations, charities and other NGOs</p>	<ul style="list-style-type: none"> • NGOs can be key implementation partners, and are often the most effective conveners for outreach and facilitation of a broad range of stakeholders • International NGOs and donors can play a key role in organizing regional initiatives, developing regional centers of excellence and setting the global health agenda to focus on
 <p>Healthcare providers</p>	<ul style="list-style-type: none"> • Providers are essential administrators in all health financing models because they are ultimately responsible for the delivery of care and the governance of treatment data and patient data • Providers inherently play a role in health financing as a coordinator between sources of funding, channeling of payment and funding outcomes



Physician associations and national disease associations

- Physician associations are powerful influencers and can leverage their technical expertise to clearly define the gaps and unmet needs that exist in cancer and high-cost NCD care
- Physicians can provide advice to governments regarding the value of these NCD treatments and advancing the overall NCDs agenda



Patient advocacy groups and civil society organizations (CSOs)

- Patient advocacy groups can play a larger role beyond supporting existing patient needs by engaging in public discourse to shape the future of financing and access for patients
- CSOs can lead grass-roots mobilization efforts to disseminate public health information, and raise awareness of local initiatives for patients and their families as well as fundraise or secure additional resources
- CSOs can collaborate with other public and private sector stakeholders to support the implementation of innovative financing models and monitor its success

Within these partnership models that were evaluated, private sector organizations like global pharmaceutical companies have played a crucial role in driving partnerships. While their involvement frequently targets specific parts of the pathway where there is commercial rationale to instigate partnerships, their contributions have consistently served as a catalyst for innovation more broadly, leading to improved outcomes across the patient journey.



Conclusions

Roche and IQVIA have conducted reviews of the funding and financing ecosystem, discovering new approaches with a review of recent innovative funding cases and a range of strategies used to support our research related to NCD funding. This new approach has revealed additional case studies and new, emerging funding and financing archetypes.

The exciting and innovative funding models discovered, while complementing traditional funding, can significantly impact those who do not currently have access to appropriate care for NCDs due to affordability. The challenge for stakeholders will be to identify the most suitable models for their health system and the population's needs and take action to adopt them sustainably.

Ultimately, an effective response to NCDs requires strengthening all the functions within a health system: healthcare services, resource generation, financing, and stewardship. Lack of adequate management for one component could diminish overall efforts, resulting in wasted public resources and catastrophic expenditures, unnecessary pain, and premature death for the patients themselves.

The funding challenges posed by NCDs are universal, with a continuous and increasing financial impact on patients, health systems and economies. While currently unavoidable, efforts to develop innovative approaches can provide access to healthcare services across the globe. Responses to tackle these funding challenges vary from region to region and are dependent on country differences. However, amongst these differences, there are also commonalities in collaborations between diverse stakeholders to create win-win partnerships.

Collaboration creates opportunities, and knowledge sharing is critical to ensure that new funding innovations are not only sustainable but scalable in other markets and regions. Successful funding

innovations are frequently driven by collaborations between different funding partners with a shared interest in improving patient care and minimizing financial hardship. These collaborations are increasingly being driven by the private sector (health care industries, private insurers and financiers) seeking partnerships with traditional funders to implement new funding innovations.

The funding gap for NCDs is significant and, without action, will grow. Approaching health financing in new and innovative ways can help countries address this challenge, ensuring that patients benefit from new scientific and technological advances. Effective control of NCDs is possible, and all stakeholders—communities, governments, non-profit organisations, and the private sector—have a role to play.

“Efforts to develop innovative approaches can provide access to healthcare services across the globe.... collaboration creates opportunities.”

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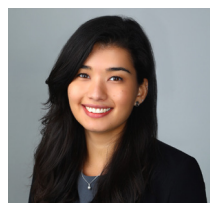
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