PERSONALIZED HEALTHCARE:

A GROWING OPPORTUNITY

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PAN AMERICAN LIFE INSURANCE GROUP

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This document includes statistics gathered by the technical medical department at Pan-American Life Insurance Group and its member companies. It should not be construed as medical advice.

We secured approval from those interviewed with the purpose of enriching the content of this document.

IT IS HEALTH that's real wealth and not pieces of gold and silver.

Mahatma Gandhi

INTRODUCTION

The low penetration of health insurance in Latin America, along with lack of awareness and high medical inflation, has had a debilitating effect on the region's healthcare system. With a few exceptions, the region has witnessed a double digit increase in medical inflation, stemming primarily from the increased cost of hospital supplies and medications, particularly those related to the treatment of cancer, respiratory, cardiovascular and gastrointestinal illnesses, as well as other diseases linked to obesity, stress and hypertension.

This study provides an analysis of the current predominant healthcare model in the region and considers the need for a new, more effective model. It evaluates trends in acute and chronic disease incidence rates; regional medical costs, specifically hospital and medication costs; and in the changes within the private health sector that have created ample opportunity to shift the focus of healthcare.

This new model of care should focus on personalized healthcare and comprehensive patient wellness. The primary care physician (or family physician) and the on-site clinic physician are at the center of this new model and play key roles in patient care. This signifies a radical shift from the current healthcare model in which primarily specialists, rather than primary care physicians treat the episodes of illness that affect only approximately 20 percent of the insured population that requests medical attention in a given calendar year. In a more personalized model, primary physicians establish close relationships and gain thorough knowledge of the health of 100 percent of the population, while effectively and efficiently managing the care and wellness of their patients with the goal of optimizing health.

This study includes data, case studies, specialist interviews, and a feature on corporate wellness.

This study, which aims to offer an outlook of healthcare market trends in Latin America, is intended to be the first of an annual series published by Pan-American Life Insurance Group.

SUMMARY

There has been a double digit increase in medical inflation.

The development of a primary healthcare delivery model represents a significant opportunity to improve population health across the region, with a focus on prevention and comprehensive wellness of the patient population.

Currently, the only available data about the health status of the population in the region is obtained via claims data submitted by the small percentage of the population that suffers an illness in any given year.

Annual worldwide healthcare expenses total approximately **US$ 7 TRILLION** [1].

Insurance companies in Panamá and Central America paid **US$571,000,000** in covered medical losses in 2015 [2].

If the incidence rate of disease can be reduced from 20 to 19 percent of the insured population, this 1 percent would represent almost **US$6 MILLION IN SAVINGS.**

[1] "Spending on Health: A global overview". World Health Organization. April 2012. http://www.who.int/mediacentre/factsheets/fs319/en/
[2] Data from local insurance Regulators

HEALTH SYSTEMS IN THE REGION

With few exceptions, healthcare systems* in Latin America are segmented into three categories:

1 Public Sector

The **public health** sector, normally under the umbrella of the Department of Health, is committed to providing comprehensive medical services to the most vulnerable and marginalized segments of society. It is often at a disadvantage in terms of resources needed to effectively execute its mandate.

2 Social Security

The **Social Security** system is financed through payroll taxes — employers pay a percentage and employees contribute another percentage. This provides coverage to those who are currently employed and to retirees that contributed to the system during their earning years. Across the region social security systems are strained and frequently suffer from lack of materials, supplies, medications and quality maintenance for special equipment. This results in long wait times for medical services and a certain amount of cost shifting to the private sector driven by those individuals who can afford private insurance coverage.

3 Private Sector

The **private sector** is comprised of individuals who can afford to purchase medical insurance for themselves and their families; and of corporations that purchase insurance on behalf of their employees.

Each sector has its own hospitals, clinics, labs and pharmacies. Except for crisis situations, or highly specialized procedures, resources are not shared between the three sectors.

*These are general findings for Latin America and must not be construed as an analysis of any particular country.

A COMMON DENOMINATOR

A common occurrence in the region is the transfer of costs from the public sector to the private sector. Ecuador serves as one of the most notable examples of this, with insufficient resources and materials in the public sector driving the cost shifting [3].

Due to limited resources, the public sector often cannot meet the healthcare needs of the entire population. This results in greater usage of private sector resources for those policyholders that have private medical insurance or a pre-paid medicine contract.

Previously, a considerable portion of this population would use their Social Security benefits to treat health conditions that required less specialized care, in order to avoid deductibles and co-payments normally required by prepaid medicine companies and private insurance policies.

During 2014, the impact of this cost transfer from the public to private sector had a loss ratio impact of 8-10 percentage points for prepaid medicine and health insurance companies[4]. As public health and social security systems in the region continue to be strained, it's likely that there will be an increased prevalence of this type of cost transfer. This will have a significant, and unpredictable, impact on the private insurance sector.

CURRENT CONDITIONS

Except for very specific examples in the region, the focus of the healthcare sector – both public and private – has traditionally been on treating and curing disease, supported by the private health insurance policy design and provider contracting methodologies employed by the private sector in the region. Although it is widely recognized that preventing disease is far more desirable and cost-effective than treating or curing it, most providers operate reactively, waiting until a patient seeks them out to provide symptom based treatment. Insurance companies simply await the claims related to treatment of disease and either pay the providers or reimburse the patients for the costs of the treatment.

This traditional model is disease oriented. The medical provider benefits from sick patients and the majority of the health insurance policies only provide benefits for treatment of disease and illness. The sicker the patient is, the more services they require from the medical providers, translating into greater income for the medical providers and other service providers who participate in the treatment continuum, and higher premium costs for the policyholders.

Today's system is centered on treatment of disease and therefore incentivizes overutilization of resources. These incentives consume more and more limited resources and a higher percentage of the world's per capita income each year without improving the health and wellness of the population.

Although there is little logic to this model, it is seldomly questioned and rarely challenged.

There is an opportunity to transform this traditional healthcare model and advocate for something that rewards all actors for optimal health and disease prevention rather than simply paying for the treatment of disease.

[3] "El IESS anuncia cobro de los seguros privados". El Universo. September 25, 2016. http://www.eluniverso.com/noticias/2016/09/25/nota/5818870/iess-anuncia-cobro-seguros-privados

[4] Data estimates by PALIG

HEALTH DATA IN LATIN AMERICA

MEDICAL INFLATION

COUNTRY	PAN-AMERICAN LIFE DATA		
	2014	2015	2016
Colombia	12%	10%	15%
Costa Rica	12%	12%	12%
Ecuador	10%	12%	15%
El Salvador	8%	10%	10%
Guatemala	10%	10%	10%
Honduras	10%	10%	13%
Nicaragua	10%	10%	12%
Panama	12%	15%	12%

1.1 Medical inflation data based on PALIG member companies experiences with the markets

Benefit claims from insurance policies, private sector medical expenses and policyholder out-of-pocket medical expenses from PALIG member companies in Latin America show an increase of over 15 percent from 2014 to 2015 with no indication to expect that this trend will dissipate if the healthcare delivery model remains the same

This cost increase has been driven by two main factors:

1) An increase in benefit usage

2) Medical Inflation

1. The incidence of certain diseases continues to increase with the most rapid increases being observed in:

a. Chronic Illnesses – a 9 percent rate growth in the number of patients with dyslipidemia and diabetes has increased these rates. Chronic illnesses are the second largest health expense in the entire region. Just four years ago, this group of illnesses was in fourth place and, should the current trend continue (as we expect it will), next year treatment of this disease group will replace orthopedic surgery as the most costly disease category in the entire portfolio [5].

b. Cancer – there has been an 8 percent increase in cancer rates (2014/2015) [6]. The alarming rate of this worldwide epidemic has led the World Health Organization (WHO) to state that we have lost the battle

[5] PALIG and member companies data
[6] Ibídem

against cancer, in spite of the millions of dollars spent on treatment, research, medications and equipment [7].

BUT, WHO HAS ALSO STATED THAT:

i. "Approximately 30 percent of cancer deaths are due to five behavioral and nutritional risk factors (high body mass index, inadequate consumption of fruits and vegetables, lack of physical activity, tobacco, in and alcohol consumption) and, therefore, could have been prevented" [8].

ii. In addition, preventive measures to mitigate cancer risk stemming from infectious diseases such as H. Pylori, HVP, and HCV, could potentially further reduce death rates for this condition [9].

c. Orthopedic Surgeries - We have observed a 6 percent cost increase (2014/2015) in orthopedic surgeries resulting from bone and joint injuries, with knee joint damage being the most common. Spinal Conditions - injuries to cervical and lumbar discs in particular have also increased 6 percent (2014/2015).

The following table shows top medical specialties with an increased number of patients and its correlation to loss percentages for 2015:

PALIG - LATAM 2015

MEDICAL SPECIALTY	L/R Impact %	Increase in Frequency
TRAUMA	17%	6.2%
CHRONIC DISEASE	13%	9.3%
SURGERY	10%	6.8%
SPINE DISEASE	4.0%	8.8%
CANCER	7%	5.7%
TOTAL	55%	7.4%

1.2 Data gathered from PALIG member companies results based on annual frequency increase in their markets

2. An increase in the use of services. The current fee for service model, in which providers receive higher compensation based on the number of services provided, is in reality a distorted model. This disproportionate increase in benefit use, as observed by PALIG and its member companies, usually has three common factors:

a. Waste.

This increase in frequency focuses on activities that presumably do not generate profit for the provider in question. For example, indiscriminately requesting clinical labs, where for every 10 labs one or less is merited.

b. Abuse.

On the most common example is when providers attempt to "upcode" (request authorization for a procedure of much higher complexity than that which is needed and will actually be performed in order to bill a higher amount) or add more procedures than will actually be performed. For example a patient with two injured spinal segments is scheduled for a surgery to correct three or more spinal segments.

c. Fraud.

c. Most common occurrence is where medical providers submit claims or pre-authorization requests for procedures based on diagnoses that are not present in the patient.

[7] "La batalla mundial contra el cáncer no se ganará únicamente con tratamiento". World Health Organization. February 4, 2014. http://www.who.int/mediacentre/news/releases/2014/cancer-report-20140203/es/

[8] "Data about Cancer". World Health Organization. Downloaded October 6, 2016. http://www.who.int/cancer/about/facts/es/

[9] "Gérmenes infecciosos". Instituto Nacional del Cáncer. April 29, 2015. https://www.cancer.gov/espanol/cancer/causas-prevencion/riesgo/germenes-infecciosos

With regards to medical inflation, it is driven by the following:

According to Medical Trends Around The World 2015, in 21 of 29 countries studied, **medical inflation was twice as high as general inflation.**

In 2015, medical inflation experienced by health insurance companies in Latin America was 12.7 percent versus a general inflation rate of 8.5 percent [10].

In particular, this inflation is driven by the cost of medications and advanced technological equipment for both diagnosis and treatment.

1. Medication inflation

a. Varies per country and, in general, is divided between those countries where there is government regulation and those where there is little to no regulation, which is the case of Colombia.

2. Medical equipment inflation (even greater in non-US dollar currency economies due to devaluation).

Strategies for cost containment and medical necessity validation are focused on:

1. Utilization review and audit, which produces savings of up to 10 percent of all paid expenses [11]. The primary activities that produce these savings are:

a. Medical authorization audit: This is the most effective strategy since it is performed prior to any medical procedure takes place. This category represents approximately 70% of the total savings [12].

b. Concurrent medical audit: This is performed onsite in the hospital while the patient is hospitalized. This strategy produces approximately 15 percent of by avoiding unnecessary increases to the length of stay in the hospital and performing and billing for services that are not medically necessary [13].

c. Medical expense audit: Although important, this strategy tends to be less effective given it is retrospective in nature and there is normally relatively little information on which to make an objective assessment. However, it is a tool that provides important statistical information and provides insight for future shifts in the other audit areas.

d. Second medical opinion: A second medical opinion helps to evaluate the proposed and normally complex treatment plan and ensure that the policyholder is presented with all potential treatment options in order to make an informed decision. This strategy often identifies alternative treatment options that are less invasive and improve quality of life and also brings to light subspecialty excesses that would result in loss ratio deviation for the company if left unchecked.

2. On Site Clinics: Another very effective cost containment strategy employed by a growing number of large corporations in the region. During the past 5 years the onsite clinic strategy has produced positive results, including a 25 - 34 percent reduction in the average cost per claim, mainly achieved by replacing the cost of unnecessary ER visits and specialty care with a focus on primary care as well as the introduction of chronic disease management programs. On site clinics reduce frequency of use mainly in urgent care centers, clinical labs and some basic specialties [14].

[10] Cabrera Vásconez, David. "La inflación médica y su relación con los impulsores de salud". Redacción médica. June 23, 2016. http://www.redaccionmedica.ec/opinion/la-inflaci-n-m-dica-y-la-relaci-n-con-los-impulsores-de-costo-en-salud-1953

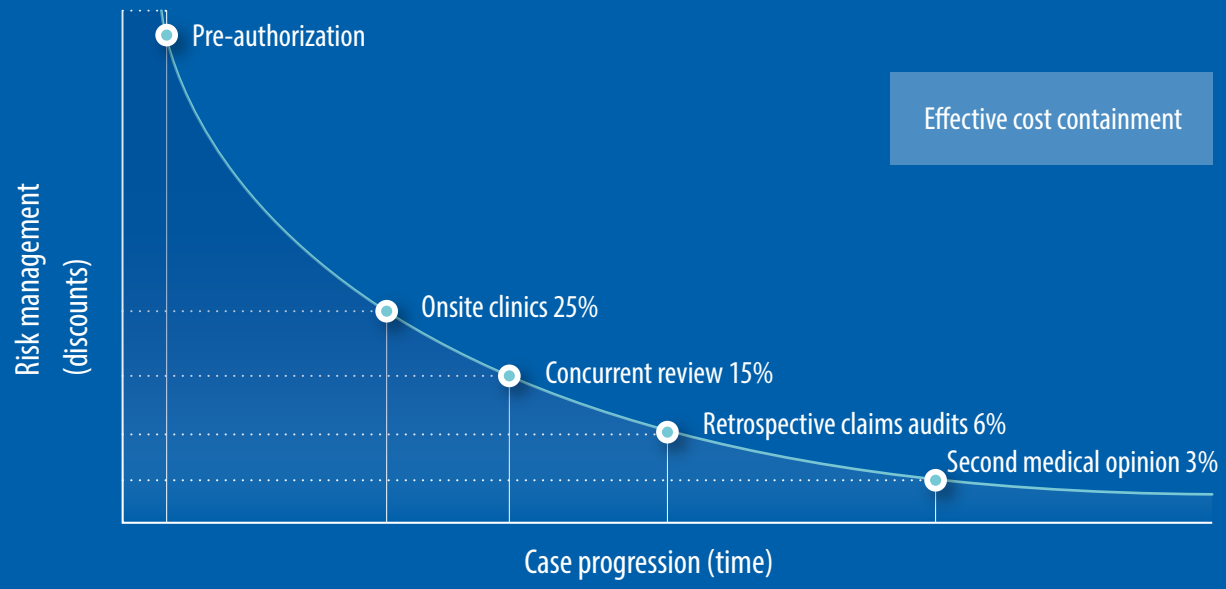
[11] "Standardization of prior authorization process for medical services". American Medical Association. June, 2011. http://massneuro.org/Resources/Transfer%20from%20old%20sit/AMA%20White%20Paper%20on%20Standardizing%20Prior%20Authorization.pdf

[12] Ibídem

[13] Ibídem

[14] Ibídem

On-site clinics: Medical offices inside or very near large corporations



1.3 Internal Data gathered by PALIG member companies

3. Pharmacy Benefit Management. Pharmacy Benefit Management is focused on four rules:

a. Plan member cost sharing – tiered co-insurance levels

b. Pharmacological management (including discounts)
i. By cost range
ii. Cost / benefit
iii. Generic vs brand name

c. Medication audit (DUR) –
i. By relevance and rationality
ii. Controlled introduction process for new high cost medications and cost - benefit review
iii. Strategies to control usage cost

d. Chronic illness management

Medical Service Comparison

The following table illustrates the significant percentage cost differentials for lab tests, x-rays, and outpatient surgical procedures performed outside of the hospital setting compared to the cost of the services performed in hospital:

COUNTRY	Labs % Average Difference	Imaging % Average Difference	Procedures % Average Difference
Ecuador	-33%	-33%	-22%
Panama	-45%	-23%	-48%
Costa Rica	-36%	-61%	-18%
El Salvador	-29%	-21%	-44%
Guatemala	-41%	-47%	-41%
Honduras	-19%	-13%	N/A

1.4 Data gathered from PALIG member companies considering medical services in these markets

The Cost of Medications

Every year, the constant increase in medication costs affects consumers' pockets and is responsible for a considerable, and growing, portion of the claims costs incurred by insurance companies in the region. The arrival of very expensive, new first generation medications and a significant increase in the price of brand-name medications, bio-equivalents, and generics, have all been contributing factors. However, there are notable differences in medication costs among the different countries in Latin America.

Panama: "Medication costs in private hospitals can be up to 248 percent higher" was the eye-catching headline of the Therapeutic Arsenal site of the Autoridad del Consumidor and Defensa de la Competencia (Acodeco, Spanish acronym) restating a well-known fact about a continuously increasing expense [15].

Colombia: A BBC Mundo article explains the reasons why [first generation specialty] medications are more expensive in Colombia than in any other country in Latin America. On this topic, Dr. Oscar Andia, Federación Médica Colombiana, who for many years has overseen Observamed, states that, "…a staunch deregulation process of such magnitude is an inherently Colombian phenomenon. No other country in the world has experienced this type of catastrophe" [16].

In a country that otherwise has with top rated medical services at an optimal cost, medication costs are out of control [for all but 863 medicines whose prices are controlled by the state].

El Salvador: For the last two years, medication prices have been regulated by the government. "Since 2013, Salvadorians have saved an average of US$60 million annually as result of Maximum List Prices published by Dirección Nacional de Medicamentos (DNM). On May 3rd, when new prices go in effect, DNM along with the consumer advocacy agency, Defensoría del Consumidor) will implement an inspection plan that includes every pharmacy in the country to verify labeling and compliance with the new price list for 2015." [17]

Costa Rica: The market continues to grow rapidly. According to data gathered by Euromonitor[18], in a market dominated by large pharmacy chains, sales have steadily increased over the last five years, reaching a high of $402 million dollars in 2014. This is a 70 percent increase in sales as compared to the same data collected in 2009. As a result, more than 50 new pharmacies and sales venues have joined the marketplace.

Honduras: In the case of Honduras, the impact of medication costs for insurance policies is atypical, representing nearly 30 percent of total medical claims expenses. It is the country with the highest rate of medication use, due in great part to a high incidence of chronic illnesses and frequent use of this benefit by policyholders. The country is experiencing a considerable medication shortage, prompting the national government to issue a decree in June 2016 to set aside 2,300 million lempiras for medications.

The government approved a multimillion purchase of drugs for public hospitals and IHSS. In the meantime, patients have supplemented their medications purchases via the private pharmacy networks [19].

[15] Rodríguez, Francisco. "Panamá: Hospitales privados venden medicamentos hasta 248% más caros". Arsenal Terapéutico: Todo sobre medicamentos. January 12, 2016. http://www.arsenalterapeutico.com/2016/01/12/panama-hospitales-privados-venden-medicamentos-hasta-248-mas-caros/

[16] Fajardo, Luis. "¿Por qué Colombia paga los medicamentos más caros de América Latina?" BBC Mundo. March 10, 2015. http://www.bbc.com/mundo/noticias/2015/03/150220_economia_medicamentos_colombia_lf

[17] "Continúa ahorro para la población con listado de precios de medicamentos para 2015". Dirección Nacional de Medicamentos. February 5, 2015. http://www.medicamentos.gob.sv/index.php?option=com_k2&view=item&id=107:contin%C3%BAa-ahorro-para-la-poblaci%C3%B3n-con-listado-de-precios-de-medicamentos-para-el-2015&Itemid=168

[18] "Crece mercado farmacéutico en Costa Rica". CentralAmericaData.com. July 24, 2015. http://www.centralamericadata.com/es/article/home/Crece_mercado_farmaceutico_en_Costa_Rica

[19] "Honduras: 2,300 millones de lempiras para medicamentos". El Heraldo. June 9, 2016. http://www.elheraldo.hn/pais/848078-214/honduras-2300-millones-de-lempiras-para-medicamentos

Increase in Hospital Supplies

Another cost area that has driven considerable cost increases in the healthcare market is: hospital supplies, osteosynthesis materials, and equipment. These are all items that historically have not been specifically negotiated in contracts between hospitals and insurance providers in the region.

These items increasingly impact the loss ratios of the medical policies in the region and, in turn, affect the premiums paid by policyholders. Significant increases have been noted, particularly with the markups added by hospitals that can exceed 300 percent for supplies purchased from third parties, such as surgical trays, prosthetics and medications, to name just a few of the more notable ones.

There is a need for better cost transparency in the hospital sector across the region. Most of the contracts between hospitals and insurance companies are based on discounts applied to the final bill. In many instances, the hospital does not provide the insurance company with an itemized list of services and supplies with their respective costs and, therefore, it may be impossible to determine the actual discount received by the patient. This is comparable to going to a restaurant and not knowing the price of the meal until the bill arrives. No other industry in the world operates this way.

Additionally, certain providers charge a higher fee to insured patients versus what they charge to uninsured patients or those that pay out-of-pocket for the same service.

Medical Procedure Cost Comparison

In Miami and different countries from the region, using Panama as reference cost:

Procedure	Colombia	Honduras	El Salvador	Ecuador	Guatemala	Costa Rica	Miami
Anterior cervical decompression and/or nerve roots, including osteophytectomy; cervical, single interspace	-61%	-53%	-29%	-29%	-24%	109%	316%
Arthroscopy knee (surgical), with meniscectomy or meniscus repair (medial or lateral)	-40%	-56%	-5%	-6%	2%	77%	410%
Total abdominal hysterectomy with or without salpingo oophorectomy, unilateral or bilateral	-36%	-40%	7%	5%	14%	105%	415%
Laparoscopic Cholecystectomy	-34%	-45%	23%	-1%	54%	64%	372%
Transurethral resection of the prostate by electrocautery, including postsurgical bleeding control, complete	-43%	-23%	-23%	-15%	-18%	98%	258%

Procedure	Colombia	Honduras	El Salvador	Ecuador	Guatemala	Costa Rica	Miami
Cesarean delivery	-27%	-26%	19%	3%	89%	118%	445%
Laparoscopic Appendectomy	-48%	-46%	17%	25%	50%	96%	288%
Inguinal hernia repair, age 5 or older: reducible	-17%	-60%	-17%	-28%	-11%	14%	308%
Appendectomy	-30%	-39%	-23%	-2%	-18%	227%	354%
Colonoscopy through stoma; with biopsy, single or multiple	-42%	-47%	35%	-13%	44%	6%	531%
Upper gastrointestinal endoscopy (esophagus, stomach, duodenum and/or jejunum) with biopsy, single or multiple	-68%	-43%	11%	-12%	19%	13%	493%
Average of the 20 most common procedures	-75%	-42%	-6%	-10%	9%	94%	356%

1.5 Internal Data from PALIG and its member companies

THE NEED FOR A NEW HEALTHCARE MODEL

Perhaps, the most significant immediate opportunity to align incentives and improve results in the region is the development of a primary healthcare model centered on primary care physicians with a focus on prevention and comprehensive patient health and wellness. An example of this model's evolution has been developed by Ochsner Health System, in the southeastern part of the United States.

EVOLUTION OF THE MEDICAL CARE MODEL IN THE U.S.

IN THE PAST 30 YEARS

The healthcare industry in the United States has evolved through several stages, each impacting the plan members and medical providers in different ways

Fee for service is a payment model in which medical services are accessed via a very open or not specific provider network and paid for upon receipt with limited control over cost or utilization. This delivery model creates an incentive for physicians to provide more treatments since payment is contingent upon the number of services provided and not the quality of the medical care or the most appropriate care required by the plan member.

Managed Care Plans (HMO, POS) are managed care delivery models in which there are significant incentives for a plan member to seek all necessary healthcare needs within the insurance company's provider network (in the case of an HMO there is often no coverage outside of the network). Generally, these contractual relationships allow insurance companies to closely monitor the performance of the providers within the network and have greater control over the unit cost and frequency of use of different medical services. Usually, the patient chooses a primary care physician that will oversee their care and refer them to a specialist if their condition requires a specific consult outside the primary physician's area of expertise.

Risk based contracting models can vary widely, but in general the medical and institutional providers assume partial or full financial risk for the healthcare needs of a specific patient population. The most comprehensive example is full capitation where hospitals or providers receive a monthly payment to provide all medical services to all covered participants in the contract. Other less comprehensive examples of partial risk transfer agreements include package payments for conditions such as knee replacements, shared service contracts such as those Medicare offers to physician groups in the United States, and those that offer bonuses or penalties to medical service providers based on quality measures, readmissions and patient satisfaction levels, among other metrics.

Value Based Contracting Models represent an evolution in clinical methodologies and payment systems that render positive results in the areas of cost and quality, promote a higher degree of responsibility on the part of the medical service provider, and take advantage of new technological advances. These contracting models align the incentives for medical providers, covered participants, employers and those responsible for service payments, to optimize clinical results and patient satisfaction while also improving cost efficiency. Medical service providers have been receptive to these models. No bonus incentive payments are made unless the improvement in health status generates the savings targets.

INTERVIEW WITH DR. PEDRO CAZABON FROM OCHSNER HEALTH SYSTEM

Ochsner is the academic system of service delivery largest health, nonprofit, with a wide range of specialties, located in the southeastern part of the state of Louisiana has 28 owned, managed or affiliated hospitals and over 60 health centers through the region. In the interview Dr. Cazabon discusses the evolution of healthcare in the United States over the past 20 - 25 years.

What are some of the major changes you have witnessed in the U.S. healthcare delivery model during the past decade?

Dr. Cazabon: We are experiencing a definite shift, in that providers are now accepting financial risks. As providers change the way in which they assume risk, they also change the delivery service models to focus not only on treatments or cures, but also on preventive health measures. If providers can improve the health of the population in general by reducing the burden of disease, everyone will benefit.

There is no doubt that we need to focus more on trying to promote this trend and push for the prevention of chronic diseases so that we can reduce the burden of diseases for future generations.

What role does primary care play today? How do you feel it will affect the healthcare delivery system as it evolves into a managed care model?

Dr. Cazabon: In general, primary care doctors have been trained to examine all aspects of the patient's clinical presentation so that they can make the best decision regarding the patient's treatment. On the other hand, specialist physicians have been trained to focus exclusively on best practices of their particular specialty.

It is evident that a primary care physician may help to coordinate a treatment plan within the different specialties in such a way that the treatment for cardiac disease does not interfere or obstruct the treatment for renal disease or any other organ related issue. In addition, primary care physicians are typically responsible for the patients' long-term health.

In many cases, the primary care physician has been around long before many of the medical issues developed. For example, primary care physicians try to prevent heart disease by monitoring blood pressure and cholesterol. This is why I believe that the focus on primary care provides a new perspective. Moreover, I truly believe that a topic that is important and rarely discussed is the difference between the specialist and the primary care physician standards of care.

In most cases, a patient that visits a primary care physician for headaches will undergo some kind of test. Afterwards, the physician will recommend a treatment plan that will be followed and monitored for a period of time. On the other hand, if the same patient visits a neurologist, he/she will have to follow the established protocols that require that the patient undergoes diagnostic tests that are much more elaborate than those recommended by the primary care physician.

There is a lot of discussion these days about of value based models. Could you

explain what this means? What incentives have been established in order to evolve in that direction? Do you consider that these models work?

Dr. Cazabon: The history of primary care in this country has consisted of payment for procedures and visits, lack of follow up, and treatment evaluation measures. Basically, patients visited a provider that recommended a treatment plan without considering if another treatment was more effective for them. In other words, until now, results have never been considered as part of the equation. Healthcare focused on quality is actually based on making sure that the resources and treatments used for patients are of the highest available quality, thus improving their outcomes. Therefore, it is a new way of measuring effectiveness and determining if we really made a difference in someone's life.

Do you think that, capitation and an incentive to maximize the quality of resources increases productivity and improves efficiency, given that the physician receives a pre-determined payment during a set period of time established contractually that motivates him/her to keep the patient healthy?

Capitation: Payment of unit per capita, for a combination of health care treatments.

Dr. Cazabon: That is correct. In my opinion, the capitation model has a balance of incentives. Therefore, if the patient is healthy everyone does well. I believe it is for this reason that all of us here at Ochsner feel so optimistic. This could very well be the road to the future because the system has been designed to function just like that and if the patients are healthy, everyone benefits.

How would you describe your experience with the health wellness self-assessment; preventive care; health promoters and coaches; as well as with other similar resources? Have any of these influenced the way that physicians practice medicine today? What are some of the goals and results of these trends?

Dr. Cazabon: Health expenses have stabilized. Patients are now benefiting from more medical care. The goal of the availability of all of these medical resources is to improve our health. Moreover, I consider that it is very important to evaluate medicines and treatments because this can help reduce complications caused by chronic diseases. All of these resources are very positive, in addition to also being a commitment tool between employers and their employees. Certainly, we have experienced positive results; employees are getting more engaged with their health. We want our patients to feel better and be healthy for the longest time possible.

What kind of model are you currently using to make sure that the employees or patients reach their goals and wellness efforts?

Dr. Cazabon: We are providing advice about available wellness programs and discussing the goals that we have set for the year. For example, one of these is an annual physical exam in which the patient is rewarded for visiting his/her primary care physician. Likewise, the primary care physician will provide a copy of the results of various tests such as cholesterol levels or blood pressure results, as well as the values that they want to get in the future. In turn, each patient and his health coach will develop a plan of action that will include exercise, weight loss and lifestyle changes. The health coach will be responsible for monitoring the program to help the patient reach his/her goals.

In addition, we will be collecting information about each patient's chronic illnesses. For example, if we identify any patients that suffer from diabetes we can

evaluate their health and include them in a registry that will in turn improve patient follow up. This way we will be able to produce specific reports about the health of our diabetic patients. There is no doubt that these health risk assessments (HRA) identify patients that will benefit from this new healthcare model. In the new model, which is a diffusion model, patients are not expected to get in contact with physicians. Instead, the model skips this step through the direct communication with the patient to make him part of the healthcare process and improve his/her health.

Another positive aspect of this risk assessment is to satisfy the health deficiencies of the patients. For example, being proactive and making sure that all patients are up to date with their immunizations instead of relying on the patients to get them.

In the traditional model, physicians only interact with patients that need medical care which consists of approximately 15% to 20% of the general population. Without a doubt, if we try to contact and provide care to the remaining 80% of the population that would be a radical change and would have a great impact. In the traditional model, we would have never known anything about this particular demographic. How much easier is it to identify diseases in their early stages, as well as improving everyone's health in general, within the new model?

Dr. Cazabon: A discovery emerged while we were trying to contact diabetes patients. Despite the fact that their medical record indicated that their disease was controlled, they had not visited us in a long time. Apparently, either they were not interested in their healthcare or were just simply trying to hide from us so they would not have to deal with their medical issues. Our first attempt to reach these patients was through an email from our website in which we notified approximately 88,000 patients about the fact that there were many areas of their health that could improve. We were expecting a reply from about 10% of the patients. However, 85% of the patients replied to the notification indicating: "We were expecting your call." That response tells us that the patients' role is changing to a more proactive one, in which they participate actively and are responsible for their decisions.

You mentioned the ever growing role technology plays in healthcare, the importance of medical records, for example to improve billing processes as well as, high risk self-assessments (HRA). Latin America has some catching up to do compared with the U.S. In your experience, how did physicians react when they were first introduced to electronic records and what incentives were developed for them to use electronic records?

Dr. Cazabon: Currently, the main change is to understand that the medical record belongs to the patient even though it has been created by physicians. This is why, when analyzed from the patient's perspective, it is extremely important that we all share our records as it facilitates the patient's treatment and care in case it is necessary.

This philosophical change could be complicated for providers. When they consider this record as their property, as belonging to the provider and not to the patient, there is fear that if the provider shares any type of information with another physician, he is at risk of losing the patient. I believe this is the most important problem that we are currently facing.

There is another extremely important element that we have to consider: today's complexity in medicine is impressive and it is almost impossible to keep multiple tests results, reports and information in traditional paper records.

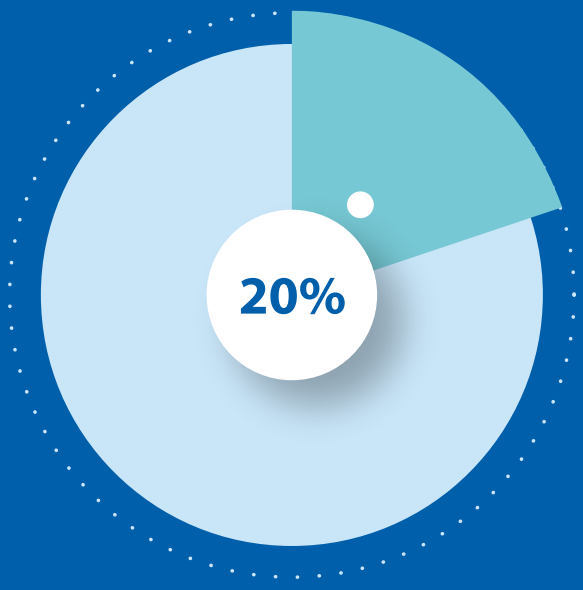
What aspects have influenced the creation of medical group practices and the trend to abandon traditional individual primary care physician practices?

Dr. Cazabon: In an effort to make better use of patient information the medical staff at Ochsner collaborated to create Ochsner Health System. As we share resources, we help the patients. We can conclude that patients who visited our medical team received better results in a safer environment. We noticed that it was very beneficial for the physicians at Ochsner to unite to improve the health of the patients, reduce costs and improve security in terms of exchanging information.

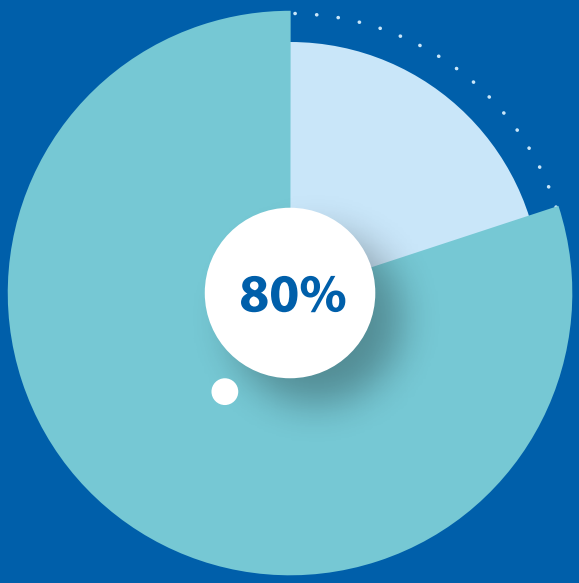
THE NEED TO FOCUS ON PATIENT'S HEALTH AND PREVENTION OF DISEASES

Currently, the market only obtains information about policyholders that suffer an illness or accident and file a medical claim for services covered under the insurance policy. This represents less one fifth of the total insured population during any given calendar year. Currently, we know very little about the health status of the remaining 80% of the population. There is a great opportunity to learn more about the health status of this large majority of insureds who do not submit a claim for an illness, and offer tools to help them remain healthy; and to prevent the development of chronic diseases. Likewise, there is arguably an even greater opportunity to provide patients who present the initial risk factors for hypertension, diabetes, high cholesterol, and obesity, the necessary tools to prevent these diseases from becoming chronic and to help those with chronic diseases to keep them under control and avoid acute episodes.

Facts [20]:



20% of the insured population files a medical claim every year.



Hardly any health information is known about the 80% of the insured population.

[20] Information about PALIG member companies

Health and Illness Treatment

Health constitutes one of the largest industries in the world with approximately US$ 7 trillion dollars in annual revenue [21]. Just in the United States, more than US$3 billion dollars are spent annually, which equals 17.5 % of its GDP [22].

In perspective, considering the health insurance and medical expenses market in Panama and Central America in 2015, insurance companies paid US$571,000,000 [23] in medical claims incurred in the treatment of accidents and illnesses of approximately 20% of policyholders. If the physicians and insurance companies of the region, through wellness and prevention programs, could reduce the rate of incidence of diseases from 20% to 19% of the insured population, this 1% savings would represent almost US$6 million, even without factoring in the savings to employers constituted by reduced absences and increased productivity.

TOWARDS A PERSONALIZED HEALTH MODEL

The new healthcare model must focus on personalized health and integral wellbeing. The primary care physician and on-site clinic physician are the main actors of this new model, and their role as the main protagonists in the patient's health is vital. This represents a radical evolution from the currently predominant model - where primarily specialists treat the one fifth of the population who visit them, unguided, to treat isolated episodes of illnesses in a given calendar year - towards a model in which primary care physicians have a close relationship and deep understanding of the health status and individual needs of each insured who forms part of their panel of clients. In this model they are active players in the optimal health maintenance and overall wellbeing of their patients.

The evolution towards improving the population's health instead of simply treating illnesses starts with education programs that create awareness and promote good health and wellness within the community, workplace, and home. The roles of the physician and patient evolve from being passive (waiting for the patient to get sick and visit their office) to a much more proactive one, which sets goals, allows for follow-up of tests and preventive assessments, provides advice to patients regarding the management of individual health risk factors, and provides the proper tools to help patients effectively manage their health.

Wellness in Multinational Companies

There is a clear trend that shows multinational companies in the region placing a greater focus on preventive care programs, comprehensive wellbeing, primary care, and chronic disease management as part of their employee benefit plan offering.

[21] "Spending on Health: A global overview". World Health Organization. April 2012. http://www.who.int/mediacentre/factsheets/fs319/en/
[22] "Health Expenditures". Centers for Disease Control and Prevention. 2014. http://www.cdc.gov/nchs/fastats/health-expenditures.htm
[23] Values of Local Superintendence

In most developed countries, multinational companies have well established preventive and wellness programs in place and have noticed a positive impact in the reduction of medical claims costs and employee absence rates. Those results in turn generate greater productivity, lower absenteeism and presenteeism, and contribute to higher levels of motivation among their staff.

Companies like **Dell** and **DHL** are global leaders in the implementation of wellness programs, and are proven examples of the positive results that these programs deliver when there is clear commitment from leaders; the message is delivered consistently and outcomes are measured on a regular basis.

"At Dell, we understand that a healthy lifestyle and the company's focus on wellness translate into a productive workforce, strongly committed, in line with our goals. In addition, it supports our focus of encouraging our team members to do their best. This is why over the years we have concentrated our efforts in the "Well at Dell" initiative. This initiative has the objective of promoting health and healthy lifestyles among our team members and their families through innovative global programs and activities that teach them how to manage their health and in many cases how to improve it.

Today, in terms of wellness, Dell has a global strategy in place that allows them to concentrate their efforts to promote the best practices, adapting them according to the country. These include a variety of programs and resources such as medical insurance plans, online access to such resources, corporate clinics, informative talks/conferences, health fairs, employee assistance programs, preventive health programs, preventive checkups, health risk assessments, and group and sport activities, among others.

There is a high level of participation in our health and wellness programs thanks to three basic key components:

1) Listen to the needs and preferences of the team members.

2) Develop a basic strategy that considers all the players, including the healthcare providers as they become strategic partners for the company.

3) Exceptional level of commitment from our leaders, who are very familiar with the results and feedback obtained, including a level of commitment and better results through an increase in productivity and reduction of absences, at the same time that we attract and retain the best talent available.

We are sure that our innovative program "Well at Dell" is a differentiating factor and an added value to the total value proposition for our team members."

Ana Singh
Regional Director of Compensation and Benefits – Dell LATAM

"Through a combination of invaluable data and strength of their network, DHL strives to partner with global insurance providers that have the ability to enable us to identify the rising need for focused local health and wellbeing programs. Such firms must be committed to providing data-driven insurance solutions and wellbeing programs that address the ongoing issue around rising healthcare costs. We feel that by investing in this area, the resulting research and support will have a significant impact on our employees´ engagement and productivity, while simultaneously providing actionable conclusions which empower us to put these concepts into practice."

Bill Fitzpatrick
Vice President, Corporate Risk Benefits
DHL's Global Captive Manager

Wellness Programs at PALIG Member Companies

PALIG's member companies are developing a corporate health and wellness program designed to protect policyholder's health. The structure of this program reflects several years of experience with the corporate models in use in Panama and El Salvador.

The detailed analysis and lessons learned taken from these types of models provide valuable improvements that have proven to increase penetration rates in a policyholder group, expand services to a larger population, and most importantly create a tool that provides an assessment of the health status of the insureds of the employer groups who adopt these programs, and help them meet their health improvement goals.

Phases of a common Wellness Program:

The program begins with a Health Risk Assessment (HRA), an executive medical examination, and standard preventive laboratory screenings.

Health Questionnaire

This questionnaire has been developed to assess three key risk factors:

1. Cardiovascular risk - measured by body mass index indicators, cholesterol, age, blood sugar, tobacco use, and family history among others, using the Framingham model.

2. Cancer risk - evaluated through two risk indicators for the most common types of cancer in both men and women.

3. Stress risk - evaluated using Sheldon Cohen's international perceived stress scale.

Once the results of the first survey are received, a risk evaluation is performed and new tests may be required for populations that demonstrate particular risks.

Nutrition

The nutrition survey will evaluate the member's daily diet, highlighting the amount of calories compared to the amount of exercise performed every day.

The questionnaire analyzes individual eating habits and provides recommendations by professional nutritionists with whom members have direct access via email.

Physical Fitness

Each member also receives a fitness survey, and then receives a report with their personalized strength profile, endurance, flexibility, and cardiovascular health, among others.

Stress

The stress risk section of the HRA is supported by the perceived stress international scale which is evaluated by a psychologist specialized in managing stress in corporate environments.

This questionnaire, just like the other models for cancer and cardiovascular health, consists of two phases:

First Phase: A few general questions are asked to evaluate the perception of stress and the member's coping style.

Second Phase: As soon as the results of the first survey are received, trained professionals will identify groups with high stress risk levels. This group will complete a more detailed secondary survey. From the analysis of this second survey a series of procedures and recommendations for the effective management of stress will be developed. Stress management will be performed virtually, as well as individual follow up to reach set goals. All of these follow up procedures will be monitored by specialized in the field (clinical and industrial psychologists).

IN CONCLUSION

Based on the analysis documented in this study, there is a clear indication that the existing healthcare system in Latin America is not sustainable given the high prevalence of benefit overutilization and the singular focus on disease treatment versus disease prevention and health promotion. This opens the door for a new model to emerge – one with better quality control measures to standardize a higher quality of care; an improved balance between healthcare costs and the value they deliver; and physicians and hospitals that are encouraged to proactively participate in helping their patients reach and maintain optimal health.

A new, more personalized healthcare model also helps to educate consumers about their medical expenses and ideal cost vs. quality ratios so that they can make informed decisions about their health. In turn, this will push providers to become more transparent with regards to the expenses they charge for their services. Additionally, insurance providers will be encouraged to find alternatives to the traditional model that centers on reducing benefits and increasing premiums to overcome high loss ratios.

In a model driven by primary care and personalized health services, all the healthcare actors – consumers, providers, public and private health sectors – achieve better outcomes.

- Physicians would earn more money in a model that rewards health instead of diseases in that payments are based on the generated savings of the healthy consumer instead of on the sick patients.

- Insurance companies would benefit from a reduction of loss rations.

- Governments benefit from less public funds being allocated to maintaining a public sector oriented to disease treatment instead of prevention.

- Companies would benefit from a healthier workforce with higher productivity. This would result in stable and predictable insurance premium payments.

- Last but not least, consumers would benefit the most as they reach and maintain optimal health with all the advantages this produces in terms of quality of life and life expectancy.

Healthcare in Latin America is at a crossroads and there is a real opportunity to embrace solutions that have already proven successful in other markets in order to create a model that is genuinely focused on good health.

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ABOUT PALIG

Pan-American Life Insurance Group is a leading provider of insurance and financial services throughout the Americas that has been delivering trusted financial services since 1911. The New Orleans- based Group is comprised of more than twenty member companies, employs more than 1,650 worldwide and offers top-rated individual and/or group life, accident and health insurance, employee benefits and financial services in 49 states, the District of Columbia (DC), Puerto Rico, the U.S. Virgin Islands, and throughout Latin America and the Caribbean. The Group has branches and affiliates in Costa Rica, Colombia, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Panama, and 13 Caribbean markets, including Barbados, Cayman Islands, Curacao and Trinidad and Tobago.

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