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Unlocking the Economic Potential of the Health Sector in Latin America

Collaborative Win-Win Approaches for Sustainability



Introduction

Healthcare spending is often viewed as a necessary burden on government and private spending—something that must be managed carefully and whose growth must be restrained. Quite often, policy analysts and policy makers express alarm at its rate of growth, and academic and policy literature frequently discuss solutions to bend the cost curve as a means to achieve sustainability. However, cost is only one side of a two-sided coin; healthcare spending also represents part of a country's gross domestic product (GDP) and contributes to economic growth like any other sector. One can therefore view healthcare as a strategic sector whose growth and efficiency should be encouraged and where routes to healthcare sustainability through investment and GDP growth can be explored.

While access to healthcare has significantly increased in the last half-century in Latin American countries, these countries still face healthcare sustainability challenges. This report examines various global policy approaches that seek to achieve sustainability by improving efficiency or delivering economic growth, and which involve partnerships between government and the private sector. It prioritizes a set of approaches based on their likely impact and replicability in Latin America, and further assesses their relevance to meet specific sustainability challenges in Mexico and Colombia—two of the largest Latin American economies—based on in-depth interviews of past and current government leaders in health and finance. These approaches, which offer to increase growth and financial sustainability of the health system, can be used to inform future policies and programs in Colombia and Mexico and can also be helpful for other countries in the region. Health industry and government officials working to make their countries' health systems more sustainable and

accessible may be able to leverage these approaches to harness the role of the health sector as a potential engine of GDP growth.

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Efforts towards healthcare sustainability in Latin America

- Over the past quarter-century, life expectancy and access to pharmaceuticals and healthcare have improved in Latin America.
- Latin American countries have aimed to achieve sustainable healthcare and have made progress towards this goal.
- Nearly universal coverage has been achieved in many countries, but expanded healthcare use and costs brings challenges of funding and fostering efficiency.
- Governments have made efforts to manage the resultant rise in healthcare costs and attain financial sustainability, but some remain behind the Organisation for Economic Co-Operation and Development (OECD) average in health expenditure as a percentage of GDP.

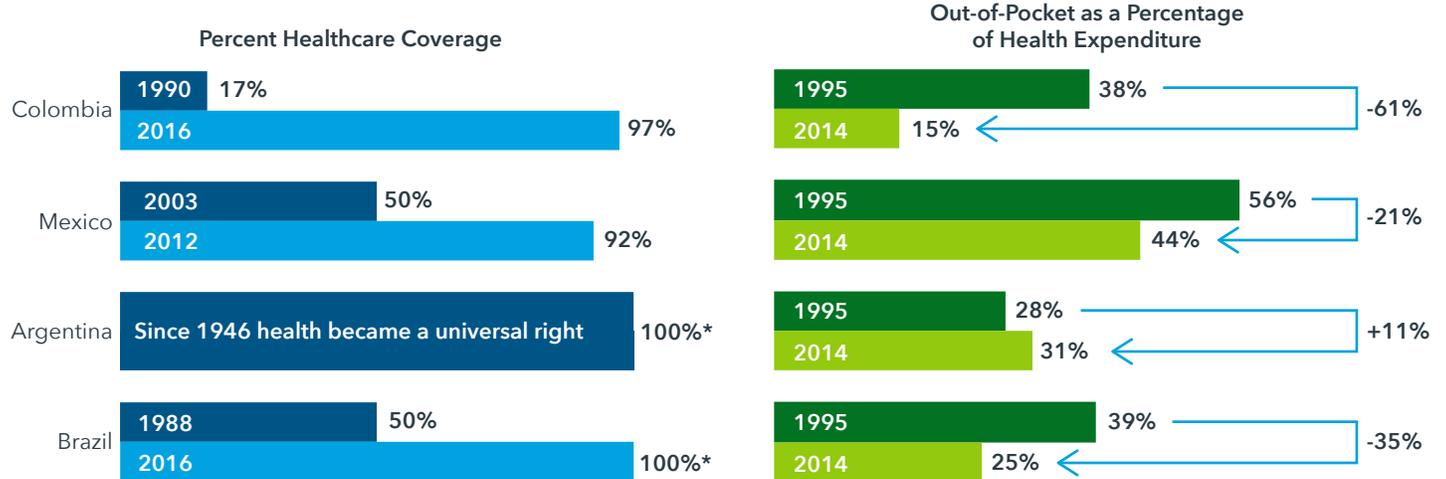
A major goal across Latin American countries is to achieve sustainable universal healthcare for their populations. A sustainable healthcare system can be best described as “a health financing system [that] raises adequate funds for health, so that people can use needed services [while being] protected from financial catastrophe or impoverishment associated with having to pay for them. It provides incentives for providers and users to be efficient.”¹ Over the past quarter-century Latin America has made great strides in healthcare coverage (see Exhibit 1). Life expectancy has increased 16 years on average, and access to pharmaceuticals and general healthcare services have improved.^{2,3} These developments have allowed for longer and healthier lives and contributed to growing human capital within Latin America.⁴

Along with funding and fostering efficiency within the healthcare system, Universal Healthcare Coverage (UHC) is a major stepping stone to attaining sustainable healthcare. Argentina, Brazil, Colombia and Mexico – the four largest economies in the region – have made meaningful progress towards providing UHC by increasing access to healthcare services, reducing inequalities and increasing public spending in healthcare.

Both Colombia and Mexico have established UHC: Colombia in 1993 with *Law 100* and a 2015 statutory law that established health as a fundamental right, and Mexico in 2003 with *Seguro Popular*. Mexico’s *Programa Sectorial de Salud* and Colombia’s *Plan Estratégico Sectorial de Salud y Protección Social* are two strategic plans established by current presidents’ administrations to enable the continued support of UHC.^{8,9}

Healthcare sustainability remains a priority on the political agenda for the majority of countries in Latin America. Colombia is one of the largest economies in Latin America, and has undergone policy changes to address healthcare sustainability. In order to meet rising healthcare demands in Colombia and fulfill the promise made through *Law 100*, the Ministry of Health passed legislative reforms to manage the resultant rise in healthcare costs and attain financial sustainability. In August 2017, Colombia created the Administrator of the Resources of the General System of Social Security in Health (ADRES), which put an end to the outsourcing of administrative work (previously known as FOSYGA) that drove costs within the health sector. ADRES centralized all administrative processes, resulting in improved expenditure management and reduced transaction costs.¹⁰

Exhibit 1: Healthcare Coverage Improvements in Latin America



Source: OECD Reviews of Health Systems: Colombia⁵ & Mexico,⁶ 2016; World Health Organization, Brazil's march towards universal coverage, Sep 2010; IQVIA, Feb 2018

Notes: Healthcare covered services differs between countries.

* = This indicator is a theoretical universal coverage (100%), in practice attainment could be much lower.

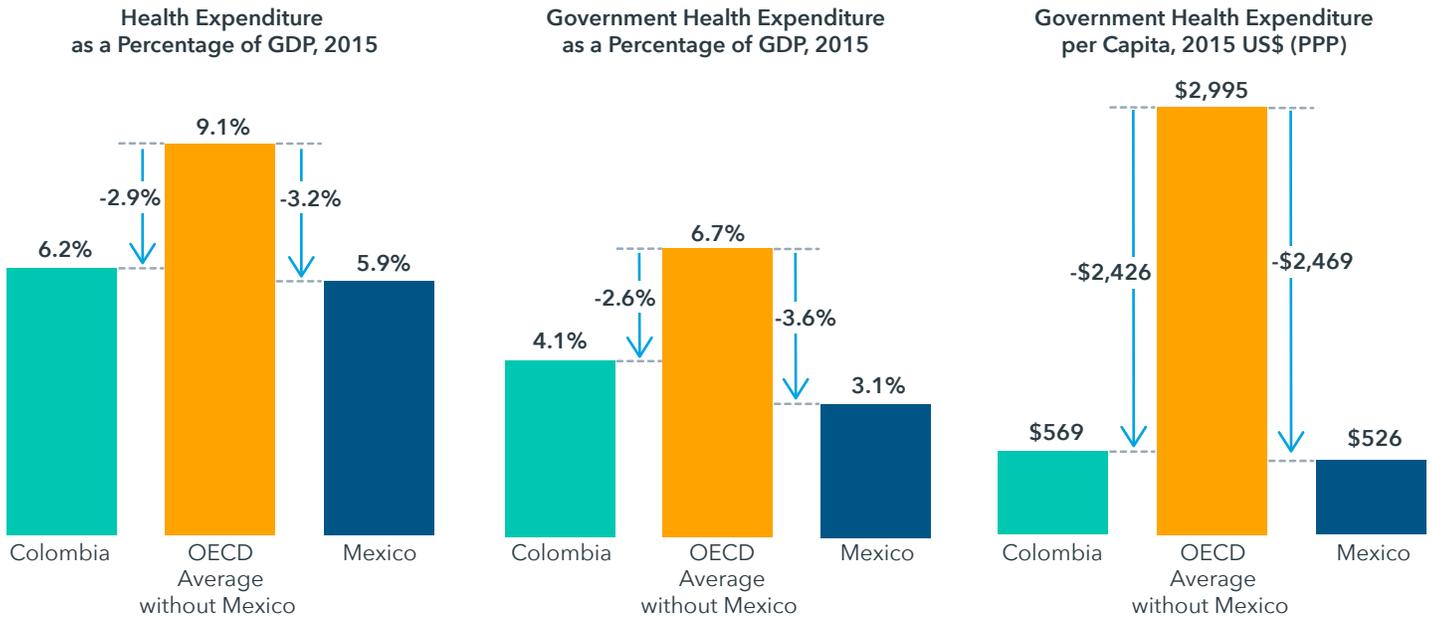
Source: World Bank Open Data, 2014;⁷ IQVIA, Feb 2018

Note: Out-of-Pocket excludes any prepayment for health services, including private insurance.

In Mexico, there has been an increase in the level of public investment in healthcare from 2.4% of GDP in 2003 to 3.2% of GDP in 2013.⁶ Additionally, there has also been progress in the authorization and safety of new technologies through the Federal Commission for the Protection against Health Risk (COFEPRIS). Establishment of this program allowed for higher quality products to be introduced to the population. However, despite these steps toward sustainable healthcare, the combination of public and private health spending in Mexico has not grown as a percentage of its GDP over the last ten years due to shifts from private to public spending. Combined spending has remained nearly flat at current levels of 5.9% of GDP, even with an expansion in the covered population and new therapies made available.⁶ While there are measures in place to make the healthcare system more efficient, supply of quality healthcare services still lags behind demand for services.

Despite rapid growth, both Colombia and Mexico remain behind the OECD average in terms of health expenditure as a percentage of GDP and domestic health expenditure (see Exhibit 2). This can be partially attributed to the contested prioritization and allocation of resources across sectors in these countries. Gaps between the OECD averages – often viewed as a benchmark of sustainability for the region – and Colombia and Mexico's levels demonstrate the financial challenges each market faces before it can become sustainable. Inadequate financing in the face of rising unit costs of care and inefficient allocation of resources – whether they be financial or human – are key hurdles.

Exhibit 2: Aspects of Colombia and Mexico Health Expenditure as Compared to OECD Average



Source: WHO Global Health Expenditure Database, 2015;¹¹ OECD Health Spending, 2015;¹² IQVIA, Feb 2018

Notes: OECD = Organisation for Economic Co-operation and Development; GDP = Gross Domestic Product; Government Health Expenditure defined by WHO as Domestic General Government Health Expenditure; Colombia is not an OECD country and is excluded from the OECD Average. PPP = Purchasing Power Parity.

Healthcare sustainability challenges

- Healthcare sustainability is influenced by three broad factors: economic inefficiencies, supply and demand.
- Mexico and Colombia face some common challenges: increasing demand for healthcare services and technologies, constrained or reduced healthcare budgets and inadequate health expenditure growth as a percentage of GDP.
- Mexico additionally faces difficulties relating to fragmentation and misalignment within its public institutions and lack of technical capabilities, while Colombia grapples with unlimited public access to services, the need for healthcare centered on diagnosis and prevention and administrative inefficiencies.

FACTORS INFLUENCING HEALTH EXPENDITURE AND FINANCIAL SUSTAINABILITY

The World Economic Forum on Latin America 2017 – building on themes of previous World Economic Forums in 2015 and 2016 – focused on five specific themes related to healthcare and its sustainability: environment and demographic shifts, technology, global health governance, global health security and healthcare delivery systems.¹³ These themes, which are all important for a government to consider as it builds and maintains a sustainable healthcare system, further fall under three broad factors influencing sustainability: economic inefficiencies, supply and demand.

- **Economic inefficiencies** include challenges in healthcare governance, fragmentation of the health system that increase administrative inefficiencies, or lack of policies that provide enough GDP growth to an expanding sector.
- **Supply** includes challenges both related to healthcare delivery and technology enablement, including the level of resources that are or can be directed to health expenditure. A reduction in government funds coupled with lagging technology advances currently provide a reduced level of resources to the general population.

- **Demand** encompasses both healthcare delivery and health security, including the consumption of healthcare resources. Populations within Latin America continue to have growing needs for new technologies and services to meet evolving care of both communicable and non-communicable diseases.

These three factors – economic inefficiencies, supply and demand – are all intertwined. In Latin America, there is a continuous growth in the demand for services, but due to economic inefficiencies, supply remains constrained or reduced, thus creating a situation where supply cannot match demand. This results in healthcare systems that cannot provide the services required by law to meet the needs of the population being covered. To change this situation new strategies and new approaches to maintain output and meet growing demand are needed.

HEALTHCARE SUSTAINABILITY CHALLENGES

DEFINING SUSTAINABILITY CHALLENGES

To explore the specific healthcare sustainability challenges faced within Latin America and identify any appropriate solutions related to GDP growth or allocative efficiency to meet these challenges, IQVIA conducted 16 individual interviews (four per market) across four Latin American markets (Argentina, Brazil, Colombia and Mexico), with focus given to Mexico and Colombia. Experts selected to be interviewed included current and former ministry of health or finance officials, academics, political consultants and other relevant stakeholders from public and private institutions with detailed knowledge of a country’s healthcare and financial situation. Three of the four interviews per market were conducted specifically with a health expert, while one interview per market was conducted with a stakeholder with specific knowledge in economics and finance. Topics covered in these interviews included: understanding healthcare challenges and government relationships within the private sector, successful global practices to overcome sustainability challenges, and how to maximize the impact of research findings with government and non-government stakeholders.

The results of this research were used both to detail sustainability challenges and prioritize possible approaches to meet these challenges.

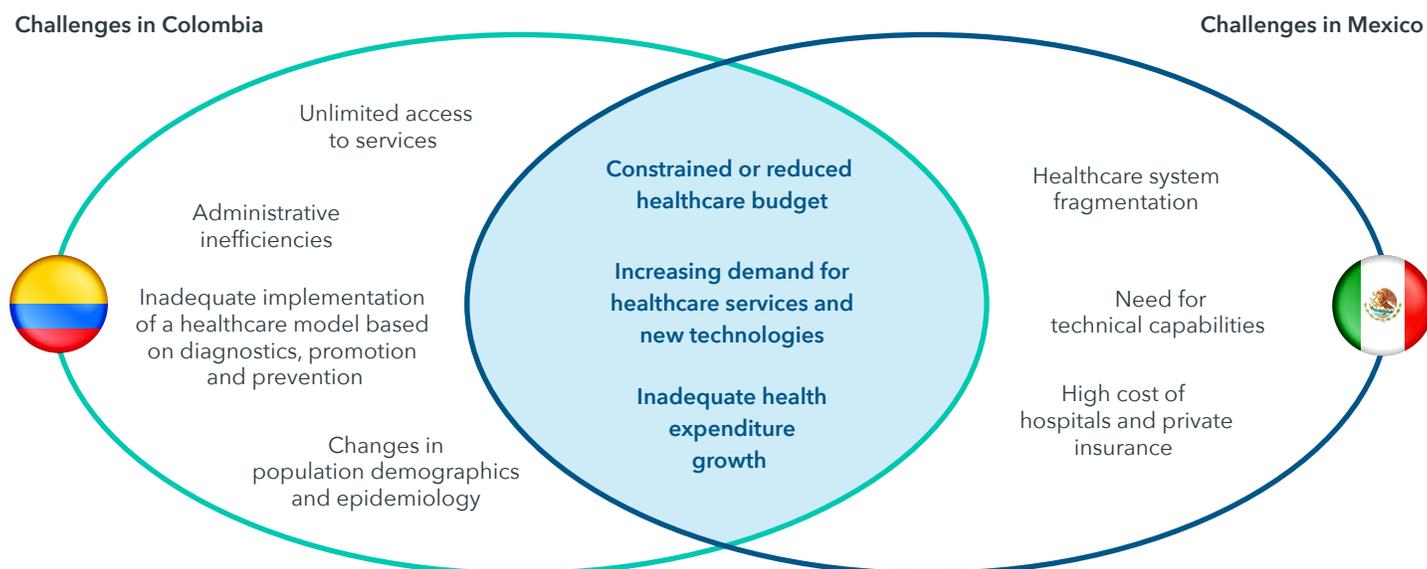
HEALTHCARE SUSTAINABILITY CHALLENGES SPECIFIC TO COLOMBIA AND MEXICO

According to interviewed stakeholders, Mexico and Colombia each possess a unique set of challenges, but they also face a number of common challenges (see Exhibit 3).

Shared challenges and actions taken to address them include:

- 1. Constrained or Reduced Healthcare Budget:**
 The healthcare budget in Mexico has remained constrained since 2013, despite an approximately 6.3 million more Mexicans affiliated to public institutions and programs since 2013.¹⁴ The national budget proposal for Mexico, for instance, increased government health expenditure by only 0.48% in 2018. This decreased public health expenditure as a percent of GDP from 2.7% in 2017 to 2.5%.¹⁴ Colombia’s healthcare budget, although stable in

Exhibit 3: Shared and Distinct Healthcare Challenges in Colombia and Mexico



Source: IQVIA, Feb 2018

recent years, is likely to decrease after the congress approved a law that reduces retiree contribution to healthcare from 12% to 4% of their reported earnings, further restricting the system's public funding.¹⁵ Facing constrained budgets with growing demand, the government of Mexico implemented "consolidated tenders" (purchases for various institutions within in one negotiation process in order to obtain lower prices in exchange for higher volume) to control pharmaceutical expenditures.¹⁶ In Colombia, the government has added steps to the process of acquiring a license to distribute medicines (such as evaluation by the Instituto de Evaluacion Tecnologica Ensalud [IETS]), increasing registration time and, thus, delaying access to new technologies.¹⁷ At the same time it has created a shortened access route for all medicines that eliminate monopolies or duopolies in order to increase competition, improve access and reduce costs.¹⁸ There have been savings due to these programs,¹⁹ however, they have also created some access restrictions to new medicines and focus narrowly on pharmaceuticals, which represent approximately 20% of the full scope of healthcare expenditure.

2. Increasing Demand for Healthcare Services and New Technologies:

Even as there has been an increase in demand, there are a number of barriers, including license and registry approvals, that slow the entry of new healthcare services and technologies. As an example of addressing such a surge in demand, the Colombian Ministry of Health and Social Protection (MoHSP) created a model for centralized purchasing of hepatitis C medicines to advance universal coverage by providing access while contributing to the financial sustainability of the system.²⁰ As of 2012, the COFEPRIS – along with the Ministry of Health in Mexico – has permitted innovative molecules, and mature molecules with a new formulation or indication, to be approved for registration and released to the market on

10 occasions. These "packages" or lists of therapies aim to accelerate access to generics and accelerate the registration of innovative drugs for the country's main mortality causes, as well as to improve efficient government spending.²¹ This program has led to 310 registrations of both branded and generic medicines since 2012, and made them available to the private market.²²

3. Inadequate Health Expenditure Growth as a Percentage of GDP:

Health expenditure as a percentage of GDP is 6.2% in Colombia and 5.9% in Mexico compared to an OECD average of 9.1%. It is expected that health expenditure as a percentage of GDP will need to grow to at least 8% to meet the demands of the population in Colombia, and to a similar level within Mexico.²³ Even if this growth is achieved, the healthcare system will need to be more efficient.²⁴ Strategies to achieve this and meet the demand of the general population include optimizing across all system actors and controlling non-formalization within the healthcare system (patient receipt of benefits beyond their purchased insurance).

While there are overlaps in challenges between Mexico and Colombia, there are also a number of distinct challenges faced in each market (see Exhibit 4).

Two distinct key challenges were identified for Mexico:

1. Fragmentation and Misalignment of Public Institutions:

Misalignment exists among several public healthcare institutions among aspects of operations, budget and resources, with the lack of a planning mechanism across the healthcare system being a root cause. For instance, each institution has its own independent network of doctors, clinics, hospitals, pharmacies, treatment centers, and unions.²⁵ The fragmented organizational arrangement of vertically integrated institutions in the health system prevents Mexico from being able

HEALTHCARE SUSTAINABILITY CHALLENGES

Exhibit 4: Healthcare Sustainability Challenges in Latin America

	Healthcare Sustainability Challenges	Mexico	Colombia	Other Latin American Markets
Economic Inefficiencies	Administrative Inefficiencies		☑ *	
	Fragmentation and Misalignment of Public Institutions	☑ *		☑
	Inadequate Health Expenditure Growth as a Percentage of GDP	☑	☑ *	☑
Supply	Constrained or Reduced Healthcare Budget	☑ *	☑	
	Need for Technical Capabilities	☑ *		☑
	High Cost of Hospitals and Private Insurance	☑		
	Development of a Healthcare Model Centered Around Diagnosis and Prevention		☑ *	
Demand	Changes in Population Demographics and Epidemiology		☑	☑
	Increasing Demand for Healthcare Services and New Technologies	☑	☑ *	☑
	Unlimited Access to Services**		☑ *	☑

Source: IQVIA primary research, Dec 2017–Jan 2018

Notes: Responses and grouping are based on 16 primary market interviews spanning Mexico, Colombia, Brazil and Argentina. Other Latin American Markets are generalized across all Latin American markets with a specific emphasis on Brazil and Argentina. *=Identified as key challenges during primary market research among respondents **= Unlimited Access to Services as promised by the law, however not necessarily implemented.

to provide continuous care. In addition, there are multiple public sources of funds to finance care for the same individual. Lack of coordination between these funds, translates into an inefficient use of resources and high costs to the system as a whole.²⁶

2. Need for Technical Capabilities: Some efforts have been made to improve international training in the COFEPRIS and the Ministry of Health and the National Cancer Institute (INCan), however, effects have been limited due to high personnel turnover within public institutions. Mexico has fallen behind in terms of global competitiveness in education,

science, technology and innovation (STI).²⁷ Despite government efforts there remains an unmet need to train and retain valuable human capital to enhance public institutions in Mexico.²⁸

Three additional country specific key challenges were identified for Colombia:

1. Unlimited Access to Services: All Colombians, regardless of economic status, have the right to access all drugs and treatments registered in the country, as prescribed. While the availability of services aims for the closure of socioeconomic status gaps and increased availability of resources for all the population, such a program places a large strain on the healthcare system to be efficient and determine where best to allocate program resources. Increased access to services has meant that many innovative products and services entering the market have been blocked for financial reasons. However, there is an unmet need to manage access to innovative products and services in the healthcare sector rather than to block them. Mi Prescripción (MIPRES) is intended to manage the prescription of medicines and services not included in the Benefits Plan for the contributive regime and thus reduce unlimited access through judiciary measures (*Tutelas*).²⁹

2. Development of a Healthcare Model Centered on Diagnosis and Prevention: Since the healthcare reform of 1993 set in place by Ley 100, the government has made the decision to promote prevention within the healthcare system. This program is still in its infancy however, since the program has lacked implementation of its preventative and primary care programs.¹⁹ The Statutory Law of 2015 called for the creation of an Integrated Healthcare Policy (PAIS), which among other objectives, aims at encouraging payers or Healthcare promoting Entities (EPSs) to devote resources for promoting prevention and diagnosis. Unmet needs that remain are to determine how the government will implement this program and what types of metrics the government can use to measure success.

3. Administrative Inefficiencies: In the health system, administrative inefficiencies have deterred healthcare growth and placed a larger cost burden on the public sector. Administrative inefficiencies are apparent within the healthcare insurance model within Colombia, and have contributed to growing deficits faced by hospitals. In the early 1990s, Colombia launched a health reform establishing a compulsory health insurance system with two main regimes: the Contributory Regime (CR) and the Subsidized Regime (SR).³⁰ The reform introduced a managed competition model where the CR (public insurance administered by private insurance companies) was supposed to foster efficiency, quality and cost-containment, and cover all employed, taxpaying individuals and their dependents, while the SR would provide health insurance for all other individuals. Unfortunately, these attempts to foster efficiencies have not met their intended goals as enrollment in the SR regime has increased and become unsustainable (in part due to an equalization of benefits packages provided in the CR versus SR).⁵ Recent increases in expenditures within the SR regime amounted to 23% in 2013–2014, and public sector operational deficits of hospitals reached \$63 million in 2012.⁵ Generally, the poor financial status of public hospitals are attributed to delays in payment-for-services by Entidades Promotoras de Salud (EPS) – payers that are publically funded but privately run – to complete default of payment of services by EPS, and poor operational efficiency.

Approaches to achieve financially sustainable healthcare systems

- Global strategies to achieve sustainable healthcare systems include growing GDP and improving allocative efficiency; both of which can be explored to address challenges in Latin America.
- National income and GDP have a direct effect on health system growth, enabling the expansion of healthcare coverage and delivery.
- Lacking unlimited resources, economies also require the pursuit of allocative efficiencies.
- Six approaches were identified as having high potential economic impact and ranging levels of feasibility and replicability in Latin America.

GLOBAL APPROACHES TO OVERCOME SUSTAINABILITY CHALLENGES

GDP growth and allocative efficiency of healthcare services are two essential drivers of healthcare sustainability. National income or GDP has a direct effect on the development of health systems, enabling the expansion of insurance coverage and increases in public spending.³¹ There is also evidence that a rise in economic growth of some 0.3–0.4 percentage points a year is associated with a 10% improvement in life expectancy.^{31,32} Further, poor health in working age adults is estimated to impact the GDP, by approximately 5% in Colombia and 3.5% in Mexico by 2030.³³ Nevertheless, an economy does not have unlimited resources and requires the pursuit of allocative efficiencies – the allocation of limited resources in the most optimal and efficient way so as to provide maximal benefit to the population.³⁴ Therefore, the bridging of

GDP growth and allocative efficiency is important to create a sustainable healthcare system. A system with strong GDP growth and policies to maintain allocative efficiency provide enough resources to manage increases in demand of resources from the population focused on value added services without duplication.

To determine what policy approaches might be relevant to countries in Latin America, and ultimately might meet the healthcare sustainability challenges facing Mexico and Colombia, 16 global approaches were assessed that have been proposed or implemented elsewhere globally by governments and focus on either of these two strategies: GDP growth or allocative efficiency (see Exhibit 5). Each of these approaches has been implemented across one or more countries with evidence of successful economic and health outcomes.

Exhibit 5: Global Approaches to Promote Healthcare Sustainability

ALLOCATIVE EFFICIENCY APPROACHES	
Innovative contracting and reimbursement models	Innovative contracting and/or reimbursement models for the procurement of medicines and medical procedures, such as outcomes-based reimbursement, are being widely applied to create a mechanism for patients to gain access to medicines while reducing healthcare costs for the government and providing predictability for the private sector.
Integrated healthcare model	A robust healthcare system provides integrated preventative care and access to early diagnosis. Integrated care may reduce the burden of overcrowded hospitals and diminish unnecessary costs to the healthcare system.
Creation of public-private programs to focus on primary care	Local and city governments can partner with private industry in order to create a pilot program to test a replicable, cost-effective healthcare model that leverages technology to provide improved access to primary care in underprivileged urban communities. This can then be replicated through the country to provide access to the wider population.
Integrated national healthcare strategy	Governments can create an integrated strategy aimed to “significantly improve the health and well-being of populations, reduce health inequalities, strengthen public health and ensure people-centered health systems that are universal, equitable, sustainable and of high quality.”* This can lead to increase in access and improved outcomes.
Primary care investment	Through public-private partnerships that invest in primary care through communities, health officials can create innovative healthcare models where primary care physicians coordinate treatment for their patients, strengthen evidence-based care for chronic conditions and encourage value-based payments.
Investment in community health workers	Partnering with non-governmental organizations and private industry to invest in community health workers can increase knowledge and skills among the community and increase access as well as bring investment in local infrastructure.
Increasing the private insurance market	Private industry partnerships to develop additional policies that will cover high-cost treatments and care. Such partnerships can help improve infrastructure development, build data repositories that help analyze treatment options and cost to select an appropriate reimbursement for treatment, and launch affordable insurance policies.
Raising awareness and increasing primary healthcare	Developing partnerships to create programs that improve the delivery of health care services, increase access to innovative treatments and improve support for serious chronic diseases. Such programs can include training sessions with primary care professionals to improve screening, diagnosis and disease awareness campaigns.

Note: * = World Health Organization, Aims of Health 2020, 2013.

Exhibit 5 is continued on the next page...

APPROACHES TO ACHIEVE FINANCIALLY SUSTAINABLE HEALTHCARE SYSTEMS

Exhibit 5: Global Approaches to Promote Healthcare Sustainability *continued*

GDP GROWTH APPROACHES	
Innovative grants to support multinational investment	Governments can stimulate business and innovation within a country by providing incentives in the form of large or small grants. Grants should be awarded to promote healthcare innovation, job creation, multinational investment, and technology gains through knowledge transfer.
Promotion of local research and development (R&D)	Governments can invest in promoting and attracting private investment in clinical trials. Attracting investment in clinical trials and R&D in the country could provide economic benefits to the job market, to the sites conducting the trials and to the economy as a whole.
Technology transfer and local partnerships with the private sector	Technology transfer is the process of disseminating technology from the place it originates to a wider group of individuals. Technology transfers in this context would provide the healthcare system processes to produce products locally, thus reducing costs, increasing employment, building technical skills of the workforce and growing strategic manufacturing capabilities.
Reduction in corporate tax rates to entice foreign investment	Lowering corporate tax rates provides incentives for other countries and corporations to invest in, and locate corporate offices within the country. A change in corporate taxes can benefit the health sector and tech companies, because there is more money held within a country to conduct investments potentially increasing skilled labor, employment and GDP growth.
Government incentives to drive biomedical sciences	Governments can invest in the biomedical sciences through an integrated strategy to develop a globally competitive pharmaceutical and biomedical industry. This includes subsidies for R&D as well as investment in the necessary infrastructure.
Three-pronged approach towards advancing universal healthcare (UHC)	To achieve both UHC and a financially sustainable system, governments can create an integrated approach focusing on a) commercializing local public-sector medical research, b) offering medical services to foreigners seeking high-quality care, and c) commercializing public payment schemes through tax or policy in order to provide care for an aging population.
Creating a roadmap for healthcare modernization	Governments can focus on modernizing their healthcare through private investment in infrastructure, specifically hospital-building, setting fixed goals towards reaching universal coverage with access to high-quality services and by growing the pharmaceutical industry.
Strategies to grow health sector through research and innovation	By engaging in multi-stakeholder programs and initiatives, the health sector can grow and be a positive driver for the economy. Creating a roadmap along with private industry stakeholders to position the country as leader in health sector research and innovation internationally can help attract investment in order to ensure a high standard of healthcare.

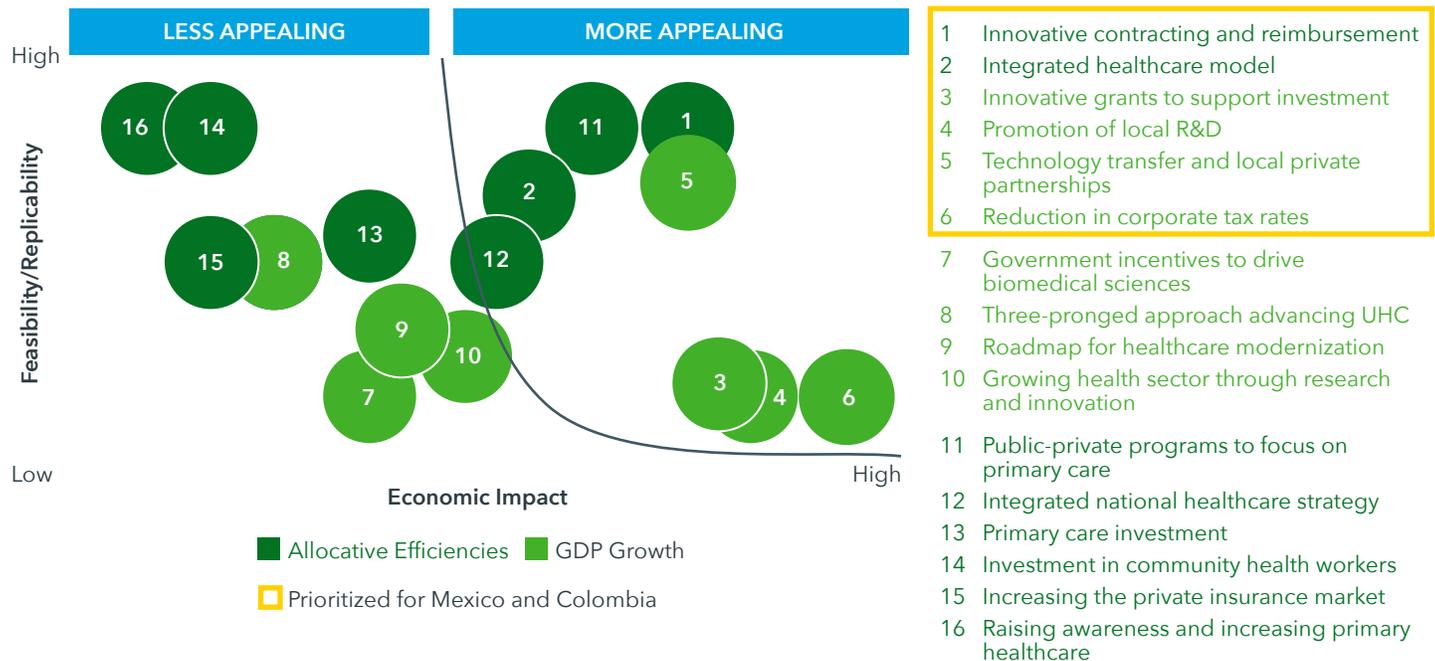
Source: IQVIA, Feb 2018

PRIORITIZATION OF APPROACHES

Since not all of these are likely to be equally applicable to the unique challenges or conditions of Latin American countries, the 16 global approaches were considered and ranked based on general feasibility/replicability and economic impact in the region (see Exhibit 6). Feasibility/replicability was assessed based

on whether the region has the resources and political ability to effectively implement the approach with the same rigor as the original study site. Each case was ranked qualitatively on a 1 to 3 scale (1-lowest and 3-highest) to determine if the approach could be replicated and was feasible in the region. Economic impact refers to the level of measurable growth

Exhibit 6: Prioritization of Approaches Based on Feasibility/Replicability and Economic Impact in Latin America



Source: IQVIA qualitative analysis, Feb 2018

or facilitation of healthcare expansion due to the approach. Economic impact was also ranked on a 1 to 3 scale (1-lowest and 3-highest). Approaches were compared based on the measurable outputs of globally-implemented case studies (e.g., US\$ increase in medical spending, absolute US\$ of additional revenue made available for hospitals or other areas of the healthcare sector, etc.). Eight approaches were identified as more appealing based on this criteria.

These eight approaches were further narrowed to a unique set of six prioritized approaches as two approaches – public-private programs to focus on primary care (#11) and integrated national healthcare strategy (#12) – had significant overlap with other selected approaches. These six were therefore identified as the approaches to undergo further investigation in one-on-one research interviews with current and former officials from Argentina, Brazil, Colombia and Mexico. The case study examples that tie in to these six approaches can be seen in Exhibit 7. Each approach possessed the ability to increase

allocative efficiency within healthcare or promote GDP growth. Approaches three, four and six offered lower feasibility/replicability compared to the other strategies, but demonstrated the highest economic impact. These were included to advance discussion around high-impact innovative approaches even if it might be more difficult to implement these approaches immediately. Prioritizing approaches with lower feasibility/replicability risked that some interviewees might not focus on the specific benefits of these approaches because they could be viewed as out of reach to Latin America. However, the purpose of these interviews was to investigate innovative approaches, including those outside of what is most comfortable or known within each market, which might provide high impact. Interviewees were therefore encouraged to consider these approaches, and assess if the benefits of each approach once implemented would be worth the potential risk of an implementation failure.

APPROACHES TO ACHIEVE FINANCIALLY SUSTAINABLE HEALTHCARE SYSTEMS

Exhibit 7: Prioritized Approaches to Achieve Healthcare Sustainability in Latin America

Focus	Approaches to Healthcare Sustainability	Case Study Example and Benefits in Practice
Allocative Efficiency	1 Innovative contracting and reimbursement models	Brazil developed an outcomes-based reimbursement model with hepatitis C treatment manufacturers to allow the Ministry of Health to only pay the cost of treating patients who demonstrate sustained virologic response (SVR) with few or no side effects. ³⁵
	2 Integrated healthcare model	The leaders of Canterbury's District Health Board (DHB) in New Zealand developed a future vision based on the notion of "one system, one budget" at the state level, and a new integrated care strategy. This strategy focused on enabling individuals to take responsibility for their own health so as they could be treated preventatively and stay out of the hospital. It also aimed at reducing hospital stays and visits by empowering general practitioners through access to diagnostic tests and reducing wait times. ³⁶
GDP Growth	3 Innovative grants to support multinational investment	The Israel Innovation Authority provides financial support for research and development programs through grants and incubator programs in order to incentivize multinational companies to invest in the country. This opportunity not only increases employment but amplifies the technical capabilities in the country. ³⁷
	4 Promotion of local research and development (R&D)	In Hungary, real-world economic data/results were provided to government officials and politicians in order to obtain strategic support for the implementation of clinical studies. Clinical trials generated \$400 million USD in revenues of healthcare providers (i.e., investigators, hospitals) and in the value of investigational medical products. ³⁸
	5 Technology transfer and local partnerships with the private sector	Pfizer conducted a technology transfer agreement for the pneumococcal conjugate vaccine to a private local company, Elea, with incentives provided by the government of Argentina. This resulted in a 42% reduction of hospitalization of children under 2 years for pneumonia and a 52% reduction for meningitis. ³⁹ At the beginning of 2017 the Ministry of Health announced that they would extend this agreement for the National Vaccine Calendar, which adds an indication for those 65 years and over. This partnership resulted and will continue to result in benefits to local infrastructure development, job creation and scientific knowledge acquisition in the country. ⁴⁰
	6 Reduction in corporate tax rates to entice foreign investment	In 2015, Ireland reduced its corporate tax rate by 50% to 6.25%, which applies to a tax category called a "knowledge development box." Ireland's corporate tax rates may be low by international standards, but the revenue generated is a major contributor to the country's treasury. This resulted in an initial boom in GDP growth in 2015, followed by higher GDP growth in 2016 and 2017. Gross National Product (GNP) grew 60% from 2014 since the tax change and industries like manufacturing have increased 67% since 2014. ⁴¹

Source: IQVIA, Feb 2018

Notes: (SVR: Sustained Virologic Response); (DHB: District Health Board); (GNP: Gross National Product).

Prioritized approaches for Mexico and Colombia

- Each of the six approaches assessed were deemed likely to meet at least one of the current challenges facing Mexico and Colombia.
- The allocative approach – integrated healthcare model – was assessed as most able to meet Mexico and Colombia’s challenges, including fragmentation, was considered to have high feasibility/replicability and economic impact for Colombia, and was the most widely supported strategy among interviewees in Colombia.
- Technology transfer and local partnerships with the private sector was the most widely supported GDP growth strategy among interviewees and met most of the key challenges across Mexico and Colombia.
- Innovative contracting and reimbursement models also had among the highest level of economic impact and feasibility/replicability for the two countries.
- Although public-private cooperation support sustainability strategies, a troubled past relationship between the pharmaceutical industry and governments will need to be overcome to reach a common goal of a sustainable healthcare system.

MEETING SUSTAINABILITY CHALLENGES

During interviews with experts from Mexico and Colombia, a number of questions were discussed related to these six prioritized approaches for healthcare sustainability. Interviewees were asked to evaluate each approach and provide their:

1. Perspective on the approach
2. View on its benefit to the government
3. View of the approach as a short-term or long-term solution
4. Criteria used to evaluate the approach.

In order to evaluate each approach, participants were also asked to rank each as low, medium or high across feasibility/replicability and economic impact, and to discuss how each solution might best address or match each challenge in their respective market.

In addition to the challenges matched by interviewees, further opportunities for the unmatched approaches to meet country challenges were analyzed in a workshop setting by IQVIA and Pfizer country experts. Integrated healthcare model was additionally matched to constrained or reduced healthcare budget for Mexico, and promotion of local R&D was additionally matched to increasing demand for healthcare services for Colombia. Each of the six prioritized approaches for healthcare sustainability were assessed as being able to meet at least one of the current challenges facing Mexico or Colombia. Several of these approaches were able to address more than one challenge that inhibited both allocative efficiencies and GDP growth (see Exhibit 8).

PRIORITIZED APPROACHES FOR MEXICO AND COLOMBIA

Exhibit 8: Approaches to Mexico and Colombia’s Prioritized Healthcare Sustainability Challenges

Sustainability Challenges	Allocative Strategies		GDP Growth Strategies			
	Innovative Contracting	Integrated Healthcare Model	Innovative Grants for Investment	Promotion of Local R&D	Tech Transfer and Private Partnerships	Reduction in Corporate Tax Rates
MEXICO						
Health System Fragmentation		✔				
Constrained or Reduced Healthcare Budget	✔	✔				
Need for Technical Capabilities			✔	✔	✔	
COLOMBIA						
Inadequate Health Expenditure Growth		✔	✔		✔	✔
Administrative Inefficiencies		✔	✔		✔	✔
Increasing Demand for Healthcare Service & Tech	✔	✔		✔	✔	
Unlimited Access to Services	✔	✔			✔	
Healthcare Model of Diagnosis and Prevention	✔	✔			✔	

Source: IQVIA, Feb 2018

CHALLENGES

Allocative strategies

Integrated healthcare model met seven of the eight key challenges across Mexico and Colombia (see Exhibit 8), and was the most widely supported strategy among interviewees. It also was considered to have high feasibility/replicability and economic impact for

Colombia (see Exhibit 6), but feasibility was assessed as low for Mexico. This approach focuses on building an integrated system that communicates across institutional sub-divisions to reduce both the duplication of services and the administrative burden associated with fragmentation. An integrated system provides the ability to better coordinate for needed patient care through centralized health records. Integrated care also

provides a medium where care goals can be centralized and agreed upon across healthcare institutions, reducing conflicting care goals and elevating the quality of care delivered to patients. Such integrated care would also allow for increased allocative efficiencies due to an enhanced emphasis on prevention and early diagnosis thus reducing higher-cost future procedures and their associated complications. Patients requiring additional innovative value-added services would have greater access to meet their needs through enhanced centers of care using novel technologies to promote innovation. However, an integrated system requires all sectors of the healthcare system to work together and communicate. Several markets in Latin America have discussed plans to integrate their healthcare system, but initiatives did not progress beyond developing a plan of action. This approach additionally requires buy-in and cooperation at all levels of the healthcare system—national, regional and local – without which this approach’s implementation could suffer.

Innovative contracting and reimbursement models met four of the eight key challenges across Mexico and Colombia. It was also ranked with high feasibility/replicability and economic impact for both countries. Innovative purchasing contracts for medicines and medical procedures provide allocative efficiencies to the healthcare system. Innovative contracts can include outcomes-based agreements, risk-sharing and other types of agreements to promote value within the healthcare system. At their core, innovative contracts deliver innovative treatments to patients at a cost relative to their real-world value. This provides health systems with the opportunity to more directly measure and pay for value. A movement toward innovative agreements and away from tenders or flat rebates would provide the system with a new mechanism to engage with private industry, while still requiring demonstrable and measurable benefit of each dollar spent on healthcare. Allocative efficiency would be obtained through the selection of value-added goods

and services, and the removal of those that do not create or propagate value. Innovative contracting was therefore viewed as allowing for greater access to medicines and procedures because the government would no longer need, or be forced to create, roadblocks to that access (e.g., through licensures). Countries that guarantee unlimited access to a population could use innovative contracting as a vehicle to increase access to new innovative medicines and procedures, while remaining fiscally responsible and upholding their promise of access to their population. Nevertheless, the impact of innovative contracting may be limited if it is only directed at a minority of medicines and medical procedures. The focus of efforts might include high-cost therapy areas and orphan drugs, but without the proper diagnostic tools in place to identify the full cost-burden of therapies, there would be less benefit than if these were applied additionally to diseases that impact a greater proportion of the population like diabetes and cancers.

Both approaches – integrated healthcare model and innovative contracting and reimbursement models – help enable the healthcare system to reach allocative efficiency, but they do not grow GDP. Since markets operate with finite resources spread across necessary government functions, GDP growth is often required to secure additional resources and infrastructure, such as those needed to design, build and maintain support of an integrated healthcare system or innovative contracts. Additionally, without GDP growth, an integrated healthcare system could be starved of resources and might need to significantly reduce access to new and advanced therapies and procedures, thus limiting the impact of innovative contracts or other strategies. Therefore, both allocative approaches are important building blocks that help meet the challenges of constructing and maintaining a sustainable healthcare system, but still require additional approaches to yield their full potential.

PRIORITIZED APPROACHES FOR MEXICO AND COLOMBIA

GDP growth strategies

Technology transfer and local partnerships with the private sector met six of the eight key challenges across Mexico and Colombia (see Exhibit 8), making this the most widely supported GDP growth strategy among interviewees. This approach allows for the government to engage in technology transfers with private corporations to support local R&D and other industries such as pharmaceuticals, medical devices and data generation/storage/analytics capabilities, as well as help build an infrastructure to support allocative efficiency approaches. Engaging in this approach further allows for the promotion of manufacturing and distribution capabilities within healthcare. Like in the previous two approaches, technology transfer and local partnerships would further promote skill building within Latin America through increased opportunities to learn best practices within the healthcare sector. An immediate challenge facing this approach would be ownership of the intellectual property that is shared between the government and multinational corporations engaging in technology transfers. Although a concern around intellectual property rights might discourage the sharing of proprietary information that could yield the greatest benefit, this concern can be solved by the signing of non-disclosure agreements among counterparts. Interviewees concerns additionally focused on whether local pharmaceutical companies would not be willing to participate, viewing a threat from large multinational companies.

Innovative grants to support multinational investment met three of the eight key challenges across Mexico and Colombia: need of technical capabilities, inadequate health expenditure growth and administrative inefficiencies, but for Colombia were viewed as having low feasibility. Innovative grants could be provided by only the government, or as a collaborative effort between government and private industry. Specifically, they provide a new stimulus to the healthcare system through incentives to promote scientific discovery and innovation. These grants make a market more

attractive for skilled workers to remain within a country by increasing the opportunity to grow and create new companies and develop skills. Latin America has seen much of its skilled workforce leave and look for opportunities elsewhere, but providing a way for trained employees to develop ideas and test hypotheses within Latin America could result in an increase in GDP growth for the region. While innovative grants can spur GDP growth and strengthen the skilled workforce, the main challenge is who provides the initial seed money. With constrained or reduced healthcare budgets, the Colombian and Mexican governments have little room for allocating grants without taking away funds from another government programs or sectors. There would likely be a reliance on government and private industry partnerships to provide an initial round of seed money. However, sustainability of an innovative grant program would need gradual increased financial support from the government to ensure benefits from the innovative grants help meet government initiatives and strategies.

Promotion of local research and development (R&D)

met two of the eight key challenges across Mexico and Colombia: need for technical capabilities and increasing demand for healthcare services and new technologies. In Colombia interviewees did not see promotion of local R&D as having high economic impact and this approach was not matched to a specific challenge by interviewees. The building of local research and development capabilities requires support in multiple forms, including the development of state of the art clinical facilities, updates to ethical review boards and other elements increasing the ability to recruit patients for international studies. Promoting local R&D could work in parallel with providing grants to support multinational investment because grants could attract and maintain a skilled workforce that could then contribute to R&D efforts occurring within each market. Multinational corporations could support these efforts by providing additional skills and knowledge to set up research sites and provide trainings to make sure research sites are run effectively with available resources. In addition, the

creation of these sites might also allow for the support of previously mentioned allocative efficiency approaches, including innovative contracting, because if innovative products are produced and tested at local sites, each market will be more likely able to support a contract that requires the monitoring of outcomes. Professionals in that market would then be familiar with how to measure the given endpoints within a country-led trial and would require less training. Both government officials and private corporations would be more likely to trust the outcomes provided for contracting purposes in the local environment. A significant challenge identified is the shrinking number of local research firms within Mexico and Colombia. This approach would therefore likely need to focus not only on the few local firms left in each country, but would also need to support the construction of new R&D firms. The fact that some past R&D firms were not able to support themselves and failed is not likely to give the government as much confidence for this approach. This approach would therefore benefit from additional support from multinational companies to provide not just technical skills to local firms, but also business skills to make sure these firms will continue to flourish once the initial stimulus wears off.

Reduction in corporate tax rates to entice foreign investment only met two of the eight priority challenges across Mexico and Colombia and there was less enthusiasm within the markets to pursue this approach. All interviewees viewed this approach as having high economic impact, but felt it was less likely to be replicated within each market included in the study. Such an approach would be viewed by the general public as reducing funds to the government to supply services. Additional education would need to be provided to the general population to clarify why this approach might have a large benefit to society. A change in the corporate tax rate could help make some of the other approaches discussed more feasible by spurring growth. Specifically, because a reduction in tax rates would make these markets a more favorable place to hold corporation earnings versus other foreign

markets, it could encourage international corporations to shift partnerships and investments locally.

A significant hurdle to implementing any of the GDP growth approaches is to make sure there is mutual benefit between the government and the private corporations helping to provide grants, assisting with R&D, or technology transfers. If there is a feeling that one party is significantly benefiting more than the other, these strategies could have trouble coming into fruition and providing Latin America with the tools to accomplish sustainable healthcare.

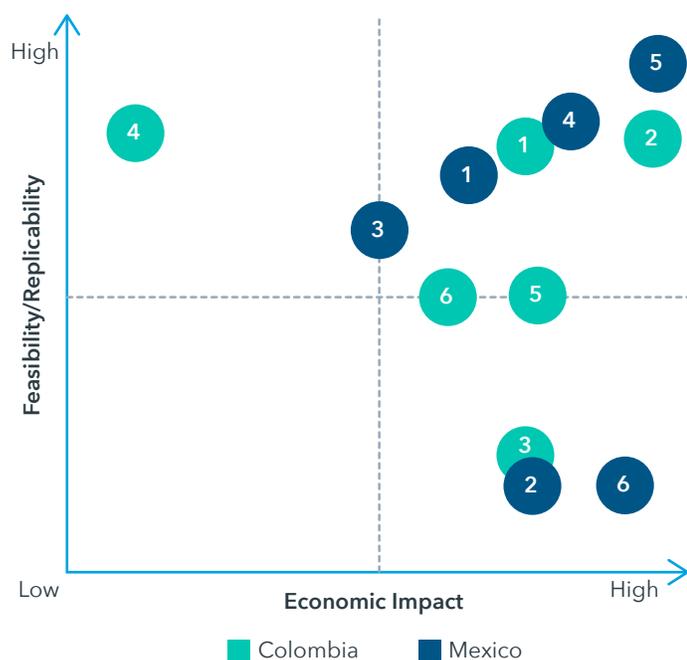
Perceptions of feasibility

Across Mexico and Colombia, *technology transfers and local partnerships within the private sector and innovative contracting and reimbursement models* were two approaches that had among the highest level of economic impact and feasibility/replicability compared to the other approaches (see Exhibit 9). One challenge of shifting to an innovative contracting and reimbursement model is having the infrastructure and proper legal frameworks to support such an approach. While this approach might create allocative efficiencies, it depends on GDP growth to build, support and maintain contracts. Technology transfers are important to grow access to innovative therapies and increase in human capital through benefits to skilled labor. However, organizations that provide the technology transfer need to see a mutual benefit as a result of the partnership. Such an approach will need to be clear on the benefits to both parties and also provide additional securities to maintaining a mutually beneficial relationship between both the government and the private corporation.

WIN-WIN APPROACHES

Healthcare sustainability requires GDP growth and allocative efficiencies to work in parallel. For instance, Colombia might be able to utilize strategies to increase allocative efficiency, but this likely will not be enough to meet the goal of access for all the population. In Mexico, fragmentation of the health system could be

Exhibit 9: Perceptions of Feasibility/Replicability and Economic Impact of Healthcare Sustainability Approaches in Mexico and Colombia



Focus	Approaches to Healthcare Sustainability
Allocative Efficiency	1 Innovative contracting and reimbursement models
	2 Integrated healthcare model
GDP Growth	3 Innovative grants to support multinational investment
	4 Promotion of local research and development (R&D)
	5 Technology transfer and local partnerships with the private sector
	6 Reduction in corporate tax rates to entice foreign investment

Source: IQVIA primary research, Dec 2017–Jan 2018

Notes: Based on eight interviews conducted with current and ex- health and finance ministers in Colombia (n=4) and Mexico (n=4); Displays average of responses from the four interviews per market

improved with integrated healthcare, where programs and services are offered in a coordinated continuum of care. However, building the technological capabilities needed to bring the software systems of various institutions together to create an integrated and unified system, or to analyze and maintain a high-functioning, efficient system, is unlikely without either technology transfers or GDP growth. GDP growth would also create opportunities and incentivize the skilled labor force more greatly to help keep them in Mexico.

For this reason, in both markets, healthcare sustainability challenges can best be achieved through a combination of allocative efficiency and GDP growth focused approaches discussed in this report, some of which leverage public-private cooperation. However, a troubled past relationship between the government and private corporations may pose a sticking point to move forward. Frequent topics of discussion in stakeholder

interviews were challenges to intellectual property rights and mutual feelings of distrust between private corporations and governments in both Mexico and Colombia. For instance, in 2016 the Colombian Minister of Health issued a Declaration of Public Interest and reduced the cost of a high-cost oncology product by up to 45%.⁴² While this would yield significant savings to the Colombian healthcare system, this has caused a ripple effect within international diplomacy and the healthcare sector, creating an environment of distrust and undermining the desire to work together. Nevertheless, interviewees voiced support for the improvement of such relationships because of the potential benefit of partnered approaches and the possibility of reaching the common goal of a sustainable healthcare system.

Partnering to make health systems sustainable and accessible

- Cross-cutting challenges within Mexico and Colombia create a need to grow GDP in addition to creating allocative efficiencies.
- GDP growth strategies offer opportunities for public and private actors to partner, innovate and implement win-win approaches.
- Partnered approaches offer to attract and maintain a pool of talented professional healthcare workers that many Latin American countries need, increase access to new innovative medicines and procedures and build infrastructure.
- Health industry and government officials working to make their country's health system more sustainable and accessible may be able to leverage these approaches to harness the role of the health sector as a potential engine of GDP growth.

Mexico, Colombia and other Latin American markets each possess challenges related to economic inefficiencies and supply and demand. Cross-cutting challenges within these markets create a need to generate approaches, not only to grow GDP, but to also create allocative efficiencies. Stakeholders within a market may believe that allocative efficiencies are the most significant factor within their market, but reducing costs does not typically yield enough savings to support the additional spending required to meet an evolving population in need of innovative therapies.

Cooperation between the public and private sector is often needed to enable either strategy. For instance, contracting could easily be seen as a zero-sum game between the government and private corporations. However, the result of innovative contracting and reimbursement models is not only to reap allocative efficiency for the system, but also to increase access to new innovative medicines and procedures and build infrastructure to support covering its population

with these treatments; an output that can be better generated with the increased resources generated by GDP growth. Partnerships with multinational private companies that are willing to provide technology transfers can also help build more integrated healthcare systems. Additional possibilities for governments to explore include innovative grants to spur development in-country and approaches to attract local and international R&D. All three of these approaches may help attract and retain a pool of talented professional healthcare workers that many Latin American countries need. Multinational Corporations could achieve greater access for their products or procedures through these partnerships and create centers for the development of new products and services valuable for Latin American healthcare systems.

None of the approaches proposed are one-size-fits-all, but they do offer incremental benefit to each market. One major obstacle to overcome before the implementation of these solutions is to improve public-private

PARTNERING TO MAKE HEALTH SYSTEMS SUSTAINABLE AND ACCESSIBLE

relationships between country governments and multinational companies. All of the approaches discussed offer inherent benefits to both the public and private sector, and therefore both parties would stand to gain from engaging in dialogue around these.

In conclusion, both Colombia and Mexico face common and unique challenges to attain healthcare sustainability, and a number of these challenges similarly affect other countries in Latin America. These challenges stretch across economic inefficiencies, supply and demand, which are the three broad factors influencing healthcare sustainability. Utilization of strategies to improve efficiencies and supply, such as the allocative efficiency and GDP growth approaches prioritized for Colombia and Mexico, allow a health system to meet growing demand for health services and can support movement toward healthcare sustainability in Latin America. These prioritized initiatives include

technology transfers and local partnerships with the private sector to improve GDP growth, and innovative contracting and reimbursement models to address allocative efficiency.

Such partnerships and the development of mutual understanding between the public and private sectors on healthcare system needs, can enable unified approaches to be taken to meet sustainability challenges, and allow for productive movement toward systems viable in the long-term. This report provides a set of approaches that healthcare stakeholders focused on sustainability – including the governments of Latin America and corporations - can discuss together. Such discussion, with the aim of mutual benefit, can then lead to the development of implementation plans to ensure both stakeholders' interests are met and ultimately make progress towards sustainability in healthcare.

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About the Institute

The IQVIA Institute for Human Data Science contributes to the advancement of human health globally through timely research, insightful analysis and scientific expertise applied to granular non-identified patient-level data.

Fulfilling an essential need within healthcare, the Institute delivers objective, relevant insights and research that accelerate understanding and innovation critical to sound decision making and improved human outcomes. With access to IQVIA's institutional knowledge, advanced analytics, technology and unparalleled data the Institute works in tandem with a broad set of healthcare stakeholders to drive a research agenda focused on Human Data Science including, including government agencies, academic institutions, the life sciences industry and payers.

Research Agenda

The research agenda for the Institute centers on 5 areas considered vital to contributing to the advancement of human health globally:

- Improving decision-making across health systems through the effective use of advanced analytics and methodologies applied to timely, relevant data.
- Addressing opportunities to improve clinical development productivity focused on innovative treatments that advance healthcare globally.
- Optimizing the performance of health systems by focusing on patient centricity, precision medicine and better understanding disease causes, treatment consequences and measures to improve quality and cost of healthcare delivered to patients.
- Understanding the future role for biopharmaceuticals in human health, market dynamics, and implications for manufacturers, public and private payers, providers, patients, pharmacists and distributors.
- Researching the role of technology in health system products, processes and delivery systems and the business and policy systems that drive innovation.

Guiding Principles

The Institute operates from a set of Guiding Principles:

- Healthcare solutions of the future require fact based scientific evidence, expert analysis of information, technology, ingenuity and a focus on individuals.
- Rigorous analysis must be applied to vast amounts of timely, high quality and relevant data to provide value and move healthcare forward.
- Collaboration across all stakeholders in the public and private sectors is critical to advancing healthcare solutions.
- Insights gained from information and analysis should be made widely available to healthcare stakeholders.
- Protecting individual privacy is essential, so research will be based on the use of non-identified patient information and provider information will be aggregated.
- Information will be used responsibly to advance research, inform discourse, achieve better healthcare and improve the health of all people.

The IMS Institute is now the
 **IQVIA**[™]
INSTITUTE
for Human Data Science

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